

## SENSORS – AIRFLOW • SENSORS – ANGULAR RATE

AWM 40000 SERIES MICROBRIDGE  
MASS GAS-FLOW SENSORS
**Honeywell**  
Sensing and Control

Provides mass gas-flow sensing in a unique manifold mount package. Provides highly accurate, stable, and repeatable performance. Features: precision ceramic flow tube resulting in a non-outgassing flow channel, high common mode pressure capability (250 PSI max.), high operating temperature (to +125°C), and hydrogen compatibility. Recommended excitation: 10VDC. Dimensions: 1.2H x 0.5W x 1.3"D. Response time: 1 msec. typ. Additional flow ranges available; SLPM = Standard Liters Per Minute; SCCM = Standard Cubic Centimeters Per Minute ; go online or call.



## NON-AMPLIFIED

Mfg. Part No.	Flow Range	Output	Stock No.	Price Each
● AWM42150VH	0-25 SCCM	8.5mV	04M8262	111.91

## AMPLIFIED

● AWM43300V	0-1000 SCCM	5.0VDC	04M8263	118.75
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AWM 5000 SERIES MICROBRIDGE  
HIGHFLOW AIRFLOW SENSORS
**Honeywell**  
Sensing and Control

Sensors feature a venturi-type flow housing. The microbridge chip is in direct contact with the flow stream, greatly reducing error possibilities due to orifice or bypass channel clogging. Maximum pressure drop of 2.25" H<sub>2</sub>O. Maximum output voltage: 5.0VDC. Supply voltage (recommended excitation): 10VDC. Common mode pressure 50PSI max. Gas calibration: CO<sub>2</sub> and Argon are available. Weight: 30 grams. Operating temperature range: -20°C to +70°C. Response time 60 msec max. Dimensions: 1.4H x 1.3W x 6.4"L. SLPM = Standard Liters Per Minute.

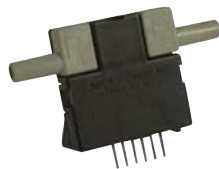


Mfg. Part No.	Gas Calibration	Flow Range	Stock No.	Price Each
● AWM5101VN	Nitrogen, N <sub>2</sub>	0-5SLPM	92F2998	167.19
● AWM5102VN	Nitrogen, N <sub>2</sub>	0-10SLPM	04M8264	191.23
● AWM5104VN	Nitrogen, N <sub>2</sub>	0-20SLPM	04M8265	167.19

(5138)

MICROBRIDGE MASS  
AIRFLOW SENSORS
**Honeywell**  
Sensing and Control

Operates on theory of heat transfer due to mass airflow directed across surface of a micromachined silicon sensing element. Output voltage mV or V varies in proportion to mass air or other gas flow through inlet and outlet ports of package. Supply voltage (recommended excitation): 10VDC. Common mode pressure: 25PSI max. Weight: 10.8 grams. Operating temperature range: -25°C to +85°C. Response time: 1.0 msec typ. Dimensions: 1.2H x 0.6W x 1.2"D. SCCM = Standard Cubic Centimeters Per Minute.



## AMPLIFIED OUTPUTS

Mfg. Part No.	Measurement	Flow Range	Output	Stock No.	Price Each
● AWM3100V	Massflow	0-200 SCCM	5.0VDC	04M8260	98.02
● AWM3300V	Massflow	0-1000 SCCM	5.0VDC	04M8261	98.02

## NON-AMPLIFIED OUTPUTS

● AWM2100V	Massflow	0-200 SCCM	44.5mV	04M8259	79.46
● AWM2300V	Massflow	0-1000 SCCM	55.5mV	92F2997	79.46

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## MEMS FLOW SENSORS

Just Added


**OMRON**  
OMRON ELECTRONIC COMPONENTS LLC


D6F-10, -20, -50



D6F-W



D6F-03

➔ CONTINUED ➔

## MEMS FLOW SENSORS (CONT.)

## Specifications:

- Applicable gas: Air
- Supply voltage: 26.4VDC
- Output voltage: 6VDC
- Current consumption: 15mA
- Operating humidity: 85% RH
- Operating temperature: -10°C to 60°C

## Features:

- Stable output across full scale
- Low power consumption
- Dust resistant design



## MASS AIRFLOW SENSORS

D6F-V

Mfg. Part No.	Flow Range (LPM)	Termination	Stock No.	Price Each		
● D6F-03A3-000*	0 - 3	Q.D. Cable	04M8973	650.00	585.00	520.00
● D6F-10A5-000	0 - 10	Built-in R/A Connect	23M4658	291.50	262.35	233.20
● D6F-20A5-000	0 - 20	Built-in R/A Connect	23M4660	291.50	262.35	233.20
● D6F-50A5-000	0 - 50	Built-in R/A Connect	23M4662	291.50	262.35	233.20
● D6F-10A6-000	0 - 10	Built-in Straight Connect	23M4659	291.50	262.35	233.20
● D6F-20A6-000	0 - 20	Built-in Straight Connect	23M4661	291.50	262.35	233.20
● D6F-50A6-000	0 - 50	Built-in Straight Connect	23M4663	291.50	262.35	233.20

## AIRFLOW SENSORS

● D6F-V03A1	0 - 3	Q.D. Cable	23M4657	66.25	59.63	53.00
● D6F-W01A1	0 - 1	Q.D. Cable	04M8971	150.00	135.00	120.00
● D6F-W04A1	0 - 4	Q.D. Cable	04M8972	198.00	178.20	158.40

## CABLE CONNECTOR ASSEMBLIES

Mfg. Part No.	For Use With	Stock No.	Price Each		
● D6F-CABLE1	D6F-10A, -20A, -50A sensors	04M8969	13.00	11.70	10.40
● D6F-W CABLE	D6F-W sensors	04M8970	4.98	4.48	3.98

\* Terminates with D6F-CABLE2 (optional)  
(89844)

EM SERIES MASS  
FLOW SENSORS
**SENSIRION**  
THE SENSOR COMPANY

- CMOSens Technology
- Digitally calibrated and temperature compensated
- RS-232 and SPI digital interface

Enables fast and economical measurement of gas flows over a very wide dynamic range. CMOSens technology combines a sensor element with the amplification and A/D converter circuit on one single CMOS chip. Requires a supply voltage of 7-18VDC and provides an RS-232 and SPI compliant electrical interface. Exceptionally well suited for difficult measurement conditions when fast changing gas flows must be monitored and summed up precisely.



Mfg. Part No.	Flow Range (Ln/min)	Accuracy* % measured value	Pressure Drop at full flow (mbar/psi)	Stock No.	Price Each
● EM1NV	0-200	5	100/1.45	18M2036	340.77
● EM1NR	0-20	3	20/0.29	18M2035	340.77
● EM1NL	0-0.5	3	2/0.029	07J2368	340.77

\* At 1-100% full scale

## EVALUATION KITS

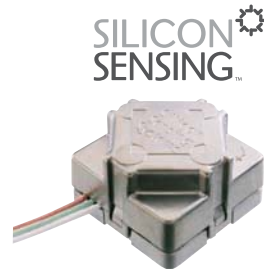
Mfg. Part No.	For Part No.	Kits Contain	Stock No.	Price Each
● EK-F3_V	EM1NV	Sensor, 9-pin D-sub cable, Legris & Hausmann connector, power adapter, FlowViewer CD	07J2366	662.67
● EK-F3_R	EM1NR		07J2365	662.67
● EK-F3_L	EM1NL		07J2364	662.67

(79397)

## CRS03 SERIES ANGULAR RATE SENSORS

- Bias, Setting Tolerance: < 3°/s
- Bandwidth: 10Hz (-3dB)
- Operating Temperature: -40°C to +85°C
- Mass: <18g
- Supply Voltage: 4.75V to 5.25V
- Supply Current: < 35mA
- Measures Perpendicular to The Mounting Plane
- Dimensions: 0.72H x 1.14W x 1.14"L (18.4 x 29 x 29mm)

Suitable for applications where the sensing axis is perpendicular to the mounting plane. Angular rate sensors are used wherever rate of turn sensing is required without a fixed point of reference. The sensor will output a DC voltage proportional to the rate of turn and input voltage.



Mfg. Part No.	Rate Range (°/s)	Nominal Scale Factor (mV/°/s)	Termination	Stock No.	Price Each
CRS03-01	±100	20	3-Pins	64J7628	316.59
CRS03-02	±100	20	Pigtail and Connector	93C9882	334.58
CRS03-04	±200	10	Pigtail and Connector	86H3888	331.21

(72949)

## SENSORS – ANGULAR RATE • SENSORS – CURRENT

## CRS05 SERIES ANGULAR RATE SENSORS



SILICON SENSING

- Bias, Setting Tolerance:  $\leq \pm 1.5^\circ/\text{s}$
- Operating Temperature:  $-40^\circ\text{C}$  to  $+100^\circ\text{C}$
- Mass:  $< 11\text{g}$

- Supply Voltage: 4.75V to 5.25V
- Supply Current:  $< 35\text{mA}$

Mfg. Part No.	Rate Range ( $^\circ/\text{s}$ )	Nominal Scale Factor ( $\text{mV}/^\circ/\text{s}$ )	Bandwidth ( $-90^\circ$ Phase) (Hz)	Quiescent Noise ( $\text{mVrms}$ )	Stock No.	Price Each
CRS05-01	$\pm 50$	40	80	85	64J7629	210.74

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## CRS07 ANGULAR RATE SENSORS

## Features:

- Ultra-small size
- High rate range:  $\pm 573^\circ/\text{s}$
- Excellent performance over temperature
- Repeatable drift characteristic
- High shock and vibration operation
- Output type: Analogue voltage
- Mass: Less than 10g
- Supply voltage: 5.25V max.
- Supply current: Less than 35mA



SILICON SENSING

A robust and affordable mass produced miniature gyroscope for applications in which space is critical. Angular rate sensors are used whenever rate of turn sensing is required without a fixed point of reference. The sensor will output a DC voltage proportional to the rate of turn and input voltage.

Mfg. Part No.	Rate Range	Bandwidth	Quiescent Noise	Stock No.	Each
CRS07-11	$\pm 573$	55	1mV max	53K4152	258.98

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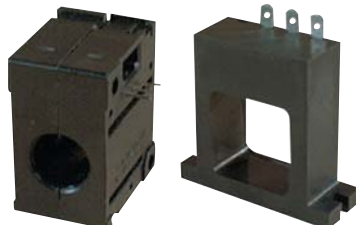
## CSD SERIES HALL-EFFECT DIGITAL OUTPUT CURRENT SENSORS



Honeywell

Sensing and Control

CSD series solid-state sensors detect absence/presence of DC or AC current with digital current sink output. Response time: 100µsec. Output voltage: 0.4VDC. Changes from Vs to 0.4V at operating current. Output current: 20mA, except mfg. part no. CSDB1CC: 100mA. NOTE: Thru-hole design does not require electrical connection to sensed current. Max. sensed current is only limited by the conductor size.



Mfg. Part No.	Terminal Type	Supply Voltage (VDC)	Operate Current (nom)*	Release Current (min)*	Stock No.	Price Each
● CSDA1BA	Solder Pins	6-16	0.50/Turn	0.08/Turn	04M8744	15.30 14.61
● CSDA1BC	Solder Pins	6-16	3.50/Turn	0.6/Turn	51F2597	16.10 15.37
● CSDB1CC	Spade Terminals	8-16	3.50/Turn	0.6/Turn	04M8747	77.22 73.74
● CSDC1BA	Solder Pins	5 $\pm$ 0.2	0.50/Turn	0.08/Turn	04M8748	17.50 16.71
● CSDA1AA	Solder and PCB Mount Pins	6-16	0.50/Turn	0.08/Turn	04M8742	17.21 16.43
● CSDA1AC	Solder and PCB Mount Pins	6-16	3.50/Turn	0.6/Turn	04M8743	18.21 17.39
● CSDC1DA	PCB Mount Pins	5 $\pm$ 0.2	0.50/Turn	0.08/Turn	04M8749	24.86 23.19
● CSDA1DA	Amp® Connector	6-16	0.50/Turn	0.08/Turn	04M8745	17.83 17.03
● CSDA1DC	Amp® Connector	6-16	3.50/Turn	0.6/Turn	04M8746	18.67 17.83

\* at  $+25^\circ\text{C}$   
(3478)

Download RoHS Certificates of Compliance.

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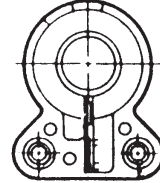
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## CSLA SERIES HALL-EFFECT LINEAR OUTPUT CURRENT SENSORS



Honeywell

Sensing and Control



CSLA series solid-state sensors provide output voltage directly proportional to current flow. AC or DC sensing. 8-16VDC supply for CSLA1 series. 6-12VDC supply for CSLA2 series. CSLA2 series feature temperature compensation circuitry. Offset voltage: Vs/2. Output voltage swings from 25% of Vs to 75% of Vs. NOTE: Thru-hole design does not require electrical connection to sensed current. Max. sensed current is only limited by the conductor size. 3µsec. response time. Sensors with 57A to 950A capabilities also available; go online or call.

## BOTTOM MOUNT w/SSS SENSOR, SOURCE OUTPUT

Mfg. Part No.	Sensed Current (A)	Sensitivity $\text{mV}^\circ/\text{N}$ at 12VDC	Stock No.	Price Each
● CSLA1CD	0-57	49.6	10M8406	18.71 17.79
● CSLA1CF	0-100	29.7	16M2414	20.54 19.53
● CSLA1DJ	0-225	13.2	10M8407	20.88 19.85
● CSLA1DK	0-325	9.1	10M8408	27.10 25.76

## BOTTOM MOUNT w/SS9 SENSOR, SINK/SOURCE OUTPUT

Mfg. Part No.	Sensed Current (A)	Sensitivity $\text{mV}^\circ/\text{N}$ at 8VDC	Stock No.	Price Each
● CSLA2CD	0-72	32.7	10M8409	17.15 16.31
● CSLA2CF	0-125	19.6	10M8410	15.19 14.44
● CSLA2DH	0-235	9.8	16M2415	31.80 30.24
● CSLA2DJ	0-225	8.7	48F2802	33.57 31.91
● CSLA2EL	0-550	4.3	16M2417	34.79 33.08

## SIDE MOUNT w/SS9 SENSOR, SINK/SOURCE OUTPUT

Mfg. Part No.	Sensed Current (A)	Sensitivity $\text{mV}^\circ/\text{N}$ at 8VDC	Stock No.	Price Each
● CSLA2GE	0-92	26.1	16M2418	21.06 20.02
● CSLA2GF	0-125	19.6	16M2419	21.28 20.23

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## CSN SERIES HALL-EFFECT NULL-BALANCE LINEAR CURRENT SENSORS



Honeywell

Sensing and Control



CSNE151

CSN series solid-state sensors measure AC, DC, and impulse currents. Operation based on the Hall-effect principle and the null-balance or zero magnetic flux method (feedback system). The magnetic field on the sensor is constantly controlled at zero. The amount of current required to balance zero flux is the measure of primary current flowing through conductor multiplied by the ratio of the primary to secondary windings.  $\pm 0.5\%$  accuracy. Response time: 1µsec. NOTE: Thru-hole design does not require electrical connection to the sensed current. Max. sensed current is only limited by the conductor size. Sensors with up to 1200A of sensed current also available; go online or call.

Mfg. Part No.	Supply Voltage	Sensed Current	Nominal Output	Stock No.	Price Each
● CSNA111	$\pm 15\text{VDC}$	$\pm 70\text{A}$	50mA	10M8411	22.32 18.98 16.72 15.04
● CSNE151	$\pm 15\text{VDC}$	$\pm 5-36\text{A}$	25mA	10M8412	21.61 18.38 16.19 14.57

(3410)

## RS/RSS OPEN LOOP CURRENT SENSOR



RS/RSS-A series open-loop hall effect current sensor accurately measures AC and DC currents and provides electrical isolation between the circuit being measured and the output of the sensor. The RS-A series operates from dual DC supply voltages of  $\pm 15\text{V}$  to  $\pm 18\text{V}$ . The RSS-A series operates from a single DC supply voltage of 12V to 18V, with a zero current output of 6VDC. All models are in the same standard package and have the versatility to be panel or bulk-head mounted.



Mfg. Part No.	Nominal Current (A)	Output ( $\text{mV}/\text{A}$ )	Stock No.	Price Each
RS-100A	100	40	87H5552	49.11 44.37
RS-200-A	200	20	45J2871	50.25 45.40
RS300A	300	13.33	56J8731	51.40 46.43
RS-500-A	500	8	89J1820	53.68 48.50

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## SENSORS – CURRENT

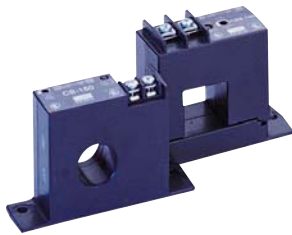
## RS/RSS OPEN LOOP CURRENT SENSOR (CONT.)

Mfg. Part No.	Nominal Current (A)	Output (mV/A)	Stock No.	Price Each	
				1-4	5+
RSS-200-A	200	8	89J1822	46.82	42.30
RSS-300A	300	5.33	86H3829	47.96	43.33
RSS-500-A	500	3.2	89J1824	50.25	45.40
RSS-1000-A	1000	1.6	89J1821	52.54	47.47

(84578)

## AC AND DC CURRENT SENSORS AND SWITCHES

Mfg. part nos. 155125 thru 155128 sensors provide 4-20mA output proportionate to AC current. **SCC series** provide either a 4-20mA or a 0-20mA unipolar output proportional to AC or DC current. **SCV series** provides either a 0-5V or 0-10V unipolar output proportional to AC or DC current. **CS/CSS series** detects AC current from 1A to 150A and provides a switched output when the current exceeds the adjustable switch point. Adjustment is made via multi-turn trim pot. Mfg. part nos. 115127, 115128, as well as **CSS, SCC, and SCV series** clamp around existing wiring for easy installation. Mfg. part nos. 115125 thru 155128 and **CS/CSS series** feature simple 2-wire connection and interface to PLCs. **SCC and SCV series** require 24VAC/VDC operating voltage. All models are panel-mounted, feature jumper range selection. UL listed. Higher current units are available. Go online or call.



Mfg. Part No.	Range AC (A)	Output	Aperture	Stock No.	Price Each
155125	10-20-50	4-20mA	0.73"	92F4429	147.92
155126	100-150-200	4-20mA	0.73"	92F4430	170.68
155127	10-20-50	4-20mA	0.85"	92F4431	182.05
155128	100-150-200	4-20mA	0.85"	92F4432	170.68
CS-150	1-150	Switch	0.73"	01F816	108.10
CSS-150	1.5-150	Switch	0.85"	01F817	125.17
SCC-100P	50-75-100*	4-20mA	0.85"	48F4355	256.02
SCC-100C	50-75-100*	0-20mA	0.85"	48F4356	256.02
SCV-100L	50-75-100*	0-5V	0.85"	48F4357	256.02
SCV-100H	50-75-100*	0-10V	0.85"	48F4358	256.02

\*AC(A) or DC(A)  
(3460)

## IHA SERIES HIGH FREQUENCY CURRENT SENSORS

Response <1μs. Frequency range DC to 50kHz. Linearity ±1%. Operating voltage ±12VDC to ±15VDC. Temperature range 0°C to +75°C. Case design allows for either panel or PCB mounting by use of appropriate connector; go online or call. Mounting tabs accept No.6 screws for placement on PCB or panel. Ideal for use in solid-state circuits.



Mfg. Part No.	Current Range	Full Scale Output	Aperture	Stock No.	Price Each
IHA-25	±25A	±1V	0.38"	92F4411	135.66
155970	±100A	±5V	0.38"	92F4412	129.20

(3459)

## CLOSED LOOP CURRENT SENSORS



CLN-200



Closed loop sensors null out the flux produced by the current through the aperture. Output is a current that is proportionate to the aperture current divided by the number of turns on the coil. Mfg. part nos. CLN-25/50/100 mount directly on PCB. Mfg. part nos. CLN-200/1000 mounts on the panel. Response time <1μs. Linearity >0.2%. Frequency range: DC to 100kHz min.

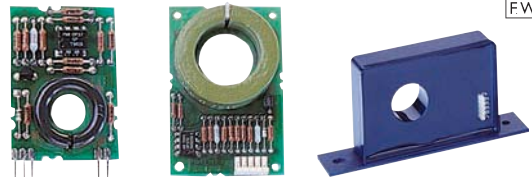
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## CLOSED LOOP CURRENT SENSORS (CONT.)

Mfg. Part No.	Nom. Current (A <sub>RMS</sub> )	Output (mA/A)	Operating Voltage (±VDC)	Aperture	Stock No.	Price Each
CLN-25*	25	1	15	PCB	83F2354	27.09
CLN-50	50	1	15	0.39 x 0.53"	83F2355	33.60
CLN-100	100	1	15	0.39 x 0.53"	83F2357	53.11
CLSM-05MA	0.005	5	18	PCB	48J6052	29.06
CLSM-10MA	0.01	2.5	18	PCB	48J6054	29.70
CLSM-25M	25	1	18	PCB	64J9088	17.64
CLSM-50LA	50	1	18	0.402" x 0.795"	84J2272	24.80
CLSM-100S	100	0.5	18	0.276" x 0.630"	84J2267	23.05
CLSM-200LA	200	0.5	18	0.402" x 0.795"	84J2268	32.60
CLSM-300	300	0.5	18	0.787" dia.	84J2271	80.21
CLSM-1000	1000	0.2	18	1.58" dia.	22J0781	134.49
CLSM-2000	2000	0.2	24	1.58" dia.	84J2269	278.21

\*CL-25 offers choice of ranges via connection to pins on sensor: 5, 6, 8, 12 or 25 Arms.  
(3456)

## BB SERIES HALL-EFFECT CURRENT SENSORS

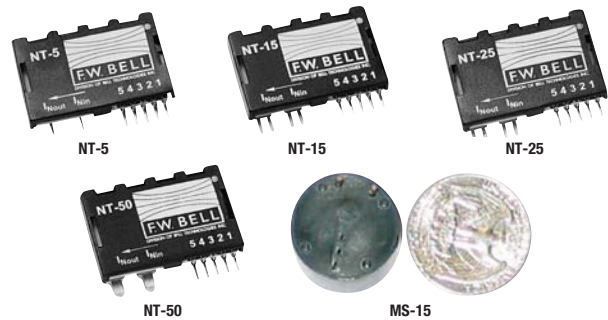


Accurately measure DC and AC currents. Provide fast response and electrical isolation from the circuit being measured. The voltage output is proportional to the current being measured. Mfg. part nos. 155150 and 155151 mount directly on PCB via thru-hole pins. Mfg. part no. 155154 has four 0.12" holes for mounting on panel. **BBP series** sensors are potted in plastic case with flange mount. Electrical connections for 150/300/600A models via Panduit Model No. CE100F26-5 mating connector. Operating voltage: ±15VDC. Operating temperature range: -25°C to +85°C.

Mfg. Part No.	Full-Scale DC or AC Peak	Full-Scale Output	Bandwidth	Aperture	Stock No.	Price Each
155150	±25A	±1V	DC to 60kHz	0.40"	92F4399	62.46
155151	±100A	±5V	DC to 60kHz	0.40"	92F4400	77.34
155154	±600A	±6V	DC to 10kHz	0.80"	92F4403	131.17
BBP-150F	±150A	±6V	DC to 60kHz	0.80"	93B4608	112.42
BBP-600H	±600A	±6V	DC to 10kHz	0.80"	92F8901	149.89

(3514)

## NT SERIES AND MS-15 CURRENT SENSORS



**NT series** thin footprint current sensors mount directly to PC Board. All electrical connections are via thru-hole pins. Small size (less than 0.25" wide) allows placement in applications with limited board space. Measure AC and DC currents. Frequency Response DC to 50kHz. Linearity ±1%. Response time <2μs. Sensors operate from +0°C to +70°C. Ideal replacement for shunts where electrical isolation is required.

Mfg. Part No.	Nom. Current (Arms)	Full Scale Output	Voltage (VDC)	Stock No.	Price Each	
					1-5	6-9
NT-5	5	2.5V	±15	16F6749	27.58	25.49
NT-15	15	2.5V	±15	16F6750	30.25	27.60
NT-25	25	2.5V	±15	16F6751	31.88	29.09
NT-50	50	2.5V	±15	16F6752	33.51	30.58

## MS-15 CURRENT SENSOR

The miniature MS sensor measures DC and AC currents and provides electrical isolation between the circuit being measured and the output. The unipolar power source, small size and low cost make it the most cost effective solution for Hall effect current sensing in the industry. Supply voltage is +5VDC.

Mfg. Part No.	Measurement Range	Output	Stock No.	Price Each	
				1-4	5-9
MS-15	(± 15A)	0.08 - 0.15 V/A	49H8118	9.97	9.07

(3586)



## SENSORS – EQUIPMENT SYSTEM DETECTORS • SENSORS – FLOW

EQUIPMENT HEALTH MONITORING  
SYSTEM DETECTORS
**Honeywell**  
Sensing and Control

## SPECIFICATIONS

- Power supply: 10-32VDC @ 20mA
- Operating temperature: -25°C to 70°C
- Storage temperature: -40°C to 90°C
- Dimensions: 0.71in x 2.1in x 3.8in
- IP67 sealed

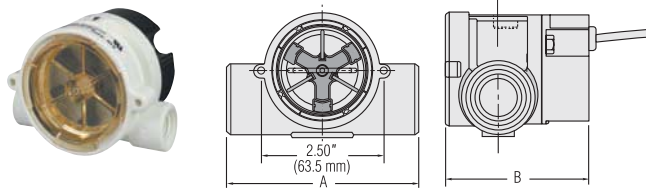


Monitor the steady state characteristics of the equipment and learn those characteristics. If these conditions change in a negative way an alarm is generated so that the problem can be investigated before serious damage comes to the equipment. The device output is digital; devices have a dual color LED, which is normally green. Fault detection turns the LED red, at the same time, the device's output will change state from "Open" to "Closed." The output can be connected to an alarm or PLC input.

Mfg. Part No.	Description	Stock No.	Price Each
EHM-D-COOL	Temperature loss detector	29K6626	310.04
EHM-D-FLOW	Fluid flow detector	29K6627	310.04
EHM-D-HEAT	Temperature rise detector	29K6628	310.04
EHM-D-HISS	Fluid leak detector	29K6629	310.04
EHM-D-KNOCK	Mechanical noise detector	29K6630	310.04
EHM-D-RUMBLE	Mechanical wear detector	29K6631	310.04
EHM-D-SNAP	Mechanical insertion detector	29K6632	310.04
EHM-D-SONIC	Audible noise detector	29K6633	310.04
EHM-D-TILT	Slope change detector	29K6634	394.48
EHM-D-VIBRATION	Vibration detector	29K6635	394.48

(84855)

## RFO SERIES FLOW RATE MONITORING SENSORS

**Gems**  
Sensors


Output signal for RFO series is an on/off pulse of the DC voltage supplied to the unit, it is compatible with all digital logic families. Input voltage range is 4.5 to 24VDC. Frequency of the output pulse is proportional to the flow rate and ranges from approximately 25Hz at low flow to 225Hz at high flow.

Mfg. Part No.	Body Material	Port Size NPT	Flow Range GPM	Dimensions		Stock No.	Price Each
155421	Polypropylene	0.25"	0.5-5.0 (±7%)	3.06"	2.38"	92C8701	92.15
155481		0.50"	4.0-20.0 (±15%)	(77.7mm)	(60.5mm)	92C8704	92.15
156261	Brass	0.25"	0.5-5.0 (±7%)	3.01"	2.32"	92C8708	154.23
194761		0.75"	5.0-30.0 (±15%)	3.94"	2.95"	92C8745	154.23
194762		1.00"	8.0-60.0 (±15%)	(100mm)	(74.6mm)	92C8746	154.23

(72581)

## FS-150 SERIES FLOW SWITCHES


**Gems**  
Sensors

- Port Size: 1/2" NPT
- Primary Construction Material: Polypropylene
- Rytan® -R4, 316 Stainless Steel Piston
- 316 Stainless Steel Spring
- Maximum Operating Pressure: 200 PSIG @ +70°F to +150°F (+21.1°C to +65.5°C); 150 PSIG @ +150°F to +212°F (+65.5°C to +100°C)

- Operating Temperature: 0°F to 212°F (-17.8°C to +100°C)
- Length: 5 3/32"
- Quick connect terminals: 1/4"
- Switch: SPST, 20VA

These slim, inline switches reduce pressure drop to a minimum. Liquids are able to smoothly pass around the piston and flow through the switch with little pressure loss to the down stream line.

Mfg. Part No.	Flow Settings GPM	Stock No.	Price Each
129660	0.5	92C8689	77.90
129661	1.0	92C8690	77.90

➤ CONTINUED ➤

## FS-150 SERIES FLOW SWITCHES (CONT.)

Mfg. Part No.	Flow Settings GPM	Stock No.	Price Each
129662	2.0	92C8691	77.90
129663	3.0	92C8692	77.90

(72574)

FS3 AND FS4 SERIES  
LIQUID FLOW SWITCHES


**Gems**  
Sensors


FS-3 Series



FS-4 Series

FS-3 series switches are specifically designed for reliable operation in clean post-filtered water. Noryl® housing with 316 stainless steel spring and stop pin. Pressure rating: 150 psi @ +70°F; 50 psi @ +212°F. Operating temperature: 0°F to 212°F (17°C to 100°C) max. FS-4 series switches have a Rytan® R4 housing and piston with a 316 stainless steel spring. Max. operating pressure: 250 psi @ +17°C. Operating temperature: 0°F to +225°F (17°C to 107°C).

## FS-3 SERIES SPST SWITCHES

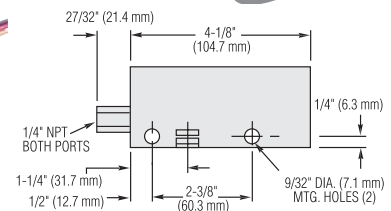
Mfg. Part No.	Flow Setting GPM	Length	Port Size	Stock No.	Price Each
165841	0.25	4.1"	1/4" Male NPT	92C8721	80.51
165842	0.50			92C8722	80.51
165843	1.00			92C8723	80.51

## FS-4 SERIES SPST SWITCH

Mfg. Part No.	Flow Setting GPM	Length	Port Size	Stock No.	Price Each
122353	0.25	3 5/8"	9/16"-18 UNF	92C8684	94.09

(72573)

## FS-925 SERIES GENERAL PURPOSE FLOW SWITCHES

**Gems**  
Sensors


- Brass Housing
- Piston in Brass Housing: Polysulfone for Water, Brass for Oil and Air
- 316 Stainless Steel Spring
- Max. Operating Pressure Rating: 1000 PSIG
- Operating Temperature with Brass: -20°F to +300°F (-29°C to +148.9°C)
- Switch: SPDT, 20VA
- Inlet/Outlet Ports: 1/4" NPT

FS-925 series switches provide accurate detection of excessive or insufficient flow rates in such applications as protecting against loss of fluid flow in hydraulic systems, assuring proper coolant flow in semiconductor processing equipment, monitoring high pressure lubrication systems and ensuring proper air flow in water/waste systems.

Mfg. Part No.	Flow Settings GPM, ±10%	Stock No.	Price Each
26914	0.10	92C8758	163.93
26915	0.25	92C8759	163.93
26916	0.50	92C8760	163.93

(72576)

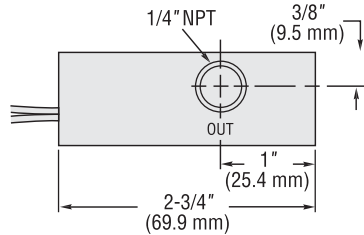
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(94635)

## SENSORS – FLOW • SENSORS – FORCE

## FS-927 SERIES COMPACT FLOW SWITCHES



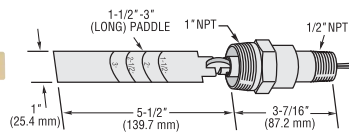
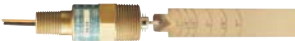
- Brass Housing and Piston
- 316 Stainless Steel Spring
- Operating Pressure: 1000 PSIG Max.
- Operating Temperature: -20°F to +200°F (-29°C to 93.3°C)
- Switch: SPST-NO @ No Flow, 20VA
- Inlet/Outlet Ports: 1/4" NPT

Measuring only 1" x 2 3/4", these compact switches are ideal for use where space is at a premium. Designed for use with water and oil. They are ideal for coolant or lubricant flow monitoring in portable equipment and many other applications with space constraints.

Mfg. Part No.	Flow Settings GPM	Stock No.	Price Each
			1-9
● 70820	0.10	92C8782	85.50
● 70821	0.25	92C8783	85.50
● 70822	0.50	92C8784	85.50
● 70824	1.00	92C8786	85.50

(72577)

## FS-550 SERIES HIGH PRESSURE PADDLE TYPE FLOW SWITCHES



- Pipe Line Size: 1 1/4" and Up
- Maximum Operating Pressure: 2000 PSIG
- Pressure Drop: 3 PSIG Maximum
- Operating Temperature: -30°F to +300°F (-34.4°C to +148.9°C)
- Switch: SPDT, 20VA

Standard FS-550 switches sense liquid flow in either direction to monitor flow/no-flow conditions. They are supplied in two paddle lengths. The paddle is trimmed during installation to permit switch actuation at the desired flow rate. As flow increases in a pipe, the paddle of the switch pivots to move out of the liquid path, producing less than 3 PSIG of pressure drop regardless of pipe size.

Mfg. Part No.	Paddle Length	Housing Material	Switch Operation	Stock No.	Price Each
					1-9
29609	Long	Brass	N.O. or N.C.	92C8765	189.09
29608				92C8764	290.07
30640	Short	316 SS		92C8768	290.07

(72580)

## SENSOTEC MODEL 13 SUBMINIATURE LOAD CELLS

Just Added

Honeywell

Sensing and Control

## Features:

- Stainless steel construction
- Measure load ranges from 1000g to 1000lbs
- mV/V output
- Subminiature dimensions, with height ranging from 0.13 to 0.25in, allow easy incorporation into limited applications

## Specifications:

- Infinite resolution
- Electrical termination: Integral 5ft twisted cable with balance board included 2ft from load cell
- Foil strain gage
- Shunt calibration data included
- Operating temperature: -65°F to 250°F

Mfg. Part No.	Range	Stock No.	Price Each
			1-4
AL322AR	1000g	27M3390	659.51
AL322AV	10lbf	27M3391	659.51
AL322BL	25lbf	27M3392	659.51
AL322BN	50lbf	27M3393	659.51
AL322BR	100lbf	27M3394	659.51
AL322CN	250lbf	27M3395	659.51
AL322CV	1000lbf	27M3396	659.51

(90228)

## SENSOTEC MODEL 31 PRECISION LOW AND MID RANGE LOAD CELLS

## Features:

- Stainless steel welded construction
- Miniature design
- Measure wide range of both tension and compression load forces from 250g to 1,000lbs
- Shunt calibration data included
- Other applications include cable tension and electromechanical parts testing

## Specifications:

- Male threads
- Infinite resolution
- Foil or semiconductor strain gage type
- Integral 5ft. teflon cable termination
- Operating temperature range: -65°F to 250°F
- Call for higher ranges greater than 2,000lbs

## LOW RANGE

Mfg. Part No.	Range	Stock No.	Price Each
			1-4
AL311AN 4A	250 gm	27M1580	943.45
AL311AR	1000 gm	27M1581	943.45

## MID RANGE

AL311AV	10 lbs	27M1583	943.45
AL311BL	25 lbs	27M1584	943.45
AL311 BN	50 lbs	27M1579	943.45
AL311BR	100 lbs	27M1585	943.45
AL311CN	250 lbs	27M1586	943.45
AL311CR	500 lbs	27M1587	943.45
AL311CV	1000 lbs	27M1588	943.45

(90038)

Honeywell

Sensing and Control

Just Added



## SENSOTEC MODEL 53 LOW COST LOAD CELLS

Honeywell

Sensing and Control

Just Added

## Features:

- Designed for low cost production and testing applications
- Stainless steel welded construction
- Excellent long-term stability and reliability under severe operating conditions
- Integral load button machined as part of the load cell

## Specifications:

- ±0.25% non-linearity
- Infinite resolution
- Output: 2mV/V
- Operating temperature: -65°F to 250°F
- Bonded foil strain gage
- Shunt calibration data included
- Integral 5ft teflon cable termination

Mfg. Part No.	Range (lbf)	Stock No.	Price Each
			1-4
AL131CR	500	27M2018	600.92
AL131CV	1000	27M2019	600.92
AL131DL	2000	27M2020	600.92
AL131DR	5000	27M2021	683.55
AL131DV	10000	27M2022	683.55
AL131EL	20000	27M2023	784.20
AL131EP	50000	27M2024	917.91

(90229)

## SENSOTEC MODEL 41 PRECISION LOAD CELLS

Honeywell

Sensing and Control

Just Added



## Features:

- Two stabilizing diaphragms reduce side-loading effects
- Stainless steel welded construction
- Measures wide range of both tension and compression load forces from 50lb to 50000lb
- Shunt calibration data included
- Applications include tube mills, extruding processes and weighing

## Specifications:

- Low profile, "pancake" type load cell
- Threaded hole runs completely through center of cell
- Bonded foil strain gage type
- Infinite resolution
- Operating temperature: -65°F to 250°F
- Mating connector and cable assemblies not included; order separately below

Mfg. Part No.	Range (lbf)	Stock No.	Price Each
			1-4
AL111BN	50	27M1712	1042.60
AL111BR	100	27M1713	1042.60
AL111CR	500	27M1714	1042.60
AL111CV	1000	27M1715	1042.60
AL111DR	5000	27M1716	1110.20

➤ CONTINUED ➤

## SENSORS – FORCE • SENSORS – HUMIDITY

## SENSOTEC MODEL 41 PRECISION LOAD CELLS (CONT.)

Mfg. Part No.	Range (lbf)	Stock No.	Price Each
			1-4
AL111DV	10000	27M1717	1110.20
AL111EL	20000	27M1718	1518.83
AL111EP	50000	27M1719	1518.83

## ACCESSORIES

Mfg. Part No.	Description	Stock No.	Price Each
			1-4
AA111	PT06A-10-6S mating connector up to 5000lbs	27M1708	52.89
AA113	PT06A-10-6A connector with 15ft of 4-conductor cable up to 5000lbs	27M1709	107.43
AA121	MS3106A-14S-6S mating connector 10000lbs and above	27M1710	52.89
AA122	MS3106A-14S-6S mating connector with 50ft of 6-conductor cable 7500lbs and above	29M9213	160.30
AA123	MS3106A-14S-6S connector with 15ft of 4-conductor cable up to 10000lbs	27M1711	107.43

(90231)

## SENSOTEC UNIVERSAL IN-LINE AMPLIFIERS

Just Added

## Features:

- For applications where transducer must be located away from the display
- Long signal transmission with minimal signal loss
- Compatible with any strain gage sensor
- Meets NEMA 4 and IP66 ratings for water resistance

## Specifications:

- Operating voltage: 18-32VDC
- Linearity: 0.02% F.S.



Mfg. Part No.	Model	Output	Stock No.	Price Each	
				1-4	5-19
BE125	U3W	4-20mA	29M9216	471.73	432.63
BE127	UV10	±10VDC	29M9217	471.73	432.63

(90545)

## SENSOTEC MODEL LK DIGITAL FORCE INDICATOR



## Honeywell

Sensing and Control

## Features:

- 9V battery supply and compact size; easily carried to remote locations
- Peak capture; easily display highest force reading
- Zero offset/tare button standard on all models
- Stainless steel construction of both sensor and indicator projects the unit in adverse field conditions

## Specifications:

- 3.7" diameter
- Compression reference: For tension or compound reference; go online or call
- Models below do not include electrical connection

Just Added



Mfg. Part No.	Load Range (lbs)	Stock No.	Price Each	
			1-4	5-19
LKW10KZ	10	29M9221	2001.07	1835.23
LKW25KZ	25	29M9222	2001.07	1835.23
LKW50KZ	50	29M9225	2001.07	1835.23
LKW250KZ	250	29M9223	2001.07	1835.23
LKW500KZ	500	29M9226	2000.96	1835.13
LKW5KKZ	5000	29M9224	2001.07	1835.23
LKW10KKZ	10000	29M9220	2001.07	1835.23

(90543)

## LEBOW MODEL 3132 GENERAL PURPOSE LOAD CELLS

Just Added

## Honeywell

Sensing and Control

## Features:

- Low profile
- Low sensitivity to extraneous loads
- Rugged welded construction
- No moving parts

## Specifications:

- Operating temperature: -65°F to 200°F
- ±0.1% non-linearity
- 3±0.25% mV/V output



➤ CONTINUED ➤

## LEBOW MODEL 3132 GENERAL PURPOSE LOAD CELLS (CONT.)

Mfg. Part No.	Range (lbf)	Stock No.	Price Each
			1-4
3132-1K	1000	27M2045	1538.36

(90227)

## FC AND FT SERIES LOAD CELLS



## Compression Load Cells

- Recommended excitation voltage: 5VDC
- Output at no load (Zero output): ±5% FSO
- Temperature compensation: 0-50°C
- Thermal zero shift: Less than ±0.05% FSO/°C
- Thermal sensitivity shift: Less than ±0.05% / °C
- Operating temperature range: -40°C to 85°C



## Tension Load Cells

Compression and tension force sensors create new markets previously unrealizable due to cost and performance constraints. For use in all types of OEM weighing and force measurement applications where high reliability and accuracy are critical. Used in a variety of application including bathroom scales, paint sprayers, and safety-critical automotive brake sensors.

## COMPRESSION LOAD CELLS

Mfg. Part No.	Compression Range	Output Voltage (VDC)	Stock No.	Price Each	
				1-9	10-99
FC2131-0000-0002-L	2 Lbf	0.5-4.5	35K3667	56.11	52.01
FC2131-0000-0005-L	5 Lbf	0.5-4.5	35K3668	56.11	52.01
FC2231-0000-0010-L	10 Lbf	0.5-4.5	35K3669	56.11	52.01
FC2231-0000-0025-L	25 Lbf	0.5-4.5	35K3670	56.11	52.01
FC2231-0000-0050-L	50 Lbf	0.5-4.5	35K3671	56.11	52.01
FC2231-0000-0100-L	100 Lbf	0.5-4.5	35K3672	56.11	52.01

## TENSION LOAD CELLS

Mfg. Part No.	Tension Range	Output Voltage (VDC)	Stock No.	Price Each	
				1-9	10-99
FT2431-0000-0010-L	10 Lbf	0.5-4.5	35K3675	56.11	52.01
FT2431-0000-0025-L	25 Lbf	0.5-4.5	35K3676	56.11	52.01
FT2431-0000-0100-L	100 Lbf	0.5-4.5	35K3677	56.11	52.01

(84986)

## HHI-4000 SERIES HUMIDITY SENSORS

## FEATURES

- Molded thermoset plastic housing
- Linear voltage output vs % RH
- Laser trimmed interchangeability
- Low power design
- High accuracy
- Fast response time



## Honeywell

Sensing and Control



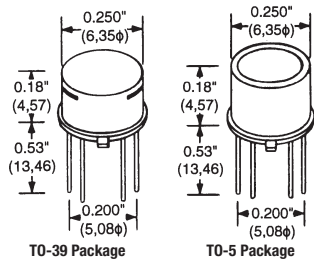
A more robust version of the HH 3610 series, HHI-4000 series humidity sensors typically draw only 200µA of current, ideally suited for low drain, battery operated systems. Delivers instrumentation-quality RH (Relative Humidity) sensing performance in a competitively priced, solderable SIP (Single In-Line Package). Available in two lead spacing configurations, the RH sensor is a laser trimmed, thermoset polymer capacitive sensing element with on-chip integrated signal conditioning. The sensing element's multilayer construction provides excellent resistance to most application hazards such as wetting, dust, dirt, oils and common environmental chemicals.

Mfg. Part No.	Description	Lead Pitch (in.)	Stock No.	Price Each
● HHI-4000-002	Integrated circuitry	0.050	71J4531	29.59
● HHI-4000-004	Integrated circuitry with calibration and data printout	0.050	31M9177	33.89
● HHI-4000-001	Integrated circuitry	0.100	12M6693	29.59
● HHI-4000-003	Integrated circuitry with calibration and data printout	0.100	15M0250	33.89

(85461)



## SENSORS – HUMIDITY

HIH-4602  
SERIES  
HUMIDITY  
SENSORSHoneywell  
Sensing and Control

## Features:

- Linear voltage output vs. % RH
- Laser trimmed interchangeability
- High accuracy, fast response
- Chemically resistant
- Stable, low drift performance

## Specifications:

- Rh range: 0-100% RH
- Temperature range: -40°C to +85°C
- Accuracy:  $\pm 3.5\% \text{ RH}$
- Voltage output:  $V_{OUT} = 0.00003(\text{Sensor RH})^2 + 0.0281(\text{Sensor RH}) + 0.820$  Typical @ 25°C

## Applications:

- Refrigeration
- Drying

- Built-in static protection
- Ideal for dew point and absolute moisture measurements
- TO-39 or TO-5 housings

- Temperature compensation:  $V_{OUT} = (0.0305 + 0.000044T - 0.000011T^2)(\text{Sensor RH}) + (0.9237 - 0.0041T + 0.000040T^2)T = \text{Temperature in } ^\circ\text{C}$

- Meteorology
- Battery-Powered Systems

Replacement for the HIH-3602 series humidity sensor. TO-5 package provides hydrophobic sintered SST filtered for maximum protection in harsh or splash-prone environments. TO-39 slotted package provides gross mechanical protection and faster response time.

Mfg. Part No.	Temp. Sensor	Interchangeability	Data Included	Package	Stock No.	Price Each
● HIH-4602-A	100k $\Omega$	$\pm 3.5\% \text{ RH}$	Yes	TO-5	14M5850	121.26
● HIH-4602-C	1k PRTD	$\pm 3.5\% \text{ RH}$	Yes	TO-5	17M6711	92.73
● HIH-4602-L	None	$\pm 3.5\% \text{ RH}$	No	TO-39	68K0554	64.20

(85848)

LINPICCO (TM) ANALOG  
HUMIDITY SENSORS

INNOVATIVE SENSOR TECHNOLOGY

## Features:

- For accurate relative humidity measurement
- Low power consumption, current loop version supplied from current loop
- Temperature-compensated
- Rapid response
- Good linearity
- Drift-stable
- Low hysteresis
- Very small dimensions
- Mechanically robust

## Specifications:

- Sensor Type P14 SMD
- Measurement principle: Capacitive humidity sensor
- Specification range: 15 to 85% RH
- Accuracy: 3% rF at 23°C
- Humidity range: 0 to 99.9% RH, non condensing
- Operating temperature range: -25°C to +85°C
- Humidity measurement range: +85°C
- Current consumption: 3mA
- Storage temperature range: -40°C to +100°C at 95% RH, non condensing
- Dimensions: L=47.0 x W=10.0 x H=2.8mm
- Soldering terminals for VCC, analog out, loop-through of optional temperature sensor

Mfg. Part No.	Humidity Range	Stock No.	Price Each
● LINPICCO (TM) BASIC A01	0 to 100% RH	83K3474	32.74
● LINPICCO (TM) BASIC A05	0 to 100% RH	83K3481	31.02
● LINPICCO (TM) BASIC A0545	0 to 100% RH	83K3490	29.54
● LINPICCO (TM) BASIC A420	0 to 100% RH	83K3500	35.99

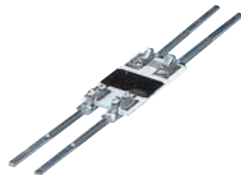
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P14 SERIES CAPACITIVE  
HUMIDITY SENSORS

INNOVATIVE SENSOR TECHNOLOGY



P14



P14 THERMO

➔ CONTINUED ➔

## P14 SERIES CAPACITIVE HUMIDITY SENSORS (CONT.)

## Features:

- Laser-trimmed version available, saving calibration for many applications
- Version with integrated temperature resistance, for dew point determination and for measurements above the dew point by heating.
- Mechanically robust
- Good linearity
- Condensation-resistant
- Alcohol-resistant
- Low hysteresis
- Temperature-shock-resistant
- Resistant to many chemical agents

## Specifications:

- Humidity operating range 0 ... 100% RH (max. DP = 85°C)
- Temperature range: -30...+150°C
- Capacity: 150 50pF (@ 30% rF)
- Loss factor: 0.01
- Linearity: 1.5 % RH (15...90% RH)
- Hysteresis: 1.5 % RH
- Response time: t[-6](-3) 12 sec, 50...0% RH
- Frequency range: 1...100 kHz
- Electric strength: 12VAC
- Connectors: SIL

Mfg. Part No.	Humidity Range	Stock No.	Price Each
● P14	0 to 100% RH	83K3507	27.92
● P14TR	0 to 100% RH	83K3518	47.67
● P14 THERMO	0 to 100% RH	83K3523	44.16

(88539)

CAPACITIVE  
HUMIDITY SENSOR

INNOVATIVE SENSOR TECHNOLOGY

## Features:

- For use in corrosive applications
- Mechanically robust
- Good linearity
- Condensation-resistant, very high dew point temperature
- Alcohol-resistant
- Low hysteresis
- Temperature-shock-resistant, extreme temperature operating range
- Resistant to many chemical agents

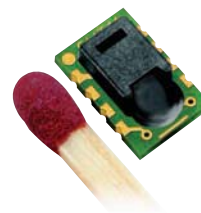
## Specifications:

- Measuring Principle: Capacitive Polymer Humidity Sensor
- Max. Dewpoint Temp. (100% RH): +95°C
- Temperature Operating Range: -40...+190°C
- Capacity: 300 40 pF (bei 30% RH)
- Sensitivity: 0.45 pF / % RH (20...95 % RH)
- Loss Factor: 0.01
- Linearity: 2% RH (20...90% rH)
- Hysteresis: 2% RH
- Response time: t[-9](-0)t[-6](-3) 10sec, 50...0% RH
- Frequency range: 1 to 100kHz
- Electric strength: 12VAC
- Connectors: SIL
- Dimension: 5.00 x 3.81 x 0.38

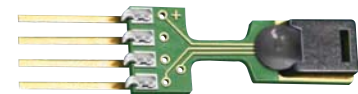


Mfg. Part No.	Humidity Range	Stock No.	Price Each
● MK33	0 to 100% RH	83K3512	53.10

(88540)

SHT SERIES HUMIDITY AND  
TEMPERATURE SENSORSSENSIRION  
THE SENSOR COMPANY

SHT11



SHT71

- Measurement range: 0-100% RH
- Response time: <4sec.
- Temperature range: -40°C to +120°C

Single chip relative humidity and temperature sensor is fully calibrated and offers excellent long-term stability with ultra-low power consumption. The digital CMOSens technology integrates two sensors and readout circuitry on one single chip. The **EK-H2 Evaluation Kit** offers a "plug and play" solution for test and evaluation. Kit contains a set of two mfg. part no. SHT11, two mfg. part no. SHT15, two mfg. part no. SHT75 sensors, the ASD11 microprocessor board (with LCD), a serial interface cable, a sensor interface cable and a power supply.

Mfg. Part No.	Humidity Accuracy (%RH)	Temperature Accuracy (°C)	Package	Stock No.	Price Each
● SHT11	$\pm 3$	$\pm 0.4 @ 25^\circ\text{C}$	4-LCC SMD	69C4848	22.74
● SHT15	$\pm 2$	$\pm 0.3 @ 25^\circ\text{C}$	4-LCC SMD	18M2986	27.29
● SHT71	$\pm 3$	$\pm 0.4 @ 25^\circ\text{C}$	4-SIP	18M2987	27.29
● SHT75	$\pm 1.8$	$\pm 0.3 @ 25^\circ\text{C}$	4-SIP	18M2988	31.75

## ACCESSORIES

Mfg. Part No.	Description	Stock No.	Price Each
● EK-H2	Evaluation Kit	18M2031	456.21
● SF1	Filter Cap for Types SHT11 and SHT15 Sensors	09J2305	3.99

(79350)

## SENSORS – LIQUID LEVEL

## OPTICAL LEVEL SENSORS FOR LIQUIDS

Infrared probe for liquid level detection based on refraction principle. Resistant to most acids and bases. LED indication for sensor on. Works well with: oil, wine, waste water, hydraulic fluid. Not recommended for use in environments with high ambient light (i.e., fluorescent light or sunlight), or for use with any material which may coat or adhere to the tip of the sensor. **E or EP suffix:** 10-40VDC, 200mA, transistor output; **110TB suffix:** 115VAC, 100mA, SCR output. Thread: 3/8" ISO 228. 6' cable. Operating temperature: Max. +176°F. CE compliant.



Mfg. Part No.	Housing Material	Output Type	Stock No.	Price Each
VP01E	Polysulphone	NPN, N.C.	05M4438	131.67
VP02EP	Polysulphone	PNP, N.O.	96F1244	131.67
VP02-110TB	Polysulphone	SCR, N.O.	96F1242	144.94

(3500)

## LIQUID LEVEL SENSORS — VERTICAL CABLE MOUNT



- For use in non-turbulent water
- Hermetically sealed
- Direct power switching
- 100m depth capability
- Material: High density polyethylene



Just Added

Lead length: 5m. Max. working pressure: 10 bar. Switching voltage max: 250VAC; 110VDC. Switching power max: 750VA (AC); 180W (DC). Switching current max. (inductive): 4A (AC); 1A (DC). Standard cable: 5m PVC sheathed 3 core. U cable for fuel oils: polyurethane sheathed 3 core cable. UL recognized, VDE approved, CENELEC approved.

Mfg. Part No.	Max. Temp. (°C)	Contact Form	Stock No.	Price Each		
				1-4	5-14	15-24
MS10A	55	SPST-NO	89C5049	24.44	23.25	22.46
MS10B	55	SPST-NC	89C5056	24.44	23.25	22.46
MS10C	55	SPST-CO	89C5060	24.44	23.25	22.46

(94476)

## LIQUID LEVEL SENSORS — VERTICAL CABLE MOUNT



- Suitable for open reservoirs, turbulent water and industrial wastewater
- Unaffected by suspended solids, humidity and condensation
- 100m depth capability
- Self-cleaning switching element



Just Added

Switches are fitted with additional internal weight that brings the center of gravity and rotation close to the cable entry. Switching power max: 750VA (AC); 180W (DC). Switching current max. resistive: 10A. Switching voltage max: 110VDC; 250VAC. Switching current max. inductive: 4A (AC); 1A (DC). Body material: high density polyethylene. Standard cable: 5m PVC sheathed 3 core. U cable for fuel oils: polyurethane sheathed 3 core cable. Temperature range: 0°C to 55°C; 32°F to 131°F. Max. working pressure: 10bars.

Mfg. Part No.	Max. Temp. (°C)	Contact Form	Stock No.	Price Each		
				1-4	5-14	15-24
FFSMC10A	55	SPST-NO	89C5039	70.60	67.17	64.88
FFSMC10B	55	SPST-NC	89C5044	70.60	67.17	64.88
FFSMC10C	55	SPST-CO	89C5046	70.60	67.17	64.88

(94471)

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On your desk tomorrow.

- Best products, great value.
  - No minimum order fees, no hassles.
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(94640)

## LIQUID LEVEL SENSORS — HORIZONTAL MOUNT



- Compact internal fitting
- Reliable reed switch contacts
- Available in nylon, polypropylene or PPS
- Many variants are UL recognized, components file no. E171218



Just Added

**RS40 series** compact horizontally mounted switches require access to inside of the tank. Manufactured in a variety of materials with nitrile gaskets to suit most commonly used liquids. SPST-NO contacts. Switch action may be reversed by mounting the device with the orientation arrow pointing downwards, instead of the normal upwards direction. Maximum pressure: 5 bar. Float SG: 0.7. Minimum fluid SG: 0.85. Cable length: 1.0m. Cable size: 16/0.2 20AWG. Switching power max: 25VA. Switching current max: 0.6A. Switching voltage: 240VAC, 120VDC.

Mfg. Part No.	Body Mat'l.	Must Close (mm)	Must Open (mm)	Max. Temp. (°C)	Stock No.	Price Each		
						1-4	5-14	15-24
RSF43Y100RF	Nylon	7	20	75	92F4697	11.44	10.89	10.51
RSF44Y100RF	Polypropylene	8	20	100	91F5742	12.13	11.54	11.15
RSF46Y100RF	PPS*	9	24	120	89C7871	14.32	13.63	13.16

\*Polyphenylene Sulphide  
(94466)

## LIQUID LEVEL SENSORS — VERTICAL CABLE MOUNT



- Compact design, miniature single switch
- User configurable SPST-NO or SPST-NC operation
- Reliable reed switch contacts
- WRAS approval
- Many variants are UL recognized, components file number E171218



Just Added

Mounting is in the top or bottom of the tank from the inside. Switch action may be reversed by removing the float, inverting it and then refitting it to the stem. PPS type gives good chemical absorption resistance, withstands continuous exposure to boiling water. Switching power max: 25VA. Switching voltage max: 240VAC; 120VDC. Switching current max: 0.6A.

## M12 THREAD

Mfg. Part No.	Body Mat'l.	Must Close (mm)	Must Open (mm)	Max. Temp. (°C)	Stock No.	Price Each		
						1-4	5-14	15-24
RSF53Y100RC	Nylon	11.5	22.5	75	31B4771	12.71	12.10	11.68
RSF54Y100RC	Polypropylene	15	26	100	31B4773	12.95	12.32	11.90
RSF56Y100RC	PPS*	9.5	20.5	120	89C7875	15.17	14.44	13.94

## 1/8" NPT TAPERED THREAD

RSF53Y100R1/8	Nylon	11.5	22.5	75	45M5560	13.29	12.64	12.21
RSF54Y100R1/8	Polypropylene	15	26	100	45M5561	14.10	13.42	12.96
RSF56Y100R1/8	PPS*	9.5	20.5	120	72C5815	15.58	14.82	14.32

\*Polyphenylene Sulphide  
(94477)

## LIQUID LEVEL SENSORS — VARIABLE INSERTION DEPTH



- Maximum insertion depth: 450mm
- Insertion depth can be increased by using extension tubes (306mm long including connection adapter)
- 3 extension tubes can be used to achieve a maximum insertion depth of 1350mm

Just Added

The extension tube is fitted by initially removing the cable gland from the float switch and screwing the extension tube to the float switch. The cable gland is then reassembled into the end of the extension tube. The float switch is mounted at the desired level using the clamp supplied. Float material: polypropylene. Stem material: polyphenylene sulphide. Tube material: PVC class 7. Cable length: 1.5m. Switching power max: 25VA. Switching current max: 0.6A. Switching voltage: 240VAC, 120VAC. **Mfg. part no. RSF64BXS** with SPST-NC contacts also available; go online or call.



## SENSOR

Mfg. Part No.	Contact Form	Max. Temp. (°C)	Min. Fluid SG	Stock No.	Price Each		
					1-4	5-14	15-24
RSF64EXS	SPST-NO	75	0.65	45M5562	43.72	41.59	40.18

## ACCESSORY

Mfg. Part No.	Description	Stock No.	Price Each		
			1-4	5-14	15-24
RSF64EXT	306mm Extension Tube	92F4699	61.78	58.78	56.77

(94478)



## SENSORS – LIQUID LEVEL

LIQUID LEVEL SENSORS —  
HORIZONTAL MOUNT

- Many UL recognized components, file number E171218

**Just Added**

**RS70 series** is designed for external fitting, achieving liquid tightness with high grade compression seal, avoiding need for access to inside of chamber. Ideally suited to uses where space or fitting time are prime considerations. Manufactured in a variety of materials with nitrile gaskets to suit most commonly used liquids. SPST-NO contacts. Switch action may be reversed by mounting the device with the orientation arrow pointing downwards, instead of the normal upwards direction. Minimum fluid SG: 0.85. Cable length: 1.0m. Cable size: 16/0.2 20AWG. Switching power max: 25VA. Switching current max: 0.6A. Switching voltage: 240VAC, 120VDC.

Mfg. Part No.	Body Mat'l.	Must Close (mm)	Must Open (mm)	Max. Temp. (°C)	Stock No.	Price Each		
						1-4	5-14	15-24
● RSF73Y100RN	Nylon	7	20	75	99B1523	12.45	11.85	11.45
● RSF74Y100RN	Polypropylene	8	20	100	99B1525	13.19	12.55	12.13
● RSF76Y100RN	PPS*	9	24	120	99B1528	15.01	14.28	13.79

\*Polyphenylene Sulphide (94469)

LIQUID LEVEL SENSORS —  
HORIZONTAL MOUNT

- Quick installation
- Ideal for tanks with inaccessible tops or bottoms
- Many variants are UL recognized, components file number E171218
- Compact external mount with 1/2" taper thread

**Just Added**

**RS80 series** is designed for external mounting, achieving a seal with a 1/2" NPT taper thread. Avoids need for access to the inside of the chamber and is ideally suited to applications where space or fitting time are prime considerations. Manufactured in a variety of materials with nitrile gaskets to suit most commonly used liquids. SPST-NO contacts. Switch action may be reversed by mounting the device with the orientation arrow pointing downwards, instead of the normal upwards direction. Minimum fluid SG: 0.85. Cable length: 1.0m. Cable size: 16/0.2 20AWG. Switching power max: 25VA. Switching current max: 0.6A. Switching voltage: 240VAC, 120VDC.

Mfg. Part No.	Body Mat'l.	Must Close (mm)	Must Open (mm)	Max. Temp. (°C)	Stock No.	Price Each		
						1-4	5-14	15-24
● RSF83Y100R	Nylon	7	20	75	31B4778	10.85	10.32	9.97
● RSF84Y100R	Polypropylene	8	20	100	92F4695	11.03	10.50	10.14
● RSF86Y100R	PPS*	9	24	120	91B1442	13.73	13.06	12.62

\*Polyphenylene Sulphide (94470)

LIQUID LEVEL SENSORS —  
HORIZONTAL MOUNT**Just Added**

50cm XLPE Wires



Plug and Socket Connection

- Compact external fitting with 1/2" npt taper thread
- Stainless steel
- Temperature range to 120°C

- User configurable SPST-NO or SPST-NC action by rotating switch 180°

**SSF212 series** horizontally mounted switches mount externally in the side of the tank with a 1/2" NPT (fits 1/2") BSP thread. Manufactured in 304 grade stainless steel for those liquids an environments that require the use of stainless steel and will work in liquids of SG 0.8 min. Switch action may be reversed by mounting the device with the orientation arrow pointing downwards, instead of the normal upwards direction. Float and stem material: 304 grade. Maximum pressure: 5 bar. Float SG: 0.7. Cable length - standard: 500mm. Cable size: 17/0.10 - 22 AWG. Cable conductor material: tinned copper. Cable temperature rating: 125°C. Switching power max: 50VA. Switching current max: 0.5A. Switching voltage: 300VAC, 300VDC.

Mfg. Part No.	Max. Temp. (°C)	Min. Fluid SG	Leadouts	Stock No.	Price Each		
					1-4	5-14	15-24
● SSF212X050	120	0.8	50cm XLPE Wires	97J7616	66.18	62.96	60.81
● SSF212XP	120	0.8	Plug and Socket Connection	97J7615	91.60	87.14	84.17

(94459)

LIQUID LEVEL SENSORS —  
VERTICAL CABLE MOUNT

- Miniature internal fit
- 316 grade stainless steel
- Temperature range to 120°C
- User configurable SPST-NO or SPST-NC action

**Just Added**

**SF22 series** is a compact vertically mounted device designed to achieve reliable switching. Mounting is in the top or bottom of the tank from the inside. Switch action may be reversed by removing the float, inverting it and then refitting it to the stem. Mounting thread: 1/4" BSP. Maximum pressure: 10 bar. Float SG: 0.7. Cable length - standard: 350mm. Cable size: 17/0.10 - 22 AWG. Cable conductor material: tinned copper. Cable temperature rating: 125°C. Tightening torque for fixing nut: 2.0kg/cm. Switching power max: 50VA. Switching current max: 0.5A. Switching voltage: 300VAC, 300VDC. Breakdown voltage min: 600VDC.

Mfg. Part No.	Max. Temp. (°C)	Min. Fluid SG	Leadouts	Stock No.	Price Each		
					1-4	5-14	15-24
● SSF22X035	120	0.8	35cm XLPE Wires	97J7618	57.41	54.62	52.76

(94462)

LIQUID LEVEL SENSORS —  
VERTICAL CABLE MOUNT

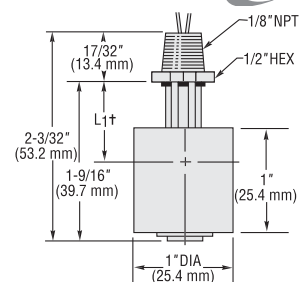
- High temperature internal fitting
- 316 grade stainless steel
- Temperature range to 200°C
- User configurable SPST-NO or SPST-NC action
- Will work in liquids of SG 0.65 min.

**Just Added**

**SSF26 series** is a vertically mounted device designed to achieve reliable switching at higher temperatures. Mounting is in the top or bottom of the tank from the inside. Switch action may be reversed by removing the float, inverting it and then refitting it to the stem. Typical application is in deep frying oil tanks. Mounting thread 3/8" BSP. Maximum pressure: 10 bar. Float SG: 0.55. Cable length - standard: 350mm. Cable size: 17/0.10 - 22 AWG. Cable conductor material: tinned copper. Cable temperature rating: 200°C. Tightening torque for fixing nut: 2.0kg/cm. Switching power max: 50VA. Switching current max: 0.5A. Switching voltage: 300VAC, 300VDC. Breakdown voltage min: 600VDC.

Mfg. Part No.	Max. Temp. (°C)	Min. Fluid SG	Leadouts	Stock No.	Price Each		
					1-4	5-14	15-24
● SSF26X035	200	0.65	35cm XLPE Wires	97J7620	175.48	166.94	161.25

(94464)

LS-3 SERIES  
PLASTIC LIQUID  
LEVEL SWITCHES

- SPST, 20VA, 120-240VAC

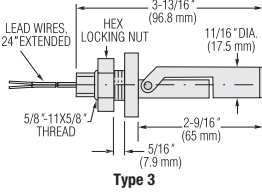
Polysulfone float for water based liquids with limited use in oils and chemicals. Polypropylene float (hollow) features a low specific gravity float offering broad chemical compatibility. Mounting type: 1/8" NPT. UL recognized, CSA certified, CE compliant.

Mfg. Part No.	Material		Min. Liq. Sp. Gr.	Pressure** PSI/Bar Max.	Stock No.	Price Each
	Stem and Mounting	Float				
● 42295	Polysulfone	Polysulfone	0.75	50/3	92C8773	30.00
● 142505	Polypropylene	Polypropylene (Hollow)	0.60		92C8697	30.00
● 116826		Polypropylene (Solid)	0.90	150/10	92C8681	30.00

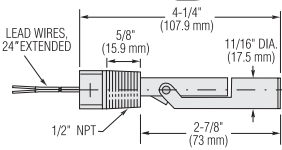
\*\*Maximum Pressure @ 70°F (30°C) (72568)

## SENSORS – LIQUID LEVEL

## LS-7 SERIES PLASTIC SIDE MOUNT LIQUID LEVEL SWITCHES



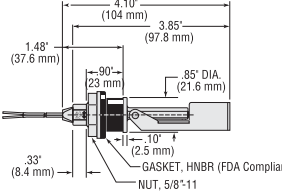
Type 3



Type 5



Type 7



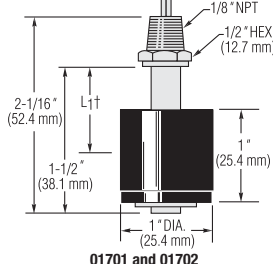
Type 10

- Switch Type SPST, Rated 130VAC, 20VA
- Operating Pressure: 100 psi @ 70°F (Except Mounting Type 10, 50 psi @ 70°F)
- Ideal for High Volume Use in Small Tanks and Vessels

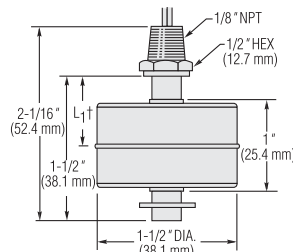
Mfg. Part No.	Mounting Type	Materials		Min. Liq. Sp. Gr.	Operating Temperature	Stock No.	Price Each
		Stem and Mounting	Float				1-9
165570	3	Nylon (13% Glass)	0.65	-40°F to +250°F	92C8718	32.96	
164520		Polypropylene (20% Glass)	0.55	-40°F to +225°F	92C8716	32.96	
131100	5	Polypropylene (20% Glass)	0.55	-40°F to +225°F	92C8695	31.93	
140620		Nylon (13% Glass)	0.65	-40°F to +250°F	92C8696	31.93	
201 2A		Versaplast®	0.80	-40°F to +300°F	92C8735	32.96	
160450	7	Polypropylene	0.55	-40°F to +225°F	92C8714	31.93	
160460		Nylon	0.65	-40°F to +250°F	92C8715	31.93	
165800	10	Polypropylene (20% Glass)	0.55	-40°F to +225°F	92C8719	33.99	
165900		Nylon (13% Glass)	0.65	-40°F to +250°F	02H2894	28.35	

(72563)

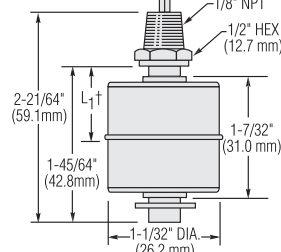
## LS-1700 SERIES ALLOY LIQUID LEVEL SWITCHES



01701 and 01702



01750 and 79990



01755

- Switch: SPST, 20VA
- UL Recognized, CSA Certified, CE Compliant

Ideal for shallow tanks or restricted spaces. LS-1700 series offers broad chemical compatibility for general purpose use. Ideal for oils and water. The LS-1750 and LS-1755 series are rugged construction suitable for most corrosive liquids and for high temperatures and pressures.

➤ CONTINUED ➤

## LS-1700 SERIES ALLOY LIQUID LEVEL SWITCHES (CONT.)

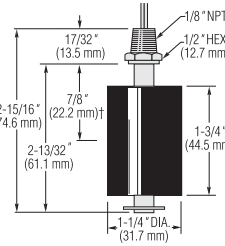
Mfg. Part No.	Material			Min. Liq. Sp. Gr.	Operating Temperature	Stock No.	Price Each
	Stem and Mounting	Float	Other Wetted				
01701	Brass	Buna N	316 SS, Epoxy	0.45	Water: to 180°F Oil: -40°F to +230°F	92C8672	37.00
01702	316 SS	316 SS	316 SS	0.70	-40°F to +300°F	92C8673	62.00
01750	316 SS	316 SS	316 SS	0.90	-40°F to +300°F	92C8674	71.00
01755	316 SS	316 SS	316 SS	0.90	-40°F to +300°F	92C8675	71.00

(72565)

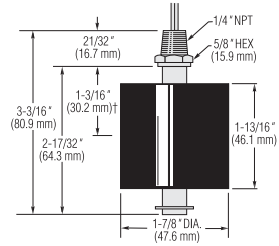
## LS-1800 AND LS-1900 SERIES ALLOY LIQUID LEVEL SWITCHES



LS-1807



LS-1801



LS-1901

- Buna N Float
- Pressure, psi, Max.: 150
- Operating Temperature: Water to 180°F, Oil -40°F to +230°F
- Electrical Termination: No. 18AWG, 24"L., Polymetric Lead Wires
- UL Recognized, Except Where Noted Below

LS-1800 and LS-1900 series switches offer excellent stability for general use in oils and waters. Along with their large float displacement, these switches withstand rough service and are suitable for high viscosity liquids.

## LS-1800 SERIES

Mfg. Part No.	Material			Min. Liq. Sp. Gr.	Switch SPST	Stock No.	Price Each
	Stem and Mounting	Float	Other Wetted				
01801	Brass	Buna N	316 SS, Hysol	0.75	20VA	92C8676	40.74
35651	316 SS	316 SS	316 SS	0.55	100VA**	92C8770	51.41
01807					20VA	92C8677	65.96

## LS-1900 SERIES

01907	316 SS	Buna N	316 SS	0.55	20VA	92C8679	70.81
35682		Buna N	316 SS	0.55	100VA**	92C8772	79.54

\*\* 100VA switches are not UL recognized (72566)

## LS-1950 SERIES ALLOY LIQUID LEVEL SWITCHES

- Stem and Mounting Material: 316 Stainless Steel
- Minimum Liquid Sp. Gr.: 0.80
- Pressure, Maximum: 750 psi
- 2 1/16" diameter (52.4mm)
- 1/4" NPT port

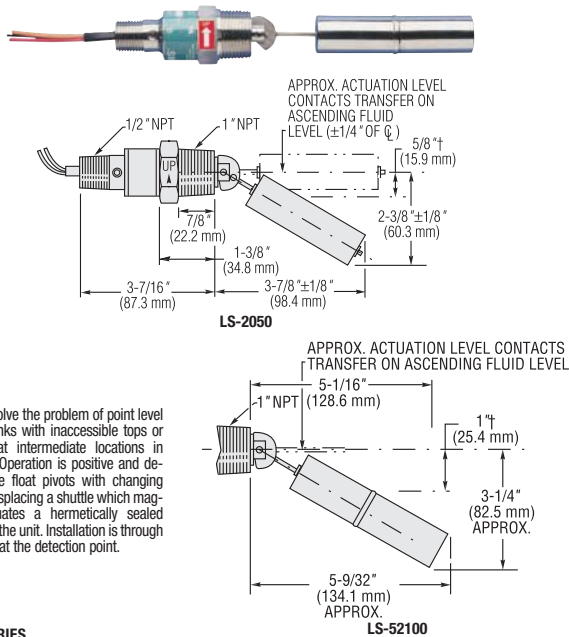
For high performance applications, these models provide high temperature and pressure capabilities. Construction materials comply with FDA food contact regulations. Exceptionally accurate for higher temperatures and in pressurized or corrosive liquids. For oils, water and chemicals. UL recognized, CSA certified, CE compliant.



Mfg. Part No.	Operating Temperature	Switch	Stock No.	Price Each
01950	-40°F to +300°F	SPST, 20VA	92C8680	76.50
26717	-40°F to +300°F	SPST, 100VA**	92C8756	83.64
79999	-40°F to +480°F	SPST, 20VA	92C8795	118.32

\*\*100VA switches are not UL recognized or CSA certified (72567)

## SENSORS – LIQUID LEVEL

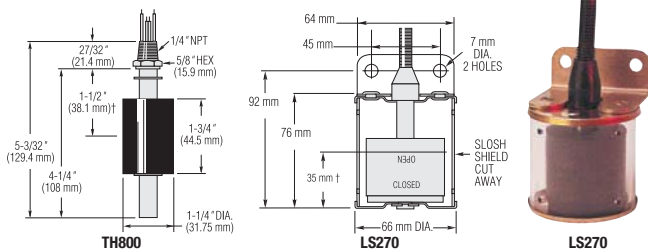
LS2050/52100 SERIES  
ALLOY SIDE MOUNT  
LIQUID LEVEL SWITCHES

LS-2050 SERIES

Mfg. Part No.	Material		Min. Liq. Sp. Gr.	Switch	Stock No.	Price Each
	Stem and Mounting	Float				1-9
30288	Brass	Buna N	0.80	SPDT, 20VA	92C8766	180.42

LS-52100 SERIES

52100	316 SS	304 SS	0.85	SPDT, 20VA	92C8779	253.17
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TH800 AND LS-270  
SERIES SPECIALTY  
LEVEL SWITCHES

- Maximum Pressure: 150 psi
- UL Recognized, CSA Certified

**TH800 series** temperature level switch is a level monitoring and temperature switch in a single unit. It is intermediate in size and has a single-setting temperature sensor at the bottom of its stem. **LS-270 series** bracket mounting slosh shield is small, lightweight and extremely stable in nonstatic, highly contaminated liquids. Slosh shielding minimizes effects of turbulence and helps prevent interference by foreign material. Bracket-mounted to any convenient surface.

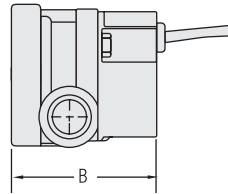
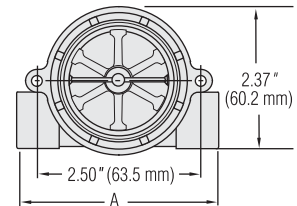
## TH800 SERIES — SPST - 20VA, N.O.

Mfg. Part No.	Material		Min. Liq. Sp. Gr.	Temperature Logic	Stock No.	Price Each
	Stem and Mounting	Float				1-9
● 57143	Brass	Buna N	0.75	N.C., Open on +150°F	92C8780	77.60

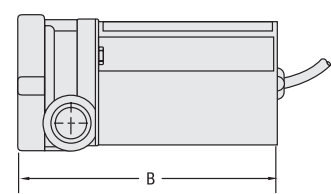
## LS-270 SERIES

Mfg. Part No.	Material		Min. Liq. Sp. Gr.	Switch Level SPST	Stock No.	Price Each
	Stem and Mounting	Float				1-9
● 43765	304 SS	Buna N	0.55	20VA, N.O.	92C8775	116.40
● 43760				20VA, N.C.	92C8774	116.40

(72570)

RFS TYPE FLOW SET  
POINT SWITCHES

VDC Versions



VAC Versions

- Combines Visual Confirmation of Flow with Dynamic, Electronic Switch Operation
- Adjustable Switch Point Calibration: A Local LED Signals When Set Point Is Reached
- Operating Temperature: Polypropylene - 20 - +180°F; Brass - 20 - +212°F

Mfg. Part No.	Body Material	Port Size NPT	Flow Range GPM	Dimensions (Inches)		Stock No.	Price Each
				A	B		
155425	Polypropylene	0.25"	0.1 to 5.0	3.06	2.38	92C8702	172.26
155876		0.50"	1.5 to 20.0	3.06	4.50	92C8706	195.03
155485		0.50"	1.5 to 20.0	3.06	2.38	92C8705	172.26
156266	Brass	0.25"	0.1 to 5.0	3.01	4.50	92C8711	252.45
156268		0.50"	1.5 to 20.0	3.01	2.32	92C8712	229.68
156269		0.50"	1.5 to 20.0	3.01	4.50	92C8713	252.45
180395		0.75"	5.0 to 30.0	3.94	2.95	92C8738	229.68
180396		0.75"	5.0 to 30.0	3.94	4.76	92C8739	252.45
181689		1.00"	8.0 to 60.0	3.94	4.76	92C8742	252.45

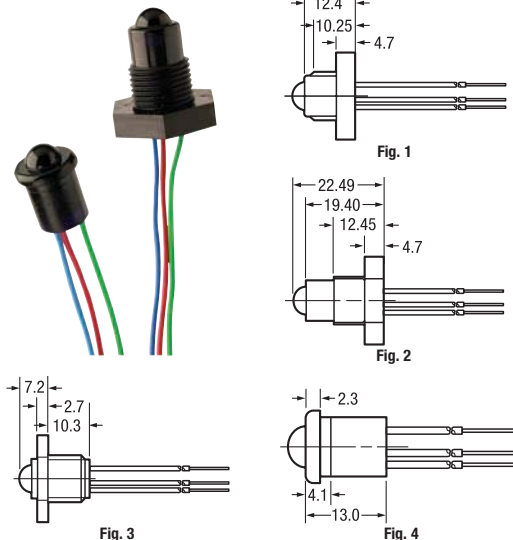
(72571)

## LLE SERIES LIQUID LEVEL SENSORS



## Honeywell

Sensing and Control



## Features:

- Accurate Repeatable Switching Point
- Microprocessor Compatible
- Reverse Polarity, Over Voltage, Short Circuit and Transient Protection

## Specifications:

- Termination: 250mm Flying Leads
- Operating Temperature: -25°C to 80°C (standard); -40°C to 125°C (high temperature)
- Supply Voltage (V<sub>CC</sub>): +5VDC to +12VDC ±5%
- Supply Current (mA): 15mA Nominal (standard temperature) 5mA Nominal (high temperature)

Liquid level sensors incorporate a phototransistor trigger which provides a digital output that denotes the presence or absence of liquid. LED and phototransistor are housed within a plastic dome at the head of the device. When no liquid is present, light from the LED is internally reflected from the dome to the phototransistor. When liquid covers the dome, the

➤ CONTINUED ➤



SENSORS – LIQUID LEVEL • SENSORS – MAGNETIC

LLE SERIES LIQUID LEVEL SENSORS (CONT.)

effective refractive index at the dome-liquid boundary changes, allowing some light from the LED to escape. Therefore, the amount of light received by the phototransistor is reduced and the output switches, indicating the presence of liquid, making this method of liquid level sensing very fast, and almost instantaneous for water.

STANDARD TEMPERATURE

Mfg. Part No.	Fig.	Description	Stock No.	Price Each	
				Each	2-4
● LLE101000	1	Screw-In M12 Thread (Type 1)	31H9782	22.83	21.44
● LLE102000	2	Screw-In M12 Thread (Type 2)	19M9540	22.83	21.44
● LLE103000	3	Screw-In M12 Thread (Type 3)	10M8430	22.83	21.44
● LLE105000	4	Push-In (Type 5)	05M0500	22.83	21.44

HIGH TEMPERATURE

Mfg. Part No.	Fig.	Description	Stock No.	Price Each	
				Each	2-4
● LLE101101	1	Screw-In M12 Thread (Type 1)	65K8989	34.85	32.73
● LLE102101	2	Screw-In M12 Thread (Type 2)	37K6789	34.85	32.73
● LLE103101	3	Screw-In M12 Thread (Type 3)	65K8990	34.85	32.73
● LLE105100	4	Push-In (Type 5)	65K8991	34.85	32.73

(74823)

LIQUID LEVEL SWITCHES



- Length: 88mm (LSH); 35mm (LSV)
- Can be used in N.O. and N.C. configurations by rotating 180°
- Switching voltage: 200VDC
- Switching Current: 0.5A



PPS = polyphenylene sulfide

SIDE MOUNT

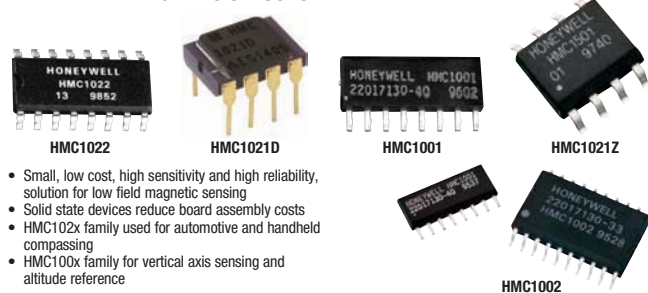
Mfg. Part No.	Material	Contact Power	Mounting	Stock No.	Price Each	
					1-9	10-24
● LSH-1-01-A	Polypropylene	10W	1/2" NPT	04M4565	14.29	12.38
● LSH-4-01-A	PVDF	10W	1/2" NPT	04M4568	16.43	14.24
● LSH-5-01-A	PPS	10W	1/2" NPT	76K1032	17.84	15.46
● LSH-1-01-B	Polypropylene	10W	Compression Seal	01J1684	14.29	12.38
● LSH-2-01-B	ABS	10W	Compression Seal	04M4567	14.29	12.38

VERTICAL MOUNT

● LSV-1-01-A	Polypropylene	10W	1/8" NPT	04M4570	11.03	9.56
● LSV-5-01-A	PPS	10W	1/8" NPT	76K1034	13.79	11.95
● LSV-1-01-B	Polypropylene	10W	Compression Seal	04M4571	11.03	9.56

(79209)

HMC100x AND 102x SERIES LOW FIELD LINEAR MAGNETIC SENSORS



- Small, low cost, high sensitivity and high reliability, solution for low field magnetic sensing
- Solid state devices reduce board assembly costs
- HMC102x family used for automotive and handheld compassing
- HMC100x family for vertical axis sensing and altitude reference

1-AXIS

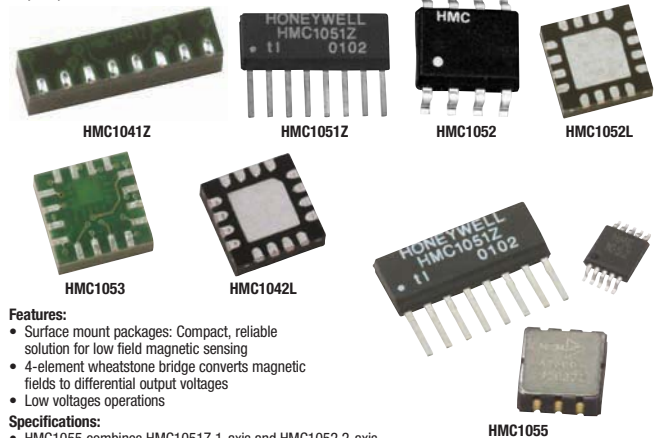
Mfg. Part No.	Field Range (gauss)	Resolution (µgauss)	Sensitivity (mV/V)	Package	Stock No.	Price Each
HMC1001	±2	27	3	8-SIP	91F4713	17.16
HMC1021D	±6	85	1	8-DIP	30K6321	232.44
HMC1021S	±6	85	1	8-SIP	91B5181	12.48
HMC1021Z	±6	85	1	8-SOIC	48F2837	12.48

2-AXIS

HMC1002	±2	27	3	20-SOIC	16F5415	23.40
HMC1022	±6	85	1	16-SOIC	91F4715	14.04

(90091)

HMC104X/HMC105X SERIES ULTRA SMALL 1-, 2-, AND 3-AXIS MAGNETIC SENSORS



Features:

- Surface mount packages: Compact, reliable solution for low field magnetic sensing
- 4-element wheatstone bridge converts magnetic fields to differential output voltages
- Low voltages operations

Specifications:

- HMC1055 combines HMC1051Z 1-axis and HMC1052 2-axis MEMSIC MX334UL accelerometer in a single kit

Z-AXIS

Mfg. Part No.	Field Range (gauss)	Resolution (mgauss)	Sensitivity (mV/V)	Package	Stock No.	Price Each
HMC1041Z	±6	120	1	8-LPCC	28K2340	12.48
1-AXIS						
HMC1051Z	±6	120	1	8-SIP	34C2810	12.48
HMC1051ZL	±6	120	1	8-LPCC	01J3095	15.60
2-AXIS						
HMC1052L	±6	120	1	8-LCC	73H4227	14.04
HMC1052	±6	120	1	10-MSOP	30C4610	14.04
HMC1042L	±6	120	1	16-LPCC	84K2730	14.04
3-AXIS						
HMC1055	±6	120	1	10-MSOP	73H4228	31.20
HMC1053	±6	120	1	16-LCC	26H2816	62.40
HMC1043	±6	120	1	16-LPCC	84K2731	28.08

(91175)

HMC15XX SERIES MAGNETIC POSITION SENSORS



Features:

- Non-contact sensors that measure the angular direction of a magnetic field vs. the strength and direction of a magnetic field
- Indexing not required
- Linear, angular and rotary applications

Specifications:

- 120mV signal output

Mfg. Part No.	Angular Range	Resolution	Package	Stock No.	Price Each
HMC1501	±45°	0.07°	8-SOIC	48F2838	12.48
HMC1512	±90°	0.05°	8-SOIC	95B7461	14.04

(91174)

3-AXIS MAGNETOMETERS



Features:

- Measure both magnetic field intensity and direction
- Small size and high sensitivity
- Ideal for compassing and navigation, security systems and lab instrumentation

Specifications:

- HMR2300 development kit includes one magnetometer module in aluminum enclosure, cabling with power supply, Windows demonstration software for remote PC, and users guide

Mfg. Part No.	Field Range (gauss)	Output	Resolution	Package	Stock No.	Price Each
HMC2003	±2	Analog	40	20-DIP	16F5425	249.60
HMR2300 DEMO KIT	±2	RS232	67	...	34C2812	877.50
HMR2300-D21-232	±2	RS232	67	...	16F5423	877.50
HMR2300-D21-485	±2	RS232	67	...	16F5424	850.20

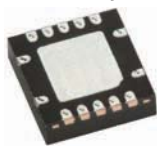
(91176)

## SENSORS – MAGNETIC • SENSORS – PHOTOELECTRIC

## HMC SERIES DIGITAL COMPASS SOLUTIONS

## Features:

- HMC6052 combines magneto-resistive sensor plus amplifiers and analog support features
- 2 channels of amplified sensor signals
- Set switch functions allow easy-to-implement solutions
- HMC6352 uses I2C serial interface supply heading data to host processors
- Ideal for consumer electronics applications
- Contains firmware heading computation and calibration

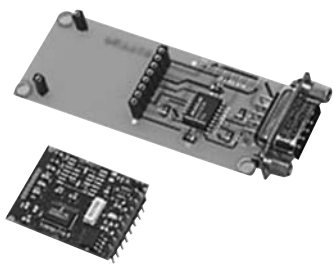
**Honeywell**

HMC6052

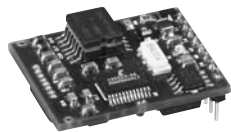
Mfg. Part No.	Description	Size	Field Range (gauss)	Package	Stock No.	Price Each
						1-4
HMC6052	2-Axis, PCB Module	3.5x3.5x0.8mm	±2	14-LCC	30K6322	31.20
HMC6352	2-Axis, PCB Module	6.5x6.5x1.4mm	±2	24-LCC	83H6761	37.44

(70806)

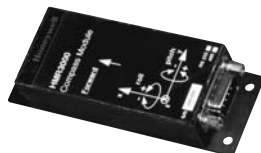
## HMR SERIES DIGITAL COMPASS SOLUTIONS

**Honeywell**

HMR3100



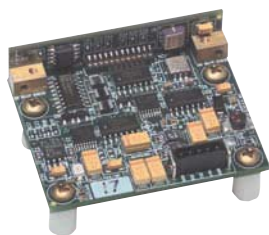
HMR3200



HMR3000



HMR3400



HMR3500

## Specifications:

- HMR Development kits includes HMR digital compass, circuit card with RS232 output, cabling with power supply, Windows demonstration software for remote PC, and users guide
- HMR3500 Development kits includes DB9 data and power cable, RS232 interface, Windows CompassHost software, and manual with software protocol message descriptions

Mfg. Part No.	Description	Size	Tilt Range	Stock No.	Price Each
					1-4
HMR3100	2-Axis, PCB Module	19x19x4.5mm	...	01J3096	93.60
HMR3200	2-Axis, PCB Module, UART Output	1"x1.45"x0.4"	...	34C2815	351.00
HMR3200 DEMO KIT	2-Axis, PCB Module, with Development Kit	1"x1.45"x0.4"	...	34C2816	429.00
HMR3000	3-Axis, Tilt Compensated, RS232 Output	1.5"x4.2"x0.88"	±40°	34C2813	819.00
HMR3000D00485	3-Axis, Tilt Compensated, RS485 Output	1.5"x4.2"x0.88"	±40°	49H6711	819.00
HMR3000 DEMO KIT	3-Axis, Tilt Compensated, RS232 Output with Development Kit	1.5"x4.2"x0.88"	±40°	34C2814	877.50
HMR3300	3-Axis, Tilt Compensated, PCB Module only	1"x1.45"x0.4"	±60°	34C2817	444.60
HMR3300-D00-232	3-Axis, Tilt Compensated, PCB Module and RS232 Motherboard	1"x1.45"x0.4"	±60°	92H7099	468.00
HMR3400	3-Axis, Tilt Compensated, PCB Module only	0.6"x1.5"	±60°	84K2741	405.60
HMR3500	3-Axis, Tilt Compensated, PCB Module only	2"x1.5"x0.5"	±80°	74K2363	842.40

➔ CONTINUED ➔

## HMR SERIES DIGITAL COMPASS SOLUTIONS (CONT.)

Mfg. Part No.	Description	Size	Tilt Range	Stock No.	Price Each
					1-4
HMR3300 DEMO KIT	3-Axis, Tilt Compensated, PCB Module with Development Kit	1"x1.45"x0.4"	±60°	34C2818	507.00
HMR3500 DEMO	3-Axis, Tilt Compensated, PCB Module with Development Kit	2"x1.5"x0.5"	±80°	84K2742	877.50

(91177)

## R58 SERIES EXPERT™ REGISTER MARK SENSORS


**BANNER**  
 more sensors, more solutions


Flat mount bracket



Right-angle bracket

## Features:

- Ultra-fast 10kHz switching frequency
- Sensor automatically selects red, green or blue LED during TEACH to optimize application contrast
- Outstanding color contrast sensitivity, detects 16 levels of gray scale
- Rugged zinc alloy die-cast housing with high-quality acrylic lens suitable for food processing applications; rated IP67, NEMA 6

## Specifications:

- Focus: 10mm (0.39")
- Supply voltage: 10 to 30VDC
- Output type: Bipolar NPN/PNP

## SENSORS

Mfg. Part No.	Sensing Image Orientation	Cable	Stock No.	Price Each
R58ECR6B1	Parallel to sensor length	5-wire, 2m	93K6147	239.00
R58ECR6B1Q	Parallel to sensor length	5-pin Euro-style QD pigtail	93K6148	239.00
R58ECR6B2	Perpendicular to sensor length	5-wire, 2m	93K6149	239.00
R58ECR6B2Q	Perpendicular to sensor length	5-pin Euro-style QD pigtail	93K6150	239.00

## QUICK-DISCONNECT CABLES

Mfg. Part No.	Description	Length (m)	Stock No.	Price Each
● MQDEC2-515	5-pin Euro-Style Straight, with shield	9	21H2313	28.62

## BRACKETS

Mfg. Part No.	Description	Stock No.	Price Each
● SMB55RA	Right-angle bracket, 12-gauge stainless steel	21H8851	9.20
● SMB55F	Flat mount bracket, 12-gauge stainless steel	21H8850	9.20

(88873)

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(94847)

## SENSORS – PHOTOELECTRIC

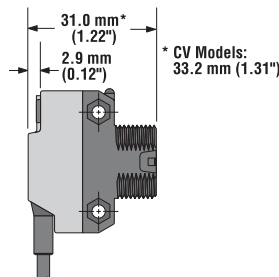
WORLD-BEAM® QS18  
UNIVERSAL  
COMPACT SENSORS

Fig. 2

- Easily Fits (or Retrofits) Almost Any Mounting Situation
- Exceptional Optical Performance, Comparable to Larger "Mini-Style" or Barrel Sensors
- Bright LED Operating Status Indicators Are Visible from 360°
- Rugged Sealed Housing, Protected Circuitry
- Supply Voltage: 10 - 30VDC
- All Models Less than 1ms Output Response for Excellent Sensing Repeatability
- Temperature: -20°C to +70°C (-4°F to +158°F) Except AF Versions (0°C to +55°C)

## OPPOSED MODE EMITTER (E) AND RECEIVER (R)

Mfg. Part No.	Fig.	Range	Cable	Output Type	Stock No.	Price Each
QS186E	1	20m (66')	2m (6.5') 2-Wire	N/A	02H6905	36.80
QS18VN6R	1	20m (66')	2m (6.5') 4-Wire	NPN	02H6897	54.17
QS18VP6R	1	20m (66')	2m (6.5') 4-Wire	PNP	02H6904	54.17

## POLARIZED RETROREFLECTIVE MODE

QS18VN6LP	2	3.5m (12')	2m (6.5') 4-Wire	NPN	02H6896	62.35
QS18VP6LP	2	3.5m (12')	2m (6.5') 4-Wire	PNP	02H6903	62.35

## CONVERGENT MODE

QS18VN6CV15	2	16mm (0.63")	2m (6.5') 4-Wire	NPN	02H6892	62.35
QS18VP6CV15	2	16mm (0.63")	2m (6.5') 4-Wire	PNP	02H6899	62.35
QS18VN6CV45	2	43mm (1.7")	2m (6.5') 4-Wire	NPN	02H6893	62.35

## DIFFUSE MODE

QS18VN6D	2	450mm (18")	2m (6.5') 4-Wire	NPN	02H6894	62.35
QS18VP6D	2	450mm (18")	2m (6.5') 4-Wire	PNP	02H6901	62.35

## ADJUSTABLE FIELD MODE

QS18VN6AF100	3	1mm (0.04") to Cutoff Point	2m (6.5') 4-Wire	NPN	02H6891	80.74
QS18VP6AF100	3	Cutoff Point Adjustable Between 20 - 100mm	2m (6.5') 4-Wire	PNP	02H6898	80.74

## PLASTIC FIBER-OPTIC MODE

QS18VN6FP	4	Varies	2m (6.5') 4-Wire	NPN	02H6895	62.35
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## MOUNTING BRACKETS

Mfg. Part No.	Description	Stock No.	Price Each
SMB18A	90°, Stainless Steel 2-Axis, 18mm	02H7579	3.07
SMB18SF	18mm Plastic, Swivel Mount Bracket	02H7580	7.16
SMBQS18AF	90°, Stainless Steel 2-Axis, Side Mount for Use with "AF" Versions	02H7577	4.09

(73570)

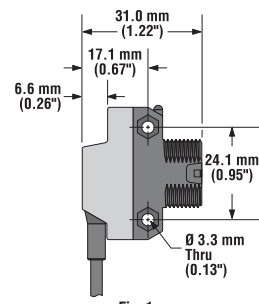
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more sensors, more solutions

Fig. 1

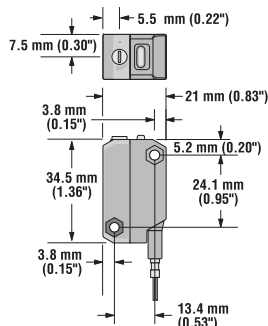


Fig. 3

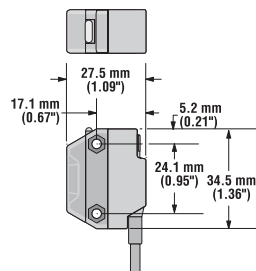
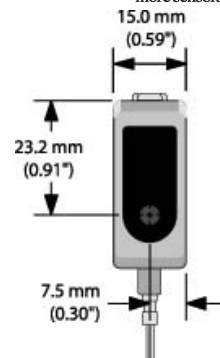


Fig. 4

WORLD-BEAM® QS18LAF  
SERIES LASER SENSORSBANNER®  
more sensors, more solutions

## Features:

- High-performance, low-cost laser sensors
- Adjustable-field sensing based on optical triangulation for applications where a bright background must be ignored
- Excellent optical performance throughout 30 - 150mm sensing range
- Narrow effective beam provides small-object detection and precise position control
- Crosstalk rejection algorithm protects against optical disturbances from adjacent sensors
- Visible Class 1 laser
- 10 to 30VDC operation
- Bright LED operating status indicators are visible from 360°
- Compact, rugged sealed housing, protected circuitry
- Mounting versatility - popular 18mm threaded barrel or side-mount

## Specifications:

- Focus: 10mm (0.39")
- Supply voltage: 10 to 30VDC
- Output type: Bipolar NPN/PNP

## SENSORS

Mfg. Part No.	Cable	Output	Stock No.	Price Each
QS18VN6LAF	4-wire, 2m integral cable	NPN	34K9442	139.00
QS18VP6LAF		PNP	34K9469	139.00
QS18VN6LAFQ5	4-pin Euro-style QD pigtail	NPN	34K9446	150.00
QS18VP6LAFQ5		PNP	34K9473	150.00

## QUICK-DISCONNECT CABLES

Mfg. Part No.	Description	Length (m)	Stock No.	Price Each
MQDC-406	4-pin Euro-style Straight, Threaded Connector	2	20M7027	16.87
MQDC-415		5	20M7028	19.93
MQDC-430		9	02H6730	32.71

## BRACKETS

Mfg. Part No.	Description	Stock No.	Price Each
SMBQS18AF	Right-angle mounting bracket, 14-gauge 304 stainless steel	02H7577	4.09

(88874)

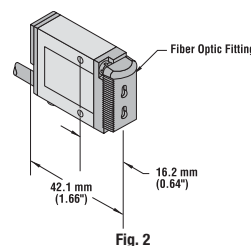
MINI-BEAM® DC  
PHOTOELECTRIC  
SENSORSBANNER®  
more sensors, more solutions

Fig. 2

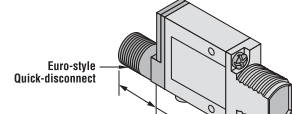


Fig. 1

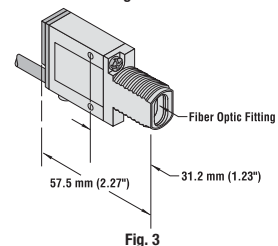


Fig. 3

➤ CONTINUED ➤



## SENSORS – PHOTOELECTRIC

## MINI-BEAM® DC PHOTOELECTRIC SENSORS (CONT.)

- Rear-Panel Light/Dark Operate Switch
- DC Models Include Patented Alignment Indicating Device Signal Strength Monitoring Indicator
- Integral Quick-Disconnect (QD) Fitting
- Sensing Mode Options: Opposed, Diffuse, Retroreflective, Convergent, and Glass and Fiber Optic
- Temperature Rating: -20°C to +70°C (-4°F to +158°F)
- Bipolar NPN/PNP Output
- Supply Voltage: 10-30VDC
- UL Listed, CSA Certified, CE Compliant

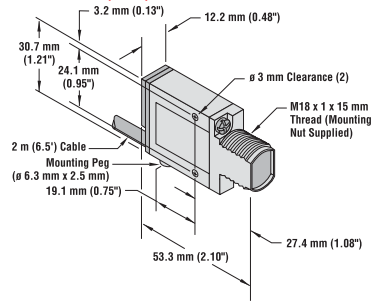


Fig. 4

Mfg. Part No.	Fig.	Mode	Sensing Range	Termination	Stock No.	Price Each
SM312CV2	4	Convergent	43mm	2m Cable	02H7606	97.39
SM312CV2QD	1	Convergent	43mm	4-Pin Euro QD	02H7607	97.39
SM312D	4	Diffuse	380mm	2m Cable	02H7608	83.92
SM312DQD	1	Diffuse	380mm	4-Pin Euro QD	02H7609	83.92
SM312F	3	Glass Fiber	Varies	2m Cable	02H7610	83.92
SM312FQD	3	Glass Fiber	Varies	4-Pin Euro QD	02H7613	83.92
SM31E	4	Opposed Emmitter	3m	2m Cable	02H7602	49.73
SM31EQD	4	Opposed Emmitter	3m	4-Pin Euro QD	02H7603	49.73
SM31R	4	Opposed	3m	2m Cable	02H7604	73.56
SM31RQD	1	Opposed	3m	4-Pin Euro QD	02H7605	73.56
SM31EL	1	Opposed Emmitter	30m	2m Cable	21H9680	67.20
SM31ELQD	1	Opposed Emmitter	30m	4-Pin Euro QD	21H9686	67.20
SM31RL	4	Opposed	30m	2m Cable	21H9721	99.40
SM31RLQD	1	Opposed	30m	4-Pin Euro QD	21H9731	99.40
SM312FP	2	Plastic Fiber	Varies	2m Cable	02H7611	90.14
SM312FPQD	2	Plastic Fiber	Varies	4-Pin Euro QD	02H7612	90.14
SM312LP	4	Polarized Retroreflective	3m	2m Cable	02H7614	90.14
SM312LPQD	1	Polarized Retroreflective	3m	4-Pin Euro QD	02H7615	90.14
SM312LV	4	Retroreflective	5m	2m Cable	02H7616	83.92
SM312LVQD	1	Retroreflective	5m	4-Pin Euro QD	02H7617	83.92

## MOUNTING BRACKETS

Mfg. Part No.	Description	Stock No.	Price Each
● SMB18A	90°, Stainless Steel 2-Axis, 18mm	02H7579	3.07
● SMB18SF	18mm Plastic, Swivel Mount Bracket	02H7580	7.16
● SMB312S	90°, Stainless Steel Bracket, Side Mount	02H7583	4.09

(73567)

## MINI-BEAM® AC PHOTOELECTRIC SENSORS



## Features:

- Signal strength or output indicator
- Solid state outputs
- 2m integral cable or 3-pin Micro-style QD
- Mfg. part nos. with suffix "QD" requires a mating cable; order separately on pages 1748-1749
- For 9m cable add suffix "W/30" to the mfg. part no.

## Specifications:

- Supply voltage: 24-240VAC
- Output configuration: SPST solid-state, 2-wire (light operate, dark operate selectable)
- Operating temperature: -20°C to +70°C

## INTEGRAL CABLE

Mfg. Part No.	Mode	Range	LED	Stock No.	Price Each
SM2A312CV	Convergent	16 mm	Visible Red LED	21H9516	107.75
SM2A312D	Diffuse	380 mm	Infrared LED	21H9532	102.57
SM2A312F	Glass Fiber	Variable	Infrared LED	21H9540	102.57
SM2A312FP	Plastic Fiber	Variable	Visible Red LED	21H9542	107.75
SM2A312LV	Retro	5 m	Visible Red LED	21H9564	102.57

## 3-PIN MICRO-STYLE QUICK DISCONNECT CABLE

SM2A312CVQD	Convergent	16 mm	Visible Red LED	21H9522	107.75
SM2A312DQD	Diffuse	380 mm	Infrared LED	21H9538	102.57
SM2A312FQD	Glass Fiber	Variable	Infrared LED	21H9550	102.57
SM2A312FPQD	Plastic Fiber	Variable	Visible Red LED	21H9546	107.75
SM2A312LVQD	Retro	5 m	Visible Red LED	21H9570	102.57

(89736)

## MINI-BEAM® EXPERT™ SENSORS

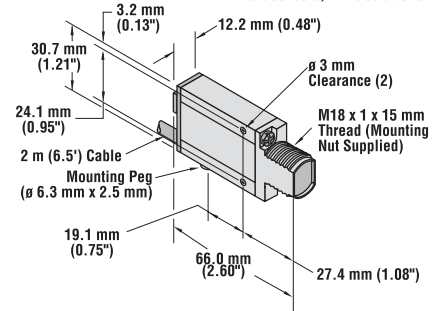


Fig. 1

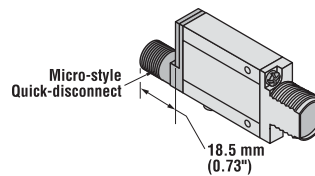


Fig. 2

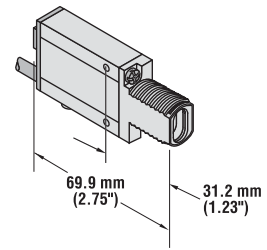


Fig. 3

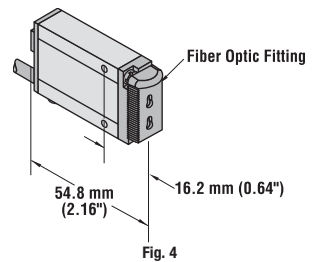


Fig. 4

- TEACH-Mode Sensors in the Popular MINI-BEAM Package
- Easy Pushbutton Programming Automatically Adjusts Sensitivity to Optimal Setting
- 500 Microsecond Output Response
- Bipolar NPN (Sinking)/PNP (Sourcing) Outputs
- Supply Voltage: 10 - 30VDC
- Easy Output Programming Eliminates the Need for Light or Dark Operate Selection
- Separate TEACH Input Allows Remote Programming by an External Device Such as a Switch or a Process Controller
- Temperature: -20°C to +70°C (-4°F to +158°F)
- CE Compliant, Canadian/US Recognized

## POLARIZED RETROREFLECTIVE MODE

Mfg. Part No.	Figure	Range	Cable	Stock No.	Price Each
SME312LP	1	10mm - 3m	2m (6.5') 5-Wire	02H7592	88.92
SME312LPQD	2	10mm - 3m	5-Pin Euro-Style QD	02H7593	88.92

## DIFFUSE MODE

SME312D	1	380mm (15\")	2m (6.5') 5-Wire	02H7586	82.79
SME312DQD	2	380mm (15\")	5-Pin Euro-Style QD	02H7587	82.79

## CONVERGENT MODE

SME312CV2	1	43mm (1.7\")	2m (6.5') 5-Wire	02H7584	96.07
SME312CV2QD	2	43mm (1.7\")	5-Pin Euro-Style QD	02H7585	96.07

## GLASS FIBER-OPTIC

SME312FV	3	Varies	2m (6.5') 5-Wire	02H7590	82.79
SME312FVQD	3	Varies	5-Pin Euro-Style QD	02H7591	82.79

## PLASTIC FIBER-OPTIC

SME312FP	4	Varies	2m (6.5') 5-Wire	02H7588	88.92
SME312FPQD	4	Varies	5-Pin Euro-Style QD	02H7589	88.92

(73568)

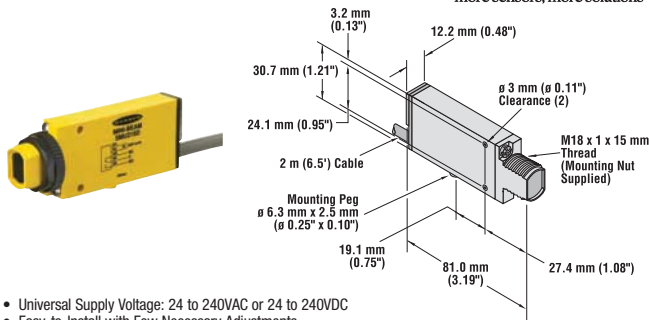
**Best products, great value.**

(94650)

## NO MINIMUM ORDER FEES

We offer the broadest in-stock selection. Visit us online or call us today.

## SENSORS – PHOTOELECTRIC

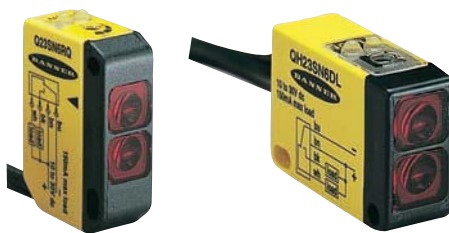
MINI-BEAM® UNIVERSAL  
VOLTAGE SENSORS

- Universal Supply Voltage: 24 to 240VAC or 24 to 240VDC
- Easy-to-Install with Few Necessary Adjustments
- 3A SPDT Electromechanical Relay
- Temperature: -20°C to +55°C (-4°F to +131°F)

Exclusive (U.S. Patent No. 4356393) alignment indicating device system (AID™) lights a rear panel LED whenever sensing light is detected. Superimposed pulse rate indicates received light signal strength.

Mfg. Part No.	Description	Range	Cable	Stock No.	Price Each 1-9
SMU31E	Opposed Mode Emitter	3m (10')	2m (6.5') 2-Wire	02H7594	59.28
SMU31R	Opposed Mode Receiver	3m (10')	2m (6.5') 5-Wire	02H7595	85.85
SMU315D	Diffuse Mode	380 mm (15')	2m (6.5') 5-Wire	02H7597	101.18
SMU315LV	Non-Polarized Retroreflective Mode	5m (15')	2m (6.5') 5-Wire	02H7601	101.18
SMU315LP	Polarized Extended Range Retroreflective Mode	10mm - 3m (0.4" - 10')	2m (6.5') 5-Wire	02H7600	106.29
SMU315CV2	Visible Red 650nm Convergent Mode	43mm (1.7")	2m (6.5') 5-Wire	02H7596	111.40
SMU315F*	Infrared 880nm Glass Fiber-Optic	Varies	2m (6.5') 5-Wire	02H7598	101.18
SMU315FP*	Visible Red 650nm Plastic Fiber-Optic	Varies	2m (6.5') 5-Wire	02H7599	106.29

\*Diagram not shown  
(73569)

Q23 SERIES MINIATURE  
PHOTOELECTRIC SENSORS

Q23

QH23

- Stainless Steel Right-Angle Mounting Bracket and Hardware Are Included
- -20°C to +55°C (-5°F to +131°F)

Choose NPN (sinking) or PNP (sourcing) models. Outputs are short circuit protected and rated for up to 150mA load. LED indications for power ON, output status (including overload condition), alignment and marginal signal. Supply voltage: 10-30VDC. UL recognized, CE compliant.

## OPPOSED MODE EMITTER (E) AND RECEIVER (R)

Mfg. Part No.	Range	Cable	Output Type	Dimensions (mm)	Stock No.	Price Each 1-9
Q236E	8m (26')	2m (6.5')	...	L W H	02H6914	42.28
Q236E				23 12 34		
Q236E			Complementary Solid-State NPN	34 12 23	02H6890	42.28
Q236E				23 12 34		
Q23SN6R	8m (26')	2m (6.5')	Complementary Solid-State NPN	L W H	02H6909	62.37
Q23SN6R				23 12 34		
Q23SN6R			Complementary Solid-State PNP	34 12 23	02H6885	62.37
Q23SN6R				23 12 34		
Q23SP6R	8m (26')	2m (6.5')	Complementary Solid-State PNP	L W H	02H6913	62.37
Q23SP6R				23 12 34		
Q23SP6R	8m (26')	2m (6.5')	Complementary Solid-State PNP	L W H	02H6889	62.37
Q23SP6R				23 12 34		

➤ CONTINUED ➤

## Q23 SERIES MINIATURE PHOTOELECTRIC SENSORS (CONT.)

## POLARIZED RETROREFLECTIVE MODE

Mfg. Part No.	Range	Cable	Output Type	Dimensions (mm)			Stock No.	Price Each
Q23SN6LP	100mm-2m (4-80")	2m (6.5')	Complementary Solid-State NPN	L	W	H	02H6908	76.11
QH23SN6LP			34	12	23	02H6884	76.11	
Q23SP6LP			25.5	12	34	02H6912	76.11	
QH23SP6LP			34	12	23	02H6888	76.11	

## DIFFUSE MODE (LONG RANGE)

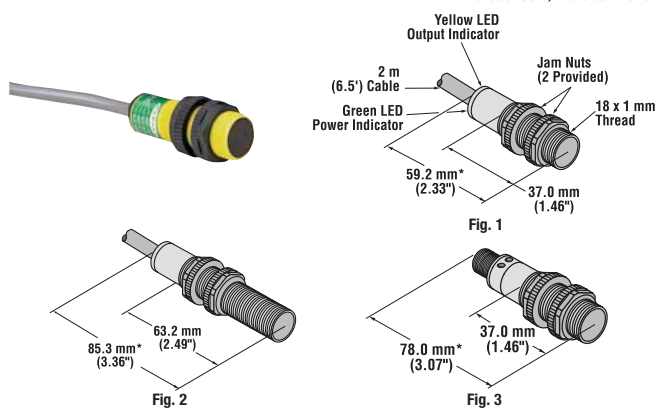
Q23SN6DL	Optimum: 30-300mm	2m (6.5')	Complementary Solid-State NPN	23	12	34	02H6907	76.11
QH23SN6DL				34	12	23	02H6883	76.11
Q23SP6DL	Max: 800mm (32")		Complementary Solid-State PNP	25.5	12	34	02H6911	76.11
QH23SP6DL				34	12	23	02H6887	76.11

## CONVERGENT MODE

Q23SN6CV50	50mm (2")	2m (6.5')	Complementary Solid-State NPN	25.5 12 34	02H6906	76.11
Q23SN6CV50			Complementary Solid-State PNP	34 12 23		
Q23SP6CV50			Complementary Solid-State NPN	36.5 12 23		
Q23SP6CV50			Complementary Solid-State PNP	36.5 12 23		

(73574)

## S18 SERIES EZ-BEAM® SENSORS



- 18mm Thermoplastic Polyester-Threaded Barrel Sensor
- Advanced Self-Diagnostics with Separate Alarm Output
- Dual LED System Indicates Sensor Performance
- SPST Solid-State Switch Output, Maximum Load 300mA
- -10°C to +50°C (+14°F to +122°F)
- CE Compliant

## OPPOSED MODE EMITTER (E) AND RECEIVER (R)

Mfg. Part No.	Range	Cable	Supply Voltage	Output Type	Fig.	Stock No.	Price Each 1-9
S186E	20m (66')	2m (6.5')	10-30VDC	...	1	02H7663	25.55
S186EQ		4-Pin Euro QD			3	02H7664	25.55
S18SN6R		2m (6.5')			1	02H7652	35.77
S18SN6RQ		4-Pin Euro QD		NPN	3	02H7653	35.77
S18SP6R		2m (6.5')			1	02H7660	35.77
S18SP6RQ		4-Pin Euro QD	20-250VAC	PNP	3	02H7661	35.77
S183E		2m (6.5')			2	02H7662	32.71
S18RW3R		2m (6.5')		DO	2	02H7645	47.02
S186E		2m (6.5')			2	02H7645	47.02

## RETROREFLECTIVE MODE, POLARIZED (VISIBLE RED, 680 NM)

S18SN6LP	2m (79")	2m (6.5')	10-30VDC	NPN	1	02H7650	72.57
S18SN6LPQ		4-Pin Euro QD			3	02H7651	72.57
S18SP6LP		2m (6.5')		PNP	1	02H7658	72.57
S18SP6LPQ		4-Pin Euro QD			3	02H7659	72.57
S18RW3LP		2m (6.5')		DO	2	02H7644	88.92
S18RW3LP		2m (6.5')			2	02H7644	88.92

## S18 DIFFUSE MODE (100mm RANGE)

S18SN6D	100mm (4")	2m (6.5')	10-30VDC	NPN	1	02H7646	39.86
S18SN6DQ		4-Pin Euro QD			3	02H7647	43.95
S18SP6D		2m (6.5')		PNP	1	02H7654	39.86
S18SP6DQ		4-Pin Euro QD			3	02H7655	43.95
S18AW3D		2m (6.5')		LO	2	02H7642	53.15
S18AW3D		2m (6.5')			2	02H7642	53.15

➤ CONTINUED ➤

## SENSORS – PHOTOELECTRIC

## S18 SERIES EZ-BEAM® SENSORS (CONT.)

S18 FIXED-FIELD MODE (WITH 100mm FAR LIMIT CUTOFF)

Mfg. Part No.	Range	Cable	Supply Voltage	Output Type	Fig.	Stock No.	Price Each
S18SN6FF100	100mm (4")	2m (6.5')	10-30VDC	NPN	1	02H7648	82.79
S18SN6FF100Q		4-Pin Euro QD			3	02H7649	82.79
S18SP6FF100		2m (6.5')		PNP	1	02H7656	82.79
S18SP6FF100Q		4-Pin Euro QD			3	02H7657	82.79
S18AW3FF100		2m (6.5')	20-250VAC	LO	2	02H7643	101.18

## MOUNTING BRACKETS

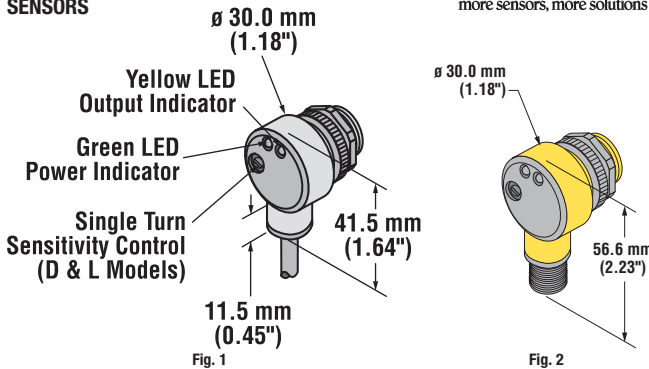
Mfg. Part No.	Description	Stock No.	Price Each
● SMB18A	90° Stainless Steel 2-Axis, 18mm	02H7579	3.07
● SMB18SF	18mm Plastic, Swivel Mount Bracket	02H7580	7.16

(73571)

## T18 SERIES EZ-BEAM® SENSORS



more sensors, more solutions



- Patented Right-Angle Thermoplastic Polyester Housing with 18mm Threaded Lens
- Advanced Self-Diagnostics with Separate Alarm Output
- Dual LED System Indicates Sensor Performance
- Choose SPDT (Complementary) NPN or PNP Outputs (150mA Max. Each)
- SPST Solid-State Switch Output, Maximum Load 300mA
- -40°C to +70°C (-40°F to +158°F)

UL listed, CSA certified, CE compliant.

## OPPOSED MODE EMITTER (E) AND RECEIVER (R)

Mfg. Part No.	Range	Cable	Supply Voltage	Output Type	Fig.	Stock No.	Price Each
T186E	20m (66')	2m (6.5')	10-30VDC	NPN	1	02H7704	33.73
T186EQ		4-Pin Euro QD			2	02H7705	33.73
T18SN6R		2m (6.5')		PNP	1	02H7693	49.06
T18SN6RQ		4-Pin Euro QD			2	02H7694	49.06
T18SP6R		2m (6.5')	20-250VAC	DO	1	02H7701	49.06
T18SP6RQ		4-Pin Euro QD			2	02H7702	49.06
T183E		2m (6.5')		...	Not Shown	02H7703	39.86
T18RW3R		2m (6.5')		DO	Not Shown	02H7686	61.32

## RETROREFLECTIVE MODE, POLARIZED (VISIBLE RED, 680 NM)\*

T18SN6LP	2m (79')	2m (6.5')	10-30VDC	NPN	1	02H7691	72.57
T18SN6LPQ		4-Pin Euro QD			2	02H7692	72.57
T18SP6LP		2m (6.5')		PNP	1	02H7699	72.57
T18SP6LPQ		4-Pin Euro QD			2	02H7700	72.57
T18RW3LP		2m (6.5')	20-250VAC	DO	Not Shown	02H7685	88.92

Use polarized models when shiny objects will be sensed

## DIFFUSE MODE WITH GAIN CONTROL (DC)

T18SND	500mm (20")	2m (6.5')	10-30VDC	NPN	1	02H7687	56.21
T18SNDQ		4-Pin Euro QD			2	02H7688	56.21
T18SP6D		2m (6.5')		PNP	1	02H7695	56.21
T18SP6DQ		4-Pin Euro QD			2	02H7696	56.21

## DIFFUSE MODE WITH GAIN CONTROL (AC)

T18AW3D	300mm (12")	2m (6.5')	20-250VAC	LO	Not Shown	02H7683	68.48
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## T18 SERIES EZ-BEAM® SENSORS (CONT.)

FIXED-FIELD MODE WITH 100MM FAR LIMIT CUTOFF

Mfg. Part No.	Range	Cable	Supply Voltage	Output Type	Fig.	Stock No.	Price Each
T18SN6FF100	100mm (4")	2m (6.5') 4-Pin Euro QD	10-30VDC	NPN	1	02H7689	82.79
T18SN6FF100Q		2m (6.5') 4-Pin Euro QD			2	02H7690	82.79
T18SP6FF100		2m (6.5') 4-Pin Euro QD		PNP	1	02H7697	82.79
T18SP6FF100Q		2m (6.5') 4-Pin Euro QD			2	02H7698	82.79
T18AW3FF100		2m (6.5')	20-250VAC	LO	Not Shown	02H7684	101.18

## MOUNTING BRACKETS

Mfg. Part No.	Description	Stock No.	Price Each
● SMB18A	90°, Stainless Steel 2-Axis, 18mm	02H7579	3.07
● SMB18SF	18mm Plastic, Swivel Mount Bracket	02H7580	7.16

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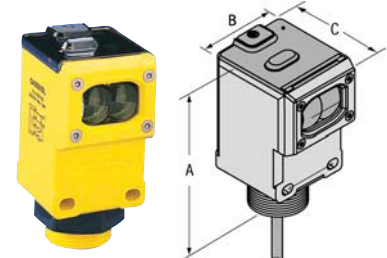
## Q45 SERIES SENSORS



more sensors, more solutions

- Retroreflective Models Include Laser Versions for Very Long Range or Precise Sensing
- -40°C to +70°C (-40°F to +158°F)

Internal light/dark operate switch and multi-turn sensitivity (gain) control accessible beneath hinged, o-ring sealed top cover. UL listed, CSA certified, CE compliant.



## OPPOSED MODE EMITTER (E) AND RECEIVER (R)

Mfg. Part No.	Range	Cable	Supply Voltage	Dimensions (mm)	Stock No.	Price Each
Q456E	60m (200')	2-Wire 2m (6.5')	10-30VDC	87.6 44.5 54.1	02H6934	57.24
Q456EQ5		4-Pin Euro QD		102.6 44.5 54.1	02H6935	57.24
Q45BB6R		4-Wire 2m (6.5')		87.5 44.5 54.1	02H6925	75.63
Q45BB6RQ5		4-Pin Euro QD		102.6 44.5 54.1	02H6926	75.63
Q453E		2-Wire 2m (6.5')	Universal 12-250VDC or 24-250VAC	87.6 44.5 54.1	02H6933	61.32
Q45VR3R		5-Wire 2m (6.5')		87.6 44.5 54.1	02H6932	86.87

## RETROREFLECTIVE MODE (POLARIZED)

Q45BB6LP	0.15-6m (6"-20')	4-Wire 2m (6.5')	10-30VDC	87.6 44.5 54.1	02H6923	86.87
Q45BB6LPQ5		4-Wire Euro QD		102.6 44.5 54.1	02H6924	86.87
Q45VR3LP		5-Wire 2m (6.5')	Universal 12-250VDC or 24-250VAC	87.6 44.5 54.1	02H6931	99.14

## DIFFUSE MODE, LONG RANGE

Q45BB6DL	1.8m (6')	4-Wire 2m (6.5')	10-30VDC	87.6 44.5 54.1	02H6917	81.76
Q45BB6DLQ5		4-Pin Euro QD		102.6 44.5 54.1	02H6918	81.76
Q45VR3DL		5-Wire 2m (6.5')	Universal 12-250VDC or 24-250VAC	87.6 44.5 54.1	02H6928	93.01

## GLASS FIBER OPTIC (VISIBLE RED, 650 NM)

Q45BB6FV	Varies*	4-Wire 2m (6.5')	10-30VDC	87.6 44.5 60.5	02H6921	81.76
Q45BB6FVQ5		4-Pin Euro QD		102.6 44.5 60.5	02H6922	81.76
Q45VR3FV		5-Wire 2m (6.5')	Universal 12-250VDC or 24-250VAC	87.6 44.5 60.5	02H6930	99.14

➔ CONTINUED ➔



## SENSORS – PHOTOELECTRIC

## Q45 SERIES SENSORS (CONT.)

## PLASTIC FIBER OPTIC

Mfg. Part No.	Range	Cable	Supply Voltage	Dimensions (mm)			Stock No.	Price Each 1-9
				A	B	C		
Q45BB6FP	Varies*	4-Wire 2m (6.5')	10-30VDC	87.6	44.5	59.8	02H6919	87.90
Q45BB6FPQ5		4-Pin Euro QD		102.6	44.5	59.8	02H6920	87.90
Q45VR3FP		5-Wire 2m (6.5')	Universal 12-250VDC or 24-250VAC	87.6	44.5	59.8	02H6929	99.14

▶ CONTINUED ▶

## Q45 SERIES SENSORS (CONT.)

## CONVERGENT MODE

Mfg. Part No.	Range	Cable	Supply Voltage	Dimensions (mm)			Stock No.	Price Each 1-9
				A	B	C		
Q45BB6CV4	100mm (4")**	4-Wire 2m (6.5')	10-30VDC	87.6	44.5	61.7	02H6915	91.98
Q45BB6CV4Q5		4-Pin Euro QD		102.6	44.5	61.7	02H6916	91.98
Q45VR3CV4		5-Wire 2m (6.5')	Universal 12-250VDC or 24-250VAC	87.6	44.5	61.7	02H6927	103.23

\*Range varies by sensing mode and fiber optics used.

\*\* Spot Size at Focus: 1.5mm (0.06")

## MOUNTING BRACKETS

Mfg. Part No.	Description	Stock No.	Price Each 1-9
● SMB30MM	90° Stainless Steel, 30mm	02H7581	5.11
● SMB30SC	30mm Plastic, Swivel Mount	02H7582	7.16

(73573)

## MULTI-BEAM® SENSORS

## Selection of Components For MULTI-BEAM® Sensors

1. Choose a sensor block for the required sensing mode
2. Choose a power block for the required sensing power (AC or DC) and interface
3. Choose a logic module (not required for opposed emitters)
4. Simply plug components together without interwiring to create a complete self-contained photoelectric sensor that is tailored to your exact needs

MULTI-BEAM® sensors are compact modular self contained photoelectric switches. The scanner block contains the complete modulated photoelectric amplifier as well as the emitter and receiver optoelements. It also contains the sensing optics and the housing for the other two modules. The power block provides the interface between the scanner block and external circuit. It contains a power supply for the MULTI-BEAM® plus a switching device to interface the circuit to be controlled. The logic module interconnects the power block and scanner block both electrically and mechanically. It provides the ability to program the output for either light- or dark-operate. The emitters of MULTI-BEAM® emitter-receiver pairs do not require a logic module. Emitter scanner blocks are supplied with a blade-pin to interconnect the scanner block and power block. This modular design, with field power block and logic module, permits over 5,000 sensor configurations, resulting in exactly the right sensor for any photo electric application. Three- and four-wire sensors permit either AC or DC operation and offer the fastest response times and the greatest ranges. The circuitry of all MULTI-BEAM® components is encapsulated within rugged, corrosion VALOX® housings, which meet or exceed NEMA 1, 2, 12, and 13 ratings. Scanner blocks include an Alignment Indicating Device (AID™) which lights a top-mounted LED when the sensor sees its own modulated light source and pulses the LED at a rate proportional to the received light signal.

## MULTI-BEAM® 3- AND 4-WIRE SCANNER BLOCKS

Mfg. Part No.	Description	Range	Response	Stock No.	Price Each	
					1-9	10-24
SBE	Opposed Mode Emitter, high speed infrared 940 nm	150-ft with SBR1 Receiver	1 on/off	21H7420	73.44	69.84
SBR1	Opposed Mode Receiver for use with SBE Emitter	150-ft with SBE Emitter	1 on/off	21H7448	99.96	95.06
SBEX	Opposed Mode Emitter, high power, long range infrared 940 nm	700-ft with SBRX1 Receiver	10 on/off	21H7424	83.64	79.54
SBRX1	Opposed Mode Receiver for use with SBEX Emitter	700-ft with SBEX Emitter	10 on/off	21H7447	99.96	95.06
SBL1	Retroreflective Mode Scanner Block, high speed infrared 940 nm	1" to 30-ft with BRT-3 reflector	1 on/off	21H7440	100.98	96.03
SBLV1	Retroreflective Mode Scanner Block, high speed visible red 650 nm	6" to 30-ft with BRT-3 reflector	1 on/off	21H7438	100.98	96.03
SBD1	Diffused Mode Scanner Block, high speed infrared 940 nm	12" using 90% reflectance white card	1 on/off	21H7418	100.98	96.03
SBDX1	Diffused Mode Scanner Block, high power, long range infrared 880 nm	6-ft using 90% reflectance white card	10 on/off	21H7416	110.16	104.76
SBC1	Convergent Mode Scanner Block, infrared 940 nm	1.5" focal point	1 on/off	21H7408	131.58	125.13
SBF1	Glass Fiber Optic Scanner Block, high speed infrared 940 nm	varies by type of fiber optic cables used	1 on/off	21H7433	127.50	121.25
SBFX1	Glass Fiber Optic Scanner Block, high power infrared 880 nm	varies by type of fiber optic cables used	10 on/off	21H7431	132.60	126.10

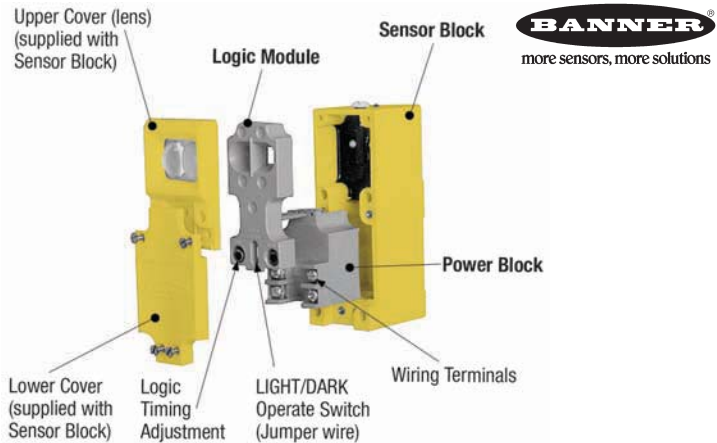
## MULTI-BEAM® 3- AND 4-WIRE POWER BLOCKS

Mfg. Part No.	Output Type	Output Capacity	Supply Voltage	On-State V Saturation	Stock No.	Price Each	
						1-9	10-24
PBA	Relay	250, 750ma Max.	105 to 130VAC	2.5VAC	21H4237	38.76	36.86
PBAT	Relay	222, 100ma Max.	105 to 130VAC	<3VAC/DC	21H4242	38.76	36.86
PBA-1	...	...	105 to 130VAC	...	21H4238	31.62	30.07
PBP	SPST, PNP (Sourcing)	30, 250ma Max.	10 to 30VDC	1VAC	21H4425	32.64	31.04
PBT	SPST, NPN (Sinking)	30, 250ma Max.	10 to 30VDC	1VAC	21H4515	32.64	31.04
PBT-1	...	...	10 to 30VDC	...	21H4516	27.54	26.19

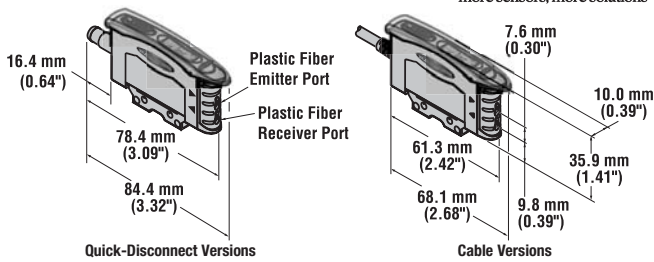
## MULTI-BEAM® 3- AND 4-WIRE LOGIC MODULES

Mfg. Part No.	Timing Function	Timing Range	Stock No.	Price Each	
				1-9	10-24
LM1	On-Delay and Off-Delay	None to light operate only	21H0811	14.28	13.58
LM3	On-Delay and Off-Delay	None to output follows input	21H0817	24.48	23.28
LM5	On-Delay	1.5 sec. to 15 sec.	21H0832	57.12	54.32
LM5-14	On-Delay and Off-Delay	1.5 sec. to 15 sec.	21H0833	68.34	64.99

(78055)



## SENSORS – PHOTOELECTRIC

D10 EXPERT™ SERIES  
FIBER-OPTIC SENSORS

- 4-Mode Power and Speed Selection with Automatic Crosstalk Avoidance Circuitry
- Gate Input Wire Can Be Used to Selectively Inhibit Sensor Outputs from Switching
- Sleek, Ultra-Slim 10mm Housing, Mounts to a Standard 35mm DIN Rail, or Use Mounting Bracket Included

Easy-to-set automatic Expert-style TEACH options including static, dynamic and single-point programming plus a manual adjustment for fine-tuning. 16-bit microcontroller and 12-bit analog-to-digital converter for high-performance, low-contrast sensing. Easy-to-read 4-digit display TEACH and signal strength readout, plus indicators for a continuous readout or operating status (user configurable).

## DUAL DISCRETE OUTPUTS (VISIBLE RED 680 NM)

Mfg. Part No.	Cable	Supply Voltage	Output Type	Stock No.	Price Each
D10DNFP	2m (6.5') Cable	12-24VDC	NPN	02H6487	162.50
D10DNFPQ	6-Pin Pico-Style QD	12-24VDC	NPN (Sinking)	02H6488	162.50

## ANALOG AND DISCRETE OUTPUTS (VISIBLE RED 680 NM)

Mfg. Part No.	Cable	Supply Voltage	Discrete Output	Analog Output	Stock No.	Price Each
D10IPFP	2m (6.5') Cable	12-24VDC	PNP	4-20mA	02H6493	203.38
D10IPFPQ	6-Pin Pico-Style QD	12-24VDC	PNP (Sourcing)	4-20mA	02H6494	203.38
D10UNFP	2m (6.5') Cable	15-24VDC	NPN	0-10V	02H6495	203.38
D10UNFPQ	6-Pin Pico-Style QD	15-24VDC	NPN (Sinking)	0-10V	02H6496	203.38

(73575)

Q12 SERIES MINIATURE  
PHOTOELECTRIC SENSORS

- Bright, visible red (640nm) light source
- 10 to 30VDC operation
- Solid-state, bipolar outputs: One current sourcing (PNP) and one current sinking (NPN)
- Light operate (LO) or dark operate (DO) depending on model
- Compact 8mm (0.31") housing mounts almost anywhere; ideal for extremely confined areas
- Crosstalk-avoidance circuitry for multiple-sensor applications
- LED status indicator for power ON, output overload, signal received and marginal signal
- Rated IP67



Q12

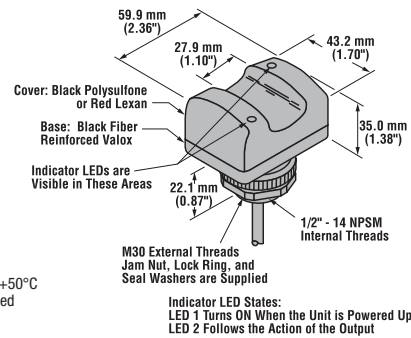


Mfg. Part No.	Sensing Mode	Range	Output	Stock No.	Price Each
Q12AB6FF15	Fixed-Field 640nm Visible Red	10-15mm	Bipolar LO	30K6998	73.99
Q12RB6FF15			Bipolar DO	30K7003	73.99
Q12AB6FF30		16-30mm	Bipolar LO	30K6999	73.99
Q12RB6FF30			Bipolar DO	30K7004	73.99
Q12AB6FF50		16-50mm	Bipolar LO	30K6394	73.99
Q12RB6FF50			Bipolar DO	30K7005	73.99
Q12AB6LP	Polarized Retro 640nm Visible Red	1m	Bipolar LO	30K7000	89.85
Q12RB6LP			Bipolar DO	30K7006	89.85
Q12AB6LV	Retro 640nm Visible Red	1.5m	Bipolar LO	30K7001	84.56
Q12RB6LV			Bipolar DO	30K7007	84.56
Q12AB6R	Opposed 640nm Visible Red	2m	Bipolar LO	30K7002	52.85
Q12RB6R			Bipolar DO	30K7008	52.85
Q126E			None	30K7009	42.28

(84778)

TOUCH-ACTIVATED  
OPTOELECTRONIC  
SENSORS

- Operating Temperature: -20°C to +50°C
- Black Sensor Field Cover is Supplied



Output is a 7A SPDT electromechanical relay. All models are supplied with a black polypropylene field cover designed to prevent inadvertent switch activation.

**WARNING: OTB and LTB Series Touch Buttons** are not themselves safety devices. For two-hand control safety applications, see safety modules (mfg. part no. ATGMK-VP6 two-hand control kit) on page 1877.

## MOMENTARY ACTION OTB'S

Mfg. Part No.	Cable	Upper Housing	Supply Voltage	Output	Stock No.	Price Each
OTBA5	2m (6.5')	Polysulfone	120VAC	SPDT	02H6802	104.25
OTBB5	2m (6.5')		220/240VAC	Electromechanical Relay	02H6803	104.25
OTBVP6	2m (6.5')		10 - 30VDC	Complementary PNP	02H6805	104.25
OTBVN6	2m (6.5')			Complementary NPN	02H6804	104.25

## ALTERNATE ACTION LTB'S

Mfg. Part No.	Cable	Upper Housing	Supply Voltage	Output	Stock No.	Price Each
LTBA5	2m (6.5')	Polysulfone	120VAC	SPDT	02H6705	104.25
LTBB5	2m (6.5')		220/240VAC	Electromechanical Relay	02H6706	104.25

## CONTROL RELAYS

Mfg. Part No.	Description	Stock No.	Price Each
AT-AM-2A	115VAC, Redundant Safety Relay (Force-Guided) Contacts, 6A Maximum Each, One N.C. Reed Relay	02H6390	255.50
AT-FM-2A	24VDC, Redundant Safety Relay (Force-Guided) Contacts, 6A Maximum Each, One N.C. Reed Relay	02H6391	240.17

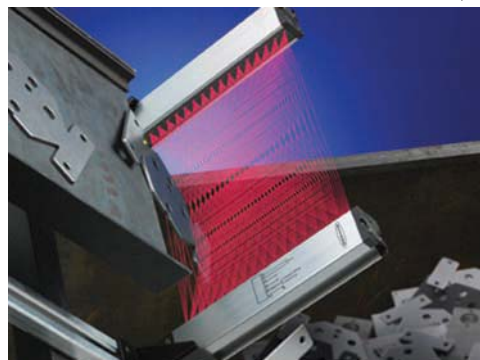
## QUICK-DISCONNECT CABLES

Mfg. Part No.	Description	Stock No.	Price Each
MQDC-406	4-Pin Euro Straight QD Cable - 2 Meters	20M7027	16.87
MQDC-415	4-Pin Euro Straight QD Cable - 5 Meters	20M7028	19.93
MQDC-430	4-Pin Euro Straight QD Cable - 9 Meters	02H6730	32.71

## MOUNTING BRACKETS

Mfg. Part No.	Description	Stock No.	Price Each
SMB30MM	90°, Stainless Steel, 30mm	02H7581	5.11
SMB30SC	30mm Plastic, Swivel Mount	02H7582	7.16

(73581)

LX SERIES PART  
SENSING LIGHT  
SCREEN

## Features:

- Simple, economical, and highly reliable means of sensing small parts or flat items which pass anywhere through the light screen
- Fast response
- Simple wiring configuration: Synchronization wire not needed
- Rugged and self contained: IEC IP65 rated
- Bipolar design offers both NPN (sinking) and PNP (sourcing) solid-state outputs
- Supply protection: Protected against reverse polarity and transient voltages

➤ CONTINUED ➤

## SENSORS – PHOTOELECTRIC

## LX SERIES PART SENSING LIGHT SCREEN (CONT.)

## Specifications:

- Standard range models shown :150mm to 2m (6" to 6.5")
- Supply voltage and power: 10 to 30Vdc
- Construction: Aluminum housing, acrylic lens window
- Temperature range: -20° to +70°C (-4°F to +158°F)

A flexible and reliable part detection light screen for sensing small or flat parts at high speed. Uses a strobed web of modulated, cross-hatched pattern light beams. Consists of two self-contained units: an emitter and receiver of equal size and sensing range. Typical applications include parts ejection verification and conveyor package detection. Short range: 75mm to 200mm (3" to 8") emitters and receivers also available.

## LIGHT CURTAINS

Mfg. Part No.	Protection Height (mm)	Unit Type	Cable Termination	Stock No.	Price Each
					1-9
LX3E	67	Emitter	Integral	99H0167	178.85
LX3R	67	Receiver	Integral	99H0170	218.71
LX3EQ	67	Emitter	Quick Disconnect	99H0168	178.85
LX3RQ	67	Receiver	Quick Disconnect	99H0171	218.71
LX6E	143	Emitter	Integral	99H0173	201.34
LX6R	143	Receiver	Integral	99H0177	277.99
LX6EQ	143	Emitter	Quick Disconnect	99H0174	201.34
LX6RQ	143	Receiver	Quick Disconnect	99H0178	277.99
LX12E	295	Emitter	Integral	99H0158	267.77
LX12R	295	Receiver	Integral	99H0162	436.40
LX12EQ	295	Emitter	Quick Disconnect	99H0159	267.77
LX12RQ	295	Receiver	Quick Disconnect	99H0163	436.40

## QUICK DISCONNECT CABLES

Mfg. Part No.	Length (m)	Description	Stock No.	Price Each
				1-9
● MQDEC2-515	5	Straight, 5-pin Euro-style	21H2313	28.62

## MOUNTING BRACKETS

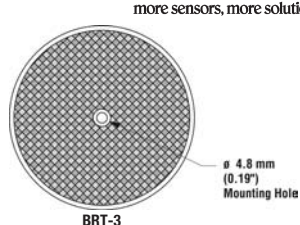
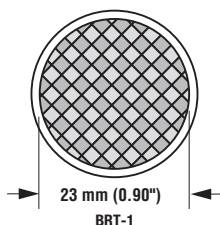
Mfg. Part No.	Description	Stock No.	Price Each
			1-9
SMBLX	End-cap brackets; set of 2	99H2350	5.11
SMBLXR	Back-mount bracket for secure one-end mounting	99H2351	6.14

## LENS SHIELDS

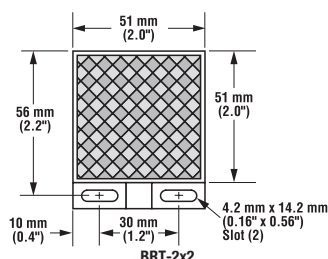
Mfg. Part No.	Description	Stock No.	Price Each
			1-9
LXS3	Lens Shield for the LX3	99H0154	10.22
LXS6	Lens Shield for the LX6	99H0155	11.25
LXS12	Lens Shield for the LX12	99H0153	12.27

(87303)

## RETROREFLECTIVE TARGETS



High-quality acrylic targets, high-temperature targets, and adhesive-backed retro tapes.



Mfg. Part No.	Description	Reflectivity Factor	Maximum Temperature	Stock No.	Price Each
					1-9
● BRT-1	1" Round Retroreflective Target	1.0	65°C (150°F)	02H6397	2.05
● BRT-3	3" Round Retroreflective Target	1.0	65°C (150°F)	02H6399	4.09
● BRT-2X2	2" x 2" Round Retroreflective Target	1.0	50°C (120°F)	02H6398	4.09
● BRT-THG-1-100	Retroreflective Tape, 1" Wide, 100' Roll	...	...	02H6396	21.98

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## QUICK-DISCONNECT (QD) CABLE ASSEMBLIES



## PICO-STYLE QUICK-DISCONNECT CABLES

- Cable: PUR Jacket, Polyurethane Connector Body, POM Snap-Lock Coupling
- Conductors: 26 or 24AWG High Flex Stranded, Gold-Plated Contacts
- Temperature: -40°C - +90°C (-40°F - +194°F)
- Voltage Rating: 30VAC/36VDC



Mfg. Part No.	Length	Style	Used With	Stock No.	Price Each
					1-9
● PKG6Z-9	9m (30')	6-Pin Straight	D10 Series	02H6813	30.66
● PKW6Z-2	2m (6.5')	6-Pin Right-Angle	D10 Series	02H6814	22.49
● PKW6Z-9	9m (30')	6-Pin Right-Angle	D10 Series	02H6815	30.66

## EURO-STYLE QUICK-DISCONNECT CABLES

- Cable: PVC Jacket, Polyurethane Connector body, Chrome-Plated Brass Coupling Nut
- Conductors: 22AWG High Flex Stranded, PVC Insulation, Gold-Plated Contacts
- Temperature: -40°C - +90°C (-40°F - +194°F)
- Voltage Rating: 250VAC/300VDC

Mfg. Part No.	Length	Style	Used With	Stock No.	Price Each
					1-9
● MQDC1-506	2m (6.5')	5-Pin Straight	Mini-Beam Expert Series	21H2288	16.87
● MQDC1-515	5m (15')	5-Pin Straight		21H2290	19.93
● MQDC1-530	9m (30')	5-Pin Straight		21H2292	32.71
● MQDC1-506RA	2m (6.5')	5-Pin Right-Angle		21H2289	16.87
● MQDC1-515RA	5m (15')	5-Pin Right-Angle	Mini-Beam DC SM Series EZ-Beam DC Series (Q Suffix) Omni-Beam (QDH Suffix) EZ Light Series	21H2291	19.93
● MQDC1-530RA	9m (30')	5-Pin Right-Angle		21H2293	32.71
● MQDC-406	2m (6.5')	4-Pin Straight		20M7027	16.87
● MQDC-415	5m (15')	4-Pin Straight		20M7028	19.93
● MQDC-430	9m (30')	4-Pin Straight	Mini-Beam DC SM Series EZ-Beam DC Series (Q Suffix) Omni-Beam (QDH Suffix) EZ Light Series	02H6730	32.71
● MQDC-406RA	2m (6.5')	4-Pin Right-Angle		02H6727	16.87
● MQDC-415RA	5m (15')	4-Pin Right-Angle		20M7029	19.93
● MQDC-430RA	9m (30')	4-Pin Right-Angle		21M5146	32.71

## MICRO-STYLE QUICK-DISCONNECT CABLES

- Cable: PVC Jacket, Polyurethane Connector Body, nickel-plated brass coupling nut
- Conductors: 3 x 22AWG Gold-Plated Contacts
- Temperature: +105°C
- Voltage/Current rating: 250VAC/DC, 4.0A

Mfg. Part No.	Length	Style	Used With	Stock No.	Price Each
					1-9
● MQDC-306	2m (6.5')	3-Pin Straight	Mini-Beam AC SM Series	21H2261	16.87
● MQDC-315	5m (15')	3-Pin Straight		21H2263	19.93
● MQDC-306RA	9m (30')	3-Pin Right-Angle		21H2262	16.87
● MQDC-330	2m (6.5')	3-Pin Right-Angle		21H2265	31.69
● MQDC-315RA	5m (15')	3-Pin Right-Angle		21H2264	19.93
● MQDC-330RA	9m (30')	3-Pin Right-Angle		21H2266	31.69

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## PLASTIC AND GLASS FIBER-OPTIC ASSEMBLIES



## PLASTIC FIBER-OPTIC ASSEMBLIES

- PBT Versions Are Diffused Mode; PIT and PIL Are Opposed Mode
- Unterminated Control Ends Which Allow the User to Cut to the Required Length
- Available in Individual or Bifurcated Styles
- Limited to a Minimum Bend Radius of 1mm
- Fiber Core Size: 1mm
- For Use with the Following Series: D10, D12, SM, SME, SMU, Q23, Q45 and Q18



Mfg. Part No.	Style	Construction	Stock No.	Price Each
				1-9
● PBT46U	Bifurcated Threaded	Cut to Length Cable, M6 Threaded End Tip	02H6806	34.89
● PBT46UC	Bifurcated Threaded	Coiled Cable, Cut to Length Cable, M6 Threaded End Tip	02H6807	45.46
● PBT46UHF	High-Flex Bifurcated Threaded	Cut to Length Cable, M6 Threaded End Tip	02H6808	50.74
● PIT46U	Individual Threaded	M4 and M2.5 Threaded End Tip	02H6810	39.11
● PIT46UH	High-Flex Individual Threaded	M4 and M2.5 Threaded End Tip	02H6811	54.97
● PIL46U	Individual Lensed	Cut to Length Cable, 8mm Lens	02H6809	39.11

➤ CONTINUED ➤



## SENSORS – PHOTOELECTRIC

## PLASTIC AND GLASS FIBER-OPTIC ASSEMBLIES (CONT.)

## GLASS FIBER OPTIC ASSEMBLIES

- Final Assembly Length: 36"
- Stainless Steel Sheathing Material
- Bundle Size: 0.125"
- Sheath Diameter: 0.25"

## DIFFUSED SENSING MODE ASSEMBLIES

Mfg. Part No.	Style	Sensing End Tip Style	Stock No.	Price Each
● BAT23S	Bifurcated	Angled 90° and Threaded Brass Tip	02H6393	106.76
● BT23S	Bifurcated	Angled Tip (90°)	02H6400	79.28

## OPPOSED SENSING MODE ASSEMBLIES

● IA23S	Individual	Angled Tip (90°)	02H6626	70.82
● IAT23S	Individual	Angled 90° and Threaded Brass Tip	02H6625	82.45
● IT23S	Individual	Threaded 5/16-24 x 1.5", Brass End Tip	02H6658	57.08
● ITA23S	Individual	Threaded 5/16-24 x 1.5", Angled 90° End Tip	02H6657	104.65

(73585)

## SENSOR MOUNTING BRACKETS



Fig. 1



Fig. 2



Fig. 3



Fig. 4



Fig. 5



Fig. 6



Fig. 7

Mfg. Part No.	Fig.	Description	For Use With	Stock No.	Price Each
● SMB18A	1	12-Gauge, Stainless Steel, Right-Angle Mounting Bracket	MINI-BEAM, M18, Q25, S18, T18	02H7579	3.07
● SMB18SF	2	18mm Swivel Bracket, Black Thermoplastic Polyester	MINI-BEAM, M18, Q25, S18, T18	02H7580	7.16
● SMB30MM	3	30mm, 12-Gauge, Stainless Steel Bracket	OMNI-BEAM, Q45, VALU-BEAM, SM30, OTB	02H7581	5.11
● SMB30SC	4	30mm Swivel Bracket, Black Reinforced Thermoplastic Polyester	OMNI-BEAM, Q45, VALU-BEAM, SM30, S30, Q40, T30, OTB	02H7582	7.16
● SMB312S	5	Stainless Steel 2-Axis, Side Mounting Bracket	SM312	02H7583	4.09
● SMB55F	6	12-gauge stainless steel flat mount	R58E	21H8850	9.20
● SMB55RA	7	12-gauge stainless steel right angle	R58E	21H8851	9.20

(73586)

## HARSH DUTY PHOTOELECTRIC SENSORS



Cutler-Hammer



30 mm



Connector Version

- Thru-beam sensors operating voltage: 20-132VAC, 15-30VDC
- Optimum range: 0.1 to 300ft. (0.03 - 90m)
- Perfect Prox® sensors operating voltage: 90-132VAC, 18-50VDC
- 30 mm diameters

- Tempered glass lens cover
- 360° output indicator
- High temperature, high pressure washdown (1200 psi)
- Thru-beam component source

Design to withstand the harshest physical, chemical and optical environments. Ideal for automotive applications where exposure to lubricants, cutting fluids, coolants and glycols is common. Withstands the use of sanitizers, surfactants, and cleaning agents including diluted bases and acids.

➤ CONTINUED ➤

## HARSH DUTY PHOTOELECTRIC SENSORS (CONT.)

## THRU-BEAM SENSORS

Mfg. Part No.	Sensing Range (m)	Connector Type	Thru-Beam Component	Stock No.	Price Each
E58-30TS250-GA	250	2-meter Cable	Source	47K7456	209.96
E58-30TS250-GAP	250	4-pin Micro AC Connector	Source	47K7459	239.59
E58-30TD250-GD	250	2-meter Cable	Detector	47K7423	243.82
E58-30TD250-GDP	250	4-pin Micro AC Connector	Detector	47K7425	270.92
E58-30TD250-GL	250	2-meter Cable	Detector	47K7428	243.82
E58-30TD250-GLP	250	4-pin Micro AC Connector	Detector	47K7431	270.92

## PERFECT PROX® SENSORS

Mfg. Part No.	Sensing Range (m)	Connector Type	Operate	Stock No.	Price Each
E58-30DPS280-ED	280	2-meter Cable	Dark	47K7334	243.82
E58-30DPS280-EL	280	2-meter Cable	Light	47K7337	243.82
E58-30DP150-EDP	150	3-pin Micro AC Connector	Dark	47K7357	270.92
E58-30DP150-ELP	150	3-pin Micro AC Connector	Light	47K7360	270.92

(88692)

## PHOTOELECTRIC SENSORS



- Three sensing methods
- IP67 waterproof design
- Compact size (31.5 x 19.5 x 10.8 mm)
- Choose NPN output, PNP output, light ON, or dark ON
- Long sensing ranges, high-speed response
- Rated operational voltage: 12 to 24VDC
- Operating temperature: -25°C to +55°C (no freezing)

SA1E sensors are UL recognized, CE marked and IP67 rated. With advanced interference protection circuitry (except for the through-beam type), sensors can be mounted very close together without affecting their performance. Each model has several options: NPN or PNP outputs, and light ON or dark ON sensing modes. Cable included.



Connector Type



Cable Type

## SENSORS

Mfg. Part No.	Sensing Mode	Output	Operation Mode	Sensing Range	Price Each
SA1E-DN1	Diffuse-Reflective	NPN	light On	700mm	35.62 31.77
SA1E-DN2	Diffuse-Reflective	NPN	dark On	700mm	35.62 31.77
● SA1E-DP1	Diffuse-Reflective	PNP	light On	700mm	35.62 31.77
● SA1E-DP2	Diffuse-Reflective	PNP	dark On	700mm	35.62 31.77
● SA1E-PN1	Retroreflective	NPN	light On	2.5m	35.62 31.77
● SA1E-PN2	Retroreflective	NPN	dark On	2.5m	35.62 31.77
● SA1E-PP1	Retroreflective	PNP	light On	2.5m	35.62 31.77
● SA1E-PP2	Retroreflective	PNP	dark On	2.5m	35.62 31.77
● SA1E-TN1	Through-Beam	NPN	light On	10m	40.70 36.30
● SA1E-TN2	Through-Beam	NPN	dark On	10m	40.70 36.30
● SA1E-TP1	Through-Beam	PNP	light On	10m	40.70 36.30
● SA1E-TP2	Through-Beam	PNP	dark On	10m	40.70 36.30
● SA1E-BN1-2M	Background Suppression	NPN	light On	200mm	86.49 77.14
● SA1E-BN1C	Background Suppression	NPN	light On	200mm	86.49 77.14
● SA1E-BN2-2M	Background Suppression	NPN	dark On	200mm	86.49 77.14
● SA1E-BN2C	Background Suppression	NPN	dark On	200mm	86.49 77.14
● SA1E-BP1-2M	Background Suppression	PNP	light On	200mm	86.49 77.14
● SA1E-BP1C	Background Suppression	PNP	light On	200mm	86.49 77.14
● SA1E-BP2-2M	Background Suppression	PNP	dark On	200mm	86.49 77.14
● SA1E-BP2C	Background Suppression	PNP	dark On	200mm	86.49 77.14

## ACCESSORIES

Mfg. Part No.	Description	Price Each
● SA9Z-S06PN02	0.5 mm Slit for Through-Beam	5.09 4.54
● SA9Z-S07PN02	1.0 mm Slit for Through-Beam	5.09 4.54
● SA9Z-S08PN02	2.0 mm Slit for Through-Beam	5.09 4.54
● IAC-R5	Standard Reflector	9.01 8.04
● IAC-R6	Small Reflector	6.11 5.45
● IAC-L2	Mounting Bracket for IAC-R5 Standard Reflector	4.20 3.75
● IAC-L3	Mounting Bracket for IAC-R6 Small Reflector	6.11 5.45
● SA9Z-K01	Vertical Mounting Bracket for Sensors	4.07 3.63
● SA9Z-K02	Horizontal Mounting Bracket for Sensors	4.07 3.63
SA9Z-CM8K-4L2	Right-angle 2 meter, connector cable	20.35 18.15
SA9Z-CM8K-4L5	Right-angle 5 meter, connector cable	26.46 23.60
SA9Z-CM8K-4S2	Straight 2 meter, connector cable	20.35 18.15
SA9Z-CM8K-4S5	Straight 5 meter, connector cable	26.46 23.60

(84847)

## SENSORS – PHOTOELECTRIC

NEXT GENERATION  
MINIATURE PHOTOELECTRIC  
SENSORS

- Pin-Point Beam for Detecting
- Extremely Small Objects
- Thru-Beam, Retro-Reflective
- and Diffuse Models
- IP67
- 12-24VDC Input Voltage
- 50mA Max.
- Prewired with 6.6' (2m) of Cable
- Utilizes Omron's "Hyper LED" Technology to Achieve Industry's Smallest Visible Red Beam
- Self-Contained Sensor Ideal for Compact Applications
- Convergent-Beam Model Spot Diameter: 0.15mm
- CE Compliant

Mfg. Part No.	Sensing Method	Operation Mode	Sensing Range (mm)	Dimensions Inches (mm)	Stock No.	Price Each 1-4
E3T-FD13	Diffuse Flat	Light-On, NPN	5 - 30	0.82 x 0.47 x 0.15 (20.8 x 12 x 3.7)	12C0923	92.36
E3T-FD11	Diffuse Flat	Light-On, NPN	5 - 30	0.82 x 0.47 x 0.15 (20.8 x 12 x 3.7)	88K1921	106.08
E3T-SL11	Convergent Beam	Light-On, NPN	5 - 30	0.82 x 0.47 x 0.15 (20.8 x 12 x 3.7)	88K1922	92.36
E3T-SL12	Convergent Beam	Dark-On, NPN	5 - 30	0.82 x 0.47 x 0.15 (20.8 x 12 x 3.7)	91F9328	92.36
E3T-SR11	Retro-Reflective	Light-On, NPN	10 - 200	0.57 x .028 x .037 (14.6 x 7 x 9.5)	91F9325	105.42
E3T-SR12	Retro-Reflective	Dark-On, NPN	10 - 200	0.57 x .028 x .037 (14.6 x 7 x 9.5)	91F9326	105.42
E3T-ST11	Thru-Beam	Light-On, NPN	1000	0.57 x .028 x .037 (14.6 x 7 x 9.5)	88K1923	120.44
E3T-ST12	Thru-Beam	Dark-On, NPN	1000	0.57 x .028 x .037 (14.6 x 7 x 9.5)	91F9324	120.44

(12926)

MINIATURE  
PHOTOELECTRIC SENSORS

- Long Sensing Distance
- High Noise Immunity
- NPN Output
- IP67 Water and Dust Rating
- Switch Selectable Light-On/Dark-On Operation
- 12 - 24VDC Supply Voltage
- Response Time: 1MS
- Pre-Wired 6.56' (2m) Cable Length

Dimensions: 1.2 x 0.66 x 0.4" (31 x 17 x 10.4mm). M8 connector type and PNP output models also available; go online or call. CE compliant.

Mfg. Part No.	Sensing Method	Sensing Distance	Connection	Stock No.	Price Each 1-9
E3Z-T61	Through-Beam	4.9'	Pre-wired	88K1925	117.24
E3Z-R61	Polarized Reflective	3.9" to 9.8'	Pre-wired	93K7548	86.18
E3Z-D62	Diffuse-Reflective	0.2" to 3.9"	Pre-wired	93K7547	80.67
E3Z-D61	Diffuse-Reflective	0.2" to 3.9"	Pre-wired	88K1924	75.66
E3ZD66	Diffuse-Reflective	0.2" to 3.9"	Connector	05J1679	95.22
E3Z-R66	Polarized Reflective	3.9" to 9.8'	Connector	85C2080	103.19
E3Z-T66	Through-Beam	0.2" to 3.9"	Connector	16M2426	120.21

(60674)

PLASTIC-BODY CYLINDRICAL  
PHOTOELECTRIC SENSORS

- Threaded M18 size
- Built-in amplifier
- Chemical-resistant, ABS resin case type
- Polarized models available
- Compact and space-saving
- Long detection distance -- up to 7m
- DC switching types with connectors for easy maintenance
- Wide operating voltage range (10 to 30VDC, or 24 to 240VAC)
- Short-circuit and reverse connection protection (DC switching type)
- Light source: infrared LED

Dimensions: through-beam and retro-reflective: 90 x 16.8mm; diffuse reflective: 65 x 16.8mm. Pre-wired 2m (6.56') cable length. Power and light receive status indicators. Additional stainless and nickel-plated brass versions, polarized and connector versions and NPN types also available; go online or call. UL recognized, CSA certified, CE compliant, NEMA approved.

➤ CONTINUED ➤

## PLASTIC-BODY CYLINDRICAL PHOTOELECTRIC SENSORS (CONT.)

Mfg. Part No.	Sensing Method	Supply	Output	Sensing Range	Stock No.	Price Each 1-9
E3F2-7C4	Through-Beam	10-30VDC	NPN Light-On/Dark-On	22.96' (7m)	01C6969	100.74
E3F2-R2C4	Retro-Reflective*	10-30VDC	NPN Light-On/Dark-On	6.56' (2m)	27M2387	78.39
E3F2-DS10C4-N	Diffuse	10-30VDC	NPN Light-On/Dark-On	3.94" (10cm)	52F4365	76.18
E3F2-3Z1	Through-Beam	24-240VAC	SCR Light-On	9.89' (3m)	27M2389	132.48
E3F2-3Z2	Through-Beam	24-240VAC	SCR Dark-On	9.89' (3m)	27M2390	132.48
E3F2-R2Z1	Retro-Reflective*	24-240VAC	SCR Light-On	6.56' (2m)	52F4360	90.53
E3F2-R2Z2	Retro-Reflective*	24-240VAC	SCR Dark-On	6.56' (2m)	27M2388	92.19
E3F2-DS10Z1-N	Diffuse	24-240VAC	SCR Light-On	3.94" (10cm)	52F4363	88.05
E3F2-DS10Z2-N	Diffuse	24-240VAC	SCR Dark-On	3.94" (10cm)	27M2386	88.05
E3F2-DS30C4-P1	Diffuse	10-30VDC	NPN, Light-On/Dark-On	11.8" (30cm)	91B4841	106.97
E3F27C4M1M†	Through-Beam	10-30VDC	NPN, Light-On/Dark-On	23' (7m)	66J6928	125.63
E3F2-R2RC4-M1-M†	Retro-Reflective*	10-30VDC	NPN, Light-On/Dark-On	6.6' (2m)	59J7557	88.32
E3F2-DS30C4-M1-M†	Diffuse	10-30VDC	NPN, Light-On/Dark-On	11.8" (30cm)	09H2011	83.34

\*Includes Reflector †Nickel-plated brass body (3543)

HEAVY-DUTY, LONG-RANGE  
REFLECTIVE PHOTOELECTRIC SENSORS

- Universal AC/DC Supply Voltage: 42-240VAC, 24-240VDC
- DPDT 10A, 240VAC Output Standard
- Easy-to-Wire Terminal Strip
- Plug-In Replaceable Relay Outputs
- Light-ON/Dark-ON Operation, Switch Selectable
- Mutual Interference Protection
- Adjustable Sensitivity With Operation And Stability Indicators
- NEMA b4, 4X, 12, 13 and IP67
- Light Source: Infrared LED
- ¾"-14NPT Conduit Entry

Dimensions: 7.32H x 3.50W x 2.48"D (186 x 89 x 63 mm). Mounting bracket and reflector for retroreflective type are included. UL recognized, CSA certified.

Mfg. Part No.	Description	Sensing Range	Supply Voltage (VAC)	Stock No.	Price Each
E3K-R10K4	Non-Polarized Retroreflective	32.81' (10M)	42	27M2392	281.69
E3K-D2K4	Diffuse Reflective	6.56' (2M)	42	52F4335	281.69

(3541)

E3G SERIES LONG-DISTANCE  
PHOTOELECTRIC SENSORS

Retroreflective units feature sensing distance up to 10m. One-touch teach function (up to 2m, diffuse) minimizes set-up and changeover time. NPN/PNP switchable output. Light-ON/Dark-ON operation. 10-30VDC supply voltage. Mfg. part nos. E3G-R13 and E3G-R17 include reflector. For other types, order reflector separately below. Order mounting brackets separately below. CE compliant.



## SENSORS

Mfg. Part No.	Description	Connection	Stock No.	Price Each 1-24
E3G-R13	Polarized Retroreflective	Pre-leaded	19C6935	180.46
E3G-R17	Polarized Retroreflective	Connector	19C6936	186.64
E3G-L77	Diffuse Reflective	Connector	12C0754	205.18

➤ CONTINUED ➤

## SENSORS – PHOTOELECTRIC

## E3G SERIES LONG-DISTANCE PHOTOELECTRIC SENSORS (CONT.)

## ACCESSORIES

Mfg. Part No.	Description	Stock No.	Price Each
● E39-R1	100mm to 6m Reflector	27M2403	14.20
● E39-L131	Adjustable Side- or Rear-Mounting Bracket	19C6942	8.52

(59387)

## AC/DC SUPPLY PHOTOELECTRIC SENSORS WITH TIMER MODULES



- Switch-Selectable Light-ON/Dark-ON Operation for Timer Models
- ON-Delay, OFF-Delay, One-Shot, and ON-OFF Delay Modes
- Polarized Diffuse Retroreflective, and Thru-Beam Models
- NEMA 1, 4, 4X, 12 and IP 66
- Plug-In Replaceable Outputs
- SPDT Relay Output @ 3A, 250VAC; 3A 30VDC
- Supply Voltage: 24 to 240VAC, 50/60Hz; 12 to 240VDC
- Dimensions: 2.95H x 1.02W x 2.95D (75 x 26 x 75mm)
- Adjustable Sensitivity and Mutual Interface Protection Included
- Operation Indicators, Mounting Brackets, 1/2" - 14 NPT Conduit Entry Included
- Optional Solid-State Outputs

Solid-state output modules series G3K and reflector adapter E39-L7 for stud-mounting E39-R1 reflector also available; go online or call. UL listed, CSA certified, CE compliant. For Omron's series E3A2-XC fiber-optic sensors on this page.

## SENSORS

Mfg. Part No.	Sensing Method	Sensing Range	Detectable Object Type	With Timer	Stock No.	Price Each
● E3A2-10M4T	Thru-Beam	32.8' (10m)	Opaque Materials, 1.02" (26mm) Min. Dim.	Y	27M2380	310.75
● E3A2DS70M4	Diffuse Reflective	27.6" (70cm)	Opaque and Translucent Materials	N	27M2381	192.24
● E3A2-DS70M4T	Diffuse Reflective	27.6" (70cm)	Opaque and Translucent Materials	Y	27M2374	226.48
● E3A2-R3M4	Retroreflective	9.8' (3m)	Opaque and Mirror Surface Materials, 2.20" (56mm) Min. Dim.	N	90B3567	226.48
● E3A2-R3M4D		9.8' (3m)		Y	27M2375	269.93
● E3A2-R3M4T		9.8' (3m)		Y	27M2376	265.98

## REPLACEMENT PARTS

Mfg. Part No.	Description	Stock No.	Price Each
● G6C-2117P-US-DC8	Relay Output Module, SPDT, 3A at 250VAC (Output Supplied with Each Sensor)	34K3624	5.58
● E39-R1	Reflector (Supplied with Retroreflective Sensors)	27M2403	14.20

(3542)

## AC/DC FIBER-OPTIC AMPLIFIER WITH RELAY OUTPUT



- Slim Amplifier with Plug-in Outputs
- Standard 3A, 250VAC; 3A, 30VDC Relay Output
- Built-in Time Delays
- Universal Supply Voltage for AC/DC Operation
- Solid-State Output Available
- Light-ON/Dark-ON Operation, Switch Selectable
- 24 to 240VAC, 50/60Hz; 12 to 240VDC
- Power Consumption: 1.5W
- Light Source: Pulse-Modulated Red LED
- Adjustable Sensitivity
- SPDT Contact Configuration
- 15ms Response Time
- NEMA 1, 4, 4X, 12, IP66

Uses E-32 series fiber-optic cables. Solid state output modules series G6K also available; go online or call. UL listed, CSA certified.

## AMPLIFIERS

Mfg. Part No.	ON/OFF Delay Range (Sec.)	Timer Function	Stock No.	Price Each
● E3A2-XCM4	No Timer	No Timer	27M2377	201.64
● E3A2-XCM4D	0.1 to 5 sec.	Independently Adj. ON-Delay and OFF-Delay	27M2378	235.44
● E3A2-XCM4T	0.1 to 5 sec.	ON-Delay, OFF-Delay, One-Shot, or Equal On-Delay and Off Delay	27M2379	235.44

## REPLACEMENT PARTS

Mfg. Part No.	Description	Output (A)	Output Rating	Stock No.	Price Each
● G6C-2117P-US-DC8	Replacement relay output module for E3A2-X	8	SPST-NO+SPST-NC	34K3624	5.58

(73539)

## LONG-RANGE PHOTOELECTRIC SENSORS WITH PLUG-IN BASE



- Universal AC/DC Supply Voltage
- Sensing Head Replaceable Without Rewiring
- Built-In ON- and OFF-Delay Timers Available
- Switch Selectable Light-ON and Dark-ON Operation
- Mutual Interference Protection
- Ready-to-Use: Includes 3A Relay, Mounting Bracket and Reflector
- Power consumption: 2VA (AC), 1.5W (DC)
- Supply Voltage: 24 to 240VAC, 50/60Hz; 12 to 240VDC
- SPDT Contacts
- Min. Load: 10mA, 5VDC
- NEMA 1, 3, 4, 12, 13, IP66

Replacement mounting bracket mfg. part no. E39-L35 also available; go online or call. Dimensions: 90.3H x 73W x 36mm (3.56 x 2.87 x 1.42"). UL listed, CSA certified.

## SENSORS

Mfg. Part No.	Sensing Method	Sensing Range	Detectable Object Type	Stock No.	Price Each
● E3B2-D2M4-US	Diffuse Reflective	9.84' (3m)	Opaque and Transparent	27M2382	242.46
● E3B2-R5M4D-US*	Retroreflective	16.40' (5m)	Shiny and Opaque, 3.15" (80mm) Min. Distance	27M2384	270.65
● E3B2-R5M4-US				27M2383	258.25
● E3B2-R7M4-US	Retroreflective	22.97' (7m)	Opaque, 3.15" (80mm) Min. Distance	27M2385	258.25

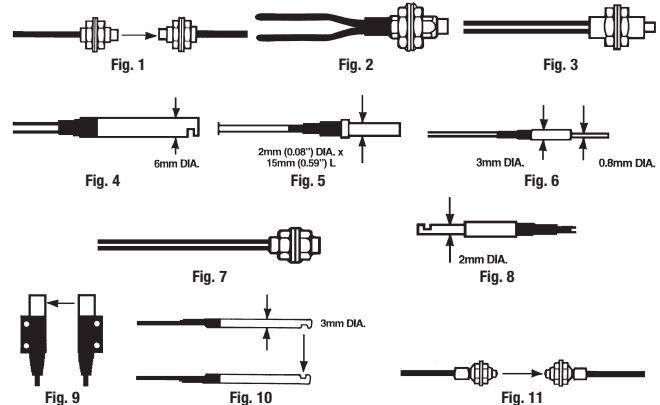
\*With timer (0.5-20 Seconds)

## REPLACEMENT PARTS

Mfg. Part No.	Description	Stock No.	Price Each
● E39-R2	Reflector (Supplied w/Retroreflective Sensors)	38B246	16.92

(73258)

## E32 SERIES FIBER-OPTIC CABLE SETS



- Extensive Selection of Fiber-Optic Sensing Heads Offers Many Unique Solutions for Tough Problems
- Fiber-Optic Sensors Detect Small, Fast-Moving Objects in Space-Confined Installations and Harsh Environments
- For a Customer Fit in the Field, Most Plastic Filament Cables Can Be Cut to Length
- For Detection in Hard-to-Reach Places, sensing heads With Bendable Stainless Steel Tubing Retain Complex Shapes
- Coiled and Ultra-Flexible Cables - Ideal for Flexing and Reciprocating Machinery Such as Robots
- Side-View Sensing Heads or Accessories Save Space in Right-Angle Detection
- Convergent Beam Sensing Heads Allow Accurate Positioning and Background Suppression Even for Shiny Objects
- Narrow Detection Zone of Concentric Beam Sensing Heads Help Eliminate Background Object and Gives Consistent Sensing, Regardless of Object Direction
- High Flexible Fibers With Minimum 1mm Bending Radius Allows Cable to Conform to Machine Contours
- Most Fiber Cables Offer IP67 Protection
- Temperature Range: -40°C to 70°C (-40°F to 158°F)

Fiber-optic photoelectric sensor cables are provided as a complete set. Cable length: 2M. Sensing distance and object detection are typical when used with a general purpose amplifier. Most cable can be cut to fit. Sold as a package of 2 cables.

Mfg. Part No.	Fig.	Configuration	Sensing Distance (cm)	Min. Object Detection (mm)	Stock No.	Price Each
● E32-TC200	1	Thru-Beam, General-Purpose	12	0.2	52F4370	59.93
● E32-DC200	2	Diffuse General Purpose	7.5	0.015	52F4379	61.69
● E32-CC200	3	Diffuse, M6 Threaded Head	7.5	0.03	52F9257	68.45
● E32-D61	3	Diffuse, M6 Compact Threaded Head, High Temperature	4.5	0.03	92F635	272.61

➤ CONTINUED ➤



## SENSORS – PHOTOELECTRIC

## E32 SERIES FIBER-OPTIC CABLE SETS (CONT.)

Mfg. Part No.	Fig.	Configuration	Sensing Distance (cm)	Min. Object Detection (mm)	Stock No.	Price Each
● E32-D11L	3	Diffuse, M6 Compact Threaded Head	10	0.015	50B6316	82.85
● E32-D14L	4	Diffuse, Side Beam	4	0.03	88F1351	143.35
● E32-D32	5	Diffuse	2	0.03	19C7909	89.59
● E32-D33	6	Diffuse, Probe Type	5	0.015	50B6317	95.47
● E32-DC200E	7	Diffuse M3 Threaded	1.8	0.03	27M2399	74.90
● E32-D24	8	Diffuse, Side Beam	1.5	0.03	83F1998	131.60
● E32-T14	9	Thru-Beam	90	1	27M2401	116.91
● E32-T14L	10	Thru-Beam	90	1	27M2402	102.82
● E32-TC200A	11	Thru-Beam	12	0.2	27M2400	61.69
● E32-T11R	11	Thru-Beam M4 x 14mm (0.55")	14	0.2	88K1926	121.04

## ACCESSORIES

Mfg. Part No.	Description	Stock No.	Price Each
● E39-F1	Focusing Lens Pair	88K1927	31.90

(69341)

## AC/DC FIBER-OPTIC AMPLIFIER WITH RELAY OUTPUT



**OMRON**  
OMRON ELECTRONIC COMPONENTS LLC

- Slim Amplifier with Plug-in Outputs
- Standard 3A, 250VAC; 3A, 30VDC Relay Output
- Built-in Time Delays
- Universal Supply Voltage for AC/DC Operation
- Solid-State Output Available
- Light-ON/Dark-ON Operation, Switch Selectable
- 24 to 240VAC, 50/60Hz; 12 to 240VDC
- Power Consumption: 1.5W
- Light Source: Pulse-Modulated Red LED
- Adjustable Sensitivity
- SPDT Contact Configuration
- 15ms Response Time
- NEMA 1, 4, 4X, 12, IP66

Uses E-32 series fiber-optic cables, see Section 4.3. Solid state output modules series **G6K** also available; go online or call. UL listed, CSA certified.

## AMPLIFIERS

Mfg. Part No.	Sensing Range	Timer Function	Indicators	Stock No.	Price Each
E3A2-XCM4.	...	No Timer Included	Light Incident (Red LED), Output Stability (Green LED)	92F630	179.23
E3A2-XCM4D.	0.1 to 5 sec.	Independently Adjustable On-Delay (0.1 to 5 sec.)	Light Incident (Red LED), Output Stability (Green LED), Output Operation (Yellow LED)	90B8563	209.28
E3A2-XCM4T.	0.1 to 5 sec.	On-Delay, Off-Delay, One-Shot or Equal On-Delay and Off-Delay (0.1 to 5 sec.)	Light Incident (Red LED), Output Stability (Green LED), Output Operation (Yellow LED)	52F4353	209.28

## REPLACEMENT PARTS

Mfg. Part No.	Description	Stock No.	Price Each
● G6C-2117P-US-DC8	Relay Output Module, 3PDT, 3A @ 250VAC (Supplied w/Each Sensor)	34K3624	5.58

(74607)

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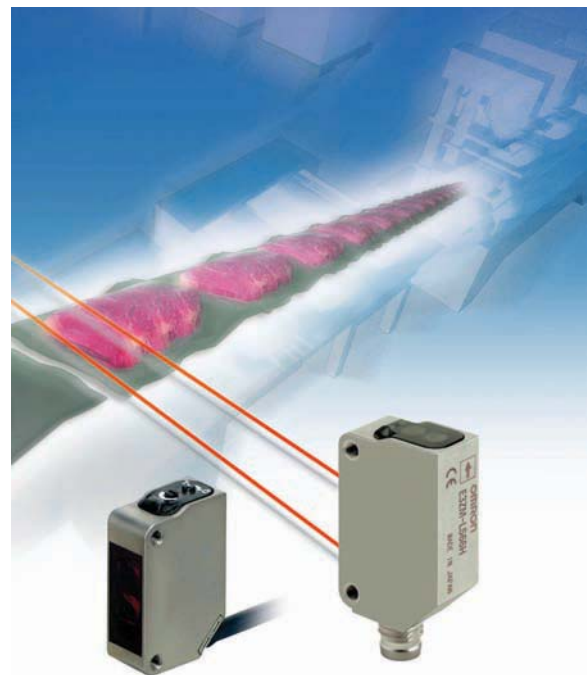
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## E3ZM STAINLESS STEEL PHOTOELECTRIC SENSORS



**OMRON**  
INDUSTRIAL AUTOMATION

Just Added



- SUS316L stainless steel casing
- Meets IP69K standards (1450psi washdown)
- Smooth shape allows easier cleansing: few seams and laser marked labels eliminate contamination
- Superior chemical resistance
- Response time: 1ms max.
- Load rating: 100mA at 30VDC max.

Reduce replacement costs where sensors fail frequently due to high-pressure chemical washdown. Used in cutting, weighing and packaging machinery for meat, poultry and fish processing. Voltage range: 12-30VDC. Current consumption: 25mA max. (reflective); 20mA (through-beam). Connection: 2m cable. Dimensions (mm): 32.2H x 10.8W x 21D. Reflectors for **E3ZM-R** series ordered separately below. Distance settable sensors available; go online or call Newark.

## STAINLESS STEEL PHOTOELECTRIC SENSORS

Mfg. Part No.	Sensing Method	Sensing Distance (m)	Output Type	Stock No.	Price Each
● E3ZM-T61 2M	Through-Beam	15	NPN	22M3779	297.97
● E3ZM-R61 2M	Retroreflective	Up To 4*	NPN	22M3778	185.62
● E3ZM-D62 2M	Diffuse	1	NPN	04M4848	175.86

\*Reflector type determines ultimate sensing distance. See table below.

## RELECTORS FOR E3ZM-R SENSORS

Mfg. Part No.	Application	Sensing Distance (m)	Dimensions (mm)	Stock No.	Price Each
● E39-R1S	Polarized Light Source	0.1 to 4	59.9H x 40.3W x 7.5D	78H1777	16.09
● E39R1K	Fog Preventive Coating	0.1 to 3	59.9H x 40.3W x 7.5D	66J7559	30.81

(89796)

## FIBER-OPTIC PHOTOELECTRIC SENSORS



**OMRON**  
INDUSTRIAL AUTOMATION

Omron fiber-optic sensor amplifier units come prewired with a 2m cable. DIN rail mountable. **E32** series fiber-optic sensing cables ordered separately on pages 1718-1719.

## E3X-A SERIES GENERAL-PURPOSE

High performance with quick response time and self-diagnostics. 8 turn sensitivity adjustment with position indicator. IP66 enclosure rating.

Mfg. Part No.	Output Configuration	Additional Functionality	Stock No.	Price Each
E3X-A11	NPN LO/DO	...	85F306	150.09
E3X-A21	NPN LO/DO	Off-Delay, Alarm, Check Input	90B3806	166.22
E3X-A41	PNP LO/DO	...	91B3165	150.09
E3X-A51	PNP LO/DO	Off-Delay, Alarm, Check Input	50B6311	166.22

➤ CONTINUED ➤

## SENSORS – PHOTOELECTRIC

## FIBER-OPTIC PHOTOELECTRIC SENSORS (CONT.)

## E3X-NT/M SERIES EXTENDED RANGE, AUTOTUNING

Sensing distance is up to 100% greater than standard amplifiers. Pushbutton sensitivity adjustment. IP50 enclosure rating. Supply voltage: 12-24VDC.

Mfg. Part No.	Output Configuration	Additional Functionality	Stock No.	Price Each
E3X-NT11	NPN LO/DO	...	52F4374	159.16
● E3X-NM11	NPN LO/DO	4 Separate Channels, Off-Delay Timer, Remot Teach Input	52F4372	410.99

## E3X-DA SERIES WITH DIGITAL DISPLAY

High performance amplifier with 3 user selectable sensing modes; standard, long distance, and high speed. Display is user-selectable for digital level, percentage or analog. Teach or manual sensitivity adjustment. Adjustment off-delay. IP50 enclosure rating. Supply voltage: 12-24VDC.

Mfg. Part No.	Output Configuration	Additional Functionality	Stock No.	Price Each
● E3X-DA11-N	NPN LO/DO	...	18M7320	165.29
● E3X-DA41-N	PNP LO/DO	...	19C7907	165.29
● E3X-DA21-N	NPN LO/DO	Second Output Analog 1-5VDC	19C7906	222.99
● E3X-DA51-N	PNP LO/DO	Second Output Analog 1-5VDC	19C7908	206.36

## E3X-NH SERIES HIGH PRECISION, EXTENDED RANGE

Employs industry's first 16-bit processor. Automatic sensitivity adjustment feature allows stable detection in frequency changing environments. 3 teach modes, pushbutton sensitivity adjustment plus manual fine tune feature. Second analog output on all models. IP50 enclosure rating. Supply voltage: 12-24VDC.

Mfg. Part No.	Output Configuration	Additional Functionality	Stock No.	Price Each
E3X-NH11	NPN LO/DO	...	88F3091	188.38
E3X-NH41	PNP LO/DO	...	12C0957	188.38

## E3X-DA-S SERIES POWER TUNING, DIGITAL DISPLAY

Power tuning function addresses saturation, insufficient light and sensor variation. Dual display allows simultaneous viewing of current and preset values. 4-element LED and auto power control. 2 independent outputs for area detection, remote input function, counter function. Supply voltage: 12-24VDC.

Mfg. Part No.	Description	Output Configuration	Stock No.	Price Each
● E3XDA11S	Standard Model, pre-wired cable, red LED	NPN LO/DO	97H5080	187.32
● E3XDAB11S	Mark-detecting, pre-wired cable, blue LED	NPN LO/DO	18M7321	220.38
● E3XDAB6S	Standard Model, connector, blue LED	NPN LO/DO	18M7322	214.87
● E3XDAG11S	Mark-detecting, pre-wired cable, green LED	NPN LO/DO	66J7236	214.87
● E3XDAG6S	Mark-detecting, connector, green LED	NPN LO/DO	18M7323	214.87

## E3X-MDA SERIES DUAL FIBER SENSORS

New dimension 2-channel amplifiers feature extremely narrow 5mm per channel profile. AND/OR control out put. Flexible control from the mobile console. Supply voltage: 12-24VDC.

Mfg. Part No.	Description	Output Configuration	Stock No.	Price Each
● E3XMDA11	2 Channel FOA, NPN, prewired cable	NPN LO/DO	66J7276	297.51
● E3XMDA41	2 Channel FOA, PNP, prewired cable	PNP LO/DO	18M7324	297.51
● E3X-MDA6	2 Channel FOA, NPN, connector	NPN LO/DO	21J6534	297.51
● E3XMDA8	2 Channel FOA, PNP, connector	PNP LO/DO	66J7278	297.51
● E3XCN11	Master connector for E3X-MDA11 & E3X-MDA41	...	66J7223	18.49
● E3XCN12	Slave connector for E3X-MDA11 & E3X-MDA41	...	66J7224	16.22
● E3XCN21	Master connector for E3X-MDA6 & E3X-MDA8	...	66J7225	21.11
● E3XCN22	Slave connector for E3X-MDA6 & E3X-MDA8	...	66J7227	18.49

## E3XNA SERIES MANUAL FIBER AMPLIFIER

Adjuster type standard for true ease and simplicity. Supply voltage: 12-24VDC.

Mfg. Part No.	Description	Output Configuration	Stock No.	Price Each
● E3X-NA11	Standard Model, pre-wired cable, red LED	NPN LO/DO	92C2195	162.31
● E3XNA11F2M	High-speed Detection Model, pre-wired cable, red LED	PNP LO/DO	27M2397	223.03
● E3XNA41F2M	High-speed Detection Model, pre-wired cable, red LED	PNP LO/DO	66J7284	223.03
● E3XNA6	Standard Model, connector, red LED	NPN LO/DO	27M2398	162.31
● E3XNA8	Standard Model, connector, red LED	PNP LO/DO	66J7288	162.31
● E3XNAG11	Mark-detecting, pre-wired cable, green LED	NPN LO/DO	66J7279	183.33
● E3XNAG41	Mark-detecting, pre-wired cable, green LED	PNP LO/DO	66J7280	183.33

(64071)

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(94660)

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## MINIATURE HIGH-PERFORMANCE PHOTOELECTRIC SENSORS



**PEPPERL+FUCHS**  
SENSING YOUR NEEDS

- 3M prelead cable for AC models
- Output and alignment LED indicators
- Adjustable sensitivity and light ON/Dark ON selectable
- Typical operating temperature: -22°F to +158°F
- 1-20UNEF-2A threaded barrel front mount, or thru-hole side mount
- 2 meter PVC cable for DC models

Harsh-duty design can withstand 1200PSI washdown, and meets IP69K and NEMA 6P enclosure ratings. Additional housing, termination, and output styles available; *go online or call Newark*.

## 20-260VAC SUPPLY VOLTAGE - SCR OUTPUT

Mfg. Part No.	Scan Style	Scan Distance	Stock No.	Price Each
MHP-TR2AL	Thru-Receiver	100'	95F6190	116.48
MHP-TE2AL	Thru-Emitter	100'	95F6191	109.76

## 10-30VDC SUPPLY VOLTAGE - NPN/PNP OUTPUT

MHP-LR33L	Retro-Reflective	30'	03H5103	116.48
MHP-D33L	Diffused	18"	84F2174	109.76
MHP-C233L	Convergent	2.5"	16F3180	116.48
MHP-TR33L	Thru-Receiver	100'	95F6184	116.48
MHP-TL33L	Thru-Emitter	100'	95F6185	109.76

## ACCESSORIES

Mfg. Part No.	Description	Stock No.	Price Each
MHP5B	Mounting Bracket, Side Mount	84F2180	15.68

(69233)

## ML7 SERIES MINIATURE PHOTOELECTRIC SENSORS



**PEPPERL+FUCHS**  
SENSING YOUR NEEDS

- Supply voltage: 10-30VDC
- Automatic cross talk protection for all diffused and retro-reflective models
- Temperature range: -4°F to +140°F
- Rated IP67
- Load current: 100mA
- Operating mode: Dark on (except diffused mode)



## THRU BEAM MODE - SENSING RANGE 0-3.5M

Mfg. Part No.	Model	Directional Mounting	Output	Stock No.	Price Each
M776A/115	Transmitter	Vertical	...	43J1303	92.96
MV759/102/115	Receiver	Vertical	PNP	43J1299	122.08
MV759/82B/103/143*	Receiver	Vertical	PNP	43J1300	112.00
M7176A/115	Transmitter	Horizontal	...	43J1304	92.96
MV7159/102/115	Receiver	Horizontal	NPN	43J1301	122.08
MV7159/82B/103/115	Receiver	Horizontal	PNP	43J1302	112.00

## DIFFUSED MODE - LIGHT ON OPERATING MODE

Mfg. Part No.	Sensing Range (mm)	Directional Mounting	Output	Stock No.	Price Each
ML7-8-200/25/102/115	20-200	Vertical	NPN	08J9159	122.98
ML7-8-200/25/103/115	20-200	Vertical	PNP	08J9161	122.98
ML71-8-200/25/102/115	20-200	Horizontal	NPN	02J5405	122.98
ML71-8-200/25/103/115	20-200	Horizontal	PNP	08J9181	122.98

## RETRO-REFLECTIVE MODE - SENSING RANGE 0-2.5M

Mfg. Part No.	Reflector Distance	Directional Mounting	Output	Stock No.	Price 1-4
ML7-55/59/102/115	30mm-2.5m	Vertical	PNP	08J9140	127.46
ML7-55/59/103/115	30mm-2.5m	Vertical	PNP	08J9144	127.46
ML71-55/59/102/115	30mm-2.5m	Horizontal	NPN	08J9164	127.46
ML71-55/59/103/115	30mm-2.5m	Horizontal	PNP	08J9168	127.46
ML7-6/59/102/115	20mm-2.5m	Vertical	NPN	08J9150	110.69
ML7-6/59/103/115	20mm-2.5m	Vertical	PNP	08J9154	110.69
ML71-6/59/102/115	20mm-2.5m	Horizontal	NPN	08J9172	110.69
ML71-6/59/103/115	20mm-2.5m	Horizontal	PNP	08J9176	110.69

\* Denotes electrical connection of quick-disconnect type V31.  
(83019)

## SENSORS – PHOTOELECTRIC • SENSORS – POSITION &amp; ENCODING

MLV12 SERIES  
METAL-FRAMED  
PHOTOELECTRIC  
SENSORS
**PEPPERL+FUCHS**  
SENSING YOUR NEEDS


## Features:

- Rugged die-cast metal housing frame
- IP67 sealing
- 4 in 1 output offers NPN and PNP, NO/NC
- Automatic cross-talk immunity for all diffused and retro-reflective models
- Cabled and quick-disconnect versions available

## Specifications:

- Compact housing: 65mm x 15mm x 42mm
- Typical operating temperature: -40°F to 140°F
- Operating voltage: 10 to 30VDC

Mfg. Part No.	Sensing Range	Sensing Type	Electrical Connection	Stock No.	Price Each 1-4
MLV12-8-H-250-RT/65B/124/128	250mm	Diffuse w/Background Suppression	2.5m Cabled	08J8946	170.24
MLV12-54/76B/124/128	3m	Polarized Retro-Reflective for Clear Object detection	Quick-Disconnect	63J8287	252.00
MLV12-54-G/76B/124/128	5m	Polarized Retro-Reflective	Quick-Disconnect	08J8942	198.24
MLV12-54-LAS/76B/110/124	15m	Polarized Retro-Reflective Laser	Quick-Disconnect	71J5910	240.80

(87082)

CYLINDRICAL  
PHOTOELECTRIC SENSORS
**PEPPERL+FUCHS**  
SENSING YOUR NEEDS


KT11-50



GLV12



OBT500

- IP67
- Output LED indicator
- Termination: 2 meter PVC cable unless noted \*

Additional housing, termination, and output types available. 4mm through 30mm sizes available; go online or call Newark.

## 3-WIRE DC NPN OUTPUT - SUPPLY VOLTAGE: 10-30VDC - METAL HOUSING

Mfg. Part No.	Sensing Face Dia.	Sensing Range	Scan Type	Load Current	Stock No.	Price Each 1-4
KT9-50/25/102/115	4mm	50mm	Diffuse	100mA	97C8444	172.14
KT11-50/25/98A/102*	5mm	50mm	Diffuse	100mA	71C7683	172.14
GLV12-8-200/36/40B/115	12mm	200mm	Diffuse	300mA	97C8441	79.80

\* Termination: QD Pico-style V3

## 3-WIRE DC NPN OUTPUT - SUPPLY VOLTAGE: 10-30VDC - PLASTIC HOUSING

CP18D1DNL2	18mm	3.94"	Diffuse	150mA	50F5087	55.86
CP18LDND2	18mm	13'	Retro-Ref.	150mA	50F5091	55.86

## UNIVERSAL AC/DC OUTPUT - SUPPLY VOLTAGE: 12 260VDC OR 20 - 260VAC - PLASTIC HOUSING

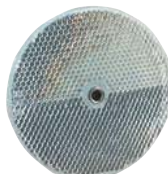
CP18LBD2	18mm	13'	Retro-Ref.	300mA	33C9536	70.68
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(69232)

## RETRO-REFLECTIVE TARGETS

**PEPPERL+FUCHS**  
SENSING YOUR NEEDS

- For all retro-reflective and photoelectric sensors. All corner-cube reflective type.



FE-RR1



FE-RR8

Mfg. Part No.	Dimensions	Description	Stock No.	Price Each 1-4
FE-RR1	3"	Diameter Molded Acrylic Disc.	23F4252	11.05
FE-RR8	2.8 x 2"	Rectangular Acrylic Reflector	50F5308	15.47
FE-RR6	2.6 x 1"	Rectangular Molded Acrylic Reflector, w/2 Mounting Holes	93F6645	15.47
REFLECTOR A25	1"	Circular, Self Adhesive	35C4232	4.42
REFLECTOR A46	2"	Circular, Self Adhesive	97C8475	6.63
REFLECTORC110-2	3.3"	Circular, Center Hole Mount	94C2669	8.84
QRR 50	2 x 2"	Square, Bottom Hole Mount	24C3984	5.53

➤ CONTINUED ➤

## RETRO-REFLECTIVE TARGETS (CONT.)

Mfg. Part No.	Dimensions	Description	Stock No.	Price Each 1-4
REFLECTOR H116HT	2 x 5"	Rectangle, High Temp (230°F)	97C8476	29.84
REFLECTOR H60	1.5 x 2.5"	Rectangle	97C8477	8.84
QFR70-2	3 x 3"	Square Foil, Self Adhesive (10 pcs.)	03H5834	75.14
RT1 X 100	...	Reflective Tape Roll, 1" x 100"	24C4034	27.63
RT3 X 100	...	Reflective Tape Roll, 3" x 100"	24C4036	69.62

(69333)

MODEL 600  
LINEAR  
MOTION  
POSITION  
SENSOR
**BEI DUNCAN ELECTRONICS DIVISION**  
BEI TECHNOLOGIES, INC.

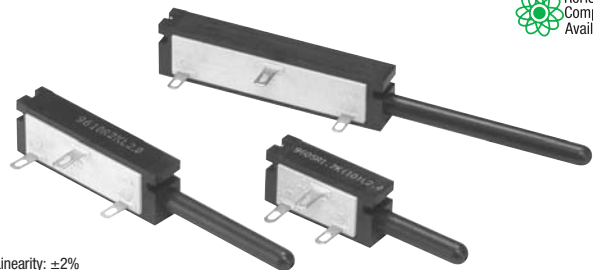

- Infinite Resolution
- Insulation Resistance at 500 VDC: 1000 Megohms
- Dielectric Strength: 500 VDC
- Temperature Range: -55°C to +125°C
- Output Smoothness: 0.1%
- Actuation Force: 2 oz (.56 Newtons) max.
- Life: 10 x 10<sup>6</sup> Cycles
- Resistance Tolerance: +/-20%
- Power Rating: 0.25 Watts at 70°C
- 16mm Diameter

600 series linear motion position sensors provide extremely accurate measurements in applications that require a rugged instrument operating in a tight area. Long life, infinite resolution and smooth output deliver high reliability in critical measurements. Floating shaft design allows for shaft/interface misalignments up to 0.010". Repeatability within .0005 inch. Supplied with #29 AWG Teflon insulated wire 12 inches min. length.

Mfg. Part No.	Electrical Travel (mm)	Active Electrical Travel (mm)	Mechanical Travel (mm)	Length (mm)
601R1KL.7	25	23	28	57
602R2KL.35	51	48	53	89
603R3KL.25	76	74	79	114
604R4KL.15	102	99	104	140
606R6KL.12	152	150	155	190
610R10KL.09	254	251	257	292
612R12KL.08	305	302	307	343

Mfg. Part No.	Resistance Ohms +/-20%	Linearity (+/-)	Stock No.	Price Each 1-2	3-5	6-14
601R1KL.7	1K	0.70	86H6847	270.09	219.13	184.73
602R2KL.35	2K	0.35	86H6848	215.25	174.64	147.22
603R3KL.25	3K	0.25	86H6849	221.71	179.88	151.65
604R4KL.15	4K	0.15	86H6850	230.96	187.38	157.97
606R6KL.12	6K	0.12	86H6851	330.13	267.84	225.80
610R10KL.09	10K	0.09	86H6852	277.15	224.86	189.56
612R12KL.08	12K	0.08	86H6853	334.37	271.28	228.70

(77682)

MODEL 9600 MOTION  
SPRING RETURN LINEAR  
MOTION POSITION SENSORS
**BEI DUNCAN ELECTRONICS DIVISION**  
BEI TECHNOLOGIES, INC.


- Linearity: ±2%
- Actuation Force: 14.4 (4.0) Newtons max.
- Temperature Range: -40°C to +135°C
- Mechanical Life: 2,000,000 Full Cycles; 5,000,000 Dither Cycles
- Spring return design allows for interface-free installation.

9600 series spring return linear motion position sensors are ideal for a variety of applications requiring a highly miniaturized solution. Plastic housing and shaft. Plated brass eyelet style terminals. 4.8mm diameter shaft. Supplied with internal spring to return actuator to extended position. Ideally suited for use with microprocessor-based systems including joystick controls, robotics and industrial automation and controls.

Mfg. Part No.	Electrical Travel (mm)	Active Electrical Travel (mm)	Mechanical Travel (mm)	Power Rating at 70°C (Watts)
9605R1.7KL2.0	12.7	10.0	14.2	0.25
9610R3.4KL2.0	25.4	22.8	26.9	0.5
9615R5.1KL2.0	38.1	35.6	39.6	0.75

Mfg. Part No.	Resistance Ohms +/-25%	Length (mm)	Terminal Spacing (mm)	Stock No.	Price Each 1-4	5-9	10-24
9605R1.7KL2.0	1.7 K	26.9	0.300	86H6854	67.32	33.12	25.80
9610R3.4KL2.0	3.4 K	39.6	12.7	86H6855	67.32	33.12	25.80
9615R5.1KL2.0	5.1 K	52.3	20.3	86H6856	67.32	33.12	25.80

(77683)



## SENSORS – POSITION &amp; ENCODING

## MODEL 9850 SINGLE AND DUAL OUTPUT LOW-PROFILE PRECISION ROTARY SENSOR MODULES

**BEI** DUNCAN ELECTRONICS DIVISION  
BEI TECHNOLOGIES, INC.

- Linearity: +/- 2%
- Total Resistance: 5K ohms +/- 20%
- Power Rating: 0.15 Watts at 70°C
- Temperature Range: -40°C to +125°C
- Mechanical Life: 2,000,000 Full Cycles, 5,000,000 Dither Cycles
- Stop Strength: 0.68 Nm max.
- Torque: 0.11 Nm max.

**9850 series** offer a highly reliable rotary potentiometer sensor module that can be easily integrated into a wide variety of space-conscious applications requiring installation simplicity, long service life and repeatable accuracy. High temperature plastic housing. Sealed for harsh environments. Spring return. Mating Connector: Packard Electric METRI-Pack Series 150.

Mfg. Part No.	Output	No. of Pins
9851R5KL2.0	1	6
9852R5KL2.0	1	8
9855R5KL2.0	1	10
9856R5KL2.0	1	18
9861R5KL2.0	2	20
9862R5KL2.0	2	20

Mfg. Part No.	Mechanical Rotation	Active Electrical Rotation	Rotation Direction	Stock No.	Price Each	
					1-4	5-9
9851R5KL2.0	120°	85°	Clockwise	<b>86H6861</b>	44.22	39.53
9852R5KL2.0	120°	85°	Counter-Clockwise	<b>86H6862</b>	44.22	39.53
9855R5KL2.0	180°	130°	Clockwise	<b>86H6863</b>	44.88	40.12
9856R5KL2.0	180°	130°	Counter-Clockwise	<b>86H6864</b>	44.88	40.12
9861R5KL2.0	120°	85°	Clockwise	<b>86H6865</b>	68.64	61.36
9862R5KL2.0	120°	85°	Counter-Clockwise	<b>86H6866</b>	68.64	61.36

(77685)

## MODEL 9900 DUAL OUTPUT HALL EFFECT SENSOR

**BEI** DUNCAN ELECTRONICS DIVISION  
BEI TECHNOLOGIES, INC.

- Input Voltage: 5.0V +/- 0.25VDC
- Sensor 1 Output: 0.5V - 4.5V
- Sensor 2 Output: 0.25V - 2.5V
- Input Current: 10mA max. per output; 20mA max. total
- Output: Dual, 6-Pin
- Accuracy: +/- 3.0 % of full scale
- Resolution: Analog (continuous)
- Ratiometric Output
- Operational Temperature Range: -40°C to +85°C
- Rotational Life: 10 Million Cycles

**9900 series** offers a non-contacting Hall effect sensor in a rugged design. Two independent outputs for redundancy. Sealed construction to meet IP66/IP67 standards. High Temperature plastic housing and shaft. Fully sealed for harsh environments. Spring return. Mating Connector: Packard Electric METRIC-Pack 150 Series.

Mfg. Part No.	Mechanical Rotation	Active Electrical Rotation	Rotation Direction	Stock No.	Price Each	
					1-5	6-10
9902090CW	180°	90°	Clockwise	<b>86H6867</b>	50.68	45.09

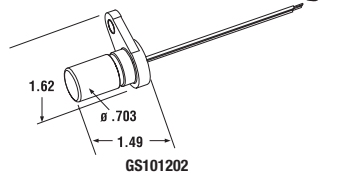
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## SOLID-STATE SPEED SENSORS

RoHS Compliant Available

**CHERRY**

- Hall-Effect Technology with High Speed and Near-Zero Speed Capabilities
- Sense Rotation of Ferrous Target Such as Gearwheel, Sprocket or Chain
- Digital Sinking Output
- Maximum Supply Current: 6mA except Type SD100203: 17mA



GS101202

Mfg. part no. **SD100203** provides two separate digital outputs for speed and direction. All except mfg. part no. **GS100701** provide additional circuit protection for immunity against electrical interference. Mfg. part no. **SD100203** includes 6" 20AWG leads. Mfg. part no. **GS100101** meets all IEC requirements for heavy industrial environments.

## INDUSTRIAL-GRADE

Mfg. Part No.	Description	Supply Voltage	Operating Temp. Range	Stock No.	Price Each
● GS100101	M12-1 Stainless Steel Barrel	4.5 - 24VDC	-40° - 105°C	<b>05M6387</b>	48.41

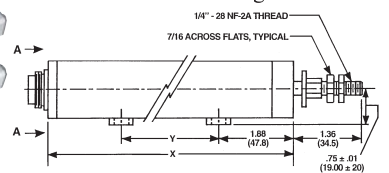
## COMMERCIAL-GRADE

● GS100502	M12-1 Stainless Steel Barrel	4.5 - 24VDC	-40° - 125°C	<b>05M6388</b>	26.84
GS100701	1 1/2" Aluminum Barrel	4.5 - 24VDC	-40° - 125°C	<b>95B6032</b>	26.21
SD100203	M18-1 Speed and Direction Sensor	4.75 - 24VDC	-40° - 85°C	<b>97H8411</b>	51.11

(69350)

## LF2 SERIES LINEAR POSITION TRANSDUCERS

RoHS Compliant Available



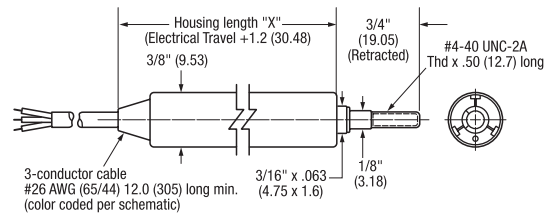
The **LF2 series** provide greater resistance to vibration. Feature stainless steel shafts, MystR® plastic elements, longer front-end bearings, a vibration-free damped element, spring-loaded ball joints, and a high-precision metal wiper. Vibration: 20g rms/0.75mm 5-2Hz. Total resistance: 5K Ohms. 0.1% independent linearity. Infinite resolution. Life: 1 billion operations. Backlash: .001". Operating temperature: -65°C to 105°C (-85°F to 221°F).

Mfg. Part No.	Electrical Travel (Nominal)	Dimensions		Mechanical Travel		Stock No.	Price Each
		"X" (in.)	"Y" (in.)	in.	mm		
● LF2S09N5KB6A	9"	12.19	310	9.10	231	<b>19C7113</b>	389.68
● LF2S14N5KB6A	14"	17.19	437	14.10	358	<b>19C7115</b>	474.86
● LF2S18N5KB6A	18"	21.19	538	18.12	460	<b>10M8428</b>	512.18

(60986)

## MLT SERIES LINEAR POSITION TRANSDUCERS

RoHS Compliant Available



- Anodized Extruded Aluminum Housing
- 0.375" Diameter
- Stainless Steel Shaft
- Absolute Continuous Measurement
- 4-40 Thread Shaft
- Operating Temperature: -40°C to +80°C (-40°F to +176°F)

Rugged enough to withstand the hostile environment of the factory, the **MLT series** linear position transducers are small in diameter. By using a proprietary dual wiper, internal ball joint and the MystR® conductive plastic film, the **MLT series** transducers provide usable output at high vibration levels for long periods of time. The use of precious metal wipers further enhances reliability. V max = 30V, I max = 100mA, Ci = 0, µF, Li = 0 mH. Intrinsically safe for Class I, II and III Division 1, Groups A, B, C, D, E, F, and G for Hazardous (indoor/outdoor) NEMA 4 locations.

Mfg. Part No.	Electrical Travel (in.)	Res. (Ohms)	Linearity (%)	Housing Length "X" (in.)	Wt. (g)	Stock No.	Price Each
● MLTOR5N0750F5C	0.5	750	1	1.7	11	<b>49H7056</b>	236.58
● MLT002N3000B5C	2	3000	0.1	3.2	20	<b>07H4154</b>	251.58
● MLT004N6000B5C	4	6000	0.1	5.2	28	<b>81H2504</b>	277.72
● MLT006N9000B5C	6	9000	0.1	7.2	31	<b>10M8431</b>	288.64

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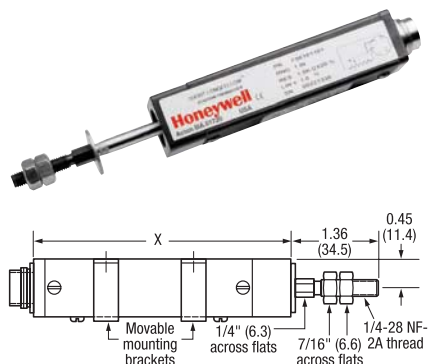


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## SENSORS – POSITION & ENCODING

### SLF SERIES LINEAR POSITION TRANSDUCERS



- 0.081" Thick Housing with 0.25" Shaft
- 1/4"-28 Thread Shaft
- Operating Temperature: -65° to +105°C

SLF series transducers are frequently used for measuring linear position or displacement up to 6" on a wide variety of manufacturing and process equipment. The mechanical design of the unit's front and rear bearings, anodized extruded aluminum housing, stainless steel shaft and precious metal wipers are suitable for a factory's harsh environment. Based on the proprietary Mystr<sup>®</sup> conductive plastic film, it provides a high resolution, absolute position measurement without external signal conditioners. V max. = 30V, I max. = 100mA, Ci = 0,  $\mu$ F, Li = 0 mH. Intrinsically Safe for Class I, II, and III Division I, Groups A, B, C, D, E, F, and G for Hazardous (indoor/outdoor) NEMA 4 locations.

Mfg. Part No.	Electrical Travel (in.)	Res. (Ohms)	Mechanical Travel (in.)	Linearity (%)	Housing Length "X" (in.)	Price Each	
						Stock No.	1-2
● SLF01N1500F6A	1	1500	1.2	1	4.05	67H4215	299.87
● SLF01N1500B6A	1	1500	1.2	0.1	4.05	81H2506	312.76
● SLF02N3000F6A	2	3000	2.2	1	5.05	10M5261	303.58
● SLF02N3000B6A	2	3000	2.2	0.1	5.05	81H2507	337.61
● SLF04N6000F6A	4	6000	4.15	1	6.95	10M8451	329.41
● SLF04N6000B6A	4	6000	4.15	0.1	6.95	03H3356	433.88
● SLF06N9000F6A	6	9000	6.15	1	8.95	94C2857	361.36
● SLF06N9000B6A	6	9000	6.15	0.1	8.95	06H0953	421.30

(77664)

### 103SR AND SR4 SERIES HALL-EFFECT SENSORS



### Honeywell

Sensing and Control



Adjustable mounting, threaded aluminum housing contains Hall-effect sensor operated by proximity to external magnet. Sealed housing meets NEMA enclosure types 3, 3R, 3S, 4, 4X, 12, and 13. 24-gauge, 6" stranded, color-coded lead wires at termination. Mfg. part nos. with "2" suffix are supplied with one meter, 22AWG, PVC jacketed cable. Mfg. part nos. 103SR13 are digital current sinking output. Mfg. part nos. 103SR11 and 103SR12 are current sourcing. Magnetics type for mfg. part nos. 103SR: unipolar. Dimensions: 15/32-32NS x 1"L. Operating temperature range: -40°C to +100°C. Magnets available on page 1724.

Mfg. Part No.	Supply Voltage	Supply Current	Voltage Output	Stock No.	Price Each	
					1-14	
● 103SR11A-1	4.5-5.5VDC	4mA	Vs-1.5VDC	23F2233	28.91	
● 103SR12A-1	6-24VDC	10.0mA	Vs-1.5VDC	05M2281	27.15	
● 103SR12A-2	6-24VDC	10.0mA	Vs-1.5VDC	05M2282	38.50	
● 103SR13A-1	4.5-24VDC	10.0mA	0.4VDC	14M6607	25.71	
● 103SR13A-2	4.5-24VDC	10.0mA	0.4VDC	50F5281	31.51	

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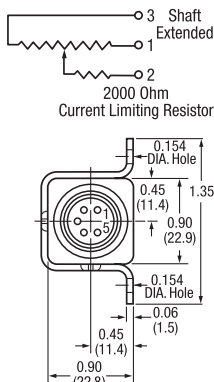
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(94640)

### Honeywell

Sensing and Control



### GT SERIES HALL-EFFECT GEAR-TOOTH SENSOR



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- EMI Resistant
- Fast Operating Speed: Over 100kHz

Mfg. part no. 1GT101DC gear-tooth sensor uses a magnetically-biased, Hall-effect integrated circuit to accurately sense movement of ferrous metal targets. Units will function from a 4.5 to 24VDC power supply and have reverse polarity protection. Current sinking output. Dimensions: 0.70W x 1.43"D.

Mfg. Part No.	Stock No.	Price Each			
		1-49	50-99	100-499	500+
● 1GT101DC	92F3009	24.98	21.19	18.74	16.84

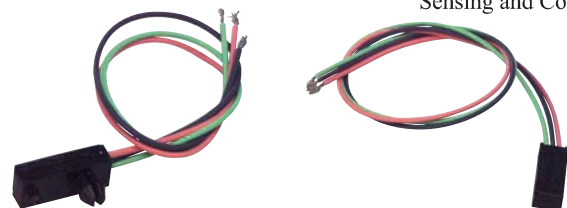
(3457)

### SR13/SR15 SERIES HALL-EFFECT POSITION SENSORS



### Honeywell

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- SR13C-A1
- Snap-In or Flat Mount Packages
- Digital Output (Current Sinking)
- Operating Temperature: -40°C to +150°C

- SR15C-A3
- Temperature Compensated Magnetics
- 24 AWG Radox Wire Leads

SR13 and SR15 series position sensors are not susceptible to common occurrences of humidity, vibration or dust contamination yet provide easy installation. Devices can be installed without additional hardware, using the pre-leaded snap-in or flat-pack housings. Sensors utilize time-proven SS400 series position sensors, which have a thermally balanced integrated Hall-effect circuit providing predictable performance over a wide operating temperature range. Snap-in mount feature accepts a panel thickness up to 0.135". Supply voltage: 3.8-30VDC. Supply current: 13mA. Output voltage: 400mV. Sinking current: 20mA continuous, 50mA cycled. Dimensions: 0.80L x 0.30W x 0.20"D. Magnets available on page 1724.

#### SPECIFICATIONS

Mfg. Part No.	Magnetics	Gauss Level @ 25°C		
		Max. OP	Min. RL	Min. DIF
● SR13C-A1	Unipolar	180	75	25
● SR13R-A1	Latching	85	-85	50

Mfg. Part No.	Lead Length	Mounting Style	Stock No.	Price Each			
				1-49	50-99	100-499	500+
● SR13C-A1	6.0"	Snap-in	05M1292	5.12	4.34	3.85	3.46
● SR13R-A1	6.0"	Snap-in	95B0184	6.09	5.15	4.57	4.11
● SR15C-A3	10.0"	Flat Pack	05M1293	4.14	3.51	3.11	2.80

(51471)

### 4AV SERIES HALL-EFFECT VANE SENSORS



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Vane-operated sensors feature dual digital current sinking outputs and closely controlled differential to predict pulse width. Sensors also offer transient protection. Mfg. part no. 4AV16 has 24AWG XLPE 7.45" (189.2mm) lead wires; mfg. part no. 4AV18 has 24AWG XLPE 18.15" (461mm) lead wires; mfg. part no. 4AV20 is dual output and has 4-pin in-line PCB terminals. Operating temperature range: -40°C to +125°C. Dimensions: 0.43H x 0.52W x 0.75"D.

Mfg. Part No.	Supply Voltage (VDC)	Supply Current (mA)	Output Voltage (VDC)	Termination	Stock No.	Price Each			
						1-49	50-99	100-499	
● 4AV16F	4.5-24	18.5	0.4	7.45" Wire Lead	12M6713	25.60	21.82	19.26	
● 4AV18F	4.5-24	18.5	0.4	18.15" Wire Lead	10M8485	24.91	21.23	18.74	
● 4AV20F	4.5-24	18.5	0.4	PCB	48F2799	25.96	22.13	19.53	

(3480)

## SENSORS – POSITION &amp; ENCODING

SS4/SS5 SERIES  
HALL-EFFECT  
SENSORS

SS5

- Operating speed: 0 to over 100kHz
- Supply voltage: 3.8-24VDC
- Output voltage: 0.4V max
- SOT89 package
- Built-in timing circuit

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Digital position sensors have current sink output. Feature temperature compensation. **SS4 series** dimensions: 0.160 × 0.118" (4.06 × 3.00). **SS5 series** are SOT89 packages. **SS42R series** features digital dual complementary sink/source outputs. Operate/release points are trimmed for zero symmetry. Reverse voltage polarity protection for full supply range. Operate temp. range: -40 to +105°C. **SS421 series** feature an operate temp. range of -40 to +105°C. Bipolar operation for easy RPM counting using ring magnets. Built-in timing circuit greatly simplifies and reduces the cost of PC board design. Speed trip point adjustable with external resistor and capacitor. "L" version is active low, "H" version is active high.

## MINIATURE DIGITAL SENSORS

Mfg. Part No.	Magnetics	Supply Current (mA)	Gauss Level @ 25°C			Stock No.	Price Each
			Max. OP	Min. RL	Min. DIF.		
● SS41	Bipolar	8.7	150	-140	50	73K1376	1.52
● SS411A	Bipolar	10	60	-60	15	73K4040	1.92
● SS443A	Unipolar	10	180	75	25	73K1377	1.61
● SS441A	Unipolar	10	115	20	20	93F6654	1.92
● SS461A	Latch	10	85	-85	50	93F9228	1.92
● SS466A	Latch	10	180	-180	200	73K4041	1.68

## COMPLEMENTARY OUTPUT

● SS42R	Latch	11	185	-185	200	01J0382	1.88
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## SURFACE MOUNT DIGITAL SENSORS (SOT 89)

● SS541AT	Unipolar	10	115	20	20	86C1047	2.48
● SS543AT	Unipolar	10	180	75	25	72C8940	1.77
● SS549AT	Unipolar	10	390	235	30	86C1048	1.77

## MINIATURE LINEAR SENSORS

Mfg. Part No.	Supply Voltage (VDC)	Supply Current (mA)	Sensitivity* MV/Gauss	Stock No.	Price Each
● SS49	4-10	4	0.9	95F5207	1.45
● SS49E	3-6.5	6	1.4	09J1786	2.06
● SS59ET	3-6.5	6	1.4	81H1715	1.77
● SS495A	4.5-10.5	7	3.125 ± 0.125	73K4042	2.70
● SS495A1	4.5-10.5	7	3.125 ± 0.094	73K4043	3.37
● SS495A2	4.5-10.5	7	3.125 ± 0.156	73K1378	2.28
● SS496A1	4.5-10.5	7	2.50 ± 0.075	73K1379	3.37
● SS496A	4.5-10.5	7	2.50 ± 0.100	48F2831	2.72

\*Nominal at 5.0VDC supply  
(5179)

SS2/2SS SERIES ULTRA-SENSITIVE  
MAGNETICALLY OPERATED SENSORSHoneywell  
Sensing and Control

2SS52M



SS2

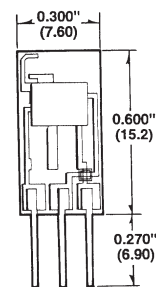
Feature magneto-resistive sensor with digital current sink output. Can be operated with either north or south magnetic pole. 3-pin, in-line PC board terminals on 0.100" (2.54) mounting centers except **mfg. part no. 2SS52M**, which is 0.050" (1.27). For **mfg. part nos. SS21 and SS22** output voltage: 0.4V max. Typical OP @ 25°C: 15 gauss. Typical RL @ 25°C: 11 gauss. Typical differential @ 25°C: 4. Gauss 0.3" × 0.3" (7.62 × 7.62), with epoxy chip protection. **Mfg. part no. 2SS52M**: 0.18" × 0.18" (4.57 × 4.57) plastic package.

Mfg. Part No.	Operate Gauss	Supply Voltage	Supply Current	Stock No.	Price Each	
					1-49	50-99
● SS21PE	15	4.5-5.5VDC	10mA	05M1360	10.20	8.16
● SS22PE	15	6-24VDC	13.5mA	05M1361	8.82	7.47
● 2SS52M	15	3.8-30VDC	6mA	48F2833	2.85	2.28

(5178)

SS94A SERIES  
LINEAR HALL-EFFECT  
TRANSDUCERS

Operated by a magnetic field, the output voltage varies proportionally to the field strength. All sensors feature temperature compensation circuitry. **Mfg. part no. SS94A2** features silver back for improved noise immunity. Gauss range of -500 to +500 except **mfg. part no. SS94A1F** at -100 to +100. **Mfg. part no. SS94A1F** is high sensitivity.

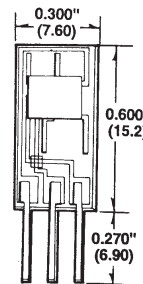
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Mfg. Part No.	Supply VDC	Supply mA	MV/Gauss Output @ 25°C*	Linearity % of Span	Price Each		
					Stock No.	1-24	25-49
● SS94A1	6.6-12.6	30.0	5.000	1.5% max	05M1372	16.34	15.51
● SS94A1B	4.5-8.0	17.5	1.875		05M1373	15.38	13.07
● SS94A1F	6.6-12.6	30.0	25.000		05M1376	18.00	17.08
● SS94A2	6.6-12.6	30.0	5.000		50F5182	18.60	17.65

\*Nominal at 8VDC supply except **SS94A1B** at 5VDC  
(5087)

91SS SERIES LINEAR  
HALL-EFFECT TRANSDUCER

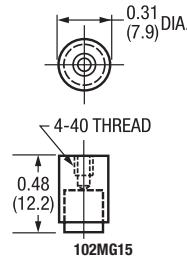
Linear output transducer operates by magnetic field. Thin ceramic package. Supply voltage: 8-16VDC. Supply current: 19mA. Sensitivity at 12VDC: 7.5mV/gauss at 25°C. Gauss range: -400 to +400. 1.5% linearity.

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Sensing and Control

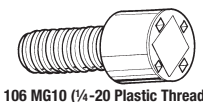
Mfg. Part No.	Stock No.	Price Each			
		1-49	50-99	100-499	500+
● 91SS12-2	05M3033	11.63	9.89	8.69	7.81

(5088)

## MG SERIES BAR MAGNETS

Honeywell  
Sensing and Control

102 MG11 (8-32 Aluminum Thread)



106 MG10 (1/4-20 Plastic Thread)



101 MG7

Bar magnets are ideal for sensors with unipolar magnetic characteristics. Gauss level given is @ 25°C. Other threaded bushing, bar, ring magnets, and ring magnets with alternate North and South poles for use with bipolar magnetic sensors are available; go online or call.

Mfg. Part No.	Dimensions		Gauss Level @		Stock No.	Price Each
	Length	Outside Diameter	0.050"	0.100"		
● 101MG7	0.25" (6.35)	0.25" (6.35)	755	480	23F2226	3.58
● 102MG11	0.67" (17.02)	0.31" (7.87)	755	480	23F2229	6.33
● 102MG15	0.48" (12.2)	0.31" (7.9)	755	480	23F2230	5.49
● 103MG5	0.04" (1.01)	0.078" (1.98)	225	100	23F2429	0.93
● 106MG10	0.93" (23.62)	0.40" (10.16)	1600	940	23F2237	8.23

(6177)

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(94645)



## SENSORS – PRESSURE

## DC SERIES ULTRA-LOW PRESSURE SENSORS



## Honeywell

Sensing and Control

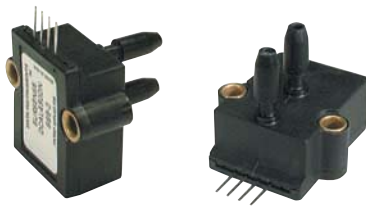


Fig. 1

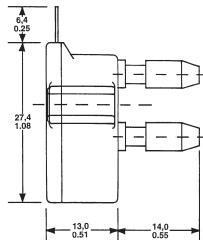


Fig. 1

- Silicon Micromachined Sensing Element
- -25°C to +85°C Operating Temperature
- Material in Contact with Media: Silicon, Glass-Filled Nylon and Alumina Ceramic
- Zero- and Span-Calibrated, Temperature Compensated
- Port size: 0.19" barb

Sursense™ ultra-low pressure sensors incorporate a proprietary technology designed using 2 sensing elements to reduce output offset or common mode errors to ensure the highest possible accuracy. They feature thermal, offset and full-scale calibration, long-term stability and low sensitivity to position.

## DC ULTRA-LOW PRESSURE WITH AMPLIFIED OUTPUT AND SURSENSE™ CALIBRATION

Mfg. Part No.	Pressure Range	Reference	Zero Output	Fig.	Stock No.	Price Each
• DC001NDC4	0-1" H <sub>2</sub> O	Differential	2.25VDC	1	20M8049	138.08
• DC001NGC4	0-1" H <sub>2</sub> O	Gage	0.25VDC	1	20M8051	138.08
• DC005NDC4	0-5" H <sub>2</sub> O	Differential	2.25VDC	1	20M8054	129.16
• DC010NDC4	0-10" H <sub>2</sub> O	Differential	2.25VDC	1	20M8055	124.72
• DC001NDR5	0-1" H <sub>2</sub> O	Differential	3.5VDC	1	20M8050	149.97
• DC001NGR5	0-1" H <sub>2</sub> O	Gage	1.0VDC	1	20M8052	149.97

\*Regulated output  
(60990)

## DCXL-DS SERIES SURSENSE ULTRA LOW PRESSURE SENSORS



## Honeywell

Sensing and Control

## Features:

- Available in gage and differential pressure ranges
- Highly stable linear output

## Specifications:

- Unamplified signal conditioning
- 5psi maximum overpressure
- PCB termination
- Supply voltage: 3VDC min. 12VDC typ. 16VDC max.
- Temperature compensated: 0°C to 50°C (32°F to 122°F)



The SURSENSE line of ultra low pressure sensors is based upon a proprietary technology designed to reduce output offset or common mode errors. Each sensor features calibrated offset, full scale span and thermal error calibration to promote accuracy for flow pressure measurement. These highly stable sensors feature an industry standard, ported package with a snap together cover that improves stress isolation for printed circuit board applications.

Mfg. Part No.	Operating Pressure (in. Water)	Sensitivity (mV/in. Water)	Full Scale Span (mV)	Stock No.	Price Each
• DCXL01DS	1	10.000	10	76K0616	131.59 123.81 112.15
• DCXL05DS	5	4.000	20	76K0617	114.21 107.47 97.35
• DCXL20DS	20	1.000	20	04M8778	108.00 101.63 92.06

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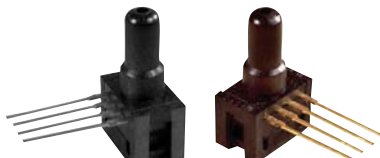
## 24PC SERIES NON-TEMPERATURE COMPENSATED MINIATURE PRESSURE SENSORS



## Honeywell

Sensing and Control

- Differential and Gage Pressure Measurement
- Miniature Package
- Silicon Piezoresistive Sensor Chip
- Can be Used to Measure with Vacuum or Positive Pressure



Differential

Gage

Contain straight port, non-compensated circuitry and fluorosilicone seals. Operating temperature: -40°C to +85°C. 16mA constant excitation current significantly reduces sensitivity shift over temperature range. Recommended excitation voltage: 10VDC ratiometric (16VDC max). Dimensions: Differential: 1.35L x 0.50"W; Gage: 0.86L x 0.50"W. 4-pin SIP termination 0.600" leads. Sensors are available with threaded, barbed, luer, and needle pressure port options. Other seal materials for media compatibility are available. DIP termination option is available.

Mfg. Part No.	Pressure Range	Measure-ment	Full Scale Output	Sensitivity (mV/psi)	Stock No.	Price Each
• 24PCFA6D	0-1 psi	Differential	45mV	45	16F3194	15.53
• 24PCFA6G	0-1 psi	Gage/Vac	45mV	45	16F3193	15.53

▶ CONTINUED ▶

## 24PC SERIES NON-TEMPERATURE COMPENSATED MINIATURE PRESSURE SENSORS (CONT.)

Mfg. Part No.	Pressure Range	Measure-ment	Full Scale Output	Sensitivity (mV/psi)	Stock No.	Price Each
• 24PCBFA6D	0-5 psi	Differential	115mV	23	16F3196	15.53
• 24PCBFA6G	0-5 psi	Gage/Vac	115mV	23	16F3195	15.53
• 24PCDFA6G	0-30 psi	Gage/Vac	330mV	11	16F3199	15.53
• 24PCFFA6G	0-100 psi	Gage/Vac	225mV	2.25	16F3201	15.53
• 24PCDFA6D	0-30 psi	Differential	115mV	11	93B6606	15.53
• 24PCCFFA6G	0-15 psi	Gage/Vac	225mV	15	16F3197	15.53
• 24PCFFA6D	0-100 psi	Differential	212mV	2.25	99B1851	15.53
• 24PCGFA6D	0-250 psi	Differential	212mV	0.85	86C4632	15.53
• 24PCGFA6G	0-250 psi	Gage	212mV	0.85	93B0403	15.53

(5168)

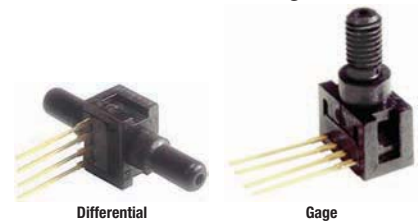
## 26PC SERIES TEMPERATURE COMPENSATED PRESSURE SENSORS



## Honeywell

Sensing and Control

- Differential and Gage Pressure Measurement
- Miniature Package
- Silicon Piezoresistive Sensor Chip
- Can be Used to Measure Vacuum or Positive Pressure
- Temperature Compensated for Interchangeability from 0°C to 50°C



Differential

Gage

Contain straight port, compensated circuitry and fluorosilicone seals. Temperature compensated from 0°C to +58°C. Null and full-scale output are calibrated. .600" long 4-pin SIP termination. Operating temperature: -40°C to +85°C. Recommended excitation voltage: 10VDC ratiometric (16VDC max.). Sensors are available with threaded, barbed, luer, and needle pressure port options. Other seal materials for media compatibility are available. DIP termination option is available.

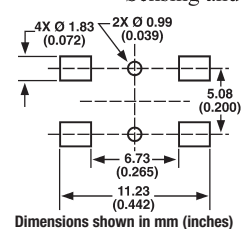
Mfg. Part No.	Pressure Range	Measurement	Full Scale Output	Sensitivity (mV/psi)	Stock No.	Price Each
• 26PCFA6D	0-1 psi	Differential	16.7mV	16.7	52F7256	23.16
• 26PCFA6G	0-1 psi	Gage/Vac	16.7mV	16.7	52F7257	23.16
• 26PCBFA6D	0-5 psi	Differential	50mV	10.0	93B0356	23.16
• 26PCBFA6G	0-5 psi	Gage/Vac	50mV	10.0	39B7194	23.16
• 26PCCFFA6D	0-15 psi	Differential	100mV	6.67	16F3198	23.16
• 26PCCFFA6G	0-15 psi	Gage/Vac	100mV	6.67	16F3206	23.16
• 26PCDFA6D	0-30 psi	Differential	100mV	3.33	16F3209	23.16
• 26PCFFFA6G	0-100 psi	Gage/Vac	100mV	1.0	16F3210	23.16

(5169)

## SURFACE MOUNT PRESSURE SENSORS

## Honeywell

Sensing and Control



- Gage, Differential, Vacuum Gage, Wet/Wet Differential Measurement
- Temperature Compensated (0°C to 50°C) And End Point Calibrated
- Excitation 10VDC, 16VDC Max.
- Linearity 0.50% of Span Typical
- Wet-Wet Differential Pressure Sensing

Designed for the medical industry, the 26PC SMT compensated pressure sensors is based on 26PC sensor utilizing wheatstone bridge construction, silicon piezoresistive technology and fluorosilicone seals. Compact package (0.28L x 0.24W x 0.31"H) with 0.125" diameter pick-up feature.

## TEMPERATURE COMPENSATED

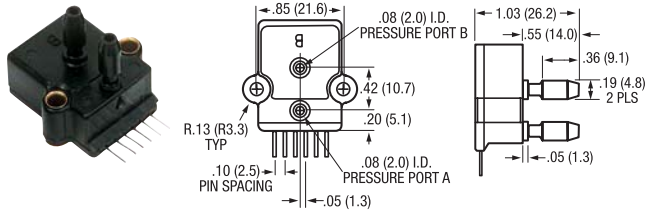
Mfg. Part No.	Pressure Range	Measurement	Full Scale Output	Sensitivity (mV/psi)	Stock No.	Price Each
• 26PC01SMT	0-1 psi	Differential	16.7mV	16.7	15M2407	17.56
• 26PC05SMT	0-5 psi	Differential	50mV	10	05M2721	17.56
• 26PC15SMT	0-15 psi	Differential	100mV	6.67	10M5361	17.56

## NON-TEMPERATURE COMPENSATED

Mfg. Part No.	Pressure Range	Measurement	Full Scale Output	Sensitivity (mV/psi)	Stock No.	Price Each
• 24PC01SMT	0-1 psi	Differential	45mV	45	15M2115	9.44
• 24PC05SMT	0-5 psi	Differential	115mV	23	92C7235	9.44

(68367)

## SENSORS – PRESSURE

SCX AND SCXL SERIES  
PRECISION COMPENSATED  
PRESSURE SENSORSHoneywell  
Sensing and Control

- SCX series response time: 100msec
- Operating temperature: -40°C to +85°C
- SIP Package
- SCXL series response time: 500msec
- Operating temperature: 0 to +70°C

Provide a very cost-effective solution for pressure applications that require high accuracy over a wide temperature range. Feature an integrated sensor element and laser-trimmed thick film ceramic housed in a compact nylon case. All devices are calibrated for span to within +/-1% and provide a very low pressure output of +/-300 microvolts maximum. Ideal for medical equipment, computer peripherals and pneumatic control applications.

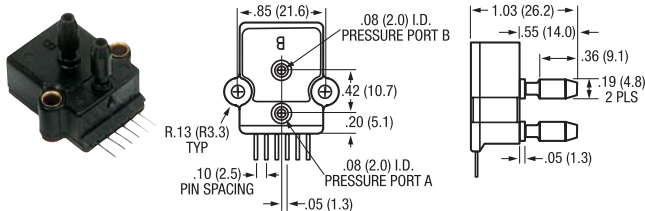
## SCX SERIES

Mfg. Part No.	Pressure	Pressure Type	Output/ Span (mV)	Supply Voltage (VDC)	Stock No.	Price Each
● SCX01DN	0-1 Psi	Differential/Gage	18	20	78H1477	76.57 72.07
● SCX05DN	0-5 Psi	Differential/Gage	60	20	78H1478	62.45 58.77
● SCX15AN	0-15 Psi	Absolute	90	20	10M5247	62.45 58.77
● SCX15DN	0-15 Psi	Differential/Gage	90	20	10M5248	62.45 58.77
● SCX30DN	0-30 Psi	Differential/Gage	90	20	78H1486	62.45 58.77
● SCX100DN	0-100 Psi	Differential/Gage	100	20	78H1480	76.57 72.07

## SCXL SERIES

● SCXL004DN*	0-4" H2O	Differential/Gage	Ratio	18	10M5245	88.96 83.73
● SCXL010DN*	0-10" H2O	Differential/Gage	Ratio	20	09J5653	67.72 63.73

(78210)

ASCX SERIES SIGNAL  
CONDITIONED PRESSURE SENSORSHoneywell  
Sensing and Control

- Supply Voltage: +4.5 to 16VDC
- Response Time: 100msec
- Operating Temperature: -25°C to +105°C
- SIP Package

Provide a cost-effective solution for pressure applications that require high-accuracy over a wide temperature range. Feature an integrated circuit sensor element and laser-trimmed thick film ceramic housed in a compact nylon case. All devices are calibrated for span to within +/-1% (typically +/-0.2%) of FSD. Requires very low quiescent current compared to other signal conditioned pressure sensors, making these devices best for battery powered applications. Also ideal for medical equipment, computer peripherals and pneumatic control applications due to their low noise and excellent temperature compensation.

Mfg. Part No.	Pressure	Pressure Type	Sensitivity	Stock No.	Price Each
● ASCX01DN	0-1 Psi	Differential/Gage	4.5 V/psi	10M5131	67.09
● ASCX05DN	0-5 Psi	Differential/Gage	0.9 V/psi	10M5132	67.09
● ASCX15AN	0-15 Psi	Absolute	0.3 V/psi	10M5134	67.09
● ASCX15DN	0-15 Psi	Differential/Gage	0.3 V/psi	78H1323	67.09
● ASCX30DN	0-30 Psi	Differential/Gage	0.15 V/psi	10M5136	67.09
● ASCX100DN	0-100 Psi	Differential/Gage	45 mV/psi	10M9191	56.10
● ASCX150AN	0-150 Psi	Absolute	30 mV/psi	78H1324	67.09

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(94650)

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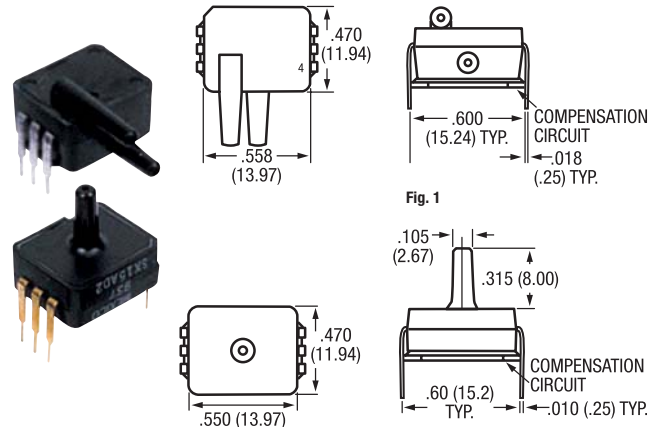
SDX SERIES PRECISION  
COMPENSATED PRESSURE SENSORSHoneywell  
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Fig. 1

Fig. 2

- Supply Voltage: +20VDC
- Response Time: 100msec

- Operating Temperature: -40°C to +85°C
- DIP Package

Provide a very cost-effective solution for pressure applications that require small size plus performance. Feature an integrated circuit sensor element and laser-trimmed thick film ceramic housed in a compact, solvent-resistant case. Double wide (0.600" lead spacing) dual-inline package. The PC board area used by each DIP is approximately 0.26 square inches, enabling the use of multiple sensors in limited board space. Thru-hole mounting. Ideal for medical equipment, computer peripherals, HVAC and pneumatic control applications.

Mfg. Part No.	Fig.	Pressure	Pressure Type	Output/ Span	Stock No.	Price Each
● SDX01D4	1	0-5 Psi	Differential/Gage	Voltage	78H1488	37.95
● SDX15D4	1	0-15 Psi	Differential/Gage	Voltage	78H1499	37.95
● SDX30A4	1	0-30 Psi	Absolute	Voltage	78H1502	37.95
● SDX005IND4	1	0-5" H2O	Differential/Gage	Voltage	78H1487	75.89
● SDX010IND4	1	0-10" H2O	Differential/Gage	Voltage	78H1490	64.66
● SDX01G2	2	0-1 Psi	Gage	Voltage	78H1489	37.95
● SDX05G2	2	0-5 Psi	Gage	Voltage	10M5255	30.97
● SDX15A2	2	0-15 Psi	Absolute	Voltage	78H1497	37.95
● SDX15G2	2	0-15 Psi	Gage	Voltage	78H1500	37.95
● SDX30A2	2	0-30 Psi	Absolute	Voltage	10M5259	38.36

(80257)

ASDX SERIES AMPLIFIED  
PRESSURE SENSORSHoneywell  
Sensing and Control

- Supply voltage: 4.75 to 5.25VDC (not reverse polarity protected)
- Response time: 8ms
- Operating temperature: -20°C to 105°C
- DIP package

Amplified version of the SDX series offering a slightly larger footprint and a 4.0V span output. Fully calibrated and temperature compensated using an on-board ASIC. Accurate to within +/-2.0%. Characterized for operation from a single 5V supply. Ideal for medical instrumentation, barometry, HVAC controls and pneumatic control applications.

## 0.5 - 4.5VDC OUTPUT

Mfg. Part No.	Pressure Range	Port Style	Stock No.	Price Each
● ASDX001G24R	0-1 Psi	Straight	78H2272	28.19
● ASDX001D44R	0-1 Psi	Straight	78H2271	28.19
● ASDX005G24R	0-5 Psi	Straight	78H2275	28.19
● ASDX005D44R	0-5 Psi	Straight	78H2274	28.19
● ASDX015A24R	0-15 Psi	Straight	78H2277	28.19
● ASDX015G24R	0-15 Psi	Straight	78H2280	28.19
● ASDX015D44R	0-15 Psi	Straight	78H2279	28.19
● ASDX030A24R	0-30 Psi	Straight	78H2282	28.19
● ASDX030G24R	0-30 Psi	Straight	78H2285	28.19
● ASDX030D44R	0-30 Psi	Straight	78H2284	28.19
● ASDX100A24R	0-100 Psi	Straight	78H2287	28.19
● ASDX100G24R	0-100 Psi	Straight	78H2290	28.19
● ASDX100D44R	0-100 Psi	Straight	78H2289	28.19

## 2.5 +/- 2VDC OUTPUT

● ASDX001D44D	0-1 Psi	Straight	78H2270	28.19
● ASDX005D44D	0-5 Psi	Straight	78H2273	28.19
● ASDX015D44D	0-15 Psi	Straight	78H2278	28.19

➤ CONTINUED ➤

## SENSORS – PRESSURE

## ASDX SERIES AMPLIFIED PRESSURE SENSORS (CONT.)

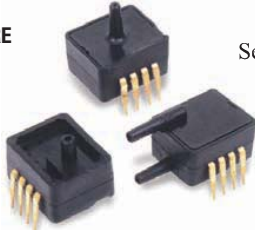
2.5 +/- 2VDC OUTPUT

Mfg. Part No.	Pressure Range	Port Style	Stock No.	Price Each
● ASDX030D44D	0-30 Psi	Straight	78H2283	28.19
● ASDX100D44D	0-100 Psi	Straight	78H2288	28.19

(78387)

## ASDX DO AND ASDXL SERIES MICROSTRUCTURE PRESSURE SENSORS

- Calibrated and temperature compensated output
- Response time: 8ms
- Standard DIP package
- ASIC enhanced output
- Supply Voltage: 5VDC



**Honeywell**  
Sensing and Control



ASDX DO series provides digital correction of sensor offset, sensitivity, temperature coefficients and non-linearity. Uses I<sup>2</sup>C compatible protocol, which allows easy interfacing to most commonly used microcontrollers and microprocessors without additional components or electronic circuitry. ASDXL series has an analog output that is ratiometric with supply voltage over the compensated supply range with 11-bit resolution. ASDX DO series is accurate to within ±2.0% full scale. ASDXL series is accurate to within ±2.5% full scale. Meets ISO 9001 standards. Intended for use with non-corrosive, non-ionic working fluids such as air and dry gases.

Mfg. Part No.	Operating Pressure (psi)	Pressure Measuring Type	Stock No.	Price Each
● ASDX001D44R-DO	1	Differential/Gage	71J3361	27.92
● ASDX001G24R-DO	1	Gage	71J3362	27.92
● ASDX005D44R-DO	5	Differential/Gage	71J3363	27.92
● ASDX005G24R-DO	5	Gage	71J3364	27.92
● ASDX015D44R-DO	15	Differential/Gage	71J3365	27.92
● ASDX015G24R-DO	15	Gage	71J3366	27.92
● ASDX030D44R-DO	30	Differential/Gage	19K7814	27.92
● ASDX030G24R-DO	30	Gage	19K7815	27.92

## ASDXL SERIES

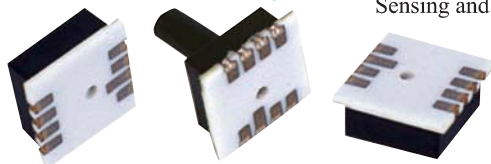
Mfg. Part No.	Operating Pressure (in H <sub>2</sub> O)	Pressure Measuring Type	Stock No.	Price Each
● ASDXL05D44D	5	Differential	38M9789	26.43
● ASDXL10D44D	10	Differential	38M9790	25.33
● ASDXL10D44R	10	Differential	01M5004	25.33
● ASDXL10G24R	10	Gage	38M9791	25.33

(83947)

## SX SMT SERIES HIGH-IMPEDANCE PRESSURE SENSORS



**Honeywell**  
Sensing and Control



## Specifications:

- Signal conditioning: Unamplified - uncompensated for temp
- Supply voltage: 5.0Vdc typ., 12.0Vdc max.
- PCB termination - 4-pin
- Standard SMT package
- Operating temperature range: -40°C to 125°C (-40°F to 257°F)
- Medi compatibility: Clean, dry gases only

The SX series surface mount sensors provide the most cost effective method of measuring absolute and gage pressures in a fully packaged sensor. The unique package design allows measurement of gage or absolute pressure and a ported package option in a true surface mount sensor. Convenient pressure ranges are available to measure gage and absolute pressures from 1psi to 150psi applications. Typical applications include pneumatic controls, automotive diagnostics, medical/dental equipment, and environmental controls.

Mfg. Part No.	Pressure Range (Psi)	Pressure Type	Port Style	Stock No.	Price Each
● SXP15ASMT	0-15	Absolute	Straight	68K9803	31.61
● SX15GSMT	0-15	Gage	...	68K9804	25.06
● SX150ASMT	0-150	Absolute	Manifold	68K9805	24.32

(87049)

## Features:

- Low cost
- Small size
- Absolute or gage pressures
- Low cost composition

## XPC/XPX SERIES SILICON PRESSURE SENSORS



**Honeywell**  
Sensing and Control

## Features:

- Low cost, small size
- Temperature compensated
- Zero and span calibrated
- Millivolt output
- Differential, gage and absolute pressure
- Constant voltage excitation
- High impedance-low current

## Specifications:

- Signal conditioning: Non-amplified
- Supply voltage: 3.0VDC min., 12.0VDC typ., 16.0VDC max.
- PCB termination
- XPC: Uncompensated and non-calibrated, mV
- XPC: Compensated and calibrated, mV

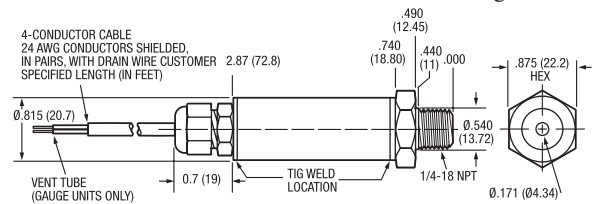
The XPC and XPC series pressure sensors integrate silicon micromachined sensing technology, temperature compensation, and calibration in a complete family of low cost packages. These piezoresistive pressure sensors use micromachined silicon chips mounted on a ceramic and protected with a plastic cap. While the sensors are designed for use with non-corrosive, non-ionic pressure media, they accommodate many gases that are used in medical applications.

Mfg. Part No.	Pressure Range	Pressure Type	Port Style	Sensitivity (mV/Psi)	Full Scale Span (mV)	Stock No.	Price Each
● XPC01DTC	-1 to 1	Differential/Gage	Barbed	18	18	86C1535	51.51
● XPC15ATC	2 to 15	Absolute	Barbed	6	90	11M1724	44.70
● XPC30GFC	-30 to 30	Gage/Vacuum	Barbed	3	90	19M4744	47.77
● XPC100DT	-100 to 100	Differential/Gage	Barbed	7.08	295	11M1726	40.79
● XPC104DTC	-4 to 4	Differential	Barbed	6.25	25	05M2094	71.93
● XPC150D	-150 to 150	Differential/Gage	...	4.20	262.5	15M1974	28.88

(87050)

## SPT SERIES STAINLESS STEEL PRESSURE SENSORS

**Honeywell**  
Sensing and Control



- Supply Voltage: +12 to +30VDC
- Response Time: 100msec
- Operating Temperature: -40°C to +125°C
- Pressure Connection: Steel 1/8-18 NPT Port
- Cable Length: 2' Standard (Pigtail Cable Connection)

Designed for pressure applications that involve measurement of hostile media in harsh environments. Will accommodate any media that will not adversely attack 304 or 316 stainless steel wetted parts. Calibrated and temperature compensated. Feature NEMA 4 design. Ideal for industrial automation and flow control, pressure instrumentation, hydraulic systems and process control applications.

Mfg. Part No.	Pressure	Pressure Type	Output Type	Stock No.	Price Each
SPT4V0005PG5W02	0-5 Psi	Gage	1-5VDC	78H1506	134.80
SPT4V0015PG5W02	0-15 Psi	Gage	1-5VDC	78H1507	134.80
SPT4V0030PG5W02	0-30 Psi	Gage	1-5VDC	78H1508	134.80
SPT4V0100PG5W02	0-100 Psi	Gage	1-5VDC	78H1509	134.80
SPT4V0300PG5W02	0-300 Psi	Gage	1-5VDC	78H1510	134.80
SPT4V0500PG5W02	0-500 Psi	Gage	1-5VDC	78H1511	134.80
SPT4V1000PS5W02	0-1000 Psi	Sealed	1-5VDC	78H1512	134.80
SPT4V2000PS5W02	0-2000 Psi	Sealed	1-5VDC	78H1513	134.80
SPT4V3000PS5W02	0-3000 Psi	Sealed	1-5VDC	78H1514	134.80
SPT4V5000PS5W02	0-5000 Psi	Sealed	1-5VDC	78H1515	134.80

(80260)

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(94656)



## SENSORS – PRESSURE

## MEDIAMATE® PRESSURE TRANSDUCERS



Made of 300-series stainless steel that is resistant to a wide variety of corrosive elements such as Freon®, ammonia, water and hydraulic fluids. Applications: HVAC, paint spraying systems, irrigation systems, heat pumps, automotive, and electronic pressure switches. Port size: 1/8 NPT (1/4 UNF and other port options). Pressure ranges down to 15 psi available. Feature gauge measurement. Supply: 5VDC. Output: 0-50mV. Operating temperature: -40°C to 90°C (-40°F to 194°F). Accuracy: 0.5% FSO BFSL. Temperature compensated: -1°C - 82°C. Hollingsworth quick-connect termination (Hirschmann connector option).

Honeywell  
Sensing and Control

Mfg. Part No.	Pressure Range (PSI)	Stock No.	Price Each
			1-4
● MM100PG1QA	100	10M8433	335.50
● MM500PG1QA	500	10M8435	335.50
● MM01KPG1QA	1000	19C7249	385.74
● MM05KPG1QA	5000	19C7250	385.74

(60981)

## SA SERIES HARSH DUTY PRESSURE TRANSDUCERS



Feature 300-series stainless-steel case and sealed construction. (Gage and absolute versions available.) Applications include: Freon® and ammonia refrigeration systems, hydraulic controls, engine controls, compressors, and automated machining. Fully calibrated, compensated (-1°C - 85°C), and are field interchangeable. Reverse polarity and RFI/EMI protection. Port size: 1/8 NPT (1/4 UNF and other port options). Pressure ranges down to 15 psi available. 3-conductor, 3' (0.91m) shielded cable. (Hirschmann connector option.) Operating temperature: -40°C to +105°C (-40°F to +221°F). Accuracy: 1% FSO BFSL. Meets military qualifications MIL-STD-810C. UL listed.

Honeywell  
Sensing and Control

Mfg. Part No.	Pressure Range (PSI)	Zero Output	Full Scale Output	Excitation	Stock No.	Price Each
						1-4
● SA100PS1C1D	100	1VDC	6VDC	9-24VDC	10M8444	478.78
● SA200PS1C1D	200	1VDC	6VDC	9-24VDC	10M8445	478.78
● SA500PS1C1D	500	1VDC	6VDC	9-24VDC	10M8446	478.78

(60982)

## ST SERIES PRESSURE TRANSDUCERS

## Honeywell

Sensing and Control



The ST series are temperature compensated (-40°C to 100°C), calibrated, and have amplified outputs from a silicon sensing element. Applications include: pneumatic equipment, air compressors, air filtration monitoring, and industrial controls. Less than 500 microseconds response time. Port size: 1/8 NPT, stainless steel (1/4 NPT and brass port options.) Pressure ranges down to 5 psi are available. Reverse polarity and EMI/RFI protection. Meet IEC enclosure IP65 classifications. Accuracy: ±1.0% FSO. Operating temperature: -40°C to 100°C (-40°F to 212°F). Connection: Packard Electric Metri-Pack™ Connector (mfg. part no. 3685302) 3M Leads.

Mfg. Part No.	Pressure Range (PSI)	Zero Output	Full Scale Output	Excitation	Stock No.	Price Each
						1-5
ST100PG1SPCF	100	0.5VDC	4.5VDC*	5VDC	30C4631	220.98
ST100PG1SPGF	100	4mA	20mA	9.5-35VDC	30C4632	220.98
ST250PG1SPCF	250	0.5VDC	4.5VDC*	5VDC	30C4634	220.98
ST250PG1SPGF	250	4mA	20mA	9.5-35VDC	30C4635	220.98
ST250PG1SPRF	250	0.5VDC	4.5VDC	7-35VDC	30C4636	220.98

\* = Ratiometric Output

## CONNECTION

Mfg. Part No.	Description	Stock No.	Price Each
			1-14
3685302	Packard Electric Female Metri-Pack™ Connector with 3m Leads	34C2858	49.49

(60983)

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(94660)

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## MLH SERIES ALL METAL PRESSURE SENSORS

## Honeywell

Sensing and Control



- All metal wetted parts
- No internal elastomeric seals – no o-ring compatibility issues
- Amplified outputs – eliminates cost of external amplifiers
- Reverse polarity and overvoltage protection
- Less than 2ms response time – accurate high speed measurement

Combines the latest in ASIC technology with a proven media isolating, steel diaphragm design. Exceeds CE heavy industrial EMC allowing for use in areas of high EMI/RFI. Accuracy: +/- 0.25% FSO. Compensated operating and storage temperature range: -40°C to +125°C. Connection: Packard Electric Metri Pack™ Connector (mfg. part no. 3685302) 3M leads.

## 1/4"-18 NPT PRESSURE CONNECTION

Mfg. Part No.	Pressure Range (PSI)	Output	Stock No.	Price Each	
				1-14	15-24
MLH150PSB01A	150	0.5-4.5VDC, Ratiometric	42J5744	95.60	88.43
MLH250PSB01A	250	0.5-4.5VDC, Ratiometric	42J5748	95.60	88.43
MLH500PSB01A	500	0.5-4.5VDC, Ratiometric	42J5752	95.60	88.43
MLH01KPSB01A	1000	0.5-4.5VDC, Ratiometric	42J5732	95.60	88.43
MLH03KPSB01A	3000	0.5-4.5VDC, Ratiometric	42J5736	95.60	88.43
MLH05KPSB01A	5000	0.5-4.5VDC, Ratiometric	42J5740	95.60	88.43
MLH150PSB01B	150	4-20mA, Current Loop	42J5745	95.60	88.43
MLH250PSB01B	250	4-20mA, Current Loop	42J5749	95.60	88.43
MLH500PSB01B	500	4-20mA, Current Loop	42J5753	95.60	88.43
MLH01KPSB01B	1000	4-20mA, Current Loop	42J5733	95.60	88.43
MLH03KPSB01B	3000	4-20mA, Current Loop	42J5737	95.60	88.43
MLH05KPSB01B	5000	4-20mA, Current Loop	42J5741	95.60	88.43

## 1/2"-27 NPT PRESSURE CONNECTION

MLH150PSB06A	150	0.5-4.5VDC, Ratiometric	42J5746	95.60	88.43
MLH250PSB06A	250	0.5-4.5VDC, Ratiometric	42J5750	95.60	88.43
MLH500PSB06A	500	0.5-4.5VDC, Ratiometric	42J5754	95.60	88.43
MLH01KPSB06A	1000	0.5-4.5VDC, Ratiometric	42J5734	95.60	88.43
MLH03KPSB06A	3000	0.5-4.5VDC, Ratiometric	42J5738	95.60	88.43
MLH05KPSB06A	5000	0.5-4.5VDC, Ratiometric	42J5742	95.60	88.43
MLH150PSB06B	150	4-20mA, Current Loop	42J5747	95.60	88.43
MLH250PSB06B	250	4-20mA, Current Loop	42J5751	95.60	88.43
MLH500PSB06B	500	4-20mA, Current Loop	42J5755	95.60	88.43
MLH01KPSB06B	1000	4-20mA, Current Loop	42J5735	95.60	88.43
MLH03KPSB06B	3000	4-20mA, Current Loop	42J5739	95.60	88.43
MLH05KPSB06B	5000	4-20mA, Current Loop	42J5743	95.60	88.43

## CONNECTION

Mfg. Part No.	Description	Stock No.	Price Each
			1-14
3685302	Packard Electric Female Metri-Pack™ Connector with 3M leads	34C2858	49.49

(82505)

## SENSOTEC MODEL A105 SUBMINIATURE PRESSURE TRANSDUCERS

## Honeywell

Sensing and Control

Just Added



## Features:

- Flush mount design
- Pressure ranges from 500psig to 10,000psig
- Solid frame construction provides durability
- Integral welded stainless steel connectors
- Ideal for applications involving rough handling or where hermetic seal is needed

## Specifications:

- Infinite resolution
- Bonded foil strain gage type
- Shunt calibration data included
- Operating temperature: -65°F to 300°F
- 7/16-20UNF male pressure port threads
- Gas and liquid media
- Mating connector available; order separately below

Mfg. Part No.	Pressure Range (psig)	Stock No.	Price Each
			1-4
AP311CR	500	27M1796	642.99
AP311CV	1000	27M1797	642.99
AP311DN	3000	27M1798	642.99
AP311DR	5000	27M1799	642.99
AP311DV	10000	27M1800	642.99

## ACCESSORIES

Mfg. Part No.	Description	Stock No.	Price Each
			1-4
AA111	PT06A-10S-6S mating connector	27M1708	52.89
AA112	PT06A-10S-6S mating connector w/50ft of 6-conductor cable	27M1795	153.85
AA113	PT06A-10S-6S mating connector w/15ft of 4-conductor cable	27M1709	107.43

(90233)

## SENSORS – PRESSURE

SENSOTEC FP2000 SERIES  
PRESSURE TRANSDUCERS

Just Added

Honeywell  
Sensing and Control

## Specifications:

- Gage pressure transducer
- 0.10% accuracy
- Standard DIN43650 electrical connection
- 4-20mA output
- 1/4-18NPT M pressure port
- Operating temperature: -40°F to 240°F

## Features:

- Stainless steel welded construction for rugged industrial applications
- Superior long term stability
- Infinite resolution
- Wide pressure ranges

## PRESSURE TRANSDUCERS

Mfg. Part No.	Pressure Range (psig)	Stock No.	Price Each
			1-4
FPG1AT2P5B6M	5	23M9960	842.79
FPG1BJ25B6M	15	23M9961	842.79
FPG1BM2P5B6M	30	23M9962	842.79
FPG1BN2P5B6M	50	23M9963	842.79
FPG1BR2P5B6M	100	23M9964	842.79
FPG1CR2P5B6M	500	23M9965	842.79
FPG1CV2P5B6M	1000	23M9966	842.79
FPG1DM2P5B6M	2500	23M9967	842.79
FPG1DR2P5B6M	5000	23M9968	842.79

## ACCESSORIES

Mfg. Part No.	Description	Stock No.	Price Each
			1-4
AA159	DIN43650 connector with 15ft of 4-conductor cable	23M9959	107.43
AA156	Mating connector for DIN43650 (4.5-7mm cable)	23M9957	36.37
AA157	Mating connector for DIN43650 (6-10mm cable)	23M9958	36.37
AA155	Mating connector for 1/2 NPTF conduit fitting	23M9956	36.37

(90072)

SENSOTEC MODEL S SUBMINIATURE  
PRESSURE TRANSDUCERS

Just Added

Honeywell  
Sensing and Control

## Features:

- Flush mount diaphragm design
- High natural frequency
- 1% accuracy

## Specifications:

- 2mV/V output
- Infinite resolution
- Operating temperature: -65°F to 300°F
- Bonded foil strain gage
- 4 twisted leads (5ft) electrical termination
- 3/8-24UNF threaded pressure port

Mfg. Part No.	Pressure Range (psig)	Stock No.	Price Each
			1-4
BP357DN	100	27M2001	617.45
BP357DR	500	27M2002	617.45
BP357DV	1000	27M2003	617.45

(90238)

SENSOTEC MODEL TJE PRECISION  
GAGE PRESSURE TRANSDUCERS

Just Added

Honeywell  
Sensing and Control

## Features:

- Stainless steel welded construction for rugged industrial applications
- Welded stainless steel diaphragm hermetically seals strain gage circuitry from atmospheric contamination
- Provides stable zero, regardless of the transducer environment
- Long term stability: A welded vacuum reference chamber

## Specifications:

- Infinite resolution
- 0.1% accuracy
- Operating temperature: -100°F to 325°F (1-1000psi), -100°F to 250°F (3000-10000psi)
- Shunt calibration data included
- Mating connector available; order separately below
- Hermetic stainless steel electrical connection

## PRESSURE TRANSDUCERS

Mfg. Part No.	Pressure Range (psig)	Stock No.	Price Each
			1-4
AP121BR	100	27M1625	800.73
AP121CR	500	27M1626	800.73
AP121CV	1000	27M1627	800.73
AP121DN	3000	27M1628	800.73

➤ CONTINUED ➤

## SENSOTEC MODEL TJE PRECISION GAGE PRESSURE TRANSDUCERS (CONT.)

Mfg. Part No.	Pressure Range (psig)	Stock No.	Price Each
			1-4
AP121DR	5000	27M1629	800.73
AP121DV	10000	27M1630	800.73

## ACCESSORIES

Mfg. Part No.	Description	Stock No.	Price Each
			1-4
AA111	PT06A-10S-6S mating connector	27M1708	52.89
AA112	PT06A-10S-6S mating connector w/50ft of 6-conductor cable	27M1795	153.85
AA113	PT06A-10S-6S mating connector w/15ft of 4-conductor cable	27M1709	107.43

(90230)

SENSOTEC MODEL 425 WING  
UNION PRESSURE TRANSMITTERSHoneywell  
Sensing and Control

## Features:

- For use with 1502 2" wing union in demanding land-based and off shore installations
- All welded assembly ensures hermetic integrity in all field conditions
- Vibration and shock proof
- Comply with NACE standard MR-01-75 (1980) for corrosive service
- Applications include cementing, drilling, wellhead measurement, mud logging

## Specifications:

- Accuracy: ±0.2%
- Operating temperature: -45°F to 200°F
- Supply voltage: 9-28VDC
- Intrinsically safe-Class 1, DIV 1
- ATEX certified
- Output: 4-20mA (full scale)
- NEMA 4X connector/mating connector

## PRESSURE TRANSMITTER

Mfg. Part No.	Pressure Range (psig)	Stock No.	Price Each
			1-4
BP425DR	0-5000	27M1774	2013.09
BP425EJ	0-15000	27M1773	2013.09

## ACCESSORIES

Mfg. Part No.	Description	Stock No.	Price Each
			1-4
Q23-0768-00	MS3106F-14S-2S mating connector	27M1775	64.60

(90234)

SENSOTEC DIN RAIL MOUNT  
IN-LINE AMPLIFIERSHoneywell  
Sensing and Control

## Features:

- For strain gage transducers
- DIN rail mount enclosures with front-accessible electrical connections and adjustments
- Easy calibration and setup
- RFI and ESD protected

## Specifications:

- 35mm DIN rail mount
- 60mA current draw
- 5000Hz DC frequency response

Mfg. Part No.	Model	Output (VDC)	Stock No.	Price Each
				1-4
BE151	DV-05	±5	29M9218	479.24
BE155	DV-10	±10	29M9219	479.24

(90544)

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[www.newark.com/rohs](http://www.newark.com/rohs)

(94635)

## SENSORS – PRESSURE

NPC-100 SERIES NOVASENSOR  
DISPOSABLE MEDICAL SENSOR

Just Added

GE  
Sensing

## Features:

- Specifically designed for use in disposable medical applications: Instrumentation, blood pressure measurement, infusion pumps, kidney dialysis machines
- Solid state, high reliability
- Factory filled with dielectric gel
- Temperature compensated

## Specifications:

- Calibrated for 6VDC input excitation
- Polycarbonate gel tube interface material
- Operating temperature: 59°F to 104°F
- Sold as cut tape and reel

Mfg. Part No.	Pressure Range (mmHg)	Stock No.	Price Each	
			1-4	
NPC-100T	-30 to 300	46M2619	21.01	

(94400)

NPP-301 SERIES  
NOVASENSOR SURFACE  
MOUNT PRESSURE SENSORSGE  
Sensing

Just Added

## Features:

- Ultra-small Silicon Fusion Bonded (SFB) SO-8 surface mount package
- Non-ported
- Wide operating temperature range: -40°F to 257°F (-40°C to 125°C)
- Four element Wheatstone bridge configuration for circuit design flexibility
- Wide range of applications, including pneumatic controls, altimeters and barometers, cable leak, detection, portable gauges

## Specifications:

- 10VDC maximum input excitation
- Compatible with most non-corrosive gases and dry air

Mfg. Part No.	Pressure Range (psi)	Pressure Measuring Type	Stock No.	Price Each	
				1-4	
● NPP-301A-100AT	0 to 15	Absolute	46M2631	9.86	
● NPP-301A-200AT	0 to 30	Absolute	46M2632	9.86	
● NPP-301A-700AT	0 to 100	Absolute	46M2633	9.86	

(94401)

NPC1210 SERIES NOVASENSOR  
MEDIUM/LOW PRESSURE SENSORS

Just Added

GE  
Sensing

## Features:

- Temperature compensated: 32°F to 140°F (0°C to 60°C)
- PCB mountable package, DIP configuration, solid state reliability
- Cost effective solution for applications requiring calibrated performance over a wide temperature range

## Specifications:

- Full scale output: 100mV
- Operating temperature: -40°F to 257°F (-40°C to 125°C)

## LOW PRESSURE SENSORS

Mfg. Part No.	Pressure Range (in-H <sub>2</sub> O)	Pressure Measuring Type	Configuration	Stock No.	Price Each	
					1-4	
● NPC-1210-10WD-3L	10	Differential	Lead Down/Long Tube	46M2625	33.61	
● NPC-1210-10WD-3S	10	Differential	Lead Down/Short Tube	46M2626	33.61	

## MEDIUM PRESSURE SENSORS

Mfg. Part No.	Pressure Range (psi)	Pressure Measuring Type	Configuration	Stock No.	Price Each	
					1-4	
● NPC-1210-015D-3L	15	Differential	Lead Down/Long Tube	46M2620	21.47	
● NPC-1210-015D-3S	15	Differential	Lead Down/Short Tube	46M2621	21.47	
● NPC-1210-015G-3L	15	Gauge	Lead Down/Long Tube	46M2623	21.47	
● NPC-1210-015G-3S	15	Gauge	Lead Down/Short Tube	46M2624	21.47	
● NPC-1210-100D-3L	100	Differential	Lead Down/Long Tube	46M2627	21.47	
● NPC-1210-100D-3S	100	Differential	Lead Down/Short Tube	46M2628	21.47	
● NPC-1210-100G-3L	100	Gauge	Lead Down/Long Tube	46M2629	21.47	
● NPC-1210-100G-3S	100	Gauge	Lead Down/Short Tube	46M2630	21.47	

(94402)

M5100 INDUSTRIAL  
PRESSURE SENSORS

Just Added

CE

msisensors  
innovation • performance • reliabilitySchaeffler  
IC Sensors  
Microfused  
Piezo Film

## Features:

- Heavy industrial CE approval
- Reverse polarity protection
- Leak proof: No o-rings, organics, or welds exposed to the pressure media
- Over 10million pressure cycles without failure

## Specifications:

- 1/4" NPT male connection with 24" cable
- Media compatibility: Fluids compatible with 17-4 PH stainless steel
- 1% total error band

## 0.5 - 4.5VDC OUTPUT

Mfg. Part No.	Range (psi)	Stock No.	Price Each	
			1-9	10-99
● M5131-000005-050PG	50	35M4444	114.98	98.44
● M5131-000005-100PG	100	35M4446	114.98	98.44
● M5131-000005-200PG	200	35M4447	114.98	98.44
● M5131-000005-300PG	300	35M4448	114.98	98.44
● M5131-000005-500PG	500	35M4449	114.98	98.44
● M5131-000005-01KPG	1000	35M4440	114.98	98.44
● M5131-000005-02KPG	2000	35M4441	114.98	98.44
● M5131-000005-03KPG	3000	35M4442	114.98	98.44
● M5131-000005-05KPG	5000	35M4443	114.98	98.44
● M5131-000005-10KPG	10000	35M4445	114.98	98.44

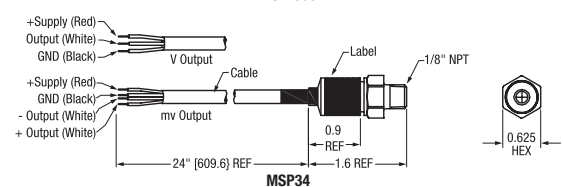
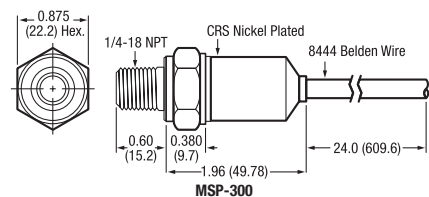
## 1 - 5VDC OUTPUT

Mfg. Part No.	Range (psi)	Stock No.	Price Each	
			1-9	10-99
● M5141-000005-050PG	50	35M4454	120.45	103.13
● M5141-000005-100PG	100	35M4456	120.45	103.13
● M5141-000005-200PG	200	35M4457	120.45	103.13
● M5141-000005-300PG	300	35M4458	120.45	103.13
● M5141-000005-500PG	500	35M4459	120.45	103.13
● M5141-000005-01KPG	1000	35M4450	120.45	103.13
● M5141-000005-02KPG	2000	35M4451	120.45	103.13
● M5141-000005-03KPG	3000	35M4452	120.45	103.13
● M5141-000005-05KPG	5000	35M4453	120.45	103.13
● M5141-000005-10KPG	10000	35M4455	120.45	103.13

## 4 - 20mA OUTPUT

Mfg. Part No.	Range (psi)	Stock No.	Price Each	
			1-9	10-99
● M5151-000005-050PG	50	35M4464	125.93	107.82
● M5151-000005-100PG	100	35M4466	125.93	107.82
● M5151-000005-200PG	200	35M4467	125.93	107.82
● M5151-000005-300PG	300	35M4468	125.93	107.82
● M5151-000005-500PG	500	35M4469	125.93	107.82
● M5151-000005-01KPG	1000	35M4460	125.93	107.82
● M5151-000005-02KPG	2000	35M4461	125.93	107.82
● M5151-000005-03KPG	3000	35M4462	125.93	107.82
● M5151-000005-05KPG	5000	35M4463	125.93	107.82
● M5151-000005-10KPG	10000	35M4465	125.93	107.82

(90542)

MSP-300/340 MICROFUSED STAINLESS STEEL  
ISOLATED PRESSURE TRANSDUCERSmsisensors  
innovation • performance • reliabilitySchaeffler  
IC Sensors  
Microfused  
Piezo Film

- Accuracy: < 1% FS
- Zero/span and thermal error: < ±2% FS
- Operating temperature: -20°C to +85°C
- Compensated temp range: 0°C to +55°C
- Connection: 2 feet cable

Suitable for measurement liquid or gas pressure, even for difficult media such as contaminated water, steam, and mildly corrosive fluids or gases. Machined from a solid piece of 17-4 PH stainless steel. Includes a 1/4 NPT pipe thread allowing a leak-proof, all metal sealed system. There are no o-rings, welds or organics exposed to the pressure media.

➤ CONTINUED ➤



## SENSORS – PRESSURE

## MSP-300/340 MICROFUSED STAINLESS STEEL ISOLATED PRESSURE TRANSDUCERS (CONT.)

## MSP-300 1/4" NPT PRESSURE PORT

Mfg. Part No.	Supply Voltage	Pressure Range	Outputs	Stock No.	Price Each
MSP-300-100-P-2-N-1	5VDC	0-100 Psi	0-100mVDC	96H0161	66.85
MSP-300-250-P-2-N-1		0-250 Psi	0-100mVDC	96H0169	66.85
MSP-300-500-P-2-N-1		0-500 Psi	0-100mVDC	96H0173	66.85
MSP-300-01K-P-2-N-1		0-1000 Psi	0-100mVDC	96H0153	66.85
MSP-300-2K5-P-2-N-1		0-2500 Psi	0-100mVDC	96H0165	66.85
MSP-300-05K-P-2-N-1		0-5000 Psi	0-100mVDC	96H0157	66.85
MSP-300-100-P-3-N-1		0-100 Psi	0.5-4.5VDC	96H0162	78.31
MSP-300-250-P-3-N-1		0-250 Psi	0.5-4.5VDC	96H0170	78.31
MSP-300-500-P-3-N-1		0-500 Psi	0.5-4.5VDC	96H0174	78.31
MSP-300-01K-P-3-N-1		0-1000 Psi	0.5-4.5VDC	96H0154	78.31
MSP-300-2K5-P-3-N-1		0-2500 Psi	0.5-4.5VDC	96H0166	128.93
MSP-300-05K-P-3-N-1		0-5000 Psi	0.5-4.5VDC	96H0158	128.93
MSP-300-100-P-4-N-1	10-30VDC	0-100 Psi	1-5VDC	96H0163	87.86
MSP-300-250-P-4-N-1		0-250 Psi	1-5VDC	96H0171	87.86
MSP-300-500-P-4-N-1		0-500 Psi	1-5VDC	96H0175	87.86
MSP-300-01K-P-4-N-1		0-1000 Psi	1-5VDC	96H0155	87.86
MSP-300-2K5-P-4-N-1		0-2500 Psi	1-5VDC	96H0167	142.11
MSP-300-05K-P-4-N-1		0-5000 Psi	1-5VDC	96H0159	142.11
MSP-300-100-P-5-N-1		0-100 Psi	4-20mA	96H0164	105.05
MSP-300-250-P-5-N-1		0-250 Psi	4-20mA	96H0172	105.05
MSP-300-500-P-5-N-1		0-500 Psi	4-20mA	96H0176	105.05
MSP-300-01K-P-5-N-1		0-1000 Psi	4-20mA	96H0156	105.05
MSP-300-2K5-P-5-N-1		0-2500 Psi	4-20mA	96H0168	105.05
MSP-300-05K-P-5-N-1		0-5000 Psi	4-20mA	96H0160	105.05

## MSP-340 1/8" NPT PRESSURE PORT

M3421-000006-100PG	5VDC	0-100 Psi	0-100mVDC	96H0194	61.12
M3421-000006-300PG		0-300 Psi	0-100mVDC	96H0195	61.12
M3421-000006-500PG		0-500 Psi	0-100mVDC	96H0196	61.12
M3431-000006-100PG		0-100 Psi	0.5-4.5VDC	96H0198	76.40
M3431-000006-300PG		0-300 Psi	0.5-4.5VDC	96H0199	76.40
M3431-000006-500PG		0-500 Psi	0.5-4.5VDC	96H0200	76.40
M3431-000006-01KPG		0-1000 Psi	0.5-4.5VDC	96H0197	76.40

(78722)

## MODEL 1210 &amp; 1230 PC BOARD MOUNTABLE PRESSURE SENSORS

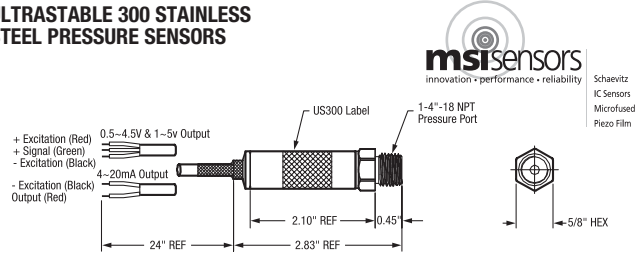


**Models 1210 and 1230 (Ultrastable high performance version)** are temperature compensated, piezoresistive silicon pressure sensors packaged in an 8-pin DIP configuration. **Model 1210** compensated temp range: 0 to 50°C. **Model 1230** compensated temp range: -20 to +85°C. **Specifications:** Supply current: 1.5mA; Output: 0-100mV; Response time: 1.0msec typ.; Feature  $\pm 0.1\%$  non-linearity, except <1psi which is  $\pm 0.3\%$ .

Mfg. Part No.	Pressure Range	Stock No.	Price Each	
1210A-001D-3L	0-1 Psi	96H0229	59.49	47.54
1210A-002D-3L	0-2 Psi	96H0230	44.58	35.63
1210A-005A-3L	0-5 Psi	96H0231	44.58	35.63
1210A-005D-3L	0-5 Psi	96H0232	44.58	35.63
1210A-015A-3L	0-15 Psi	96H0233	44.58	35.63
1210A-015D-3L	0-15 Psi	96H0234	44.58	35.63
1210A-030A-3L	0-30 Psi	96H0235	44.58	35.63
1210A-030D-3L	0-30 Psi	96H0236	44.58	35.63
1210A-100A-3L	0-100 Psi	96H0237	44.58	35.63
1210A-100D-3L	0-100 Psi	96H0238	44.58	35.63
1230-015A-3L	0-15 Psi	96H0239	57.06	45.61
1230-015D-3L	0-15 Psi	96H0240	57.06	45.61
1230-030A-3L	0-30 Psi	96H0241	57.06	45.61
1230-030D-3L	0-30 Psi	96H0242	57.06	45.61
1230-100A-3L	0-100 Psi	96H0243	57.06	45.61
1230-100D-3L	0-100 Psi	96H0244	57.06	45.61

(78724)

## ULTRASTABLE 300 STAINLESS STEEL PRESSURE SENSORS



Vent through cable (under 100psi). Add 0.4" for CE EM/RFI protection. max operating temperature for cable is 100°C

- Perfect for applications less than 100 psi.
- All materials compatible with 316 stainless steel
- Accuracy: 0.1%
- Total error band: <  $\pm 1\%$  of FS (75-10K PSI)
- Thermal effect on offset: -1.5 to 1.5 % span
- Thermal hysteresis:  $\pm 0.05$  typ.
- Operating Temperature: -40°C to +105°C
- Connection: 2 feet cable (IP67 rated)

## 0.5-4.5VDC OUTPUTS

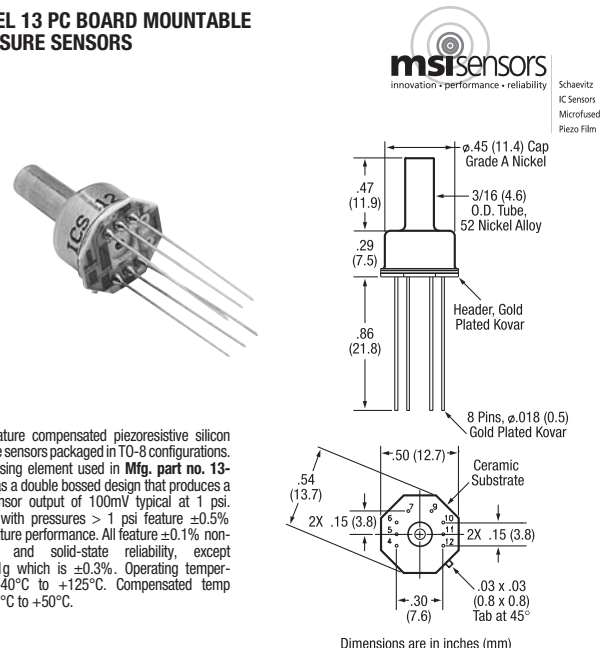
Mfg. Part No.	Pressure Range	Supply Voltage	Supply Current	Stock No.	Price Each
US331-000005-015PG	0-15Psi	4.75-5.25	2.5-3.5mA	96H0202	100.00
US331-000005-030PG	0-30 Psi	4.75-5.25	2.5-3.5mA	96H0204	100.00
US331-000005-050PG	0-50 Psi	4.75-5.25	2.5-3.5mA	96H0205	100.00
US331-000005-100PG	0-100 Psi	4.75-5.25	2.5-3.5mA	96H0207	100.00
US331-000005-015PA	0-15 Psi	4.75-5.25	2.5-3.5mA	96H0201	100.00
US331-000005-030PA	0-30 Psi	4.75-5.25	2.5-3.5mA	96H0203	100.00
US331-000005-100PA	0-100 Psi	4.75-5.25	2.5-3.5mA	96H0206	100.00

## 4 to 20mA OUTPUTS

US381-000005-015PG	0-15 Psi	10-30	...	96H0209	105.00
US381-000005-030PG	0-30 Psi	10-30	...	96H0211	105.00
US381-000005-050PG	0-50 Psi	10-30	...	96H0212	105.00
US381-000005-100PG	0-100 Psi	10-30	...	96H0214	105.00
US381-000005-015PA	0-15 Psi	10-30	...	96H0208	105.00
US381-000005-030PA	0-30 Psi	10-30	...	96H0210	105.00
US381-000005-100PA	0-100 Psi	10-30	...	96H0213	105.00

(78726)

## MODEL 13 PC BOARD MOUNTABLE PRESSURE SENSORS



Temperature compensated piezoresistive silicon pressure sensors packaged in TO-8 configurations. The sensing element used in **Mfg. part no. 13-001G** has a double bossed design that produces a high sensor output of 100mV typical at 1 psi. Models with pressures > 1 psi feature  $\pm 0.5\%$  temperature performance. All feature  $\pm 0.1\%$  non-linearity and solid-state reliability, except 13A-001G which is  $\pm 0.3\%$ . Operating temperature: -40°C to +125°C. Compensated temp range: 0°C to +50°C.

Mfg. Part No.	Pressure Range	Stock No.	Price Each	
13A-001G	0-1 Psi	96H0245	115.20	92.00
13A-002G	0-2 Psi	96H0246	90.00	83.00
13A-005G	0-5 Psi	96H0247	90.00	83.00
13A-015G	0-15 Psi	96H0248	90.00	83.00
13A-100G	0-100 Psi	96H0249	90.00	83.00

(78751)

## SENSORS – PRESSURE • SENSORS – PROXIMITY

MINIATURE  
PRESSURE SENSORS

INDUSTRIAL AUTOMATION

- 2 Independent NPN Digital Outputs Per Sensor
- Can be Configured Either Normally Opened or Closed
- Power Supply: 12 - 24VDC
- Linearity:  $\pm 1\%$
- Choice of Hysteresis or Window Mode and Auto or Manual Programming



E8Y



E8F2

Mfg. part no. E8F2 has additional 1-5VDC analog output. Small in size, dimensions: mfg. part no. E8Y 31 x 30 x 30mm; mfg. part no. E8F2 28 x 28 x 29mm. UL recognized, CE compliant.

Mfg. Part No.	Pressure	Pressure Range	Stock No.	Price Each
● E8Y-A5C-RD	Differential	0 - 0.725 PSI	25C5632	403.80
● E8F2-D10C	Gauge	0 - 145 PSI	25C4098	289.23
● E8F2-DNOC	Gauge	0 - -14.6 PSI	25C4097	289.23

## ACCESSORIES

Mfg. Part No.	Description	Stock No.	Price Each
● E89-F4	Panel Mounting Bracket mfg. part no. F8F2	25C4102	20.34
● E89-Y1	Panel Mounting Bracket mfg. part no. E8Y	12C1109	20.13

(69857)

MINIATURE  
PRESSURE SENSORS

INDUSTRIAL AUTOMATION



- Supply: 12VDC
- Output: 1-5VDC
- Connector Wiring Simplifies Installation and Replacement
- Type E8M-A1 Includes 3M Leads
- Linearity:  $\pm 1\%$  FS Max.
- Hysteresis:  $\pm 1\%$  FS Max.

Small and lightweight, E8MS series: 15mm diameter x 29.77mm. E8M series: 19 x 29 x 42.5mm cube. Ideal for direct mounting on moving components like robots, cylinders, or chip mounters. Connectors for E8MS series available separately.

Mfg. Part No.	Description	Pressure Range (PSI)	Stock No.	Price Each
● E8MS-10	Positive	0 - 145	25C4239	126.94
● E8MS-N0	Negative	0 - -14.6	25C4240	126.94
● E8MA1 3M	Differential	0 - 0.145	38B409	427.27

Mfg. Part No.	Description	Stock No.	Price Each
● E89-M4	3-Pin Connector w/3-Meter Cable. Required for mfg. part nos. E8MS-10 and E8MS-N0	25C4242	23.99

(69858)

SDP SERIES  
DIFFERENTIAL AIR  
PRESSURE TRANSDUCERS

THE SENSOR COMPANY

- Offset and hysteresis free
- Direct PCB Mounting with simple snap-on system
- Excellent accuracy and reproducibility even below 10 Pa
- Fully calibrated and temperature compensated



CMOSens technology combines an economical yet highly precise sensor element with electronics for signal processing on a single chip (ASIC). Voltage output: 0.25 to 4.0 VDC. Linear or square root output characteristics. Zero drift. Perfect for HVAC and Medical applications.

Mfg. Part No.	Measurement Range min/max	Pressure Offset (min/max) Pa	Accuracy	Stock No.	Price Each
● SDP1000-L	-20 to +500 Pa (2"H2O)	-0.4/+0.4	1% m.v.	18M2968	92.03
● SDP1000-R	-20 to +500 Pa (2"H2O)	-1.0/+1.0	1% m.v.	07J2373	92.03
● SDP1000-L05	-5 to +125 Pa (0.5"H2O)	-0.1/+0.1	1.5% m.v.	18M2969	92.03
● SDP2000-L	-100 to +3500 Pa (14"H2O)	-2.8/+2.8	1% m.v.	07J2374	92.03
● SDP2000-R	-100 to +3500 Pa (14"H2O)	-8.0/+8.0	1% m.v.	07J2375	92.03

(80121)

CAPACITIVE  
PROXIMITY SENSORS

CARLO GAVAZZI

- 12, 18 and 30 mm threaded housings
- Patented Tripleshield™ protection
- New types with automatic "Teach-In" programming
- DC, AC and AC/DC powered versions
- Easy-to-view LED indication



12, 18 and 30mm capacitive sensors feature patented Tripleshield™ protection. Protects against the effects of electrostatic discharge, RF/GSM interference, transients and line conducted noise. Newer features of Teach-in types include: pushbutton programming for sensing range and material detection and N/C or I/O output programming; humidity, dirt and moisture compensation; and automatic detection of NPN or PNP load. All types are used to detect various solid, liquid, or granulate materials such as oils, plastic pellets, grains, powders, etc. Commonly used for presence/level detection and other applications. Thermoplastic polyester housing. Adjustable sensing ranges up to 30mm. Short circuit and overload protection. 6' PVC connection cable provided. DC types: 4 wire, 10-40VDC, 200mA. NO and NC transistor outputs. AC types: 2 wire, 20-250VAC, 500mA, NO/NC (programmable on 30mm types) SCR output. IP67 and NEMA 4. 30mm stainless steel housings and quick disconnect versions available upon request; go online or call. UL recognized, CSA certified, CE compliant.

## 12mm, DC TYPES

Mfg. Part No.	Output Type	Sensing Distance (mm)	Stock No.	Price Each
● CA12CLC08BP	Auto Select: NPN/PNP, NO/NC	0.5-8	05M4027	151.17

## 18mm, DC TYPES

Mfg. Part No.	Output Type	Sensing Distance (mm)	Stock No.	Price Each
● CA18CLC12BP	Auto Select: NPN/PNP, NO/NC	0.5-12	05M4028	163.39
CA18CLN12PA	NPN, NO/NC	3-12	16C2342	108.93
CA18CLN12PA	PNP, NO/NC	3-12	16C2342	108.93
CA18CLN12PA	PNP, NO/NC	3-12	16C2342	108.93

## 30mm, DC TYPES

Mfg. Part No.	Supply Voltage	Sensing Distance (mm)	Stock No.	Price Each
● CA30CLC30BP	Auto Select: NPN/PNP, NO/NC	0.5-30	10M5141	187.85
● EC3025PPAPL	PNP, NO/NC	4-25	05M4107	172.29

## 18mm, AC TYPE

Mfg. Part No.	Output Type	Sensing Distance (mm)	Stock No.	Price Each
CA18CLN12TC	SCR, NC	3-12	16C2344	175.62
● CA18CLN12TO	SCR, NO	3-12	05M4032	175.62

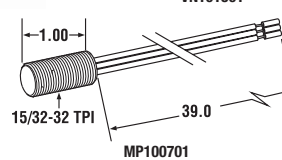
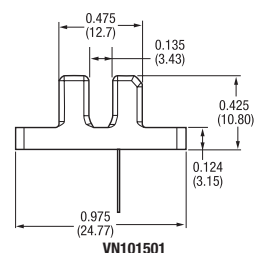
## 30mm, AC TYPE

Mfg. Part No.	Output Type	Sensing Distance (mm)	Stock No.	Price Each
EC3016TBAPL*	SCR, NO/NC	2-16	16F2855	252.31
● EC3025TBAPL	SCR, NO/NC	4-25	05M4108	231.20

\*Can be flush mounted.  
(3585)

SOLID-STATE MAGNETIC  
PROXIMITY SENSORS

CHERRY



- Hall-Effect Sensors with Virtually Unlimited life
- Operating Temperature: -40C to +85C (For MP100701, 105°C)
- 3-Wire Sinking Output Requiring only External Pull-Up Resistor
- Supply Voltage: 4.5 - 24VDC except mfg. part no. MP100701 4.75 - 24VDC

Vane sensors are operated by a ferrous vane and can replace optical interrupters in harsh environments.

Mfg. Part No.	Description	Supply Current Max.	Operate Point (Gauss)	Stock No.	Price Each
MP100701	Threaded Barrel Magnetic Proximity	16mA	300	95B6290	24.89
● VN101501	Molded Vane Sensor	6mA	N/A	05M6449	6.80
● VN101503	Molded Vane Sensor w/Leads	6mA	N/A	10M5282	7.43

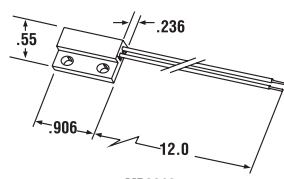
(69348)

## SENSORS – PROXIMITY

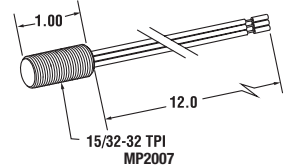
MAGNETIC  
PROXIMITY SENSORS
**CHERRY**


MP2007

- Zero Power Consumption
- Hermetically Sealed for Resistance Against Moisture and Dirt
- Can be Activated by North or South Pole of Approaching Magnet
- Operating Temperature: -40°C to +105°C
- Reliable Reed Switch Technology



MP2018



MP2007

Mfg. Part No.	Description	Switching Max. Voltage	Supply Max. Current	Stock No.	Price Each
AS101001	Threaded Magnetic Actuator	...	...	98B0564	4.09
AS201701	Smooth Barrel Actuator	...	...	35C0243	2.37
AS201801	Mini Flange Mount Actuator	...	...	35C0239	2.48
AS201901	Flange Mount Actuator	...	...	35H8626	2.69
HE610400	Threaded Magnetic Actuator	...	...	52F6742	11.16
MP200701	SPST-N/O Threaded Barrel	175VDC	0.5A	10M6194	8.07
MP200702	SPST-N/C Threaded Barrel	100VDC	0.2A	05M6405	10.00
MP200703	SPDT-C/O Threaded Barrel	100VDC	0.2A	05M6406	10.43
MP201701	SPST-N/O Smooth Barrel	175VDC	0.5A	05M6407	2.52
MP201702	SPST-N/C Smooth Barrel	100VDC	0.2A	05M6408	4.20
MP201703	SPDT-C/O Smooth Barrel	100VDC	0.2A	20C2765	4.71
MP201801	SPST-N/O Mini Flange Mount	175VDC	0.5A	05M6409	2.76
MP201802	SPST-N/C Mini Flange Mount	100VDC	0.2A	05M6410	4.24
MP201901	SPST-N/O Flange Mount	175VDC	0.5A	05M6411	2.86
MP201902	SPST-N/C Flange Mount	100VDC	0.2A	36H4514	4.28

(69349)

GLOBAL PLUS INDUCTIVE  
PROXIMITY SENSORS

Cutler-Hammer



Proximity Sensors



Connector Cable

- Most cost-effective inductive proximity sensor on the market
- Choose from cable or connector versions
- 4 LED indicators on all connector versions, single LED indicator on cable versions
- Short-circuit protection on all DC models

The Cutler-Hammer® Global Plus Proximity Sensor Family was designed by Eaton's Electrical business as the optimal solution for high volume OEM customers. It has been optimized to include the basic functions for high sensing reliability, at the price you need. The Global Plus line offers 8, 12, 18 and 30mm diameter connectorized and cable versions with a bright LED indicator to show output status. Nickel-plated brass housing. IP67 degree of protection. CE certified.

SPECIFICATIONS	AC MODELS	DC MODELS
Max. Output Current	500mA	8mm: 100mA 12, 18, 30mm: 200mA
Max. Switching Frequency	10Hz	8mm: 1KHz (Shielded); 600Hz (Unshielded) 12mm: 800Hz (Shielded); 500Hz (Unshielded) 18mm: 500Hz (Shielded); 200Hz (Unshielded) 30mm: 300Hz (Shielded); 100Hz (Unshielded)

## 3-WIRE, SHIELDED 10-30VDC OPERATING VOLTAGE

Mfg. Part No.	Sensing Face Dia (mm)	Sensing Range (mm)	Output Type	Connection Type	Stock No.	Price Each
E57-08PAS15-C	8	1.5	NPN, NO	2-Meter Cable	30K7257	36.85
E57-08PAS15-CD	8	1.5	NPN, NO	4-Pin Micro DC Connector	30K7258	36.85
E57-08PAS15-G	8	1.5	PNP, NO	2-Meter Cable	30K7259	36.85
E57-08PAS15-GD	8	1.5	PNP, NO	4-Pin Micro DC Connector	30K7260	36.85
E57-08PBS15-C	8	1.5	NPN, NC	2-Meter Cable	30K7265	36.85
E57-08PBS15-CD	8	1.5	NPN, NC	4-Pin Micro DC Connector	30K7266	36.85
E57-08PBS15-G	8	1.5	PNP, NC	2-Meter Cable	30K7267	36.85
E57-08PBS15-GD	8	1.5	PNP, NC	4-Pin Micro DC Connector	30K7268	36.85
E57-12PAS02-C	12	2	NPN, NO	2-Meter Cable	30K7275	36.85
E57-12PAS02-CD	12	2	NPN, NO	4-Pin Micro DC Connector	30K7276	36.85

➤ CONTINUED ➤

## GLOBAL PLUS INDUCTIVE PROXIMITY SENSORS (CONT.)

Mfg. Part No.	Sensing Face Dia (mm)	Sensing Range (mm)	Output Type	Connection Type	Stock No.	Price Each
E57-12PAS02-G	12	2	PNP, NO	2-Meter Cable	30K7277	36.85
E57-12PAS02-GD	12	2	PNP, NO	4-Pin Micro DC Connector	30K7278	36.85
E57-12PBS02-C	12	2	NPN, NC	2-Meter Cable	30K7287	36.85
E57-12PBS02-CD	12	2	NPN, NC	4-Pin Micro DC Connector	30K7288	36.85
E57-12PBS02-G	12	2	PNP, NC	2-Meter Cable	30K7289	36.85
E57-12PBS02-GD	12	2	PNP, NC	4-Pin Micro DC Connector	30K7290	36.85
E57-18PAS05-C	18	5	NPN, NO	2-Meter Cable	30K7299	36.85
E57-18PAS05-CD	18	5	NPN, NO	4-Pin Micro DC Connector	30K7300	36.85
E57-18PAS05-G	18	5	PNP, NO	2-Meter Cable	30K7301	36.85
E57-18PAS05-GD	18	5	PNP, NO	4-Pin Micro DC Connector	30K7302	36.85
E57-18PBS05-C	18	5	NPN, NC	2-Meter Cable	30K7311	36.85
E57-18PBS05-CD	18	5	NPN, NC	4-Pin Micro DC Connector	30K7312	36.85
E57-18PBS05-G	18	5	PNP, NC	2-Meter Cable	30K7313	36.85
E57-18PBS05-GD	18	5	PNP, NC	4-Pin Micro DC Connector	30K7314	36.85
E57-30PAS10-GD	30	10	PNP, NO	4-Pin Micro DC Connector	30K7320	46.07

## 3-WIRE, UNSHIELDED, 10-30VDC OPERATING VOLTAGE

E57-08PAU02-C	8	2	NPN, NO	2-Meter Cable	30K7261	36.85
E57-08PAU02-CD	8	2	NPN, NO	4-Pin Micro DC Connector	30K7262	36.85
E57-08PAU02-G	8	2	PNP, NO	2-Meter Cable	30K7263	36.85
E57-08PAU02-GD	8	2	PNP, NO	4-Pin Micro DC Connector	30K7264	36.85
E57-08PBU02-C	8	2	NPN, NC	2-Meter Cable	30K7269	36.85
E57-08PBU02-CD	8	2	NPN, NC	4-Pin Micro DC Connector	30K7270	36.85
E57-08PBU02-G	8	2	PNP, NC	2-Meter Cable	30K7271	36.85
E57-08PBU02-GD	8	2	PNP, NC	4-Pin Micro DC Connector	30K7272	36.85
E57-12PAU04-C	12	4	NPN, NO	2-Meter Cable	30K7281	36.85
E57-12PAU04-CD	12	4	NPN, NO	4-Pin Micro DC Connector	30K7282	36.85
E57-12PAU04-G	12	4	PNP, NO	2-Meter Cable	30K7283	36.85
E57-12PAU04-GD	12	4	PNP, NO	4-Pin Micro DC Connector	30K7284	36.85
E57-12PBU04-C	12	4	NPN, NC	2-Meter Cable	30K7293	36.85
E57-12PBU04-CD	12	4	NPN, NC	4-Pin Micro DC Connector	30K7294	36.85
E57-12PBU04-G	12	4	PNP, NC	2-Meter Cable	30K7295	36.85
E57-12PBU04-GD	12	4	PNP, NC	4-Pin Micro DC Connector	30K7296	36.85
E57-18PAU08-C	18	8	NPN, NO	2-Meter Cable	30K7305	36.85
E57-18PAU08-CD	18	8	NPN, NO	4-Pin Micro DC Connector	30K7306	36.85
E57-18PAU08-G	18	8	PNP, NO	2-Meter Cable	30K7307	36.85
E57-18PAU08-GD	18	8	PNP, NO	4-Pin Micro DC Connector	30K7308	36.85
E57-18PBU08-C	18	8	NPN, NC	2-Meter Cable	30K7317	36.85
E57-18PBU08-G	18	8	PNP, NC	2-Meter Cable	30K7318	36.85
E57-18PBU08-GD	18	8	PNP, NC	4-Pin Micro DC Connector	30K7319	36.85
E57-30PAU15-GD	30	15	PNP, NO	4-Pin Micro DC Connector	30K7321	46.07

## 2-WIRE, SHIELDED, 20-250VAC OPERATING VOLTAGE

E57-12PAS02-A	12	2	NO	2-Meter Cable	30K7273	52.97
E57-12PAS02-AD	12	2	NO	3-Pin Micro AC Connector	30K7274	62.18
E57-12PBS02-A	12	2	NC	2-Meter Cable	30K7285	52.97
E57-12PBS02-AD	12	2	NC	3-Pin Micro AC Connector	30K7286	62.18
E57-18PAS05-A	18	5	NO	2-Meter Cable	30K7297	46.07
E57-18PAS05-AD	18	5	NO	3-Pin Micro AC Connector	30K7298	49.52
E57-18PBS05-A	18	5	NC	2-Meter Cable	30K7309	46.07
E57-18PBS05-AD	18	5	NC	3-Pin Micro AC Connector	30K7310	49.52

## 2-WIRE, UNSHIELDED, 20-250VAC OPERATING VOLTAGE

E57-12PAU04-A	12	4	NO	2-Meter Cable	30K7279	52.97
E57-12PAU04-AD	12	4	NO	3-Pin Micro AC Connector	30K7280	62.18
E57-12PBU04-A	12	4	NC	2-Meter Cable	30K7291	52.97
E57-12PBU04-AD	12	4	NC	3-Pin Micro AC Connector	30K7292	62.18
E57-18PAU08-A	18	8	NO	2-Meter Cable	30K7303	46.07
E57-18PAU08-AD	18	8	NO	3-Pin Micro AC Connector	30K7304	49.52
E57-18PBU08-A	18	8	NC	2-Meter Cable	30K7315	46.07
E57-18PBU08-AD	18	8	NC	3-Pin Micro AC Connector	30K7316	49.52

## CABLES FOR MICRO-CONNECTOR OR QUICK-DISCONNECT SENSORS

PVC jacket. UL listed, c-UL recognized.

Mfg. Part No.	Description	Cable Length (m)	Wire Size (AWG)	Stock No.	Price Each
CSAS3F3CY2202	3-pin Micro AC	2	22	30K7253	16.36
CSAS3F3CY2205	3-pin Micro AC	5	22	30K7254	23.93
CSDS4A3CY2202	4-pin Micro DC	2	22	30K7255	14.42
CSDS4A3CY2205	4-pin Micro DC	5	22	30K7256	17.39

(84769)



## SENSORS – PROXIMITY

ACCUPROX™  
ANALOG INDUCTIVE  
PROXIMITY SENSORS

Just Added

- Extended linear sensing range of up to 25mm (3 times longer than standard tubular analog inductive sensors)
- Outputs available in current (4-20mA or 0-20mA) and voltage (0-10V)
- High output resolution and repeatability for applications requiring precision sensing performance
- Ideal for extreme temperature or high pressure washdown environments
- High noise immunity of 20mV/m prevents many problems associated with electrical noise

AccuProx™ high performance analog inductive proximity sensors provide unmatched sensing range, linearity and resolution in an affordable and compact tubular package. The Electrical signal varies in proportion to the position of the metal target within its sensing range making them ideal for applications requiring precise position sensing and measurements. Robust stainless steel barrel, shock-resistant cap, polycarbonate end bell and impact-absorbing potting compound. Operating voltage: 15-30VDC.

## SHIELDED

Mfg. Part No.	Sensing Face Dia. (mm)	Sensing Range (mm)	Connector Type	Output Type	Stock No.	Price Each 1-9
E59-A12A104C02-CV	12	4	2-meter Cable	Voltage and Current	32M6624	348.40
E59-A12A104D01-CV	12	4	4-Pin Micro	Voltage and Current	32M6625	353.21
E59-A12A104D01-C1	12	4	4-Pin Micro	Current	32M6626	348.40
E59-A18A107C02-CV	18	7	2-meter Cable	Voltage and Current	32M6630	386.93
E59-A18A107D01-CV	18	7	4-Pin Micro	Voltage and Current	32M6631	390.14
E59-A18A107D01-C1	18	7	4-Pin Micro	Current	32M6632	382.11
E59-A30A112C02-CV	30	12	2-meter Cable	Voltage and Current	32M6636	409.41
E59-A30A112D01-CV	30	12	4-Pin Micro	Voltage and Current	32M6637	414.22
E59-A30A112D01-C1	30	12	4-Pin Micro	Current	32M6638	401.38

## UNSHIELDED

E59-A12C108C02-CV	12	8	2-meter Cable	Voltage and Current	32M6627	348.40
E59-A12C108D01-CV	12	8	4-Pin Micro	Voltage and Current	32M6628	353.21
E59-A12C108D01-C1	12	8	4-Pin Micro	Current	32M6629	348.40
E59-A18C115C02-CV	18	15	2-meter Cable	Voltage and Current	32M6633	386.93
E59-A18C115D01-CV	18	15	4-Pin Micro	Voltage and Current	32M6634	390.14
E59-A18C115D01-C1	18	15	4-Pin Micro	Current	32M6635	382.11
E59-A30C125C02-CV	30	25	2-meter Cable	Voltage and Current	32M6639	409.41
E59-A30C125D01-CV	30	25	4-Pin Micro	Voltage and Current	32M6640	414.22
E59-A30C125D01-C1	30	25	4-Pin Micro	Current	32M6641	401.38

(90450)

## EATON 2-WIRE AND 3-WIRE SHORT BARREL INDUCTIVE PROXIMITY SENSORS



- 360° viewable LED
- Operating temperature: -25°C to 70°C
- Shielded and unshielded models
- 3 diameters 12mm, 18mm and 30mm



These sensors are manufactured to take physical and environmental abuse. Designed with stainless barrel and impact-absorbing new potting compound for robust, high pressure washdown, as well as intense shock and vibration applications. Resettable short circuit protection in AC/DC and DC models. Operating Voltage: 2-Wire AC/DC 40-250 VAC, 20-250 VDC, 3-Wire DC 6-48 VDC. Cable models include an extra long 5-meter cable as option.

## 2-WIRE AC/DC SENSORS 40-250VAC, 20-250 VDC

Mfg. Part No.	Sensor Diameter (mm)	Sensing Range (mm)	Connection Type	Output Type	Stock No.	Price Each 1-9
E57SAL12A2	12	2	2-meter Cable	NO	47K7217	125.47
E57SAL12A2SA	12	2	3-pin Micro	NO	47K7220	252.07
E57SBL12A2	12	2	2-meter Cable	NC	47K7267	205.51
E57SBL12A2SA	12	2	3-pin Micro	NC	47K7270	234.41
E57SAL12A2E	12	4	2-meter Cable	NO	47K7218	125.47
E57SAL12A2EA	12	4	3-pin Micro	NO	47K7219	252.07
E57SBL12A2E	12	4	2-meter Cable	NC	47K7268	216.75
E57SBL12A2EA	12	4	3-pin Micro	NC	47K7269	234.41
E57SAL18A2	18	5	2-meter Cable	NO	47K7233	114.57
E57SAL18A2SA	18	5	3-pin Micro	NO	47K7236	227.99
E57SBL18A2	18	5	2-meter Cable	NC	47K7281	187.85
E57SBL18A2SA	18	5	3-pin Micro	NC	47K7283	211.93
E57SBL18A2EA	18	8	3-pin Micro	NC	84K7829	122.70
E57SAL18A2E	18	8	2-meter Cable	NO	47K7234	114.57
E57SAL18A2EA	18	8	3-pin Micro	NO	47K7235	227.99

➔ CONTINUED ➔

## EATON 2-WIRE AND 3-WIRE SHORT BARREL INDUCTIVE PROXIMITY SENSORS (CONT.)

Mfg. Part No.	Sensor Diameter (mm)	Sensing Range (mm)	Connection Type	Output Type	Stock No.	Price Each 1-9
E57SBL18A2E	18	8	2-meter Cable	NC	47K7282	197.48
E57SAL30A2	30	10	2-meter Cable	NO	47K7251	116.38
E57SAL30A2SA	30	10	3-pin Micro	NO	47K7254	221.56
E57SBL30A2SA	30	10	3-pin Micro	NC	84K7833	118.98
E57SAL30A2E	30	15	2-meter Cable	NO	47K7252	116.38
E57SAL30A2EA	30	15	3-pin Micro	NO	47K7253	221.56
E57SBL30A2EA	30	15	3-pin Micro	NC	84K7832	197.48
E57SBL30A2E	30	15	2-meter Cable	NC	47K7294	199.09

## 3-WIRE DC SENSORS 6-48VDC

E57SAL12T110	12	2	2-meter Cable	NPN, NO	47K7225	89.56
E57SAL12T110SD	12	2	4-pin Micro	NPN, NO	47K7228	89.56
E57SAL12T111SD	12	2	4-pin Micro	PNP, NO	47K7232	89.56
E57SBL12T111	12	2	2-meter Cable	PNP, NC	47K7277	154.13
E57SBL12T111SD	12	2	4-pin Micro	PNP, NC	47K7280	154.13
E57SAL12T110E	12	4	2-meter Cable	NPN, NO	47K7226	89.56
E57SAL12T110ED	12	4	4-pin Micro	NPN, NO	47K7227	89.56
E57SAL12T111ED	12	4	4-pin Micro	PNP, NO	47K7231	89.56
E57SBL12T110E	12	4	2-meter Cable	NPN, NC	47K7275	154.13
E57SBL12T110ED	12	4	4-pin Micro	NPN, NC	47K7276	165.37
E57SBL12T111E	12	4	2-meter Cable	PNP, NC	47K7278	154.13
E57SBL12T111ED	12	4	4-pin Micro	PNP, NC	47K7279	154.13
E57SAL18T110	18	5	2-meter Cable	NPN, NO	47K7243	98.19
E57SAL18T110SD	18	5	4-pin Micro	NPN, NO	47K7246	98.19
E57SAL18T111	18	5	2-meter Cable	PNP, NO	47K7247	98.19
E57SAL18T111SD	18	5	4-pin Micro	PNP, NO	47K7250	98.19
E57SBL18T111SD	18	5	4-pin Micro	PNP, NC	84K7831	92.95
E57SBL18T110	18	5	2-meter Cable	NPN, NC	47K7287	170.19
E57SBL18T110SD	18	5	4-pin Micro	NPN, NC	47K7290	170.19
E57SBL18T111	18	5	2-meter Cable	PNP, NC	47K7291	170.19
E57SAL18T110E	18	8	2-meter Cable	NPN, NO	47K7244	98.19
E57SAL18T110ED	18	8	4-pin Micro	NPN, NO	47K7245	98.19
E57SAL18T111E	18	8	2-meter Cable	PNP, NO	47K7248	98.19
E57SAL18T111ED	18	8	4-pin Micro	PNP, NO	47K7249	98.19
E57SBL18T111E	18	8	4-pin Micro	PNP, NC	84K7830	92.95
E57SBL18T110E	18	8	2-meter Cable	NPN, NC	47K7288	170.19
E57SBL18T110ED	18	8	4-pin Micro	NPN, NC	47K7289	170.19
E57SBL18T111E	18	8	2-meter Cable	PNP, NC	47K7292	170.19
E57SAL30T110	30	10	2-meter Cable	NPN, NO	47K7259	116.38
E57SAL30T110E	30	15	2-meter Cable	NPN, NO	47K7260	116.38
E57SAL30T110ED	30	15	4-pin Micro	NPN, NO	47K7261	116.38
E57SAL30T110SD	30	10	4-pin Micro	NPN, NO	47K7262	116.38
E57SAL30T111	30	10	2-meter Cable	PNP, NO	47K7263	116.38
E57SAL30T111E	30	15	2-meter Cable	PNP, NO	47K7264	116.38
E57SAL30T111ED	30	15	4-pin Micro	PNP, NO	47K7265	116.38
E57SAL30T111SD	30	10	4-pin Micro	PNP, NO	47K7266	116.38
E57SBL30T110	30	10	2-meter Cable	NPN, NC	84K7835	109.69
E57SBL30T110SD	30	10	4-pin Micro	NPN, NC	84K7838	109.69
E57SBL30T111	30	10	2-meter Cable	PNP, NC	84K7839	109.69
E57SBL30T111SD	30	10	4-pin Micro	PNP, NC	84K7842	109.69
E57SBL30T110E	30	15	2-meter Cable	NPN, NC	84K7836	109.69
E57SBL30T110ED	30	15	4-pin Micro	NPN, NC	84K7837	109.69
E57SBL30T111E	30	15	2-meter Cable	PNP, NC	84K7840	109.69
E57SBL30T111ED	30	15	4-pin Micro	PNP, NC	84K7841	109.69

## STANDARD CABLE - MICRO STYLE

Mfg. Part No.	Voltage Style	Number of Pins	Wire Size (AWG)	Length	Stock No.	Price Each 1-9 10-24
CSAS3F3CY2202	AC	3	22	2m(6ft.)	30K7253	16.36 15.01

(88424)

Online today.  
On your desk  
tomorrow.

(94640)

- Best products, great value.
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## SENSORS – PROXIMITY

## iPROX INTELLIGENT INDUCTIVE PROXIMITY SENSORS



Cutler-Hammer



- Auto configures to sinking (NPN) or sourcing (PNP) when wired
- Stainless steel tubes with shock resistant front caps
- Bright dual color 360° status LED, green for power, red for output
- Extended sensing ranges, double that of standard proximity sensors

This full featured proximity sensor combines extended ranges with ruggedness to solve even the toughest applications. It's high vibration absorbing potting compound ensures a longer sensor life and superior resistance to high pressure wash downs and corrosive environments. The DC models make installation easy by sensing whether it needs to NPN or PNP, then auto configuring to that mode. This allows for one sensor to be used in either application. Superior temperature range of -40°C to 70°C. High noise immunity level of 10 v/m.

## 2-WIRE SENSORS 20 - 132 VAC

Mfg. Part No.	Output Type	Sensing Range (mm)	Connector Type	Stock No.	Price Each
E59-F12A105A01-A1	NO	4	3-Pin Micro	47K7508	103.42
E59-F12A105A01-A2	NC	4	3-Pin Micro	47K7509	103.42
E59-F12A105C02-A1	NO	4	2-meter Cable	47K7514	93.08
E59-F12A105C02-A2	NC	4	2-meter Cable	47K7515	93.08
E59-F12C110A01-A1	NO	10	3-Pin Micro	47K7522	109.07
E59-F12C110A01-A2	NC	10	3-Pin Micro	47K7523	109.07
E59-F12C110C02-A1	NO	10	2-meter Cable	47K7528	97.79
E59-F12C110C02-A2	NC	10	2-meter Cable	47K7529	97.79
E59-F18A109A01-A1	NO	8	3-Pin Micro	47K7542	114.71
E59-F18A109A01-A2	NC	8	3-Pin Micro	47K7543	114.71
E59-F18A109C02-A1	NO	8	2-meter Cable	47K7548	98.72
E59-F18A109C02-A2	NC	8	2-meter Cable	47K7549	98.72
E59-F18C118A01-A1	NO	18	3-Pin Micro	47K7556	114.71
E59-F18C118A01-A2	NC	18	3-Pin Micro	47K7557	114.71
E59-F18C118C02-A1	NO	18	2-meter Cable	47K7562	98.72
E59-F18C118C02-A2	NC	18	2-meter Cable	47K7563	98.72
E59-F30A115A01-A1	NO	15	3-Pin Micro	47K7564	118.48
E59-F30A115A01-A2	NC	15	3-Pin Micro	47K7565	118.48
E59-F30A115C02-A1	NO	15	2-meter Cable	47K7570	103.42
E59-F30A115C02-A2	NC	15	2-meter Cable	47K7571	103.42
E59-F30C129A01-A1	NO	29	3-Pin Micro	47K7578	118.48
E59-F30C129A01-A2	NC	29	3-Pin Micro	47K7579	118.48
E59-M30C129C02-A1	NO	29	2-meter Cable	47K7666	114.71
E59-F30C129C02-A2	NC	29	2-meter Cable	47K7585	103.42

## 3-WIRE SENSORS 6 - 48VDC

E59-F12A105D01-D1	NO	4	4-Pin Micro	47K7518	87.92
E59-F12A105D01-D2	NC	4	4-Pin Micro	47K7519	87.92
E59-F12A105C02-D2	NC	4	2-meter Cable	47K7517	71.47
E59-F12C110D01-D1	NO	10	4-Pin Micro	47K7532	87.92
E59-F12C110D01-D2	NC	10	4-Pin Micro	47K7533	87.92
E59-F12C110C02-D1	NO	10	2-meter Cable	47K7530	71.47
E59-F12C110C02-D2	NC	10	2-meter Cable	47K7531	71.47
E59-F18A108D01-D1	NO	8	4-Pin Micro	47K7538	127.87
E59-F18A108D01-D2	NC	8	4-Pin Micro	47K7539	94.03
E59-F18A108C02-D1	NO	8	2-meter Cable	47K7536	76.16
E59-F18A108C02-D2	NC	8	2-meter Cable	47K7537	76.16
E59-F18C116D01-D1	NO	16	4-Pin Micro	47K7552	94.03
E59-F18C116D01-D2	NC	16	4-Pin Micro	47K7553	94.03
E59-F18C116C02-D1	NO	16	2-meter Cable	47K7550	76.16
E59-F18C116C02-D2	NC	16	2-meter Cable	47K7551	76.16
E59-F30A115D01-D1	NO	15	4-Pin Micro	47K7574	101.55
E59-F30A115D01-D2	NC	15	4-Pin Micro	47K7575	101.55
E59-F30A115C02-D1	NO	15	2-meter Cable	47K7572	87.92
E59-F30A115C02-D2	NC	15	2-meter Cable	47K7573	87.92
E59-F30C129D01-D1	NO	25	4-Pin Micro	47K7588	101.55
E59-F30C129D01-D2	NC	25	4-Pin Micro	47K7589	101.55
E59-M30C129C02-D1	NO	25	2-meter Cable	47K7668	96.85
E59-F30C129C02-D2	NC	25	2-meter Cable	47K7587	87.92

## STANDARD CABLE - MICRO STYLE PVC JACKET

Mfg. Part No.	Voltage Style	Number of Pins	Gauge	Length	Stock No.	Price Each
CSAS3F2CY2202	AC	3-pin 3-wire	22 AWG	6.0ft. (2m)	84K7828	14.94
CSDS4A4CY2202	DC	4-pin 4-wire	22 AWG	6.0ft. (2m)	46K1910	14.74

(88661)

## EXTENDED RANGE INDUCTIVE PROXIMITY SENSOR



E2EM Series DC 2-wire and 3-wire models provide greater sensing distance and design flexibility. Prewired 2m (6.56') cable. Voltage supply: 12 to 24VDC. 100mA output. Enclosure rating IP67. 2-wire models have no polarity, eliminating reverse wiring. Models below are normally open; PNP models also available; *go online or call*. CE compliant.

## 2-WIRE MODELS

Mfg. Part No.	Size	Description	Sensing Distance	Stock No.	Price Each
● E2EM-X4X1 2M	M12	Shielded	4mm (0.16")	19C7892	102.40
● E2EM-X8X1 2M	M18	Shielded	8mm (0.31")	19C7895	105.08
● E2EM-X15X1 2M	M30	Shielded	15mm (0.59")	19C7885	110.49
● E2EM-X16MX1 2M	M18	Unshielded	16mm (0.63")	19C7886	118.55
● E2EM-X30MX1 2M	M30	Unshielded	30mm (1.18")	19C7889	86.83

## SHIELDED 3-WIRE MODELS

Mfg. Part No.	Size	Output Configuration	Sensing Distance	Stock No.	Price Each
● E2EM-X2C1 2M	M8	NPN	2mm (0.08")	27M2361	98.34
● E2EM-X2B1 2M	M8	PNP	2mm (0.08")	19C7887	98.34
● E2EM-X4C1 2M	M12	NPN	4mm (0.16")	19C7891	98.34
● E2EM-X4B1 2M	M12	PNP	4mm (0.16")	19C7890	98.34
● E2EM-X8C1 2M	M18	NPN	8mm (0.31")	19C7894	101.05
● E2EM-X8B1 2M	M18	PNP	8mm (0.31")	19C7893	101.05
● E2EM-X15C1 2M	M30	NPN	15mm (0.59")	19C7884	106.43

(60570)

## EXTENDED RANGE DC 3-WIRE PROXIMITY SENSORS



E2A DC 3-wire proximity sensors provide a sensing distance approximately 1.5 to 2 times longer than standard proximity sensors. Choice of prewired cable or M12 connector. Voltage supply: 12 to 24VDC. Normally open NPN output.

## SENSORS WITH M12 CONNECTOR

Mfg. Part No.	Size	Sensing Distance (mm)	Overall Length (mm)	Stock No.	Price Each
E2AS08KS02M1C1.	M8	2	43	66J6051	68.98 65.51
E2AM08LS02M1C1.	M8	2	65	66J5979	66.32 62.99
● E2AM12KS04M1C1	M12	4	48	66J5986	68.98 65.51
● E2AM12LS04M1C1	M12	4	70	66J5997	68.98 65.51
E2AM18KS08M1C1.	M18	8	53	66J6008	73.82 70.11
E2AM18LS08M1C1.	M18	8	75	66J6019	73.82 70.11
E2AM30KS15M1C1.	M30	15	58	66J6029	82.29 78.15
E2AM30LS15M1C1.	M30	15	80	66J6040	82.29 78.15
E2AS08KS02M1C1.	M8	2	43	66J6051	68.98 65.51
E2AS08LS02M1C1.	M8	2	65	66J6065	68.98 65.51

## SENSORS WITH M8 3-PIN CONNECTOR

Mfg. Part No.	Size	Sensing Distance (mm)	Overall Length (mm)	Stock No.	Price Each
E2AS08KS02M5C1.	M8	2	61	66J6067	68.98 65.51
● E2AS08KS02M5C1	M8	2	39	66J6053	68.98 65.51

(89425)

## TL-W SUBMINIATURE, FLAT-PACK PROXIMITY SENSORS

Fits tight spaces as small as 0.39" x 1.06" (10mm x 27mm). Watertight construction conforms to IEC enclosure type IP67classification. Ideal for conveyor mounting. Mount directly onto metal base or rail. Rugged, low-profile plastic housing. Prewired with 2m (6.56') cable length. Mounting bracket included. Inductive, 3-wire DC, 10-30VDC supply, 100mA switching, unshielded. PNP output models also available; *go online or call*. UL registered, CSA certified, CE compliant.



Mfg. Part No.	Sensing Range	Output	Stock No.	Price Each
● TL-W1R5MB1	0.06" (1.5mm)	PNP	50B6350	58.43
● TL-W1R5MC1	0.06" (1.5mm)	NPN	88K2005	58.43
● TL-W3MB1	0.12" (3mm)	PNP	38B1181	61.98
● TL-W3MC1	0.12" (3mm)	NPN	52F4280	61.98
● TL-W5MB1	0.19" (5mm)	PNP	27M2897	52.97
● TL-W5MC1	0.19" (5mm)	NPN	27M2898	52.97

(51877)

## SENSORS – PROXIMITY

E2K-F FLAT-PACK  
CAPACITIVE  
PROXIMITY SENSORS

Just Added



- Flat-pack, thin rectangular plastic DC sensor fits space-confined installations
- Non-contact detection of metallic and non-metallic targets including water, oil, glass, plastic and wood
- Detect level inside non-metallic containers
- 10mm (0.39") plastic body is ideal for conveyor wall mounting
- Unshielded sensor has LED indicator and fixed sensitivity for simple installation

Built-in DC amplifier provides NPN switching of loads up to 100mA. Supply voltage: 10-30VDC. Prewired with 2m 3-conductor cable. Enclosure ratings include IEC IP66, NEMA 1, 4, 12 and 13.

Mfg. Part No.	Sensing Range (mm)	Output Type	Stock No.	Price Each
				1-4
● E2K-F10MC1	10	NPN, NO	27M2369	81.04
● E2K-F10MC2	10	NPN, NC	38B202	89.54

(90316)

PLASTIC INDUCTIVE  
DC, CYLINDRICAL  
PROXIMITY SENSORS

**E2F series** detects metal objects and offer excellent resistance to chemical and water washdown environments. Shielded for mounting near metal. Features operation indicators and is prewired with 6.5' of cable and 2 mounting nuts. Meets NEMA enclosure types 1, 3, 4, 6, 12, 13, IEC IP68 classification. UL recognized, CSA certified, CE compliant.

## 2-WIRE AC SENSORS

Input voltage: 20-264VAC, switch up to 100mA; except circuit protected type with 53-US suffix, which is 90-140VAC, 300mA. CSA certified (53-US version only).

Mfg. Part No.	Description	Sensing Range	Stock No.	Price Each
				1-14
E2F-X1R5Y1	8mm Diameter x 1.57" (40)L	0.05" (1.5mm)	52F4293	72.52
● E2F-X2Y1	12mm Diameter x 1.57" (40)L	0.07" (2mm)	52F4292	85.47
● E2F-X5Y1-53-US	18mm Diameter x 1.89" (48)L	0.20" (5mm)	27M2366	96.02
● E2F-X5Y1US	18mm Diameter x 1.57" (40)L	0.20" (5mm)	38B195	87.69

## 3-WIRE DC SENSORS

Input voltage: 10-30VDC, switch up to 200mA.

Mfg. Part No.	Description	Sensing Range	Stock No.	Price Each
				1-14
● E2F-X1R5E1	NPN, 8mm Diameter x 1.38" (30)L	0.05" (1.5mm)	27M2363	74.49
● E2F-X2E1	PNP, 12mm Diameter x 1.38" (35)L	0.078" (2mm)	52F4295	68.77
● E2F-X5E1	NPN, 18mm Diameter x 1.57" (40)L	0.19" (5mm)	52F4296	69.93
● E2F-X10E1	30mm Diameter x 1.97" (50)L	0.39" (10mm)	27M2365	79.98

(51879)

E2C MINIATURE INDUCTIVE  
PROXIMITY SENSORS

**E2C sensors** detect metal objects and feature a separate amplifier that allows sensor to fit in space-confined areas. Detecting distance and differential travel can be adjusted to meet specific application requirements. Require separate amplifier, order separately, below.

## MINIATURE SENSORS

Mfg. Part No.	Sensing Range (mm)	Diameter (mm)	Stock No.	Price Each
				1-14
E2CCR5B	0.5	2.0	37B9992	110.42
E2CC1A	1	5.4	37B9994	86.81

## AMPLIFIERS

Mfg. Part No.	For Use With	Output Type	Stock No.	Price Each
				1-14
E2C-GE4A	E2C-CR8A, E2C-C1A, E2C-X1R5A	NPN	37B9999	124.20
E2C-GF4A	E2C-CR8A, E2C-C1A, E2C-X1R5A	PNP	50B6291	124.20
E2C-GE4B	E2C-CR5B	NPN	38B001	124.20

(88484)

Find  
application  
notes—fast.

(94645)

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STAINLESS STEEL CYLINDRICAL  
INDUCTIVE PROXIMITY SENSORS

**E2ES series** sensors offer a tough stainless steel head to provide a long service life with minimal wear and tear, cylindrical mono-block construction incorporates the sensor head and base. Operate without influence of metal chips or shavings upon the sensing face. Easy-to-use DC 2-wire-connection simplifies installation and maintenance. Unshielded. Voltage: 12-24VDC, 100mA switching. Meet IP67 classifications.



Mfg. Part No.	Cable	Dimensions	Sensing Range	Stock No.	Price Each
E2ES-X4D1	NO 2m	18mm(Diameter) x 27mm(L)	.16" (4mm)	95B7487	227.65
E2ES-X8D1	NO 2m	30mm(Diameter) x 35mm(L)	.31" (8mm)	95B7491	264.74

(61881)

STANDARD INDUCTIVE  
PROXIMITY SENSORS

E2E Long Body

**E2E** proximity sensors detect ferrous metal objects. Packaged in threaded, cylindrical nickel-plated housing. All are normally open. All are shielded for reliable sensing even when mounted near metal housings. All feature operation indicators include mounting nuts. Rated NEMA 1, 4, 6, 12, 13 and IP67. Mounting accessories and protective silicone covers are also available; go online or call.

## SHORT BODY, 2-WIRE AC SENSORS

Input voltage: 24-240VAC, switching to 300mA. Mfg. part numbers with -53-US suffix are short-circuit protected. Prewired with 6.5' cable. UL recognized. -US suffix are CSA certified. Dimensions and sensing ranges are in inches and (mm).

Mfg. Part No.	Description	Sensing Range	Stock No.	Price Each
				1-4
● E2E-X1R5Y1	8mm Diameter x 1.42" (32mm)L	0.06" (1.5mm)	07H1889	83.25
● E2E-X2Y1N	12mm Diameter x 1.50" (38mm)L	0.08" (2mm)	27M2360	77.70
● E2E-X2Y1USN	12mm Diameter x 1.50" (38mm)L	0.08" (2mm)	38B088	77.70
● E2EX5Y1US	18mm Diameter x 1.50" (38mm)L	0.20" (5mm)	66J6574	88.80
E2E-X10Y1-53-US	30mm Diameter x 1.85" (47mm)L	0.31" (8mm)	52F4311	102.57

## SHORT BODY, 2-WIRE DC SENSORS

Input voltage: 10-30VDC, switch up to 100mA. Prewired with 6.5' cable. Include surge absorber and short-circuit protection.

Mfg. Part No.	Description	Sensing Range	Stock No.	Price Each
				1-14
E2EC-CR8D1	3mm Diameter	0.31" (8mm)	38B016	157.16
E2EC-C1R5D1	5.4mm Diameter	0.06" (1.5mm)	38B018	164.88
● E2E-X2D1-N	8mm Diameter x 1.02" (26mm)L	0.08" (2mm)	09J1469	72.15
● E2EX2Y1M1	12mm Diameter	0.08" (2mm)	66J6525	97.55
● E2E-X3D1-N	12mm Diameter x 1.30" (33mm)L	0.12" (3mm)	09J1476	73.26
● E2EX3D1M1	12mm Diameter	0.12" (3mm)	27K4513	88.80
● E2E-X7D1-N	18mm Diameter x 1.50" (38mm)L	0.27" (7mm)	09J1483	75.48

## SHORT BODY, 3-WIRE DC SENSORS

Input voltage: 10-30VDC, switch up to 100mA.

Mfg. Part No.	Description	Sensing Range	Stock No.	Price Each
				1-14
E2EC-CR5C1	3mm Diameter	0.04" (0.5mm)	16F9314	123.01
● E2E-CR8B1	4mm Diameter x 0.98" (25mm)L	0.08" (2mm)	88K1920	98.33
● E2E-CR8C1	4mm Diameter x 0.98" (25mm)L	0.08" (2mm)	92F629	98.33
● E2E-X1B1	5mm Diameter x 0.59" (15mm)L	0.04" (1mm)	93K7546	95.46
● E2E-X1C1	5mm Diameter x 0.59" (15mm)L	0.04" (1mm)	52F9256	95.46
● E2E-X1R5E1-M1	5mm Diameter	0.04" (1mm)	09J1458	73.66
● E2E-X1R5E1	8mm Diameter x 1.02" (26mm)L	0.06" (1.5mm)	09J1457	69.93
● E2EX2D1M1	8mm Diameter	0.08" (2mm)	27K4501	87.55
● E2E-X2E1	12mm Diameter x 1.30" (33mm)L	0.08" (2mm)	52F4302	69.93
● E2E-X2F1	12mm Diameter x 1.30" (33mm)L	0.08" (2mm)	52F4301	69.93
● E2EX7D1M1	18mm Diameter	0.28" (7mm)	80K1611	91.30

## LONG BODY, 2-WIRE AC SENSORS

Input voltage: 24-240VAC switch up to 200mA.

Mfg. Part No.	Description	Sensing Range	Stock No.	Price Each
				1-14
● E2E2-X2Y1M4	12mm Diameter	0.08" (2mm)	38B165	111.42
● E2E2-X5Y1-US	18mm Diameter x 2.56" (65mm) L	0.20" (5mm)	91F5949	98.89
● E2EX5Y1M1	18mm Diameter	0.20" (5mm)	27K4533	103.80
● E2E2-X10Y1M4	30mm Diameter	0.39" (10mm)	38B146	135.26

## LONG BODY, 3-WIRE DC SENSORS

Input voltage: 10-40VDC, switch up to 200mA. Connector version.

Mfg. Part No.	Description	Sensing Range	Stock No.	Price Each
				1-14
● E2E2-X2B1-M1	PNP, 12mm Diameter x 2.36" (60mm)L	0.08" (2mm)	91F5951	77.17
● E2E2-X2C1-M1	NPN, 12mm Diameter x 2.36" (60mm)L	0.08" (2mm)	91F5950	77.17
● E2E2-X5C1-M1	NPN, 18mm Diameter x 2.56" (65mm)L	0.20" (5mm)	27M2362	80.04

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## SENSORS – PROXIMITY

## CAPACITIVE PROXIMITY SENSORS



**E2K-X** standard and **E2K-C** series adjustable range capacitive proximity sensors detect metallic and non-metallic objects such as glass, wood, paper, water, oil, and plastic. Switching up to 200mA. Both versions are unshielded, feature operation indicators, come pre-wired with 6.5' of cable, and operate in temperatures from -13°F to +158°F. **E2K-C** series adjustable versions have plastic body construction, are 3.23" (82) long, and include mounting brackets. **E2K-X** series standard versions have threaded plastic body construction and are 3.15" (80) long with mounting nuts. Diameters are listed in description column. All sensors are CSA certified. **E2K-C** series are UL listed. **E2K-X** series are UL recognized. All meet IEC enclosure IP66 classification and NEMA enclosure types 1, 4, 12, and 13.

## ADJUSTABLE RANGE VERSIONS

Mfg. Part No.	Sensing Range (in)	Supply Voltage	Output	Dia. (mm)	Stock No.	Price Each
						1-4
● E2K-C25ME1	0.12-0.98	10-40VDC	NPN (NO)	34	52F4322	139.39
● E2K-C25ME2	0.12-0.98	10-40VDC	NPN (NC)	34	52F4323	139.39
● E2K-C25MY1	0.12-0.98	90-250VAC	SCR (NO)	34	52F4320	179.99
● E2K-C25MY2	0.12-0.98	90-250VAC	SCR (NO)	34	27M2368	139.39

## STANDARD VERSIONS

E2K-X4ME1.	0.16	10-30VDC	NPN (NO)	12	52F4328	111.74
● E2K-X4ME2	0.16	10-30VDC	NPN (NC)	12	52F4329	111.74
● E2K-X4MY1	0.16	90-250VAC	SCR (NO)	12	27M2373	146.03
● E2K-X15MY1	0.59	90-250VAC	SCR (NO)	30	27M2371	146.03
● E2K-X15MY2	0.59	90-250VAC	SCR (NO)	30	27M2372	146.03
● E2K-X15ME1	0.59	10-30VDC	NPN (NO)	30	27M2370	112.85

(3533)

## LIMIT SWITCH STYLE PROXIMITY SENSORS



**E2Q2** series offers flexibility with a sensing face that easily changes to any of 5 positions. Installation uses same mounting dimensions as a standard limit switch. Conduit opening: 1/2-NPT. **E2QWN** series are weld field and noise immune, 9-way configurable with 3-pin micro-connector. Both are shielded except 30mm sensing distance versions. Rugged plastic body and stainless steel screws. Enclosure rating IP67. NO=normally open; NC=normally closed. CE compliant.

Mfg. Part No.	Output Type	Sensing Distance	Supply	Stock No.	Price Each
					1-4
E2Q2-N15Y4-51*	SCR (NO or NC)	0.59" (15mm)	20-250VAC	19C7898	209.52
E2Q2N15Y4-U	SCR (NO or NC)	0.59" (15mm)	20-250VDC	98B7939	196.67
E2Q2-N30MF3-U	PNP (NO + NC)	1.18" (30mm)	10-60VDC	19C7902	177.39

## WELD FIELD IMMUNE SENSORS

E2QWN15T1M4	AC/DC 2-wire, NO	0.59" (15mm)	20-150VAC/VDC	27K4552	248.82
E2QWN25T1M4	AC/DC 2-wire, NO	0.98" (25mm)	20-150VAC/VDC	27K4554	257.40
E2QWN35MT1M4	AC/DC 2-wire, NO	1.38" (35mm)	20-150VAC/VDC	27K4556	265.98

\*Weld field immune.  
(60470)

## ALL METAL DETECTING PROXIMITY SENSORS



**E2EV** series detect both ferrous and non-ferrous metals at the same distance. Ideal for applications with work pieces of different metals. Metal body cylindrical sensor features short circuit and reverse polarity protection and operation indicators. 10-30VDC input voltage, switches 100mA. Rated NEMA 1, 3, 4, 6, 12, 13, and IP67. Pre-wired with 6.5' of cable. Includes two mounting nuts. All are 2.36" (60) long. NO = normally open; NC = normally closed.

Mfg. Part No.	Description	Diameter (mm)	Sensing Range	Stock No.	Price Each
E2EV-X2C2	NPN, NC	12	0.08" (2mm)	52F4313	150.90
E2EV-X5C1	NPN, NO	18	0.20" (5mm)	52F4314	156.29
E2EV-X5C2	NPN, NC	18	0.20" (5mm)	52F4315	156.29
E2EV-X10C1	NPN, NO	30	0.39" (10mm)	52F4316	160.32
E2EV-X10C2	NPN, NC	30	0.39" (10mm)	52F4317	160.32

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## WELD FIELD IMMUNE PROXIMITY SENSORS



**E2AW** series offers weld field immunity and noise immunity ideal for welding environments. AC/DC 2-wire normally open control output. 10-30VDC supply voltage, 200 mA switching capacity. Choice of 3-pin mini or 3-pin micro connector type.

Mfg. Part No.	Barrel Size	Sensing Distance	Connector	Stock No.	Price Each
					1-4
E2AWM18LS05MN3T1	M18	0.19" (5mm)	3-pin mini	27K4473	223.79
E2AWM18LS05M4T1	M18	0.19" (5mm)	3-pin micro	27K4476	211.00
E2AWM18LN08MN3T1	M18	0.31" (8mm)	3-pin mini	27K4470	223.79
E2AWM18LN08M4T1	M18	0.31" (8mm)	3-pin micro	27K4472	211.00
E2AWM30LS10MN3T1	M30	0.39" (10mm)	3-pin mini	27K4479	242.97
E2AWM30LS10M4T1	M30	0.39" (10mm)	3-pin micro	27K4481	236.57
E2AWM30LN15M4T1	M30	0.59" (15mm)	3-pin micro	27K4478	236.57

(89615)

## E2FM STAINLESS STEEL INDUCTIVE PROXIMITY SENSORS



- Chemical-resistant 303 stainless steel case reduces failure from corrosion
- 0.8mm thick sensing face withstands repeated scouring to remove weld spatter
- Flush mountable in ferrous materials to protect sensor from side impact damage
- M12 connectors simplify installation and shorten service time
- IP67 rated for washdown



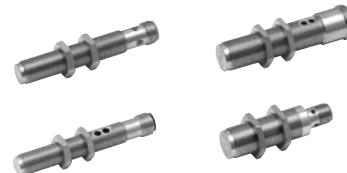
Just Added

Operating voltage: 10-30VDC. Output type: NO with or without polarity. Load rating: 3-100mA, 3V residual with polarity, 3-100mA, 5V residual without polarity. Leakage current: 0.8mA. DC surge suppressor, load short-circuit protection. 3-wire DC proximity sensors also available; go online or call.

Mfg. Part No.	Sensor Diameter (mm)	Sensing Range (mm)	Stock No.	Price Each
				1-4
● E2FM-X1R5D1-M1GJ	8	1.5	22M3775	120.96
● E2FM-X2D1-M1GJ	12	2	22M3776	110.88
● E2FM-X5D1-M1GJ	18	5	22M3777	126.00

(90224)

## PILE DRIVER™ INDUCTIVE PROXIMITY SENSORS FOR HARSH ENVIRONMENTS



- One piece stainless steel housing
- Last 20x longer than traditional proximity sensors
- Power + output LED indicators
- Ferrous-only setting
- Operating temperature: -14°F to 158°F

Additional output and termination styles available; go online or call Newark.

## 2 WIRE DC OUTPUT TYPES - SUPPLY VOLTAGE 6 - 60VDC

Mfg. Part No.	Face Diameter (mm)	Sensing Range (mm)	Load Current (mA)	Termination	Stock No.	Price Each
						1-4
NMB 2-12GM75-Z0-FE-V1	12	2	100	Micro DC Connector	24C3914	102.86
NMB 5-18GM65-Z0-FE-V1	18	5	100	Micro DC Connector	24C3930	110.69
NMB 8-30GM65-Z0-FE-V1	30	8	100	Micro DC Connector	24C3952	119.63

## 3 WIRE PNP DC OUTPUT TYPES - SUPPLY VOLTAGE: 10-30VDC

NMB1.5-8GM50-E0-FE-V3	8	1.5	100	Pico DC Connector	30M8893	106.21
NMB 1.5-8GM50-E2-FE-V3	8	1.5	100	Pico DC Connector	08J9517	106.21
NMB1.5-8GM50-E0-FE-V1	8	1.5	100	Micro DC Connector	30M8892	106.21
NMB 1.5-8GM50-E2-FE-V1	8	1.5	100	Micro DC Connector	83H8356	106.21
NMB1.5-8GM35-E0-FE-150MM-V1	8	1.5	100	Micro DC Connector	30M8890	111.80
NMB1.5-8GM35-E2-FE-150MM-V1	8	1.5	100	Micro DC Connector	30M8891	111.80
NMB2-12GM65-E0-FE-V1	12	2	200	Micro DC Connector	70K3911	86.09
NMB2-12GM65-E2-FE-V1	12	2	200	Micro DC Connector	70K3914	89.44

➔ CONTINUED ➔

## SENSORS – PROXIMITY

## PILE DRIVER™ INDUCTIVE PROXIMITY SENSORS FOR HARSH ENVIRONMENTS (CONT.)

## 3 WIRE PNP DC OUTPUT TYPES - SUPPLY VOLTAGE: 10-30VDC

Mfg. Part No.	Face Diameter (mm)	Sensing Range (mm)	Load Current (mA)	Termination	Stock No.	Price Each 1-4
NMB2-12GM65-E2-C-FE-V1	12	2	200	Micro DC Connector	70K3913	116.28
NMB5-18GM65-E0-FE-V1	18	5	200	Micro DC Connector	30M8894	98.39
NMB 5-18GM65-E2-FE-V1	18	5	200	Micro DC Connector	24C3928	98.39
NMB5-18GM65-E2-C-FE-V1	18	5	200	Micro DC Connector	97C8471	127.68
NMB8-30GM65-E0-FE-V1	30	8	200	Micro DC Connector	30M8895	107.33
NMB 8-30GM65-E2-FE-V1	30	8	200	Micro DC Connector	24C3950	107.33
NMB8-30GM65-E2-C-FE-V1	30	8	200	Micro DC Connector	97C8472	137.76

## 2 WIRE AC/DC OUTPUT TYPE - SUPPLY VOLTAGE: 20-250VAC / 20-300VDC

NMB2-12GM85-US-FE-V12	12	2	8-200	Dual Key Micro AC Connector	72C5734	154.29
NMB 5-18GM85-US-FE-V12	18	5	8-300	Dual Key Micro AC Connector	24C3940	156.52
NMB 8-30GM85-US-FE-V12	30	8	8-300	Dual Key Micro AC Connector	24C3962	157.64

(69227)

## CYLINDRICAL INDUCTIVE PROXIMITY SENSORS



- Single LED output status indicator
- Sealing to IP67
- Operating temperature: -14°F to +158°F
- Shielded (embeddable)
- 3-wire PNP output, suffix: -E2
- 3-wire NPN output, suffix: -E0



## 2 WIRE DC OUTPUT TYPE - SUPPLY VOLTAGE: 6-60VDC

Mfg. Part No.	Face Dia. (mm)	Range (mm)	Overall Length (mm)	Load Current (mA)	Termination	Stock No.	Price Each 1-4
NBB 2-12GM40-Z0	12	2	40	2-100	PVC Cable	22C9477	72.80
NBB 2-12GM40-Z0-V1	12	2	50	2-100	Micro DC Connector	24C2530	72.80
NBB5-18GM40-Z0	18	5	50	2-100	PVC Cable	97C8466	72.80
NBB5-18GM40-Z0-V1	18	5	55	2-100	Micro DC Connector	97C8467	72.80
NBB10-30GM40-Z0	30	10	50	2-100	PVC Cable	97C8462	78.40

## 3 WIRE DC NPN AND PNP OUTPUT TYPES - SUPPLY VOLTAGE: 10-30VDC

NJ 0.8-5GM25-E	5	0.8	25	200	PVC Cable	24C2993	120.96
NBB 1.5-8GM40-E0-V1	8	1.5	65	100	Micro DC Connector	24C2497	72.80
NBB 2-8GM50-E0	8	2	50	100	PVC Cable	24C2557	72.80
NBB 2-8GM50-E2	8	2	50	100	PVC Cable	24C2558	72.80
NBB 2-8GM40-E0-V1	8	2	50	100	Micro DC Connector	24C2555	72.80
NBB 2-8GM40-E2-V1	8	2	50	100	Micro DC Connector	24C2556	72.80
NBB2-12GM50-E0	12	2	50	200	PVC Cable	23C1491	61.60
NBB 2-12GM50-E2-V1	12	2	50	100	Micro DC Connector	24C2539	61.60
NBB 4-12GM50-E0	12	4	50	200	PVC Cable	24C2565	72.80
NBB 4-12GM50-E0-V1	12	4	65	200	Micro DC Connector	24C2566	72.80
NBB 2-12GM50-E0-V1	18	2	65	200	Micro DC Connector	24C2533	61.60
NBB5-18GM50-E0	18	5	50	200	PVC Cable	23C1506	67.20
NBB5-18GM50-E2	18	5	50	100	PVC Cable	23C1512	67.20
NBB 5-18GM50-E0-V1	18	5	65	200	Micro DC Connector	24C2584	67.20
NBB 5-18GM50-E2-V1	18	5	50	100	Micro DC Connector	24C2591	67.20
NBB 8-18GM50-E0	18	8	50	200	PVC Cable	24C2622	78.40
NBB10-30GM50-E0	30	10	50	200	PVC Cable	24C2636	78.40
NBB10-30GM50-E0-V1	30	10	65	200	Micro DC Connector	24C2638	78.40
NBB10-30GM50-E2	30	10	50	100	PVC Cable	24C2640	78.40
NBN15-30GM50-E2	30	15	50	100	PVC Cable	24C2763	84.00

▶ CONTINUED ▶

## CYLINDRICAL INDUCTIVE PROXIMITY SENSORS (CONT.)

## 3 WIRE DC NPN AND PNP OUTPUT TYPES - SUPPLY VOLTAGE: 10-30VDC

Mfg. Part No.	Face Dia. (mm)	Range (mm)	Overall Length (mm)	Load Current (mA)	Termination	Stock No.	Price Each 1-4
NBB15-30GM50-E0	30	15	50	200	PVC Cable	33C9706	89.60
NBB15-30GM50-E0-V1	30	15	65	200	Micro DC Connector	33C9707	89.60

## 2 WIRE AC OUTPUT TYPE - SUPPLY VOLTAGE: 6-60VDC

NJ 1.5-8GM40-WS	8	1.5	40	5-100	PVC Cable	24C3036	134.40
NBB2-12GM60-WS	12	2	60	5-200	PVC Cable	23C1517	95.20
NBB 2-12GM60-WS-V12	12	2	70	5-200	Dual Key Micro AC Connector	24C2549	95.20
NBB5-18GM60-WS	18	5	60	5-200	PVC Connector	23C1553	112.00
NBB10-30GM50-WS	30	10	50	5-200	PVC Cable	20K1862	128.80
NBB10-30GM50-WS-V93	30	10	50	5-200	Mini AC Connector	20K1864	128.80
NBB10-30GM50-WS-V12	30	10	50	5-200	Dual Key Micro AC Connector	20K1863	128.80

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## MOUNTING BRACKETS

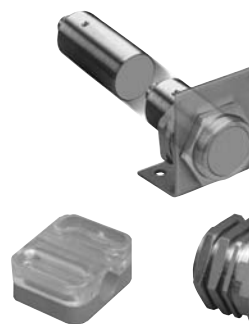


Fig. 1



Fig. 2



Fig. 3

- Brackets available for all diameter cylindrical sensors
- Simplifies mounting and sensor adjustment
- Secure fastening and durable
- Exchanger bracket features stop shoulder to maintain sensing gap during sensor removal and installation

## ADJUSTABLE BRACKET

Mfg. Part No.	Fig.	Sensor Diameter (mm)	Stock No.	Price Each 1-14
BF8	1	8	24C2398	10.08
BF12	1	12	24C2400	10.08
BF18	1	18	24C2401	10.08
BF30	1	30	24C2403	16.12

## EXCHANGER BRACKET

EXG-08	2	8	03H4272	22.17
EXG-12	2	12	03H4273	25.19
EXG-18	2	18	03H3316	31.24
EXG-30	2	30	03H4274	38.29

## UNIVERSAL BRACKET

BF5-30	3	5-30	24C2396	22.17
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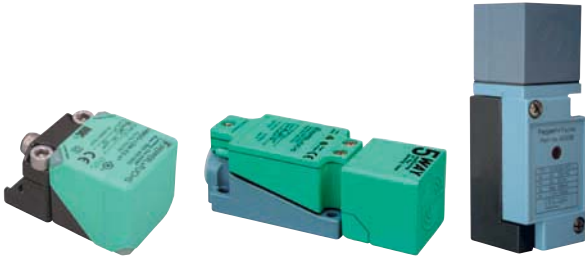
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(94650)

## SENSORS – PROXIMITY

LIMIT SWITCH STYLE  
INDUCTIVE SENSORS
**PEPPERL+FUCHS**  
 SENSING YOUR NEEDS


- 5 position head style for easy mounting
- 1/2" NPT opening, screw terminal termination
- Typical operating temperature: -14°F to 158°F
- Dual LED status indicators for power and output
- IP67/68 sealing

Replace mechanical limit switches with solid-state sensing and switching.

## 4 WIRE DC PNP CUBE STYLE N.O. AND N.C. OUTPUT - SUPPLY VOLTAGE: 20-250VAC

Mfg. Part No.	Sensing Face Size (mm)	Sensing Range (mm)	Load Current (mA)	Stock No.	Price Each 1-4
NBB20-L2M-A2-V1*	40 x 40	20	200	12J5032	117.39
NBN40-L2M-A2-V1	40 x 40	40	200	71J6440	117.39

## 3 WIRE DC PNP CUBE STYLE N.O. OUTPUT - SUPPLY VOLTAGE 10-30VDC

NBB20-L2M-E2-V1	40 x 40	20	200	41J2736	106.21
NBN40-L2M-E2-V1	40 x 40	40	200	71J6442	106.21

## 3 WIRE DC PNP FULL SIZE LIMIT SWITCH N.O. OUTPUT - SUPPLY VOLTAGE: 10-30VDC

NJ20+U4+E2*	40 x 40	20	200	24C3637	134.16
NJ30+U4+E2	40 x 40	30	200	24C3710	139.75
NJ40+U4+E2	55 x 55	40	200	24C3773	150.93

## 2 WIRE AC FULL SIZE LIMIT SWITCH N.O. OR N.C. OUTPUT - SUPPLY VOLTAGE 20-250VAC

NJ15+U4+W*	40 x 40	15	8-500	24C3549	167.70
NJ40+U4+W	55 x 55	40	8-500	24C3782	212.42

## 2 WIRE AC/DC CUBE STYLE N.O. OUTPUT - SUPPLY VOLTAGE 20-250VAC/VDC

NBB20-L3M-US-V93*	40 x 40	40	300	29M5239	145.34
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## 2 WIRE AC/DC FULL SIZE LIMIT SWITCH N.O. OR N.C. OUTPUT - SUPPLY VOLTAGE 20-250VAC

NCB15+U4+U*	40 x 40	15	8-500	24C2845	184.47
NCN40+U4+U	55 x 55	40	8-500	24C2959	229.19

\*Shielded (69228)

CAPACITIVE  
PROXIMITY SENSORS
**PEPPERL+FUCHS**  
 SENSING YOUR NEEDS


3-Wire DC

2-Wire AC

- Reliable detection of liquid, powdered or granular media
- Rated operating temperature: -14°F to +158°F
- 2-Meter Cable, 3-Conductor Electrical Connection
- Adjustable sensitivity

## 3-WIRE DC OUTPUT TYPES — NORMALLY OPEN PNP VERSIONS

Mfg. Part No.	Sensing Face Diameter	Sensing Range	Load Current (mA)	Supply Voltage (VDC)	Stock No.	Price Each 1-4
CJ 4-12GM-E2	12mm	4mm	200	10-35	03H4168	223.60
CJ 8-18GM-E2	18mm	8mm	300	10-30	34C2330	223.60
CJ10-30GM-E2	30mm	10mm	200	10-60	73C2972	195.65

## 2-WIRE AC OUTPUT TYPES — SUPPLY VOLTAGE 20-250VAC/45-60HZ

Mfg. Part No.	Sensing Face Diameter	Sensing Range	Load Current (mA)	Housing	Stock No.	Price Each 1-4
CJ10-30GK-WS	30mm	10mm	200	Plastic	27C9511	139.75
CJ10-30GM-WS	30mm	10mm	200	Nickel-Plated Brass	25C4030	229.19

(73252)

INDUCTIVE BARREL  
PROXIMITY SENSORS

Just Added


**TURCK**  
 Industrial Automation


Fig. 1



Fig. 2



Fig. 3



Fig. 4

## Features:

- Normally open output
- Threaded or smooth barrel style
- Embeddable shielded coil may be safely flush-mounted in metal
- Nonembeddable nonshielded coil require metal-free area around sensing face

## Specifications:

- Environmental rating: NEMA 1, 3, 4, 6, 13; IP68
- Operating temperature: -13°F to 167°F ("WD style" 32°F to 185°F)
- Continuous load current: 200mA
- Voltage drop: 1.8VDC at 200mA
- Input voltage: 10-30VDC

## EMBEDDABLE - 3-WIRE - THREADED BARREL

Mfg. Part No.	Fig.	Sensing Distance (mm)	Sensing Face Dia. (mm)	Output Type	Termination	Stock No.	Price Each 1-9
BI 1-EG05-AN6X	1	1	5	NPN	2m Cable	41M2035	121.57
BI 1-EG05-AN6X-V1331	1	1	5	NPN	Straight 3-pin picofast	41M2036	121.57
BI 1-EG05-AP6X	1	1	5	PNP	2m Cable	41M2037	121.57
BI 1-EG05-AP6X-V1331	1	1	5	PNP	Straight 3-pin picofast	41M2038	121.57

## EMBEDDABLE - 3-WIRE - SMOOTH BARREL

BI 1-EH04-AN6X	2	1	4	NPN	2m Cable	41M2039	121.57
BI 1-EH04-AN6X-V1331	2	1	4	NPN	Straight 3-pin picofast	41M2040	121.57
BI 1-EH04-AP6X	2	1	4	PNP	2m Cable	41M2041	121.57
BI 1-EH04-AP6X-V1331	2	1	4	PNP	Straight 3-pin picofast	41M2042	121.57

## EMBEDDABLE - 2-WIRE - THREADED BARREL

● BI 2-M12-AD4X	3	2	12	DC	2m Cable	41M2057	80.04
● BI 2-M12-AD4X-H1141	3	2	12	DC	Straight 4-pin eurofast	42M1330	80.04
● BI 3-M12-AD4X	3	3	12	DC	2m Cable	41M2068	88.30
● BI 3-M12-AD4X-H1141	3	3	12	DC	Straight 4-pin eurofast	42M1331	88.30
BI 5-M18-AD4X	3	5	18	DC	2m Cable	41M2101	95.56
BI 5-M18-AD4X-H1141	3	5	18	DC	Straight 4-pin eurofast	42M1332	95.56
BI 7-M18-AD4X	3	7	18	DC	2m Cable	41M2118	103.83
BI 7-M18-AD4X-H1141	3	7	18	DC	Straight 4-pin eurofast	42M1333	103.83

## NONEMBEDDABLE - 3-WIRE - SMOOTH BARREL

NI 3-EH6.5-AN6X	2	3	6.5	NPN	2m Cable	41M3610	93.45
NI 3-EH6.5-AN6X-V1331	2	3	6.5	NPN	Straight 3-pin picofast	41M3611	93.45
NI 3-EH6.5-AP6X	2	3	6.5	PNP	2m Cable	41M3612	93.45
NI 3-EH6.5-AP6X-V1331	2	3	6.5	PNP	Straight 3-pin picofast	41M3613	93.45

## NONEMBEDDABLE - 2-WIRE - THREADED BARREL

● NI 4-M12-AD4X	4	4	12	DC	2m Cable	41M3618	80.04
● NI 4-M12-AD4X-H1141	4	4	12	DC	Straight 4-pin eurofast	42M1334	80.04
NI 8-M12-AD4X	4	8	12	DC	2m Cable	41M3637	88.30
NI 8-M12-AD4X-H1141	4	8	12	DC	Straight 4-pin eurofast	42M1335	88.30
NI 8-M18-AD4X	4	8	18	DC	2m Cable	41M3647	95.56
NI 8-M18-AD4X-H1141	4	8	18	DC	Straight 4-pin eurofast	42M1336	95.56

(91475)

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(94656)



## SENSORS – PROXIMITY

M12 EUROFAST  
CORDSETS

Just Added


**TURCK**  
works  
Industrial  
Automation

- Standard plug body
- Nickel plated brass coupling nut
- T barb fitting
- NEMA 6P/IP68 rated



Mfg. Part No.	No. of Wires	Length (m)	Connector	Cable Jacket Material	Stock No.	Price Each
● RK 4.4T-2	4	2	Straight Female	PVC	41M4052	18.45
● RK 4.4T-2-RS 4.4T	4	2	Straight Female/ Straight Male	PVC	41M4053	31.83
● RK 4.4T-2-WS 4.4T	4	2	Straight Female/ Right-Angle Male	PVC	41M4055	31.83
● RS 4.4T-2	4	2	Straight Male	PVC	41M4124	18.45
● RK 4.4T-2-RS 4.4T/S90	4	2	Straight Female/ Straight Male	PUR	41M4054	35.76
● RK 4.4T-2-WS 4.4T/S90	4	2	Straight Female/ Right-Angle Male	PUR	41M4056	35.76
● RK 4.4T-2/S90	4	2	Straight Female	PUR	41M4057	22.38
● RS 4.4T-2/S90	4	2	Straight Male	PUR	41M4125	22.38
● RK 4.4T-5	4	5	Straight Female	PVC	41M4058	28.56
● RK 4.4T-5-RS 4.4T	4	5	Straight Female/ Straight Male	PVC	41M4059	41.94
● RK 4.4T-5-WS 4.4T	4	5	Straight Female/ Right-Angle Male	PVC	41M4061	41.94
● RS 4.4T-5	4	5	Straight Male	PVC	41M4126	28.56
● RK 4.4T-5-RS 4.4T/S90	4	5	Straight Female/ Straight Male	PUR	41M4060	53.73
● RK 4.4T-5/S90	4	5	Straight Female	PUR	41M4062	40.35
● RS 4.4T-5/S90	4	5	Straight Male	PUR	41M4127	40.35
● RK 10T-2	10	2	Straight Female	PVC	41M4047	34.36
● RS 10T-2	10	2	Straight Male	PVC	41M4120	34.36
● RK 10T-2/S90	10	2	Straight Female	PUR	41M4048	41.48
● RS 10T-2/S90	10	2	Straight Male	PUR	41M4121	41.48
● RK 10T-5	10	5	Straight Female	PVC	41M4049	48.96
● RK 12T-2	12	2	Straight Female	PVC	41M4050	37.54
● RS 12T-2	12	2	Straight Male	PVC	41M4122	37.54
● RK 12T-2/S90	12	2	Straight Female	PUR	41M4051	44.85
● RS 12T-2/S90	12	2	Straight Male	PUR	41M4123	44.85

(93070)

UPROX+ INDUCTIVE  
PROXIMITY SENSORS

Just Added

**TURCK**  
works  
Industrial  
Automation


BI4U

NI30U

## Features:

- Replaces conventional wound coil system used in previous generation of sensors
- Sensing distances up to 250% higher than conventional ferrite core
- 4-pin M12 Eurofast Q.D. termination
- Short-circuit and overload protection incorporated
- Reverse polarity and wire-break protection
- LEDs indicate: Output energized and short circuit warning

## Specifications:

- Environmental rating: NEMA 1, 3, 4, 6, 13; IP68
- Operating temperature: -13°F to 167°F (\*WD style" 32°F to 185°F)
- Continuous load current: 200mA
- Voltage drop: 1.8VDC at 200mA
- Input voltage: 10-30VDC
- Normally open output
- Threaded barrel style

## EMBEDDABLE

Mfg. Part No.	Sensing Distance (mm)	Sensing Face Dia. (mm)	Output Type	Housing Material	Stock No.	Price Each
BI4U-EM12-AN6X-H1141	4	12	NPN	Stainless Steel	41M2084	79.17
BI4U-EM12-AP6X-H1141	4	12	PNP	Stainless Steel	41M2085	79.17
BI4U-EM12WD-AN6X-H1141*	4	12	NPN	Stainless Steel	41M2086	103.53
BI4U-EM12WD-AP6X-H1141*	4	12	PNP	Stainless Steel	41M2087	103.53
BI4U-M12-AN6X-H1141	4	12	NPN	Chrome Plated Brass	41M2091	77.14
BI4U-M12-AP6X-H1141	4	12	PNP	Chrome Plated Brass	41M2092	77.14
BI4U-MT12-AN6X-H1141	4	12	NPN	Teflon Coated	41M2088	90.34
BI4U-MT12-AP6X-H1141	4	12	PNP	Teflon Coated	41M2089	90.34
BI4U-MT12E-AP6X2-H1141	4	12	PNP	Teflon Coated	41M2090	90.34
BI8U-EM18-AN6X-H1141	8	18	NPN	Stainless Steel	41M2132	92.37
BI8U-EM18-AP6X-H1141	8	18	PNP	Stainless Steel	41M2133	92.37
BI8U-EM18WD-AN6X-H1141*	8	18	NPN	Stainless Steel	41M2134	117.14

➔ CONTINUED ➔

## UPROX+ INDUCTIVE PROXIMITY SENSORS (CONT.)

Mfg. Part No.	Sensing Distance (mm)	Sensing Face Dia. (mm)	Output Type	Housing Material	Stock No.	Price Each
BI8U-EM18WD-AP6X-H1141*	8	18	PNP	Stainless Steel	41M2135	117.14
BI8U-M18-AN6X-H1141	8	18	NPN	Chrome Plated Brass	41M2138	90.34
BI8U-M18-AP6X-H1141	8	18	PNP	Chrome Plated Brass	41M2139	90.34
BI8U-MT18-AN6X-H1141	8	18	NPN	Teflon Coated	41M2136	102.52
BI8U-MT18-AP6X-H1141	8	18	PNP	Teflon Coated	41M2137	102.52
BI15U-EM30-AN6X-H1141	15	30	NPN	Stainless Steel	41M2178	92.37
BI15U-EM30-AP6X-H1141	15	30	PNP	Stainless Steel	41M2179	92.37
BI15U-EM30WD-AN6X-H1141*	15	30	NPN	Stainless Steel	41M2180	117.14
BI15U-EM30WD-AP6X-H1141*	15	30	PNP	Stainless Steel	41M2181	117.14
BI15U-M30-AN6X-H1141	15	30	NPN	Chrome Plated Brass	41M2185	90.34
BI15U-M30-AP6X-H1141	15	30	PNP	Chrome Plated Brass	41M2186	90.34
BI15U-MT30-AN6X-H1141	15	30	NPN	Teflon Coated	41M2182	102.52
BI15U-MT30-AP6X-H1141	15	30	PNP	Teflon Coated	41M2184	102.52
BI15U-MT30-AP6X-H1141	15	30	PNP	Teflon Coated	41M2183	102.52

## NONEMBEDDABLE

NI10U-EM12-AN6X-H1141	10	12	NPN	Stainless Steel	41M3663	79.17
NI10U-EM12-AP6X-H1141	10	12	PNP	Stainless Steel	41M3664	79.17
NI10U-EM12WD-AN6X-H1141*	10	12	NPN	Stainless Steel	41M3665	103.53
NI10U-EM12WD-AP6X-H1141*	10	12	PNP	Stainless Steel	41M3666	103.53
NI10U-M12-AN6X-H1141	10	12	NPN	Chrome Plated Brass	41M3670	77.14
NI10U-M12-AP6X-H1141	10	12	PNP	Chrome Plated Brass	41M3671	77.14
NI10U-MT12-AN6X-H1141	10	12	NPN	Teflon Coated	41M3667	93.08
NI10U-MT12-AP6X-H1141	10	12	PNP	Teflon Coated	41M3668	90.34
NI10U-MT12E-AP6X2-H1141	10	12	PNP	Teflon Coated	41M3669	106.68
NI15U-EM18-AN6X-H1141	15	18	NPN	Stainless Steel	41M3702	92.37
NI15U-EM18-AP6X-H1141	15	18	PNP	Stainless Steel	41M3703	92.37
NI15U-EM18WD-AN6X-H1141*	15	18	NPN	Stainless Steel	41M3704	117.14
NI15U-EM18WD-AP6X-H1141*	15	18	PNP	Stainless Steel	41M3705	117.14
NI15U-M18-AN6X-H1141	15	18	NPN	Chrome Plated Brass	41M3708	90.34
NI15U-M18-AP6X-H1141	15	18	PNP	Chrome Plated Brass	41M3709	90.34
NI15U-MT18-AN6X-H1141	15	18	NPN	Teflon Coated	41M3706	102.52
NI15U-MT18-AP6X-H1141	15	18	PNP	Teflon Coated	41M3707	102.52
NI30U-EM30-AN6X-H1141	30	30	NPN	Stainless Steel	41M3729	92.37
NI30U-EM30-AP6X-H1141	30	30	PNP	Stainless Steel	41M3730	92.37
NI30U-EM30WD-AN6X-H1141*	30	30	NPN	Stainless Steel	41M3731	117.14
NI30U-EM30WD-AP6X-H1141*	30	30	PNP	Stainless Steel	41M3732	117.14
NI30U-M30-AN6X-H1141	30	30	NPN	Chrome Plated Brass	41M3736	90.34
NI30U-M30-AP6X-H1141	30	30	PNP	Chrome Plated Brass	41M3737	90.34
NI30U-MT30-AN6X-H1141	30	30	NPN	Teflon Coated	41M3733	102.52
NI30U-MT30-AP6X2-H1141	30	30	PNP	Teflon Coated	41M3735	102.52
NI30U-MT30-AP6X-H1141	30	30	PNP	Teflon Coated	41M3734	102.52

\* Washdown - IP67, IP68, IP69K  
(91197)

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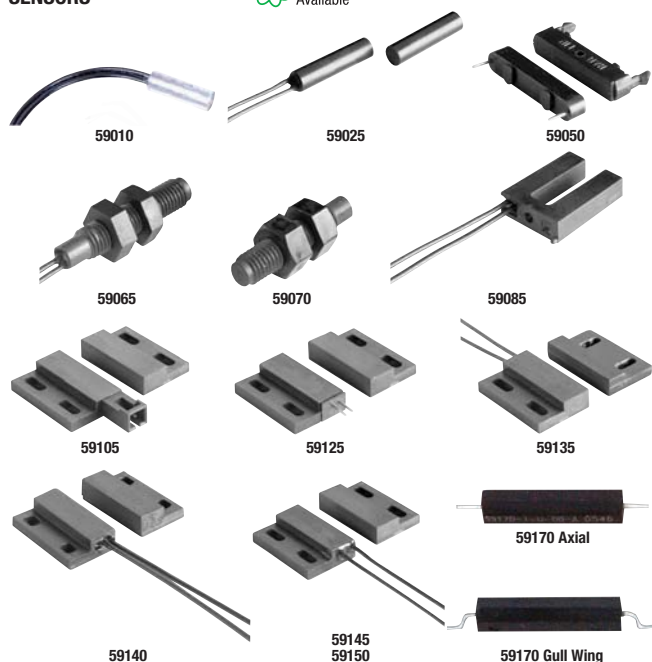
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## SENSORS – PROXIMITY

MAGNETIC  
SENSORS

H A M L I N



- Initial contact resistance: 0.200Ω
- Typical operating time: 1.00ms
- Operating and storage temperature: -40°C to +105°C

## RECOMMENDED ACTIVATING POSITIONS

Sensor contacts are activated by an approaching magnetic actuator or selected magnet and released as it is withdrawn. Sensors are connected in series with the load. No additional power is required for operation. They are unaffected by any non-ferrous material placed between sensor and actuator. Contacts are hermetically sealed for protection from hostile environments. Operating Characteristics: Typical operate time: 1ms. Operation and storage temperature: -40°C to +105°C. Shock without false operation: 50G's 11ms, ½ sine wave. Typical life @ 5Vdc, 10 ma. 50×10<sup>6</sup>. **59150 series** are identical to **59145 series** except leads exit from opposite ends of package. Notes: **59085 series** contains both sensor and magnet. Actuation is obtained by inserting a ferrous vane between them. Operate and release positions depend on thickness of vane. (See position B.) **59050 series** PINS 0.0185D x 0.130"L, 0.8" spacing. **59125 series** terminals 0.025", 0.240"L, 0.100" spacing. **Mfg. part no. 59135-12"** Flying leads, 20 AWG, 19 x 32 teflon-insulat. 200°C, 300V, UL 1180. All others-12" Flying leads, 24 AWG, ½ PVC, 105°C, UL 1430 or UL 1569, 59135 Series CSA certified. **59030** and **59050 series** are not UL listed.

## SPST-NO CONTACTS

Mfg. Part No.	Must Operate Distance (Inches)	Contact Power Max. (W)	Switching Voltage/Current (Volts/A)	Matching Actuator	Sensor Stock No.	Price Each 1-9
59010-1-S-02-A*	0.23	10	170/0.5	...	89K7537	13.74
59010-1-T-02-A*	0.17	10	170/0.5	...	89K7538	13.74
59025-010*	0.15	10	200/0.5	57025-000	05M4561	2.97
59025-020*	0.15	10	300/0.5	57025-000	05M4562	3.42

➤ CONTINUED ➤

## MAGNETIC SENSORS (CONT.)

Mfg. Part No.	Must Operate Distance (Inches)	Contact Power Max. (W)	Switching Voltage/Current (Volts/A)	Matching Actuator	Sensor Stock No.	Price Each 1-9
59050-010	0.075	10	200/0.5	57050-000	89F1394	1.37
59065-010	0.15	10	200/0.5	57065-000	05M4565	3.89
59065-020*	0.15	10	300/0.5	57065-000	19M8515	4.17
59070-010	0.15	10	200/0.5	57070-000	05M4567	3.89
59070-020*	0.15	10	300/0.5	57070-000	05M4568	4.17
59085-010	0.1	5	175/0.25	...	05M4570	9.51
59105-010	0.15	10	200/0.5	57105-000	05M4573	4.53
59105-020*	0.15	10	300/0.5	57105-000	05M4574	5.19
59125-010	0.15	10	200/0.5	57125-000	05M4575	3.96
59125-020*	0.15	10	300/0.5	57125-000	05M4576	4.53
59135-010	0.35	10	200/0.5	57135-000	05M4577	6.48
59135-020*	0.35	10	300/0.5	57135-000	05M4578	6.88
59140-010	0.175	10	200/0.5	57140-000	05M4580	3.01
59140-020*	0.175	10	300/0.5	57030-000	05M4581	3.66
59145-010	0.225	10	200/0.5	57145-000	05M4584	3.18
59145-020*	0.225	10	300/0.5	57145-000	05M4585	3.81
59150-010	0.225	10	200/0.5	57150-000	17M8454	3.21
59150-020*	0.225	10	300/0.5	57150-000	05M4588	3.81
59170-1-S-00-A	0.295	10	200/0.5	...	89K7540	2.07
59170-1-T-00-A	0.256	10	200/0.5	...	89K7543	2.07
59170-1-U-00-A	0.197	10	200/0.5	...	89K7546	2.07
59170-1-S-00-C	0.295	10	200/0.5	...	89K7541	2.07
59170-1-T-00-C	0.256	10	200/0.5	...	89K7544	2.07
59170-1-U-00-C	0.197	10	200/0.5	...	89K7547	2.07
59170-1-S-00-D	0.295	10	200/0.5	...	89K7542	1.23
59210-020	...	10	250/0.5	57140-000	05M4590	6.36

## SPST-NC CONTACTS

59025-040*	0.15	5	175/0.25	57025-000	05M4563	4.77
59065-040	0.15	5	175/0.25	57065-000	05M4566	5.28
59085-040	0.1	5	200/0.5	...	05M4572	6.66
59140-040	0.175	5	175/0.25	57140-000	05M4583	5.04
59145-040	0.225	5	175/0.25	57145-000	05M4587	5.10

## SPDT-CO CONTACTS

59025-030*	0.15	5	175/0.25	57025-000	17M8453	4.98
59030-030	0.150	10	175/0.25	57030-000	05M4564	5.67
59050-030	0.075	5	175/0.25	57050-000	50F7991	4.60
59065-030	0.15	5	175/0.25	57065-000	11M1788	5.58
59070-030	0.15	5	175/0.25	57070-000	05M4569	5.58
59085-030	0.1	5	175/0.25	...	05M4571	9.99
59135-030	0.35	5	175/0.25	57135-000	10M9205	8.20
59140-030	0.175	5	175/0.25	57140-000	05M4582	5.37
59145-030	0.225	5	175/0.25	57145-000	05M4586	5.31
59150-030	0.225	5	175/0.25	57150-000	05M4589	5.22

**Series 59085** contains both sensor and magnet. Actuation is obtained by inserting a ferrous vane between them. Operate and release positions depend on thickness of vane. **NO** = Normally open; **NC** = Normally closed; **CO** = Changeover.  
\* High Voltage (5217)

## ADDITIONAL SENSORS AVAILABLE

These additional sensor series are also available; go online or call. **NO** = Normally open; **NC** = Normally closed; **CO** = Changeover

Sensor Series	Mounting Style	Construction Features	Switching Characteristics	Connection	Switching/Breakdown Voltage (Volts Max./Min.)	Must Operate Distance (in.)	Must Release Distance (in.)	Matching Actuator
59020	Mini Firecracker	0.201 x 0.650" (16.51 x 5.10mm) Blind End Tube	N.O. Contact	12"/304mm Flying Lead, ¼"/6.3mm Stripped Back, Untinned	100/170	0.1	0.3	57020-000
59045*	Mini PCB Mount	Sub-Miniature, 0.700" (17.8mm) Length	N.O. Contact	3.3mm Legs for Through Hole Mounting, Moulded Stand-Offs Allow Board Washing	200/250	0.075	0.55	57045-000
59075	Heavy Duty Threaded Barrel	Robust Stainless Steel Barrel with M12 x 1mm Thread, Two Retaining Nuts	N.O. , N.C. or C.O. Options	198"/5030mm PVC Double Insulated 3A Cable, ¼"/6mm Stripped Back	300/450	0.393	1.18	57075-000
59160*	Surface Mount	Tape and Reel Option	N.O. or C.O. Options	J Leg and Gull Wing Leads, Moulded Stand-Offs Allow Board Washing	200/250	0.155	0.44	57160-000
59200	Lever Arm Sensor	Clip Mounting Optional Return Spring, Shrouded Terminals	N.C. Contact	Shrouded Terminals Compatible with Molex® SL Connector or Equivalent	200/250	<15°	>2°	...

\* UL Registered (72177)

## SENSORS – PROXIMITY • SENSORS – TEMPERATURE

## PROXIMITY SENSORS

Just Added



SRC DEVICES



LY-23

LY-25

LY-30

- Economic design
- No standby power drain
- High power switches available

- Screw or adhesive mounting
- Operate time: 0.5 ms
- Release time: 0.2 ms

**LY-23 series** miniature version sensor and the **LY-30 series** sensor has been designed for industrial applications. **LY-25 series** sensor features a hermetically sealed reedswitch mounted in a cylindrical module. The sensor should be mounted on the fixed surface with the activating magnet on the moving surface. Max. switching voltage: 200 VDC. Max. switching current: 0.5A. Max. carry current: 1.5A. Max. contact rating: 10VA. Operating temperature: -20°C to +85°C.

## MINI FLANGE MOUNT PROXIMITY SENSOR

Mfg. Part No.	Wire Gauge (AWG)	Dimensions inches [mm]	Stock No.	Price Each		
				1-9	10-24	25+
● LY23	22	0.91L x 0.55W x 0.23H [23L x 13.9W x 5.9H]	87K7127	7.13	5.79	5.02

## FIRECRACKER PROXIMITY SENSOR

● LY25	24	0.99L x 0.24Dia. [25.2L x 6Dia]	87K7129	4.38	3.56	3.08
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## FLANGE MOUNT PROXIMITY SENSOR

● LY30	24	1.141L x 0.73W x 0.27H [29L x 18.5W x 6.96H]	87K7131	4.80	3.90	3.38
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## ACTUATOR MAGNETS

Mfg. Part No.	For use with	Dimensions inches[mm]	Stock No.	Price Each		
				1-9	10-24	25+
● LA-23	LY-23 Series Sensor	0.91L x 0.55W x 0.23H [23L x 13.9W x 5.9H]	87K7128	2.58	2.09	1.82
● LA-25	LY-25 Series Sensor	0.99L x 0.24Dia. [25.2L x 6Dia]	01J1701	2.52	2.26	1.94
● LA-30	LY-30 Series Sensor	1.141L x 0.73W x 0.27H [29L x 18.5W x 6.96H]	16J8438	2.78	2.26	1.96

(88679)

## NON-FERROUS METAL DETECTING PROXIMITY SENSORS

- Provides Long Sensing Distances for Non-Ferrous Metals
- Easy-to-See Operation Indicator
- Shielded for Flush Mounting in Metal
- Prewired With 2-Meters (6.56') of Cable
- NEMA 1, 3, 4, 6, 12, 13, and IP67

Cylindrical metal body is shielded for reliable sensing when mounted in metal. Input voltage: 10-30VDC, maximum switch up to 100mA. Current consumption: 20mA maximum. Detectable object type: non-ferrous metals. Control output: 100mA maximum load. Maximum on-state voltage: 2VDC. Feature short circuit and reverse polarity protection and operation indicators. Two mounting nuts are included. Mounting brackets are available; go online or call.

OMRON  
INDUSTRIAL AUTOMATION

Mfg. Part No.	Output	Detecting Distance	Sensing Head	Stock No.	Price 1-4
E2EY-X4C1	NPN-NO	0.16" (4mm)	M18	52F4318	155.74
E2EY-X8C1	NPN-NO	0.31" (8mm)	M30	52F4319	160.93

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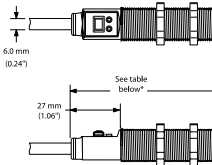
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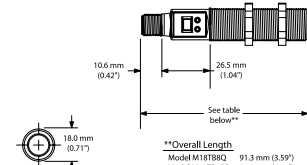
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## T-GAGE M18T ANALOG SERIES INFRARED TEMPERATURE SENSORS

BANNER  
more sensors, more solutions

\*Overall Length

Model M18TB8 81.2 mm (3.20")  
Model M18TB6 81.7 mm (3.22")  
Model M18TB4 86.5 mm (3.41")

\*\*Overall Length

Model M18TB8 91.3 mm (3.59")  
Model M18TB6 91.8 mm (3.61")  
Model M18TB4 96.6 mm (3.80")

## Features:

- Non-contact
- Fast 75ms response
- Easy-to-use TEACH mode programming
- No potentiometer adjustments
- Small, self-contained package, no external controller needed
- Does not require product motion for sensing
- Remote TEACH available in static and dynamic TEACH

- Alarm output to indicate signal maximum
- Programmable positive or negative analog slope: The sensor establishes the 0V output condition with the first taught condition and 10V with the second taught condition. It automatically scales between these 2 conditions. Minimum taught differential is 10°C

## TEMPERATURE SENSORS

Mfg. Part No.	D:S Ratio	Cable	Sensing Face	Stock No.	Price Each
M18TUP14	14:1	5-wire, 2m shielded cable	Germanium Lens	93K6141	299.00
M18TUP14Q	14:1	5-pin, Eurostyle integral QD	Lens	93K6142	299.00
M18TUP8	8:1	5-wire, 2m shielded cable	Integrated Lens	93K6145	289.00
M18TUP8Q	8:1	5-pin, Eurostyle integral QD	Lens	93K6146	289.00
M18TUP6E	6:1	5-wire, 2m shielded cable	Enclosed Plastic Face	93K6143	289.00
M18TUP6EQ	6:1	5-pin, Eurostyle integral QD	Plastic Face	93K6144	289.00

## QUICK-DISCONNECT CABLES

Mfg. Part No.	Description	Length (m)	Stock No.	Price Each
● MQDEC2-515	5-pin Euro-Style Straight, with shield	9	21H2313	28.62

## BRACKETS

Mfg. Part No.	Description	Stock No.	Price Each
● SMB18A	Right-angle mounting bracket	02H7579	3.07
● SMB18SF	One-piece swivel bracket	02H7580	7.16

(88872)

## PYROPEN HANDHELD INFRARED THERMOMETERS

CALEX  
ELECTRONICS LIMITED

- Unique ultra compact design
- Wide temperature range: -20°C to 500°C
- High accuracy and repeatability
- Response time: 500ms
- Narrow field-of-view: 8:1
- Optional laser sighting
- Optional data logging and data acquisition

The ultra compact Pyropen has been specifically designed to fit into your pocket, just like a pen, so that you can carry it with you anywhere you go. You simply aim, press the SCAN button and read the temperature immediately. The non-contact nature of the measurement means that you can take the temperature of moving, rotating, inaccessible or hazardous objects. **Mfg. part no. PYROPEN L** has all the features of **mfg. part no. PYROPEN E**, plus laser sighting for small or distant targets and adjustable emissivity. **Mfg. part no. PYROPEN D** has all the features of **mfg. part no. PYROPEN L**, plus a built-in memory for logging up to 12 temperatures and the ability to perform PC based data acquisition.

Mfg. Part No.	Data Logging and Acquisition	Emissivity	Accuracy	Stock No.	Price Each
PYROPEN E	No	0.95	+/-1%	29K6567	179.00
PYROPEN L	No	0.3 to 1.0	+/-1%	29K6568	219.00
PYROPEN D	Yes	0.3 to 1.0	+/-1%	29K6566	269.00

(84664)



## SENSORS – TEMPERATURE

## EL SERIES NON-CONTACT INFRARED TEMPERATURE SENSORS

CALEX  
ELECTRONICS LIMITED

- 4-20mA or thermocouple outputs
- Stainless steel construction
- Wide temperature range
- High accuracy and repeatability: 1%/1° accuracy
- Response time: 200ms
- Optional water/air cooled jacket (-WJ)



The **EL series** is a range of high quality low cost, miniature sensors which measure the temperature of inaccessible or moving objects and materials. **EL21** has 2:1 optics making it suitable for most applications where the sensor can be mounted close to the target. **EL101** is designed for small or distant targets and has an optical resolution of 10:1.

Mfg. Part No.	Field-of View	Temperature Range	Output	Stock No.	Price Each
EL21MT-0	2:1	0°C to 250°C	4 to 20mA	29K6560	209.00
EL21MT-0-WJ	2:1	0°C to 250°C	4 to 20mA	29K6561	439.00
EL21MT-3	2:1	0°C to 250°C	J thermocouple	87K7667	229.00
EL21MT-4	2:1	0°C to 250°C	K thermocouple	87K7668	229.00
EL101MT-0	10:1	0°C to 250°C	4 to 20mA	29K6558	249.00
EL101MT-0-WJ	10:1	0°C to 250°C	4 to 20mA	29K6559	479.00
EL101MT-3	10:1	0°C to 250°C	J thermocouple	87K7665	269.00
EL101MT-4	10:1	0°C to 250°C	K thermocouple	87K7666	269.00

(84665)

## MLE SERIES NON-CONTACT INFRARED TEMPERATURE SENSORS

CALEX  
ELECTRONICS LIMITED

- 4-20mA current output
- 2-piece (Sensing head and electronic module)
- Wide temperature range
- High accuracy and repeatability: 1%/1° accuracy
- Response time: 200ms



The **MLE series** is a range of miniature infrared temperature sensors with separate electronics. Ideal for applications where there is only a small amount of room available to mount the sensor or the ambient temperature around the sensing head is higher than normal. The emissivity setting is fixed at 0.95, making the **MLE series** suitable for the majority of applications where the target is made of a non-reflective material.

Mfg. Part No.	Field-of View	Temperature Range	Output	Stock No.	Price Each
MLE21MT-0	2:1	0°C to 250°C	4 to 20mA	29K6565	289.00
MLE101MT-3	2:1	0°C to 250°C	J thermocouple	87K7669	339.00
MLE101MT-4	2:1	0°C to 250°C	K thermocouple	87K7670	339.00
MLE101MT-0	10:1	0°C to 250°C	4 to 20mA	29K6564	319.00
MLE21MT-3	10:1	0°C to 250°C	J thermocouple	87K7671	309.00
MLE21MT-4	10:1	0°C to 250°C	K thermocouple	87K7672	309.00

(84667)

## IL SERIES NON-CONTACT INFRARED TEMPERATURE SENSORS

CALEX  
ELECTRONICS LIMITED

- PC configurable
- 4-20mA output current
- Stainless steel housing
- Wide temperature range
- High accuracy and repeatability
- Response time: 200ms
- Optional water/air cooled jacket (-WJ)



The **IL series** is a range of high performance, compact sensors which measure the temperature of inaccessible or moving objects and materials. **Mfg. part no. IL101** has 10:1 optics making it suitable for most applications. Fully configurable temperature range, emissivity, filtering, peak/valley hold, data logging etc. from a PC using CalexLink software supplied.

Mfg. Part No.	Field-of View	Temperature Range	Accuracy	Stock No.	Price Each
IL101	10:1	-20°C to 500°C	+/-1%	29K6562	589.00
IL101WJ	10:1	-20°C to 500°C	+/-1%	29K6563	989.00

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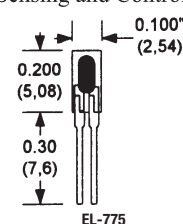
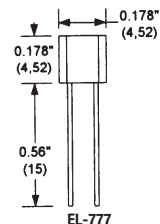
## THRU-HOLE PLATINUM RESISTANCE TEMPERATURE DETECTORS (RTDs)



Honeywell

Sensing and Control

Ideal for air temperature sensing on circuit boards and assemblies. Applications include HVAC room, duct and refrigerant equipment, temperature compensation in instrument and probe assemblies, and temperature regulation in process control. RTD type: 1000Ω/375 Alpha or 100Ω/385 Alpha. Interchangeability: ±0.1% (±0.3°C) or ±0.2% (±0.5°C) @ 0°C. Temperature range: -55°C to +150°C.



Mfg. Part No.	Resistance @ 0°C	Resistance Interchangeability	Temperature Coefficient of Resistance* 0-100°C	Stock No.	Price Each
● HEL-777-A-U-0	1000Ω	±0.2%	3.75Ω/°C	31M5132	11.78
● HEL-777-A-U-1	1000Ω	±0.1%	3.75Ω/°C	91F7124	15.63
● HEL-777-A-T-0	100Ω	±0.2%	0.385Ω/°C	10M8423	13.71
● HEL-775-B-U-0	1000Ω	±0.2%	3.75Ω/°C	15M0248	18.08
● HEL-775-B-U-1	1000Ω	±0.1%	3.75Ω/°C	15M0249	18.08
● HEL-775-B-T-0	100Ω	±0.2%	0.385Ω/°C	15M0247	16.17

\*Average TCR  
(15549)

## PTS SERIES PLATINUM SURFACE MOUNT TEMPERATURE SENSORS



## Applications

- Automotive Electronics
- Aviation Electronics
- Industrial Electronics

## Features

- Advanced Thin Film Technology
- Short Reaction Times down to  $t_{0.9}$  less than 10s (in air)
- Outstanding Stability of Temperature Characteristic
- Specification According to IEC 60751

## Specifications

- Temp. Coeff.: +3850 ppm/K
- Insulation Resistance: Less than 10 M
- Oper. Temp Range: -55°C to +155°C

Mfg. Part No.	EIA Size	Res. (ohms)	Stock No.	Price Each
● PTS060301B100RPU00	0603	100	35M5147	2.26
● PTS080501B100RPU00	0805	100	35M5148	3.73
● PTS080501B500RPU00	0805	500	35M5149	3.94
● PTS120601B100RPU00	1206	100	35M5151	4.91
● PTS120601B500RPU00	1206	500	35M5152	5.22
● PTS120601B1K00PU00	1206	1k	35M5150	5.52

(94531)

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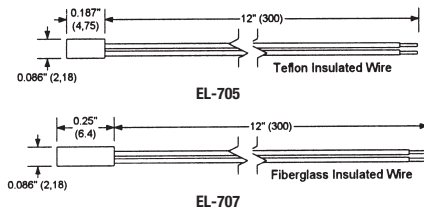
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(94542)

## SENSORS – TEMPERATURE • SENSORS – THERMOSTATS

CYLINDRICAL WIRE LEADED  
PLATINUM RESISTANCE  
TEMPERATURE DETECTORS (RTDs)

**Honeywell**  
Sensing and Control



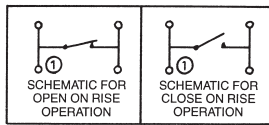
Small cylindrical ceramic bodies are designed for drill holes and probe assemblies. Applications include HVAC room, duct and refrigerant equipment, temperature compensation in instrument and probe assemblies, and temperature regulation in process control. RTD type: 1000Ω/375 Alpha or 100Ω/385 Alpha. Interchangeability:  $\pm 0.1\%$  ( $\pm 0.3^\circ\text{C}$ ) or  $\pm 0.2\%$  ( $\pm 0.5^\circ\text{C}$ ) @  $0^\circ\text{C}$ . Temperature range:  $-200^\circ\text{C}$  to  $+260^\circ\text{C}$ , Teflon<sup>®</sup>;  $-75^\circ\text{C}$  to  $+540^\circ\text{C}$  fiberglass. **EL-705** have Teflon<sup>®</sup> insulated wire; **EL-707** have fiberglass insulated wire.

Mfg. Part No.	Resistance @ $0^\circ\text{C}$	Resistance Inter-changeability	Temperature Coefficient of Resistance* 0-100°C	Stock No.	Price Each
● HEL-705-U-0-12-00	1000Ω	$\pm 0.2\%$	3.75Ω/°C	91F7129	30.48
● HEL-705-U-1-12-00	1000Ω	$\pm 0.1\%$	3.75Ω/°C	15M0243	29.49
● HEL-705-T-0-12-00	100Ω	$\pm 0.2\%$	0.385Ω/°C	15M0242	58.74
● HEL-707-U-0-12-00	1000Ω	$\pm 0.2\%$	3.75Ω/°C	15M0245	35.52
● HEL-707-U-1-12-00	1000Ω	$\pm 0.1\%$	3.75Ω/°C	15M0246	34.32
● HEL-707-T-0-12-00	100Ω	$\pm 0.2\%$	0.385Ω/°C	15M0244	64.77

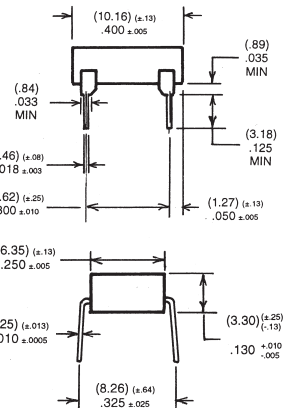
\*Average TCR  
(15545)

6600 SERIES PC BOARD  
THERMOSTATS

**AIRPAX**



**6600 series** is a miniature bimetallic snap-acting thermostat that provides sensing and switching in a single device. Lamp switching capability at 48VDC over its operating temperature range of  $40^\circ\text{C}$  to  $120^\circ\text{C}$ . Designed around the standard 8-pin N8A dual inline package, it is ideal for use on printed circuit boards, and can be installed using auto-insertion equipment.



## CLOSE ON RISE CONTACT OPERATION

Mfg. Part No.	Operating Temp. (°C)	Reset Temp. (°C)	Differential Min. (°C)	Stock No.	Price Each
● 66F040	120	20	4	91F9372	9.05 7.68 6.78
● 66F045	45	20	4	91F9374	9.05 7.68 6.78
● 66F050	50	30	4	91F9376	9.05 7.68 6.78
● 66F080	80	55	6	91F9388	9.05 7.68 6.78
● 66F085	85	55	6	91F9390	9.05 7.68 6.78
● 66F090	90	60	6	91F9392	9.05 7.68 6.78

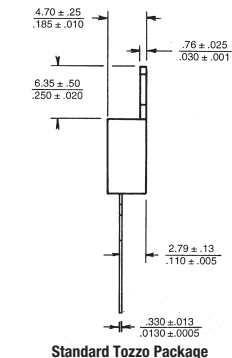
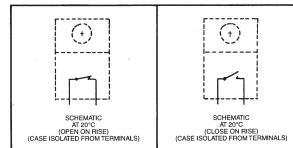
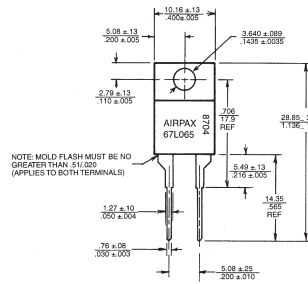
## OPEN ON RISE CONTACT OPERATION

● 66L050	50	30	4	91F9377	9.05 7.68 6.78
● 66L060	60	40	4	91F9381	9.05 7.68 6.78
● 66L075	75	50	4	91F9387	9.05 7.68 6.78
● 66L080	80	55	6	91F9389	9.05 7.68 6.78
● 66L090	90	60	6	91F9393	9.05 7.68 6.78
● 66L100	100	70	6	91F9397	9.05 7.68 6.78
● 66L120	120	90	9	91F9405	9.05 7.68 6.78

(69342)

6700 SERIES PC  
BOARD THERMOSTATS

**AIRPAX**



**6700 series** is a miniature, bimetallic, snap-acting thermostat that provides sensing and switching in a single device. It was developed for thermal management applications on power supplies but is also suited for use on crowded PC boards. Switching capability: 1A @ 48VDC. Operating temperature:  $40^\circ\text{C}$  to  $130^\circ\text{C}$ . The single-pole/single-throw switch assembly features a bimetallic element that is rated 100,000 cycles @ 5VDC 20mA resistive load.

## CLOSE ON RISE CONTACT OPERATION

Mfg. Part No.	Operating Temp. (°C)	Reset Temp. (°C)	Differential Min. (°C)	Stock No.	Price Each
● 67F040	40	20	4	79K1558	5.55 4.71 4.16
● 67F045	45	20	4	72K9971	8.33 7.07 6.24
● 67F050	50	30	4	72K9972	5.55 4.71 4.16
● 67F080	80	55	6	72K9973	5.55 4.71 4.16
● 67F090	90	60	6	72K9974	9.16 7.77 6.89

## OPEN ON RISE CONTACT OPERATION

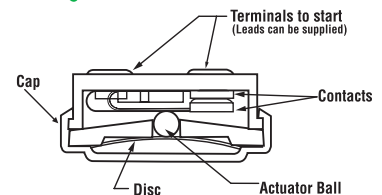
● 67L050	50	30	6	78K7116	5.55 4.71 4.16
● 67L055	55	30	6	72K9975	5.55 4.71 4.16
● 67L060	60	40	6	72K9976	5.55 4.71 4.16
● 67L075	75	50	6	72K9977	9.16 7.77 6.89
● 67L080	80	55	6	72K9978	5.55 4.71 4.16
● 67L090	85	55	6	73K3598	5.55 4.71 4.16
● 67L100	100	70	6	72K9979	9.16 7.77 6.89
● 67L120	120	85	9	72K9980	9.16 7.77 6.89
● 67L130	130	90	9	72K9981	8.33 7.07 6.24

(16029)

5003 SERIES  
THERMAL SWITCHES

**AIRPAX**

- Overall Depth: 0.250" (Without Projecting Terminals)
- Contact Rating for 100,000 Life Cycles: 5A Resistive, 120VAC; 3A Resistive, 240VAC
- Temperature Settings:  $+35^\circ\text{F}$  to  $+325^\circ\text{F}$



Thin, lightweight, water-type thermal switches, for use when space is at a premium. The basic switch assembly is operated by a bimetal disc with positive, reinforced snap-action. Excellent shock and vibration resistance. Dielectric: 1500Vrms, 60Hz, 1min. Terminals to case. Loads under 100mA, 5VDC will require gold-plated contacts, with recommended minimum load of 10mA, 5VDC. UL recognized to  $130^\circ\text{C}$  operating temperature. CSA certified to  $168^\circ\text{C}$ .

## CLOSE ON RISE CONTACT OPERATION

Mfg. Part No.	Operating Temp. Min. (°F)	Operating Temp. Max. (°F)	Stock No.	Price Each
● C53GAB105A-090Y	90	105	34C8787	20.50 18.52 17.43
● C53GAB115A-100Y	100	115	34C8788	20.50 18.52 17.43
● C53GAB120A-105Y	105	120	34C8789	20.50 18.52 17.43
● C53GAB175A-160Y	160	175	34C8790	20.50 18.52 17.43
● C53GAB195A-180Y	180	195	34C8791	20.50 18.52 17.43

## OPEN ON RISE CONTACT OPERATION

● O53GAB120A-105Y	105	120	34C9058	18.63 16.83 15.84
● O53GAB140A-125Y	125	140	34C9059	18.63 16.83 15.84
● O53GAB165A-150Y	150	165	34C9060	18.63 16.83 15.84
● O53GAB175A-160Y	160	175	34C9061	18.63 16.83 15.84
● O53GAB195A-180Y	180	195	34C9062	18.63 16.83 15.84
● O53GAB210B-185Y	185	210	34C9063	18.63 16.83 15.84

➔ CONTINUED ➔

## SENSORS – THERMOSTATS • SENSORS – TILT • SENSORS – ULTRASONIC • SENSORS – VIBRATION

## 5003 SERIES THERMAL SWITCHES (CONT.)

## OPEN ON RISE CONTACT OPERATION

Mfg. Part No.	Operating Temp. Min. (°F)	Operating Temp. Max. (°F)	Stock No.	Price Each		
				1-9	10-24	25-49
● 053GAB250A-225Y	225	250	34C9064	18.63	16.83	15.84
● 053GAB265B-240Y	240	265	73C3788	18.63	16.83	15.84

(69343)

## SNAP-ACTION DISC THERMOSTATS



STANCOR®

- Automatic Reset
- 1/4" Quick-Connect Terminals
- 1/2" Bimetal Disc Thermostat
- Loose Ring
- Stainless Steel Mtg. Bracket
- Load Rating: 15A @ 120V, 10A @ 240V
- UL Recognized, CSA Certified, VDC Lic. 81669
- 1.23" L x 1.32" Case W x 0.37" H and 2 Holes .145" Dia.

Positive, instantaneous opening or closing of electrical circuits. All have differential of 30°F, except **mfg. part no. ST0-60**, which has a differential of 20°F and **ST0-85** and **ST0-175**, which have a differential of 15°F.



Mfg. Part No.	Set Point	Function	Stock No.	Price Each		
				1-9	10-24	25-49
● ST0-60	60°F ±5°F	Opens	16M4628	5.10	4.62	4.26
● ST0-110	110°F ±5°F	Opens	16M4630	5.10	4.62	4.26
● ST0-120	120°F ±5°F	Opens	16M4631	5.10	4.62	4.26
● ST0-140	140°F ±5°F	Opens	16M4632	5.10	4.62	4.26
● ST0-150	150°F ±5°F	Opens	16M4633	5.10	4.62	4.26
● ST0-160	160°F ±5°F	Opens	16M4634	5.10	4.62	4.26
● ST0-170	170°F ±5°F	Opens	16M4635	5.10	4.62	4.26
● ST0-175	175°F ±5°F	Opens	16M4636	5.26	4.76	4.38
● ST0-190	190°F ±5°F	Opens	97F7515	5.19	4.72	4.34
● ST0-210	210°F ±7°F	Opens	16M4637	5.26	4.76	4.38
● STC-100	100°F ±6°F	Closes	16M4626	5.19	4.72	4.34
● STC-120	120°F ±7°F	Closes	46F6507	5.10	4.62	4.26
● STC-140	140°F ±7°F	Closes	46F6509	5.10	4.62	4.26

(4004)

## SURFACE-MOUNT MICRO TILT SENSORS

OMRON  
OMRON ELECTRONIC COMPONENTS LLC

- Low profile: 2mm
- Detects tilting over a range of 40 to 80 degrees in right-and-left inclination
- Gull wing surface mount terminals
- Operating temperature range: -10° to 60°C

Just Added



Ideal for PDA's, cell phones and test equipment; digital cameras and video cameras to change aspect ratio automatically; also replaces mercury switches in portable space heaters and gaming machines. **D6BN-1P** also available in full reels of 2500 pieces, go online or call.

Mfg. Part No.	Return Angle	Output Voltage (VDC)	Operating Voltage (VDC)	Supply Voltage (VDC)	Stock No.	Price Each	
						1-24	25-49
● D6BN-1(100)	50° to 10°	0.4	2.4 to 3.6	-0.1 to 5	39M4637	6.57	6.18

(91078)

## SURFACE MOUNT TILT SENSOR

OMRON  
OMRON ELECTRONIC COMPONENTS LLC

- Detects tilting over range of 45 to 75 degrees in right and left inclination
- Gull wing surface mount terminals
- Wide operating temperature range: -10° to 60°C
- Lead-free contacts

Ideal for PDAs, cell phones and test equipment, digital cameras and video cameras to change aspect ratio automatically. Also replaces mercury switches in portable space heaters and game machines such as pinball games. Output current: ±1mA. Current consumption: 20µA max. Product is sold as tape on reel.

Mfg. Part No.	Operation Angle	Output Voltage (VDC)	Operating Voltage (VDC)	Stock No.	Price Each	
					1-24	25-49
● D6B-2P	45° - 75°	0.5	2.7 - 3.3	21K6447	4.16	3.93

(83796)

## WORLD BEAM QS18U ULTRASONIC SENSORS



more sensors, more solutions

## Features:

- Fast, easy-to-use TEACH-mode programming; no potentiometer adjustments
- Ultra-compact, rugged housing for harsh environments
- Two bi-colored LEDs
- Temperature compensation
- Fast response time: 15ms
- Supply protection: Protected against reverse polarity and transient voltages

## Specification:

- Sensing range: 50 to 500mm (2" to 20")
- Supply voltage: 12 to 30Vdc
- Temperature range: -20°C to +60°C (-4°F to +140°F)
- Leakproof design rated IEC IP67, NEMA6P, or DIN40050 (depending on model)

Low cost, compact ultrasonic sensor for harsh environments in the versatile World Beam standing housing. Ideal when the sensing target is made of clear or transparent materials, or the target surface varies.



## ULTRASONIC SENSORS

Mfg. Part No.	TEACH Options	Cable Termination	Output	Stock No.	Price Each 1-9
QS18UNA	Integral pushbutton or remote TEACH	4-wire, shielded cable, 2m	NPN	69K7353	101.18
QS18UPA			PNP	69K7357	101.18
QS18UNA08		4-pin integral Euro-style QD	NPN	69K7356	101.18
QS18UPA08			PNP	69K7360	101.18
QS18UNAE	Remote TEACH	4-wire, shielded cable, 2m	NPN	69K7354	101.18
QS18UPAE			PNP	69K7358	101.18
QS18UNA08Q		4-pin integral Euro-style QD	NPN	69K7355	101.18
QS18UPA08Q			PNP	69K7359	101.18

## QUICK DISCONNECT CABLES

Mfg. Part No.	Length	Description	Stock No.	Price Each
				1-9
● MQDEC2-406	2m	Straight, 4-pin Euro-style	34K8137	21.47
● MQDEC2-406RA	2m	Right-angle, 4-pin Euro-style	34K8138	21.47
● MQDEC2-415	5m	Straight, 4-pin Euro-style	34K8139	28.62
● MQDEC2-415RA	5m	Right-angle, 4-pin Euro-style	34K8140	28.62

## MOUNTING BRACKETS

Mfg. Part No.	Description	Stock No.	Price Each
			1-9
● SMB18UR	2-piece universal 18mm swivel bracket, stainless steel	21H8816	14.31
● SMBQ518RA*	Right-angle bracket, stainless steel	35K0496	4.09
● SMB18A	12-gauge, stainless steel right-angle bracket, clearance for M4 (#8) hardware	02H7579	3.07
● SMB18SF	18mm swivel bracket, black thermoplastic polyester with stainless steel hardware	02H7580	7.16

\* Integral QD models must mount to the "outside" to allow clearance (87031)

## VIBRATION SENSORS

OMRON  
OMRON ELECTRONIC COMPONENTS LLC

- Pure mechanical vibration detector
- Sealed enclosure
- Self-resetting
- Quick-connect terminals

Mfg. Part No. **D7E-1** and **D7E-2** feature a compact seismic detector while Mfg. Part No. **D7E-3** is a tilt sensor, and responds to the gradual tilting of 1 degree/sec. This allows for quick detection of movements that could cause damage to equipment. Applications include industrial equipment, vending machines and any system requiring safety shutoff during a period of vibration or tilting. SPST-NC contacts.

## VIBRATION SENSORS

Mfg. Part No.	Detection Sensitivity (gal)	Contact Current	Return Angle	Stock No.	Price Each	
					1-24	25-49
● D7E-1	130-200	0.1mA@ 5VDC to 100mA@ 30VDC	2.5°	89C4926	8.38	7.86
● D7E-2	100-170	0.1mA@ 5VDC to 100mA@ 30VDC	2.5°	89C4927	4.71	4.42

## TILT SWITCH

Mfg. Part No.	Operating Angle	Detection Sensitivity (gal)	Contact Current	Return Angle	Stock No.	Price Each	
						1-24	25-49
● D7E-3	50-80°	200	0.1mA@ 5VDC to 100mA@ 30VDC	25°	35K5678	9.20	8.63

(83699)



## SENSORS – VISION LIGHTING

## CLE MACHINE VISION LIGHT

CLE machine vision lights designed for the machine tool, process, inspection and image processing industries. Superior brightness with high intensity LEDs. Low power consumption, low noise, and low heat. Anodized aluminum body that is rust, corrosion and oil-proof. Voltage rating: 24VDC. Power consumption: 3W. Operating temperature -24°C to +60°C. Size: 71mm diameter. Long life and high reliability even in harsh environments. Meets IP-65

## PATLITE



CLE-24N

Mfg. Part No.	Light Type	Luminous Intensity @ Optical Center (cd)	Stock No.	Price Each	
				1-4	5-9
CLE-24	Standard	20	97H8748	227.94	209.79
CLE-24N	Narrow	130	09J4666	241.20	222.00

(80281)

## PRESENCE PLUS LED BACKLIGHTS

Just Added

BANNER®

more sensors, more solutions



## Features:

- Determines the shape and size of target objects
- Provides the most robust lighting for measuring and gauging
- Highlights through-holes in target object

## Specifications:

- 2m cable connection
- 24VDC voltage

Installs behind the target, directly facing the sensor. Has a highly diffused surface and uniform brightness, with a lower intensity than other lights. Can be used to create a silhouette of the part, to detect foreign material on a clear web, to sort parts by size and shape, or to measure the height of cap on a clear bottle.

## LED BACKLIGHTS

Mfg. Part No.	LED Color	Wavelength (nm)	Illumination Area	Stock No.	Price Each
LEDRB70X70W	Red	640	70x70mm	21H0541	462.00
LEDIB70X70W	Infrared	880		57J5355	462.00
LEDRB85X220W	Red	640	85x220mm	34K6761	588.06
LEDIB85X220W	Infrared	880		34K6750	588.06

## ACCESSORIES

Mfg. Part No.	Description	Illumination Area	Stock No.	Price Each
SMBABM	Surface mount bracket for mounting light from front	70x70mm	21H8750	15.84
SMBACM	Column mount bracket with locking pivot	70x70mm	21H8751	29.04
SMBPPK6	6" Column, Base and Knuckle Kit	70x70mm	57J5857	108.24

(90572)

## PRESENCE PLUS LED AREA LIGHTS

Just Added



## Features:

- Illuminates specific surface angles
- Reflects glare from shiny surfaces away from camera
- Creates shadows to detect changes in depth
- Detect notches in ceramic rings and metal tubing
- Verify printing on reflective surfaces
- Distinguish between rough and smooth surfaces

## Specifications:

- 24VDC
- Quick disconnect versions available; go online or call
- Illuminates dark fields

## LED AREA LIGHTS

Mfg. Part No.	LED Color	Wavelength (nm)	Illumination Area	Stock No.	Price Each
LEDBA62X62W	Blue	470	62x62mm	78K8335	297.00
LEDGA62X62W	Green	525		78K8340	356.40
LEDIA62X62W	Infrared	940		78K8344	261.36
LEDRA62X62W	Red	630		78K8347	261.36
LEDWA62X62W	White	...		78K8354	297.00
LEDBA80X80W	Blue	470	80x80mm	57J5341	462.00
LEDGA80X80W	Green	525		57J5347	462.00
LEDIA80X80W	Infrared	850		21H0496	462.00
LEDRA80X80W	Red	660		21H0527	462.00
LEDWA80X80W	White	...		57J5369	462.00

## ACCESSORIES

Mfg. Part No.	Description	Illumination Area	Stock No.	Price Each
SMBVLA62X62S	Surface mounting bracket for mounting light from front	62x62mm	78K9530	23.80
SMBVLA62X62RA	Surface mounting bracket for mounting light at right-angle		78K9529	23.80
SMBABM	Surface mounting bracket for mounting light from front	80x80mm	21H8750	15.84
SMBACM	Column mount bracket with locking pivot		21H8751	29.04
SMBPPK6	6" Column, Base and Knuckle Kit		57J5857	108.24

(90573)

electronics  
design  
WORLD

(94648)

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SENSORS – VISION LIGHTING

PRESENCE PLUS  
LED SPOT LIGHTS

Just Added



Features:

- Provides off-axis illumination of small areas
- IP67 rated, withstands washdown
- Can be used to: Verify print on glossy surface, illuminate part in a washdown environment, indicate sensor field of view for end of zip code sensing

Specifications:

- 2m cable connection
- 10 to 30VDC voltage
- Quick disconnect version available or go online or call

Mfg. Part No.	LED Color	Wavelength (nm)	Stock No.	Price Each
LEDBSW	Blue	470	78K8337	356.40
LEDGSW	Green	530	78K8342	356.40
LEDRSW	Red	627	78K8351	356.40
LEDWSW	White	...	78K8357	356.40

(90574)

PRESENCE PLUS LED  
LINEAR ARRAY LIGHTS



Just Added



Features:

- Maintenance-free LED illumination of large objects from away
- Super-high intensity illumination of large areas
- IP68 rated, sealed to withstand washdown

Specifications:

- 4-pin Euro pigtail QD connection; order separately below
- 24VDC voltage
- Plastic window, glass window versions available, go online or call

Mfg. Part No.	LED Color	Wavelength (nm)	Length (in)	Stock No.	Price Each	
					1-9	10-24
LEDBLA290S-P	Blue	470	12	32M5965	970.90	917.70
LEDGLA290S-P	Green	530		32M5968	970.90	917.70
LEDRLA290S-P	Red	627		32M5973	1248.30	1179.90
LEDWLA290S-P	White	...		32M5976	970.90	917.70
LEDBLA580S-P	Blue	470	24	32M5966	1732.29	1637.37
LEDGLA580S-P	Green	530		32M5969	1732.29	1637.37
LEDRLA580S-P	Red	627		32M5974	1732.29	1637.37
LEDWLA580S-P	White	...		32M5977	1732.29	1637.37

► CONTINUED ►

PRESENCE PLUS LED LINEAR ARRAY LIGHTS (CONT.)

CABLE ASSEMBLIES

Mfg. Part No.	Description	Length (m)	Stock No.	Price Each	
				1-9	10-24
MQDC-406	4-pin Euro-style, female straight	2	20M7027	16.87	15.94
MQDC-415		5	20M7028	19.93	18.84
MQDC-430		9	02H6730	32.71	30.92

(90575)

PRESENCE PLUS LED  
ON-AXIS LIGHTS

Just Added



Features:

- Provides more uniform illumination than a ring light
- Delivers collimated illumination in same optical path as camera
- Evenly illuminates on flat reflective material
- Can be used to: Detect markings on a brushed metal surface, verify codes on reflective surfaces

Specifications:

- 24VDC voltage
- 2m connection, QD models available; go online or call

Mfg. Part No.	LED Color	Wavelength (nm)	Illumination Area	Stock No.	Price Each
LEDRO100W	Red	630	100x100mm	32M5975	1184.05
LEDBO100W	Blue	467		32M5967	1541.05
LEDGO100W	Green	520		32M5970	1541.05
LEDWO100W	White	...		32M5978	1541.05

(90576)

PRESENCE PLUS LED LOW  
ANGLE RING LIGHTS

Just Added



Features:

- Highlights surface irregularities
- Highlights changes in elevation
- Illumination from an angle nearly perpendicular to object
- Can be used to: Detect etching in glass, metal, or plastic, count solder balls, detect missing material and roundness in the opening of a plastic bottle, detect surface texture on metal sheets

Specifications:

- 24VDC voltage
- 150mm diameter
- 2m connection, QD model available; go online or call

Mfg. Part No.	LED Color	Wavelength (nm)	Stock No.	Price Each
LEDRI150-3W	Red	630	32M5972	1005.55
LEDII150-3W	Infrared	880	32M5971	1005.55

(90577)

## SENSORS – VISION LIGHTING • SENSORS – CABLE ASSEMBLIES

## PRESENCE PLUS ADJUSTABLE MOUNTING SYSTEMS



SMBPPF1 &amp; SMBPPFB

SMBPPK6

SMBPPK3

SMBPPLK

- For flexible positioning of light



PPLIM

Mfg. Part No.	Description	Stock No.	Price Each
PPLIM	Light interface module (strobe converter)	32M5979	89.25
SMBPPK	Mounting bracket knuckle	81H5026	59.40
SMBPPKB	Mounting bracket case	32M5980	17.85
SMBPPKE3	3" Column	81H5020	26.40
SMBPPKE6	6" Column	57J5856	29.04
SMBPPK3	3" Column, Base and Knuckle Kit	43K4702	122.40
SMBPPK6	6" Column, Base and Knuckle Kit	57J5857	108.24
SMBPPMC	Bogen Mini Clamp	32M5981	53.55
SMBPPLK	Spot Light - Column Mount	78K9526	22.95
SMBPPF1	Bogen Arm with single knob	21H8769	343.20
SMBPPFB	Bogen Arm Clamp	21H8768	85.80
SMBVLA62X62S	Small Area Light - Surface Mount	78K9530	23.80
SMBVLA62X62RA	Small Area Light - Right Angle or Column Mount	78K9529	23.80
SMBABM	Large Area Light or Small Backlight - Surface Mount	21H8750	15.84
SMBACM	Large Area Light or Small Backlight - Right Angle or Column Mount	21H8751	29.04

(90578)

## PRESENCE PLUS STANDARD LENSES

Just Added

**BANNER**  
more sensors, more solutions


- Wide choice of C-mount lenses for desired field of view at extended distances
- Models with focus and aperture locking
- For all Presence Plus vision sensors, except 1.3 megapixel models

## LENSES

Mfg. Part No.	Focal Length (mm)	Format Size (in)	Features	Stock No.	Price Each
LCF04	4	1/3	...	21H0443	79.20
LCF08	8	1/3	...	21H0445	52.80
LCF12	12	1/3	Focus Locking	21H0447	52.80
LCF16	16	1/3	Focus Locking	21H0449	52.80
LCF25R	25	1	Focus and aperture	21H0453	182.16
LCF50L1R	50	2/3	Focus and aperture locking	21H0455	155.76
LCF50L2R	50	1	Focus and aperture locking; metal housing	21H0456	207.24
LCF75LR	75	1	Focus and aperture locking; metal housing	21H0457	349.80

➔ CONTINUED ➔

## PRESENCE PLUS STANDARD LENSES (CONT.)

## LENS EXTENSION KITS

Mfg. Part No.	Description	Stock No.	Price Each
LEKS	Lens Extension Kit - 0.25 and 0.50mm	34K6818	3.57
LEK	Lens Extension Kit - 0.50, 1.0, 5.0, 10, 20 and 40mm	21H0609	89.76

(90584)

## PRESENCE PLUS HIGH PERFORMANCE AND MEGAPIXEL LENSES

Just Added

**BANNER**  
more sensors, more solutions


- Wide choice of C-mount lenses for desired field of view at extended distances
- Models with focus and aperture locking
- High performance lenses for all Presence Plus vision sensors except 1.3 megapixel models
- Megapixel lenses for all Presence Plus vision sensors

## STANDARD LENSES

Mfg. Part No.	Focal Length (mm)	Format Size (in)	Features	Stock No.	Price Each
LCF03LT	3.5	1/2	Focus and aperture locking	78K8321	308.88
LCF06LT	6.5	2/3	Zoom Lens w/Focus and aperture locking	21H0444	290.40
LCF08LT	8	2/3	Focus and aperture locking	21H0446	343.20
LCF1040LT*	10-40	1/2	Focus and aperture locking	34K6724	213.84
LCF12LT	12	2/3	Focus and aperture locking	21H0448	343.20
LCF16LT	16	2/3	Focus and aperture locking	21H0450	343.20
LCF25LT	25	2/3	Focus and aperture locking	21H0452	343.20
LCF50LT	50	2/3	Focus and aperture locking	21H0454	382.80
LCF75LT	75	2/3	Focus and aperture locking	21H0458	415.80

## MEGAPIXEL LENSES

LCF08LMP	8	2/3	Focus and aperture locking	78K8322	308.88
LCF12LMP	12	2/3	Focus and aperture locking (Computar)	78K8327	308.88
LCF16LMP	16	2/3	Focus and aperture locking (Pentax)	34K6725	308.88
LCF25LMP	25	2/3	Focus and aperture locking (Pentax)	34K6726	308.88
LCF35LMP	35	2/3	Focus and aperture locking (Pentax)	34K6727	308.88
LCF50LMP	50	2/3	Focus and aperture locking (Pentax)	34K6728	308.88

## LENS EXTENSION KITS

Mfg. Part No.	Description	Stock No.	Price Each
LEKS	Lens Extension Kit - 0.25 and 0.50mm	34K6818	3.57
LEK	Lens Extension Kit - 0.50, 1.0, 5.0, 10, 20 and 40mm	21H0609	89.76

\* Will not fit in opening of Banner ring lights (90585)

## QUICK-DISCONNECT (QD) CABLE ASSEMBLIES

RoHS  
Compliant  
Available

**BANNER**  
more sensors, more solutions

## PICO-STYLE QUICK-DISCONNECT CABLES

- Cable: PUR Jacket, Polyurethane Connector Body, POM Snap-Lock Coupling
- Conductors: 26 or 24AWG High Flex Stranded, Gold-Plated Contacts
- Temperature: -40°C - +90°C (-40°F - +194°F)
- Voltage Rating: 30VAC/36VDC



Mfg. Part No.	Length	Style	Used With	Stock No.	Price Each
PKG6Z-9	9m (30')	6-Pin Straight	D10 Series	02H6813	30.66
PKW6Z-2	2m (6.5')	6-Pin Right-Angle	D10 Series	02H6814	22.49
PKW6Z-9	9m (30')	6-Pin Right-Angle	D10 Series	02H6815	30.66

## EURO-STYLE QUICK-DISCONNECT CABLES

- Cable: PVC Jacket, Polyurethane Connector body, Chrome-Plated Brass Coupling Nut
- Conductors: 22AWG High Flex Stranded, PVC Insulation, Gold-Plated Contacts
- Temperature: -40°C - +90°C (-40°F - +194°F)
- Voltage Rating: 250VAC/300VDC

➔ CONTINUED ➔



## SENSORS – CABLE ASSEMBLIES

## QUICK-DISCONNECT (QD) CABLE ASSEMBLIES (CONT.)

Mfg. Part No.	Length	Style	Used With	Stock No.	Price Each
● MQDC1-506	2m (6.5')	5-Pin Straight	Mini-Beam Expert Series	21H2288	16.87
● MQDC1-515	5m (15')			21H2290	19.93
● MQDC1-530	9m (30')			21H2292	32.71
MQDC1-506RA	2m (6.5')			21H2289	16.87
● MQDC1-515RA	5m (15')	5-Pin Right-Angle		21H2291	19.93
● MQDC1-530RA	9m (30')			21H2293	32.71
● MQDC-406	2m (6.5')			20M7027	16.87
● MQDC-415	5m (15')			20M7028	19.93
MQDC-430	9m (30')	4-Pin Straight	Mini-Beam DC SM Series EZ-Beam DC Series (Q Suffix) Omni-Beam (QDH Suffix) EZ Light Series	02H6730	32.71
● MQDC-406RA	2m (6.5')		02H6727	16.87	
● MQDC-415RA	5m (15')		20M7029	19.93	
● MQDC-430RA	9m (30')		21M5146	32.71	

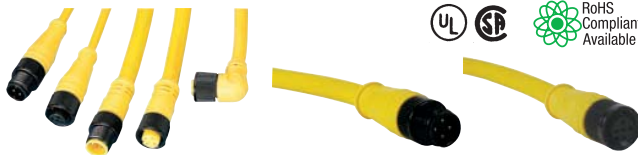
## MICRO-STYLE QUICK-DISCONNECT CABLES

- Cable: PVC Jacket, Polyurethane Connector Body, nickel-plated brass coupling nut
- Conductors: 3 x 22AWG Gold-Plated Contacts
- Temperature: +105°C
- Voltage/Current rating: 250VAC/DC, 4.0A

					Price Each
Mfg. Part No.	Length	Style	Used With	Stock No.	1-9
MQDC-306	2m (6.5')	3-Pin Straight	Mini-Beam AC SM Series	21H2261	16.87
● MQDC-315	5m (15')			21H2263	19.93
● MQDC-306RA	9m (30')			21H2262	16.87
● MQDC-330	2m (6.5')	21H2265		31.69	
● MQDC-315RA	5m (15')	3-Pin Right-Angle		21H2264	19.93
● MQDC-330RA	9m (30')			21H2266	31.69

(73584)

## DUAL KEYWAY MICRO-CHANGE® MOLDED CONNECTORS

BRADHARRISON  
From Daniel Woodhead CompanyWoodhead  
A Division of molex  
RoHS Compliant Available

- Current Rating, 4A
- Designed for 12mm and 18mm sensor applications
- IP68; NEMA 6P water-tight rating

Used with 12 and 18mm tubular proximity sensors, tubular photoelectric sensors, and modular controls. Mechanically-keyed mating parts eliminate mismatching. Diameter, 0.57" and length, 1.84". Rated 4A, 300V. Oil-resistant, PVC jacketed cable. UL listed, CSA certified. Meets NEMA enclosure Type 6 and IEC enclosure IP68.

## DUAL KEYWAY CONNECTORS (AC)

## CORDSETS WITH MOLDED CONNECTOR AND PIGTAIL

Mfg. Part No.	Connector	Poles	Cable Length	Stock No.	Price Each
702006D02F060	Male-Straight	2	6.00'	39C1969	17.61
702000D02F120	Female-Straight	2	12.00'	14B2460	22.84
● 703006D02F060	Male-Straight	3	6.00'	15M4349	18.83
● 703000D02F120	Female-Straight	3	12.00'	96F4277	25.75
● 703001D02F120	Female- 90°	3	12.00'	96F4279	25.75
704006D02F120	Male-Straight	4	12.00'	39C1971	31.78
704000D02F120	Female-Straight	4	12.00'	14B2568	31.62
705006D02F120	Male-Straight	5	12.00'	39C1972	39.97
705000D02F120	Female-Straight	5	12.00'	14B2617	40.13

## STRAIGHT RECEPTACLES WITH 12" WIRE LEADS

Mfg. Part No.	Connector	Poles	Cable Length	Stock No.	Price Each
● 7R2A00A19A120	Female	2	...	15M4343	12.77
● 7R3006A19A120	Male	3	...	14B2400	11.01
● 7R3A00A19A120	Female	3	...	15M4344	12.99
● 7R4006A19A120	Male	4	...	15M4345	13.27
● 7R4A00A19A120	Female	4	...	14B2403	15.26
● 7R5006A19A120	Male	5	...	17M8459	14.37

(80420)

## SINGLE KEYWAY MICRO-CHANGE® MOLDED AND ATTACHABLE CONNECTORS

BRADHARRISON  
From Daniel Woodhead CompanyWoodhead  
A Division of molex  
UL RoHS Compliant Available

Straight Male Receptacle

Straight Female Receptacle



Single-Ended Cordsets



Field Attachable

- Current Rating, 4A
- Designed for 12mm and 18mm sensor applications
- Field attachable
- IP68; NEMA 6 watertight rating

Used with 12 and 18mm tubular proximity sensors, tubular photoelectric sensors, and modular controls. Mechanically-keyed mating parts eliminate mismatching. Diameter, 0.57" and length, 1.84". Rated 4A, 300V. Oil-resistant, PVC jacketed cable. UL listed, CSA certified. Meets NEMA enclosure Type 6 and IEC enclosure IP68.

## SINGLE KEYWAY CONNECTORS (DC)

## CORDSETS WITH MOLDED CONNECTOR AND PIGTAIL

Mfg. Part No.	Connector	Poles	Cable Length	Stock No.	Price Each
● 803000A09M050	Female-Straight	3	16.40'	15M4874	19.10
● 803001A09M050	Female-90°	3	16.40'	15M4875	19.10
● 804006A09M050	Male-Straight	4	16.40'	15M4877	19.12
● 804000A09M050	Female-Straight	4	16.40'	96F4295	19.12
● 804001A09M050	Female-90°	4	16.40'	15M4876	19.12
● 805006A09M050	Male-Straight	5	16.40'	14B2876	29.50
● 805000A09M050	Female-Straight	5	16.40'	31M6787	29.50
● 805001A09M050	Female-90°	5	16.40'	31M6788	29.50

## STRAIGHT RECEPTACLES WITH 12" WIRE LEADS

● 8R3006A18A120	Male	3	...	14B2707	12.00
● 8R3A00A18A120	Female	3	...	15M4868	13.75
● 8R4006A18A120	Male	4	...	15M4870	14.37
● 8R4A00A18A120	Female	4	...	15M4869	15.99
● 8R5006A18A120	Male	5	...	15M4872	16.47
● 8R5A00A18A120	Female	5	...	15M4871	18.26

## ATTACHABLE CONNECTORS

Route cable through tight places where molded-on connectors won't fit. Replace damaged molded connectors quickly. Micro Change® enables quick-disconnect wiring on specialty cable and pre-wired control system devices. Current rating: 4A. Meets IEC enclosure IP68 classification. Field wireable with a screwdriver.

Mfg. Part No.	Connector	Poles	Cable Fitting	Stock No.	Price Each
● 8A4006-32	Male	4	PG9	15M4864	20.32
● 8A4000-32	Female	4	PG9	31M6776	20.32
● 8A4007-31	Male (90°)	4	PG7	31M6777	20.32
● 8A4001-31	Female (90°)	4	PG7	15M4863	20.32
● 8A5006-31	Male	5	PG7	15M4866	21.98
● 8A5000-31	Female	5	PG7	15M4865	21.98
● 8A5007-31	Male (90°)	5	PG7	15M4867	21.98
● 8A5001-31	Female (90°)	5	PG7	83F1938	21.98

(2958)

## Best products, great value.



(94653)

## NO MINIMUMS

We offer the broadest in-stock selection PLUS access to millions more products online. Visit us online or call us today.

## SENSORS – CABLE ASSEMBLIES

SINGLE-KEYWAY MICRO  
CHANGE® MULTI-PORT  
INTERCONNECT  
SYSTEM (MPIS)®BRAD HARRISON  
From Daniel Woodhead CompanyW Woodhead  
A Division of molex

Top-mount multi-port system offers connection for either input or output devices. Base unit allows wiring from 4, 6 or 8 control components through a single cable extending back to the control panel. LED display offers quick and easy troubleshooting and confirmation of sensor status. Single keyway base unit with PVC jacketed 1.64" (0.5m) cable. Used in conjunction with 8, 12 and 18mm proximity sensors, miniature controls, limit switches and solenoids. All female ports. Cordsets are 4-pole 3-wire DC M12X1 threads. 22 AWG gauge cables w/braid. 90° female assembly and 5-wire cables also available; go online or call.

## BASE UNIT—PNP OR NPN FORMATS

Mfg. Part No.	Ports	Format	Stock No.	Price Each
BTY401P-FBE-05	4	PNP	99F8693	116.20
BTY801PFBE05	8	PNP	48F4275	201.83
BTY401NFBEO5	4	NPN	48F4276	116.20
BTY801NFBEO5	8	NPN	48F4277	201.83

## FEMALE STRAIGHT/MALE STRAIGHT

Mfg. Part No.	Length	Stock No.	Price Each
● 883030D01M010	3.28' (1m)	96F4309	27.08
● 883030D01M020	6.56' (2m)	96F4288	31.74

## FEMALE STRAIGHT/MALE 90°

● 883032D01M010	3.28' (1m)	99F3097	26.68
● 883032D01M020	6.56' (2m)	99F3098	31.74

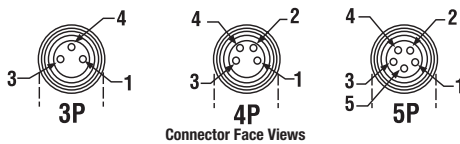
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NANO-CHANGE®  
CONNECTORSBRAD HARRISON  
From Daniel Woodhead CompanyW Woodhead  
A Division of molex

## Molded Straight Male

- 4 AMPS at 60VAC/75VDC
- Standard M8 sensor connector
- Connector dimensions (inches): Molded Straight Male .390 x 1.46L, Field Attachable Straight Female .457D x 1.772

## Field Attachable Straight Female



Smallest family of multipin connectors designed for fast, error-free wiring in all types of industrial settings. Threaded couplings meet NEMA 6 & IP67 ratings for water resistance. Cordsets are 12" long and have a molded connector on one end and stripped wire leads on the other. Receptacles mount in a 1/2" knockout and have 12" stripped wire leads. Field attachable connectors have solder terminals and are used to repair cordsets in the field. 90° versions are available; go online or call.

## CORDSETS WITH MOLDED CONNECTOR AND PIGTAIL

Mfg. Part No.	Description	Poles	Stock No.	Price Each	
				Each	2-4
● 403006A10M040	Male, Straight	3	31M6592	15.45	14.91
● 403000A10M040	Female, Straight	3	14B1384	15.45	14.91
● 404006A10M040	Male, Straight	4	31M6593	18.67	18.02
● 404000A10M040	Female, Straight	4	32M1451	18.67	18.02
● 405006A10M040	Male, Straight	5	15M2441	23.72	22.90
● 405000A10M040	Female, Straight	5	15M2440	23.72	22.90

## RECEPTACLES WITH 12" WIRE LEADS

4R3P06A27C300	Male	3	14B1366	8.90	8.59
4R3P00A27C300	Female	3	14B1365	11.61	11.21
4R4P06A27C300	Male	4	14B1368	9.93	9.58
4R4P00A27C300	Female	4	14B1367	12.66	12.22
4R5P06A27C300	Male	5	14B1370	10.98	10.59
4R5P00A27C300	Female	5	14B1369	13.70	13.22

## FIELD ATTACHABLE CONNECTORS

● N04FA03124	Female, Straight	4	14B952	24.14	23.29
● N04MA03124	Male, Straight	4	31M5736	24.14	23.29

(62180)

MINI-CHANGE®  
MOLDED CONNECTORSBRAD HARRISON  
From Daniel Woodhead CompanyW Woodhead  
A Division of molex

## MINI-CHANGE MOLDED CONNECTORS

## MINI-CHANGE MOLDED CONNECTORS

- Current rating, 8A-13A
- Connector size (inches): Straight Female Plug .56D x 4.46L, 90° Female Plug .56D x 3.53L x 1.56W, Straight Male Plug .70D x 4.50L and 90° Male Plug .70D x 3.53L x 1.60W
- For 12mm and 18mm proximity sensors

Used with: 18mm and 30mm tubular proximity sensors, limit switches, rectangular proximity and photoelectric sensors, and solenoids. Applications include: sensors on conveyors, hydraulic valves, packing equipment, and material handling equipment. Quad-Beam® contact maintains constant pressure on the male pin to ensure optimum conductivity. High-performance, long-lasting gold over palladium-nickel plating on contact. An epoxy-coated coupling nut provides up to 500 hours of corrosion resistance and an anti-vibration guard. Plugs are straight or 90° and can be lighted. Rated 7-13A, 600V. Rated NEMA 6P. UL recognized, CSA certified.

CORDSET WITH MOLDED CONNECTOR AND PIGTAIL  
6' CABLE LENGTH

Mfg. Part No.	Current Rating	Connector Type	Poles	Stock No.	Price Each
● 103002A01F060	13A	Male	3	18C1945	20.28
● 103000A01F060	13A	Female	3	15M1984	20.28
● 103001A01F060	13A	Female-90°	3	15M1985	20.28
● 104002A01F060	10A	Male	4	31M6367	26.25
● 104000A01F060	13A	Female	4	31M6364	26.25
● 104001A01F060	13A	Female-90°	4	31M6366	26.25
● 105002A01F060	8A	Male	5	18C1949	31.82
● 105000A01F060	8A	Female	5	18C3206	31.82
● 105001A01F060	8A	Female-90°	5	15M1988	31.82
● 208000A01F060	7A	Female	8	15M1997	65.74

## 15' CABLE LENGTH

● 103002A01F150	13A	Male	3	18C1946	29.64
● 103000A01F150	13A	Female	3	18C3200	29.64
● 103001A01F150	13A	Female-90°	3	18C3202	29.64
● 104002A01F150	10A	Male	4	31M6368	38.50
● 104000A01F150	10A	Female	4	31M6365	38.50
● 105002A01F150	8A	Male	5	18C1950	48.89
● 105000A01F150	8A	Female	5	18C3207	48.89
● 105001A01F150	8A	Female-90°	5	15M1989	48.89

## RECEPTACLE WITH 12" WIRE LENGTHS

Mfg. Part No.	Current Rating	Receptacle Type	Poles	Stock No.	Price Each
● 1R3006A20A120	13A	Male-Straight	3	15M1980	12.39
● 1R3007A20A120	13A	Male-90°	3	18C3192	16.02
● 1R3004A20A120	13A	Female	3	15M1979	16.88
● 1R4006A20A120	10A	Male-Straight	4	15M1981	14.19
● 1R4007A20A120	10A	Male-90°	4	18C3195	17.82
● 1R4004A20A120	10A	Female	4	18C1943	18.30
● 1R5006A20A120	8A	Male-Straight	5	18C3197	16.00
● 1R5007A20A120	8A	Male-90°	5	15M1983	19.63
● 1R5004A20A120	8A	Female	5	15M1982	19.99
● 2R8006A20A120	7A	Male	8	15M1996	36.40

## ATTACHABLE CONNECTORS

- Make cables the length you want
- Route cable without connector through tight spaces then add field attachable connector.

Mini-Change® connectors enable quick-disconnect wiring on specialty cables and pre-wired control system devices. Meets IEC IP68 enclosure classification. Field-wireable with a screwdriver.

Mfg. Part No.	Connector Type	Poles	Current Rating	L x W Dimensions (inches)	Stock No.	Price Each
● 1A3006-34	Male	3	13A	3.70 x 1.11	15M1977	24.84
● 1A3000-34	Female	3	13A	3.54 x 1.11	15M1976	24.84
● 1A5006-34	Male	5	8A	3.70 x 1.11	15M1978	28.20
● 1A5000-34	Female	5	8A	3.54 x 1.11	52F6719	28.20

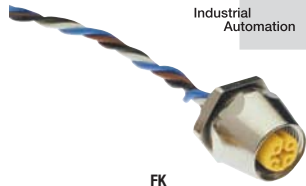
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## SENSORS – CABLE ASSEMBLIES

## M12 EUROFAST RECEPTACLES



FS



FK

- Male or female receptacle
- NEMA 1,3, 4, 6P and IEC IP68 protection

- 4-wire or 8-wire termination
- Current rating: 4A (4-wire); 2A (8-wire)

## MALE

Mfg. Part No.	Mount	Application	Length (m)	Stock No.	Price Each
● FS 4.4-0.3	Front	Mate with 4-pin Cordset	0.3	41M3248	10.18
● FS 8-0.5	Front	Mate with 8-pin Cordset	0.5	41M3249	14.52
● FSFD 4.4-0.5	Rear	Mate with 4-pin Cordset	0.5	41M3254	15.56
● FSFD 8-0.5	Rear	Mate with 8-pin Cordset	0.5	41M3258	18.77

## FEMALE

● FK 4.4-0.3	Front	Mate with 4-pin Cordset	0.3	41M3230	10.18
● FK 8-0.5	Front	Mate with 8-pin Cordset	0.5	41M3231	14.52
● FKFD 4.4-0.5	Rear	Mate with 4-pin Cordset	0.5	41M3236	15.56
● FKFD 8-0.5	Rear	Mate with 8-pin Cordset	0.5	41M3240	18.77

(93071)

## M12 EUROFAST FIELD WIREABLE CONNECTORS



- Field wireable
- Standard keyway
- Housing style: Straight

Straight

## MALE

Mfg. Part No.	No. of Pins	Application	Cable Opening	Stock No.	Price Each
● BS 4131-0/9	3	Mate with 3-pin Cordset	PG9, for reverse key	41M2264	29.21
● BS 5131-0	3	Mate with 3-pin Cordset	Standard	41M2266	19.29
● BS 8141-0/PG9	4	Mate with 4-pin Cordset	PG9	41M2268	18.16
● BS 5141-0	4	Mate with 4-pin Cordset	Standard	41M2267	19.29
● BS 4151-0/9	5	Mate with 5-pin Cordset	PG9, for reverse key	41M2265	32.39

## FEMALE

● B 4131-0/9	3	Mate with 3-pin Cordset	PG9, for reverse key	41M2013	29.21
● B 5131-0	3	Mate with 3-pin Cordset	Standard	41M2015	19.29
● B 8141-0/PG9	4	Mate with 4-pin Cordset	PG9	41M2017	18.16
● B 5141-0	4	Mate with 4-pin Cordset	Standard	41M2016	19.29
● B 4151-0/9	5	Mate with 5-pin Cordset	PG9, for reverse key	41M2014	32.39

(93072)

## MULTIBOX® EUROFAST® LOW PROFILE JUNCTION BOXES



4-port



8-port

Just Added

## Features:

- Dual output per port
- Rugged plastic housing
- Available with or without LEDs
- M23 quick disconnect or integral cable
- Threaded M12 connection
- PNP LED

## Specifications:

- 2A/port, 10A total
- Yellow PVC cable or 19-pin multifast® connector
- 3/18AWG, 8/22AWG
- Foil shield and 20AWG drain
- 2 signal per port
- Mates with CKM 19-11-\* cordsets (4 port) or CKM 19-19-\* multifast® cordsets (8 port)

Mfg. Part No.	Ports	Termination	Cable Length (m)	Stock No.	Price Each
● 4MB12Z-5P3-CS19	4	multifast connector	...	41M6587	117.36
● 4MB12Z-5P3-5	4	Integral Cable	5	41M6588	126.85
● 8MB12Z-5P3-CS19	8	multifast connector	...	41M6696	158.18
● 8MB12Z-5P3-5	8	Integral Cable	5	41M6697	170.43

(94388)

## 19-PIN MULTIFAST® CORDSETS

Just Added



## Features:

- IEC IP67 protection
- 2 signals per port
- DC color code, standard wiring, M23 thread

## Specifications:

- PLTC PVC yellow cable
- 3x18, 8x22AWG
- Temperature: 105°C
- 8.4mm OD (CK19-11-\*) or 10.4mm OD (CKM-19-19-\*)
- Voltage rating: 150V

Mfg. Part No.	No. of Conductors	Length (m)	Ports	Stock No.	Price Each
CKM 19-11-2	11	2	4	41M3121	93.39
CKM 19-11-5	11	5	4	41M3122	93.38
CKM 19-19-2	19	2	8	41M3123	114.81
CKM 19-19-5	19	5	8	41M3124	114.81

(94389)

## M12/M8 SENSOR/ACTUATOR JUNCTION BOXES WITH SPACERS

Just Added



- IP67/68 rated for extreme environments
- Built-in LED's for status indication - power and signal
- Junction boxes are fully potted to ensure system integrity
- Back of junction box is pre-marked with pin out, color-coding and circuit design
- Optional spacer provides a clean and aesthetic mounting manifold

## M12 SENSOR/ACTUATOR JUNCTION BOXES

Mfg. Part No.	No. of Ports	No. of Poles	Termination	Stock No.	Price Each
757-144	4	4	M23 Connector	29K4289	63.20
● 757-244/000-005	4	4	5m cable	29K4295	74.98
● 757-245/000-005	4	5	5m cable	29K4297	88.19
757-164	6	4	M23 Connector	29K4291	72.39
● 757-264/000-005	6	4	5m cable	29K4299	89.36
● 757-265/000-005	6	5	5m cable	29K4301	120.96
757-184	8	4	M23 Connector	29K4293	84.18
● 757-284/000-005	8	4	5m cable	29K4303	99.98
● 757-285/000-005	8	5	5m cable	29K4305	130.80
● 757-285/000-010	8	5	10m cable	29K4306	173.53

## M8 SENSOR/ACTUATOR JUNCTION BOXES

757-343	4	3	M16 Connector	45M7439	63.59
757-443/000-005	4	3	5m cable	45M7442	74.34
757-463/000-005	6	3	5m cable	45M7443	92.47
757-383	8	3	M16 Connector	45M7440	89.75
757-483/000-005	8	3	5m cable	45M7444	111.89
757-403/000-005	10	3	5m cable	45M7441	132.09

## SPACERS

Mfg. Part No.	For Use With	Stock No.	Price Each
757-040	4-Port Sensor/Actuator Box	29K4286	2.85
757-060	6-Port Sensor/Actuator Box	29K4287	3.63
757-080	8-Port Sensor/Actuator Box	29K4288	4.41
757-000	10-Port Sensor/Actuator Box	45M7438	5.05

(94458)

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