

Belling Lee

B BULGIN
Electrical + Electronic Components

Bussmann

E-T-A®

MEM
250v CIRCUIT PROTECTION & CONTROL

multicomp

SIBA

Contents

Page

10 x 38mm (1½") HRC Cartridge Fuses & Accessories	766
14 x 51mm HRC Cartridge Fuses and Accessories	766
15.9 x 4.76mm Fuses (5⁄8" x 3⁄16"), Size '00'	753
20 x 5mm Base Mount Fuseholders	753
20 x 5mm Fuses	748
20 x 5mm In-Line Fuseholders	753
20 x 5mm PCB Mount Fuseholders	752
22 x 58mm HRC Cartridge Fuses and Accessories	767
25 x 5mm Fuses	754
25.4 x 6.35mm Fuses (1" x ¼")	754
31.75 x 6.35mm (1¼" x ¼"), Size '0' Fuseholders	756
31.75 x 6.35mm (1¼" x ¼"), Size '0' Panel Mount	757
31.75 x 6.35mm Fuses (1¼" x ¼"), Size '0'	754
American Midget Fuses	765
Automotive Fuses & Accessories	760
Circuit Breakers For Distribution & Motors	776
Circuit Breakers for Equipment	773
European 'D' Fuses & Accessories	771
European DIN 80 Fuses	772
European Subminiature Fuses & Accessories	759
Fuse Carriers	770
Fuse Characteristics	746
Hazardous Environment Fuses	757
High Speed HRC Fuses	768
Industrial HRC Fuses	767
Industrial NH Fuses	772
Minature Circuit Breakers & Consumer Units	775
Resettable Fuses	762
Surface Mount Fuses	746
Thermal Protection	764
Wire Ended Circuit Protectors	758
Wire Ended Fuses	758



Make Farnell-Newark InOne
your first choice -
search over 300,000 products at
www.farnell-newarkinone.com.sg

**Can't find the product
you are looking for?**

21

Fuses, Circuit Breakers & Consumer Units

Fuse Characteristics

Each fuselink is categorised according to its blowing characteristic.

(FF) - Super Quick Acting (Ultra Rapid). These fuselinks have very low fusing factors and are designed to blow under low current overloads.

(F) - Quick Acting (Quick Blow). For use when a fast blowing time is required under relatively low overloads and when a long and reliable usage is required under full rated conditions.

(M) -Medium Time Lag (Semi-Delay). Fairly rapid blowing under moderate current overloads, combined with some tolerance of moderate transient current surges.

(T) -Time Lag (Antisurge). Capable of withstanding short duration transient currents of considerable magnitude, whilst blowing rapidly under sustained overload conditions.

Breaking Capacity (Interrupting Rating)

This is the maximum short circuit current that the fuselink can safely interrupt under prescribed conditions, usually at rated voltage.

HRC (High Rupture Capacity). Designed with a high current breaking, or rupture, capacity. Usually manufactured with ceramic fuse bodies.

Fuse Sizes

1/4" x 1/4" Fuses are normally used in North American markets, and are generally manufactured to UL and CSA standards.

20 x 5mm Fuses are normally used in European markets and are usually manufactured to IEC 127.

Apart from the physical size differences, the current / time characteristics of these fuses are different, and are therefore not interchangeable.

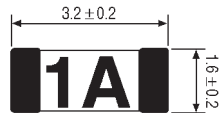
213844

Surface Mount Fuses

Fast Acting - 3216CP Series

1206 Case Size

Bussmann



- Fast acting protection from excess-current
- Rugged ceramic and glass construction
- Compatible with Reflow and Wave-soldering
- UL Recognised and CSA approved

Voltage rating 24V dc Breaking capacity 35A dc
Time/current characteristics 10 s max @ 250% rated current
1ms Typ @ 600% rated current

Mfrs. List No. 3216CP + Rating

FUS318/204517

Rating	Order Code	10+	50+	100+	250+	+	+
250mA	968-833	0.93	0.84	0.78	0.75	--	--
375mA	968-845	0.60	0.54	0.52	0.49	--	--
500mA	968-857	0.60	0.54	0.52	0.49	--	--
750mA	968-869	0.60	0.54	0.52	0.49	--	--
1A	968-870	0.60	0.54	0.52	0.49	--	--
1.5A	968-882	0.76	--	--	--	--	--
2A	968-894	0.60	0.54	0.52	0.49	--	--
2.5A	968-900	0.60	0.54	0.52	0.49	--	--
3A	968-912	0.60	0.54	0.52	0.49	--	--
4A	968-924	0.60	0.54	0.52	0.49	--	--
5A	968-948	0.60	0.54	0.52	0.49	--	--

Very Fast Acting FF

USF 0603 - 32V ac/dc

SCHURTER
ELECTRONIC COMPONENTS



- Lead Free
- High breaking capacity
- Small loss, low voltage drop - 60mV typical
- UL Recognised and CSA Approved; File No. E41599

H = 0.6, W = 1.6, D = 0.8mm

Breaking capacity 50A @ 32V ac/dc Operating temperature -55 to 90°C
Materials: Terminals - Copper, tin plated Socket and Cap - Temperature resistant plastic, UL 94V-0

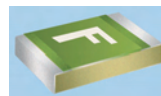
Mfrs. List No.	Order Code	Mfrs. List No.	Order Code
3412.0113.22	116-2758	3412.0119.22	116-2762
3412.0115.22	116-2759	3412.0120.22	116-2763
3412.0117.22	116-2760	3412.0121.22	116-2764

336050

Rating	Order Code	10+	50+	100+	500+	+	+
0.5A	SMD116-2758	0.82	0.72	0.64	0.57	--	--
1.0A	SMD116-2759	0.82	0.72	0.64	0.57	--	--
1.5A	SMD116-2760	0.82	0.72	0.64	0.57	--	--
2.0A	SMD116-2762	0.82	0.72	0.64	0.57	--	--
2.5A	SMD116-2763	0.82	0.72	0.64	0.57	--	--
3.0A	SMD116-2764	0.82	0.72	0.64	0.57	--	--

Super Quick Acting

USF 1206 - 32V ac, 63V dc



H = 0.6, W = 3.2, D = 1.6mm

Breaking capacity 50A @ 32V ac/dc
Materials: Terminals - Copper, tin plated

Operating temperature -55 to 90°C
Housing - Glass epoxy

Mfrs. List No.	Order Code	Mfrs. List No.	Order Code
3413.0113.22	778-5712	3413.0119.22	778-5763
3413.0114.22	778-5720	3413.0120.22	778-5771
3413.0115.22	778-5739	3413.0121.22	778-5780
3413.0116.22	778-5747	3413.0123.22	778-5798
3413.0117.22	778-5755		

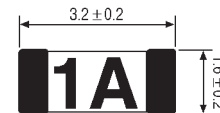
347695

Rating	Order Code	10+	50+	100+	500+	+	+
500mA	SMD778-5712	1.42	1.25	1.11	1.00	--	--
750mA	SMD778-5720	1.42	1.25	1.11	1.00	--	--
1A	SMD778-5739	1.42	1.25	1.11	1.00	--	--
1.25A	SMD778-5747	1.42	1.25	1.11	1.00	--	--
1.5A	SMD778-5755	1.42	1.25	1.11	1.00	--	--
2A	SMD778-5763	1.42	1.25	1.11	1.00	--	--
2.5A	SMD778-5771	1.42	1.25	1.11	1.00	--	--
3.0A	SMD778-5780	1.42	1.25	1.11	1.00	--	--
4A	SMD778-5798	1.42	1.25	1.11	1.00	--	--

Fast Acting - 3216FF

1206 Case Size

Bussmann



- Metal film and ultrasonic wire bond technologies for high reliability fusing
- Fuse element encapsulated with glass
- UL Recognised and CSA approved

Voltage rating 32V ac/63V dc Breaking capacity 50A ac/dc
Time/current characteristics 100% rated current for 4 hours min.
250% rated current for 5 seconds Max
4A and 5A fuses open within 1s @ 350% rated current

Rating (A)	Device Marking	TYP. Resistance @ 10% rated current (Ω)	Typ voltage Drop @ Rated Current (V)	Mfrs. List No.	Order Code
250mA	.25	4.5	1.4	3216FF250-R	112-3250
375mA	White dot	1.8	0.73	3216FF375-R	112-3251
500mA	.5	1.15	0.66	3216FF500-R	112-3252
750mA	.75	0.75	0.63	3216FF750-R	112-3253
1A	1	0.168	0.2	3216FF1-R	112-3254
1.5A	1.5	0.098	0.18	3216FF1.5-R	112-3255
2A	2	0.063	0.16	3216FF2-R	112-3256
2.5A	2.5	0.046	0.14	3216FF2.5-R	112-3258
3A	3	0.037	0.13	3216FF3-R	112-3259
4A	4	0.019	0.11	3216FF4-R	112-3260
4.5A	4.5	0.014	0.1	3216FF4.5-R	112-3261
5A	5	0.013	0.09	3216FF5-R	112-3262

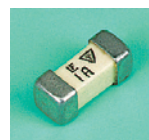
204520

Rating (A)	Order Code	10+	50+	100+	250+	+	+
250mA	112-3250	1.08	0.96	0.93	0.87	--	--
375mA	112-3251	0.90	0.60	0.58	0.55	--	--
500mA	112-3252	0.90	0.60	0.58	0.55	--	--
750mA	112-3253	0.90	0.60	0.58	0.55	--	--
1A	112-3254	0.90	0.60	0.58	0.55	--	--
1.5A	112-3255	0.90	0.76	--	--	--	--
2A	112-3256	0.66	0.59	0.56	0.53	--	--
2.5A	112-3258	0.66	0.59	0.56	0.53	--	--
3A	112-3259	0.66	0.59	0.56	0.53	--	--
4A	112-3260	0.66	0.59	0.56	0.53	--	--
4.5A	112-3261	0.66	0.59	0.56	0.53	--	--
5A	112-3262	0.66	0.59	0.56	0.53	--	--

Very Fast Acting - 451 series

Nanofuse - 125V ac/dc

Littelfuse



L=6.10, W=2.54, H=2.54 Supplied on 12mm embossed tape (reel=1K pcs)

- Compact high speed ceramic chip fuses.
 - UL Recognised and CSA approved.
- Breaking capacity 100A @ 125V ac, 300A @ 125V dc Operating temperature -55°C to +125°C
Mfrs. List No. 451 + Value

Prices are in Singapore Dollars and exclusive of GST.
Due to the volatile nature of certain products,
prices are subject to change without notice.

Order Multiple=10		Price Each				
Rating	Order Code	10+	100+	250+	500+	+
62mA	SMD 508-652 ▲	1.77	--	--	--	--
125mA	SMD 508-664 ▲	1.83	1.77	--	--	--
250mA	SMD 508-676 ▲	1.64	1.51	1.45	1.32	--
500mA	SMD 508-688 ▲	1.04	1.01	0.94	0.85	--
1A	SMD 508-690 ▲	1.04	1.01	0.94	0.82	--
2A	SMD 508-706 ▲	1.01	0.98	0.91	0.82	--
3A	SMD 508-718 ▲	0.98	0.94	0.88	0.79	--
5A	SMD 508-720 ▲	1.04	1.01	0.98	0.85	--
10A	SMD 508-731 ▲	1.01	0.94	0.91	0.79	--

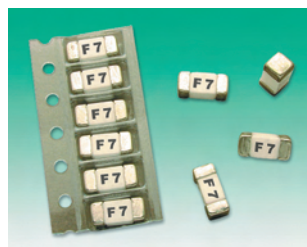
FUS243/204438

Order Multiple=10		Price Each				
Rating	Order Code	10+	100+	250+	500+	+
62mA	SMD 992-2121 ●	1.77	--	--	--	--
125mA	SMD 992-2130 ●	1.83	1.77	--	--	--
250mA	SMD 992-2148 ●	1.64	1.51	1.45	1.32	--
500mA	SMD 992-2156 ●	1.04	1.01	0.94	0.85	--
1A	SMD 992-2164 ●	1.04	1.01	0.94	0.82	--
2A	SMD 992-2172 ●	1.01	0.98	0.91	0.82	--
3A	SMD 992-2180 ●	0.98	0.94	0.88	0.79	--
5A	SMD 992-2199 ●	1.04	1.01	0.98	0.85	--
10A	SMD 992-2202 ●	1.01	0.94	0.91	0.79	--

204461

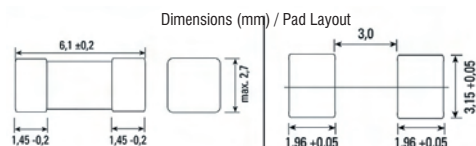
Quick Blow - 125V

Type 419



- Heat resistant ceramic housing
- UL Recognised and CSA approved
- Low voltage drop

Breaking capacity: 50A @ 125V ac/dc ($\geq 7A$),
35A @ 125V ac/dc ($\leq 7A$)
Operating temperature: -56°C to 125°C
Solderability: 235°C, 3 seconds



Rated current (A)	Voltage (V)	Voltage drop (mV)	Mfrts. List No.	Order Code
1.00	125	210	419-11000-001	416-1555
1.50	125	250	419-11500-001	416-1567
2.00	125	180	419-12000-001	416-1579
2.50	125	220	419-12500-001	416-1580
3.00	125	160	419-13000-001	416-1592
4.00	125	140	419-14000-001	416-1609
5.00	125	130	419-15000-001	416-1610
7.00	125	130	419-17000-001	416-1622
10.00	125	100	419-21000-001	416-1634

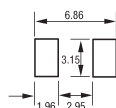
243433

Sold in Packs of 10

Mfrts. List No.	Order Code	10+	+	+	+
419-11000-001	SMD 416-1555	0.48	--	--	--
419-11500-001	SMD 416-1567	0.48	--	--	--
419-12000-001	SMD 416-1579	0.48	--	--	--
419-12500-001	SMD 416-1580	0.48	--	--	--
419-13000-001	SMD 416-1592	0.47	--	--	--
419-14000-001	SMD 416-1609	0.83	--	--	--
419-15000-001	SMD 416-1610	0.48	--	--	--
419-17000-001	SMD 416-1622	0.59	--	--	--
419-21000-001	SMD 416-1634	0.51	--	--	--

Slow Blow

Nanofuse - 125Vac/dc



L=6.10 B=2.54
H=2.54

Meets IEC 60127-4 standard for Universal Modular Fuse-links, UMF 125V.

Breaking Capacity 50A @ 125V ac or dc Operating Temperature -55°C to 125°C

Mfrts. List No. = 452 + Rating

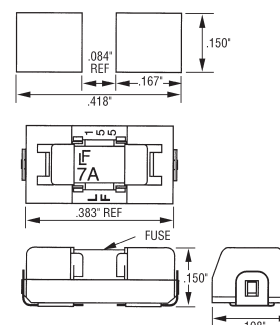


Order Multiple=10		Price Each			
Rating	Order Code	10+	100+	250+	500+
375mA	SMD 664-698 ▲	1.20	1.13	1.04	0.85
500mA	SMD 664-704 ▲	1.23	1.17	1.07	0.88
750mA	SMD 664-716 ▲	1.13	1.01	0.98	0.79
1A	SMD 664-728 ▲	1.13	1.01	0.98	0.79
1.5A	SMD 664-730 ▲	1.13	1.01	0.98	0.79
2A	SMD 664-741 ▲	1.13	1.01	0.98	0.79
2.5A	SMD 664-753 ▲	1.13	1.01	0.98	0.79
3A	SMD 664-765 ▲	1.13	1.01	0.98	0.79
3.5A	SMD 664-777 ▲	1.13	1.01	0.98	0.79
4A	SMD 664-789 ▲	1.13	1.01	0.98	0.79
5A	SMD 664-790 ▲	1.13	1.01	0.98	0.79

Order Multiple=10		Price Each			
Rating	Order Code	10+	100+	250+	500+
375mA	SMD 992-2318 ●	1.20	1.13	1.04	0.85
500mA	SMD 992-2326 ●	1.23	1.17	1.07	0.88
750mA	SMD 992-2334 ●	1.13	1.01	0.98	0.79
1A	SMD 992-2342 ●	1.13	1.01	0.98	0.79
1.5A	SMD 992-2350 ●	1.13	1.01	0.98	0.79
2A	SMD 992-2369 ●	1.13	1.01	0.98	0.79
2.5A	SMD 992-2377 ●	1.13	1.01	0.98	0.79
3A	SMD 992-2385 ●	1.13	1.01	0.98	0.79
3.5A	SMD 992-2393 ●	1.13	1.01	0.98	0.79
4A	SMD 992-2407 ●	1.13	1.01	0.98	0.79
5A	SMD 992-2415 ●	1.13	1.01	0.98	0.79

Fuse and Fuseholder Combinations

Nanofuse - 125V ac/dc & Omni Block



The Omni Block fuseholder permits quick and easy replacement of nanofuses. The fuse holder is pre-installed with a nanofuse and can be placed on the PCB in one operation. The surface mount fuse can then be replaced without the normal problems of SMD rework. The supplied fuse has silver plated contacts to prevent it soldering into the holder when reflow soldered. UL Recognised and CSA approved.

Fuse holder rated at 7A

Voltage rating

125V ac/dc

Fuse holder thermoplastic to UL94V-0

Operating temperature

-55°C to +125°C

Mfrts. List No. 154 + Rating. Add suffix H for strip of 100 & T for antisurge

Fuse Fitted	Order Code	10+	50+	100+	500+
Quick Blow (F)					
62mA	664-807 ▲	5.83	4.57	3.91	3.72
125mA	664-819 ▲	6.24	4.91	4.25	3.94
250mA	664-820 ▲	3.56	3.02	2.74	2.58
500mA	664-832 ▲	3.59	3.06	2.74	2.58
1A	664-844 ▲	3.56	3.02	2.74	2.58
2A	664-856 ▲	3.46	2.96	2.68	2.46
3A	664-868 ▲	3.46	2.96	2.68	2.46
5A	664-870 ▲	3.46	2.96	2.68	2.46
Antisurge (T)					
375mA	664-893 ▲	4.79	4.22	3.87	3.69
500mA	664-900 ▲	4.41	3.91	3.59	2.55
750mA	664-911 ▲	4.41	3.91	3.59	2.55
1A	664-923 ▲	4.95	4.35	3.97	2.80
1.5A	664-935 ▲	4.79	4.19	3.84	2.71
2A	664-947 ▲	4.41	3.91	3.59	2.55
2.5A	664-959 ▲	4.44	3.91	3.59	2.55
3A	664-960 ▲	4.44	3.91	3.59	2.55
3.5A	664-972 ▲	4.79	4.25	3.87	2.74
4A	664-984 ▲	4.57	4.06	3.72	2.61
5A	664-996 ▲	4.57	4.06	3.72	2.61

FUS264/220502

Fuse Fitted	Order Code	10+	50+	100+	500+
Quick Blow (F)					
62mA	994-3595 ●	5.83	4.57	3.91	3.72
125mA	994-3609 ●	6.24	4.91	4.25	3.94
250mA	994-3617 ●	3.56	3.02	2.74	2.58
500mA	994-3625 ●	3.59	3.06	2.74	2.58
1A	994-3633 ●	3.56	3.02	2.74	2.58

Fuses, Circuit Breakers & Consumer Units

Compliant
Non-compliant
RoHS
Limited stock - RoHS replacement available

Fuse Fitted	Order Code	10+	50+	100+	500+
Quick Blow (F)					
2A	994-3641	3.46	2.96	2.68	2.46
3A	994-3650	3.46	2.96	2.68	2.46
5A	994-3668	3.46	2.96	2.68	2.46
Antisurge (T)					
375mA	994-3676	4.79	4.22	3.87	3.69
500mA	994-3684	4.41	3.91	3.59	2.55
750mA	994-3692	4.41	3.91	3.59	2.55
1A	994-3706	4.95	4.35	3.97	2.80
1.5A	994-3714	4.79	4.19	3.84	2.71
2A	994-3722	4.41	3.91	3.59	2.55
2.5A	994-3730	4.44	3.91	3.59	2.55
3A	994-3749	4.44	3.91	3.59	2.55
3.5A	994-3757	4.79	4.25	3.87	2.74
4A	994-3765	4.57	4.06	3.72	2.61
5A	994-3773	4.57	4.06	3.72	2.61

PICO SMF

Slow Blow



L=7.2 W=4.3 H=3.0

- High performance
- UL recognised and CSA approved

Breaking capacity 50A @ 125V ac, 50A @ 125V dc
 Operating temperature -55°C to +125°C
 Mfrs. List No. R460 + Rating



FUS340/204533

Rating	Order Code	10+	100+	250+	+
750mA	302-9086	2.43	2.08	1.72	--
1.5A	302-9104	2.30	1.98	1.73	--
3A	302-9130	2.30	1.98	1.73	--
3.5A	302-9141	2.21	1.95	1.72	--

Type FST 5 X 20 Time-lag



- Directly solderable onto printed circuit boards
- Withstands reflow and wave soldering temperatures to 260°C / 10s

- Low breaking capacity L
- Glass tube
- Non-resettable

Voltage rating (Vn) V
 Breaking capacity 35A /
 Ambient temperature -40°C to 125°C

Mfrs. List No.	Order Code	Mfrs. List No.	Order Code
0034.5610.11	444-8017	0034.5619.11	444-8108
0034.5611.11	444-8029	0034.5620.11	444-8110
0034.5612.11	444-8030	0034.5621.11	444-8121
0034.5613.11	444-8042	0034.5622.11	444-8133
0034.5614.11	444-8054	0034.5623.11	444-8145
0034.5615.11	444-8066	0034.5624.11	444-8157
0034.5616.11	444-8078	0034.5625.11	444-8169
0034.5617.11	444-8080	0034.5626.11	444-8170
0034.5618.11	444-8091	0034.5627.11	444-8182

311847

Rating	Order Code	10+	50+	100+	1K+
0.2A	SMD 444-8017	0.84	0.72	0.66	0.60
0.25A	SMD 444-8029	0.84	0.72	0.66	0.60
0.315A	SMD 444-8030	0.81	0.69	0.63	0.57
0.4A	SMD 444-8042	0.81	0.69	0.63	0.57
0.5A	SMD 444-8054	0.84	0.72	0.66	0.60
0.63A	SMD 444-8066	0.81	0.69	0.63	0.57
0.8A	SMD 444-8078	0.81	0.69	0.63	0.57
1A	SMD 444-8080	0.84	0.72	0.66	0.60
1.25A	SMD 444-8091	0.84	0.72	0.66	0.60
1.6A	SMD 444-8108	0.81	0.69	0.63	0.57
2A	SMD 444-8110	0.84	0.72	0.66	0.60
2.5A	SMD 444-8121	0.81	0.69	0.63	0.57
3.15A	SMD 444-8133	0.84	0.72	0.66	0.60
4A	SMD 444-8145	0.84	0.72	0.66	0.60
5A	SMD 444-8157	0.84	0.72	0.66	0.60
6.3A	SMD 444-8169	0.84	0.72	0.66	0.60
8A	SMD 444-8170	0.88	0.72	0.65	0.62
10A	SMD 444-8182	0.84	0.72	0.66	0.60

20 x 5mm Fuses

Ultra Rapid (FF) Ceramic

70-001-40 Series



Ceramic sand filled fuses with very short cut-off time, one tenth of a cycle at 10 times overload, designed to protect thyristors, rectifiers and any semiconductor sensitive to overload. UL recognised up to 5A



Voltage rating (Vn) 250V ac
 Breaking capacity 1500A @ 6.3A & above 300kA up to 5A
 Mfrs. List No. 70-001-40 + Rating

FUS2X/204497

Rating	Order Code	10+	100+	500+	1K+
500mA	117-5126	1.80	1.62	1.44	1.35
1A	117-5127	1.80	1.62	1.44	1.35
1.6A	117-5136	1.92	1.65	1.41	1.29
2A	117-5128	1.80	1.62	1.44	1.35
2.5A	117-5137	1.92	1.65	1.41	1.29
3.15A	117-5131	1.80	1.62	1.44	1.35
4A	117-5138	1.92	1.65	1.41	1.29
5A	117-5132	1.80	1.62	1.44	1.35
6.3A	117-5133	1.80	1.62	1.44	1.35
8A	117-5134	1.80	1.62	1.44	1.35
10A	117-5135	1.80	1.62	1.44	1.35

Quick Blow(F) Ceramic

MCF04C Series



- Complies with IEC 127, DIN41660 and BS4265

Voltage rating 250V Breaking capacity 1500A @ 250V

Mfrs. List No. MCF04C + Rating

FUS287/204484

Current Rating	Order Code	10+	100+	500+	1K+	+
100mA	112-3145	0.99	0.87	0.84	0.75	--
125mA	112-3147	0.99	0.87	0.84	0.75	--
200mA	112-3150	0.99	0.87	0.84	0.75	--
250mA	112-3151	0.99	0.87	0.84	0.75	--
315mA	112-3155	0.99	0.87	0.84	0.75	--
400mA	112-3156	0.99	0.87	0.84	0.75	--
500mA	112-3158	0.99	0.87	0.84	0.75	--
630mA	112-3161	0.99	0.87	0.84	0.75	--
800mA	112-3162	0.99	0.87	0.84	0.75	--
1A	112-3148	0.53	0.47	0.44	0.39	--
1.25A	112-3143	0.49	0.44	0.41	0.37	--
1.6A	112-3144	0.45	0.41	0.38	0.33	--
2A	112-3152	0.45	0.41	0.38	0.34	--
2.5A	112-3149	0.49	0.44	0.41	0.37	--
3.15A	112-3153	0.47	0.42	0.38	0.34	--
4A	112-3157	0.45	0.41	0.38	0.34	--
5A	112-3159	0.45	0.41	0.38	0.34	--
6.3A	112-3160	0.48	0.43	0.40	0.36	--
8A	112-3163	0.49	0.44	0.41	0.37	--
10A	112-3146	0.49	0.44	0.41	0.37	--

Quick Blow (F) HRC Ceramic

20 x 5mm Fuses S501 Series



- Complies with IEC127:Standard Sheet I
- Approved to SEMKO (500mA to 5A)

Voltage rating (Vn) 250V ac
 Breaking capacity 1500A @ Vn, Cos φ = 0.7 to 0.8

204522

Order Multiple=10		Price Each			
Rating	Order Code	10 +	250 +	500 +	1K +
100mA	112-3097	1.30	1.17	1.11	1.07
250mA	112-3101	1.17	1.04	1.01	0.98
500mA	112-3106	0.42	0.38	0.35	0.33
630mA	112-3109	0.42	0.38	0.35	0.33
800mA	112-3110	0.42	0.38	0.35	0.33
1A	112-3100	0.35	0.32	0.29	0.27
2A	112-3102	0.35	0.32	0.29	0.27
3.15A	112-3103	0.35	0.32	0.29	0.27
4A	112-3104	0.35	0.32	0.29	0.27
5A	112-3107	0.35	0.32	0.29	0.27
6.3A	112-3108	0.35	0.32	0.29	0.27
8A	112-3111	0.35	0.32	0.29	0.27
10A	112-3098	0.35	0.32	0.29	0.27

Quick Blow (F) Glass

20 x 5mm Fuses MCF05G



- Complies with IEC127 Part 2 Sheet II, DIN41661 and BS4265

Mfrs. List No. MCF05G + Rating

Voltage rating (Vn) 250V ac
 Breaking capacity 100mA to 31.5A = 35A @ 250V, 4A to 10A = 10 X In @ 250V

204485

Current Rating	Order Code	10+	100+	500+	1K+	+
100mA	112-3167	0.60	0.56	0.53	0.49	--
125mA	112-3169	0.60	0.56	0.53	0.49	--
160mA	112-3170	0.60	0.56	0.53	0.49	--
200mA	112-3173	0.60	0.56	0.53	0.49	--
250mA	112-3174	0.60	0.56	0.53	0.49	--
315mA	112-3177	0.60	0.56	0.53	0.49	--
400mA	112-3179	0.24	0.22	0.19	0.13	--
500mA	112-3182	0.24	0.22	0.19	0.13	--
630mA	112-3185	0.24	0.22	0.19	0.13	--
800mA	112-3186	0.24	0.22	0.19	0.13	--
1A	112-3171	0.24	0.22	0.19	0.13	--
1.25A	112-3164	0.24	0.22	0.19	0.13	--
1.6A	112-3165	0.24	0.22	0.19	0.13	--
2A	112-3175	0.24	0.22	0.19	0.13	--
2.5A	112-3172	0.24	0.22	0.19	0.13	--
3.15A	112-3176	0.24	0.22	0.19	0.13	--
4A	112-3181	0.24	0.22	0.19	0.13	--
5A	112-3183	0.24	0.22	0.19	0.13	--
6.3A	112-3184	0.24	0.22	0.19	0.13	--
8A	112-3187	0.24	0.22	0.19	0.13	--
10A	112-3168	0.24	0.22	0.19	0.13	--

Quick Blow (F) Glass

20 x 5mm Fuses S500 Series*



Voltage rating (Vn) 250V ac
Breaking capacity 35A @ Vn

- Complies with IEC127, BS4265, Standard Sheet II
- Approved to SEMKO, BSI, VDE, IMQ
- UL recognised* except 8A and 10A which are not approved

Mfrs. List No.
50mA to 6.3A S500 + Rating,
8A, 10A* TDC641 + Rating

204592

Rating	Order Code	10+	250+	500+	1K+
50mA	112-3089	1.20	1.11	1.04	0.94
63mA	112-3093	1.20	1.11	1.01	0.98
80mA	112-3095	1.20	1.11	1.01	0.98
100mA	112-3074	0.88	0.81	0.75	0.68
125mA	112-3077	0.75	0.68	0.62	0.59
160mA	112-3078	0.20	0.18	0.17	0.15
200mA	112-3081	0.20	0.18	0.17	0.15
250mA	112-3082	0.20	0.18	0.17	0.15
315mA	112-3085	0.20	0.18	0.17	0.15
400mA	112-3086	0.20	0.18	0.17	0.15
500mA	112-3088	0.19	0.17	0.16	0.15
630mA	112-3092	0.20	0.18	0.17	0.15
800mA	112-3094	0.20	0.18	0.17	0.15
1A	112-3079	0.20	0.18	0.17	0.15
1.25A	112-3072	0.20	0.18	0.17	0.15
1.6A	112-3073	0.20	0.18	0.17	0.15
2A	112-3083	0.20	0.18	0.17	0.15
2.5A	112-3080	0.20	0.18	0.17	0.15
3.15A	112-3084	0.20	0.18	0.17	0.15
5A	112-3090	0.20	0.18	0.17	0.15
6.3A	112-3091	0.19	0.17	0.16	0.15
8A	112-3096	0.16	0.14	0.13	0.12
10A	112-3076	0.16	0.14	0.13	0.12

Quick Blow (F) Glass



217 Series

voltage rating (Vn) 250V ac
Breaking capacity 500mA to 31.5A

Mfrs. List No. 217 + Rating

FUS246/SI / 236545

Order Multiple = 10	Order Code	10+	50+	250+	500+
50mA	533-464	0.88	0.79	0.71	0.63
100mA	533-476	0.63	0.58	0.50	0.43
250mA	533-488	0.33	0.30	0.28	0.27
500mA	533-490	0.27	0.24	0.20	0.17
1A	533-506	0.30	0.27	0.23	0.20
2A	533-518	0.34	0.27	0.23	0.20
3.15A	533-520	0.30	0.27	0.23	0.20
4A	533-531	0.30	0.27	0.23	0.20
5A	533-543	0.34	0.27	0.23	0.20
6.3A	533-555	0.30	0.27	0.23	0.20

Medium Blow (M) Glass

TDC 210 Series



- Complies to DIN 41.75 T2

Voltage rating 250V ac
Construction 1A - Glass tube
1.6A and above - glass tube
with extinguishing agent

Breaking capacity @ 250V

1A = 80A
1.6A to 6.3A = 1000A
8A to 10A = 300A

Mfrs. List No. 210 + Rating

FUS312/204511

Rating	Order Code	10+	50+	100+	250+	+	+
1A	120-2374	0.27	0.25	0.23	0.22	--	--
1.6A	120-2375	0.27	0.25	0.23	0.22	--	--
2A	120-2377	0.27	0.25	0.23	0.22	--	--
2.5A	120-2378	0.27	0.25	0.23	0.22	--	--
3.15A	120-2379	0.27	0.25	0.23	0.22	--	--
4A	120-2380	0.27	0.25	0.23	0.22	--	--
5A	120-2381	0.27	0.25	0.23	0.22	--	--
6.3A	120-2382	0.27	0.25	0.23	0.22	--	--
8A	120-2384	0.27	0.25	0.23	--	--	--
10A	120-2383	0.27	0.25	0.23	--	--	--

Antisurge(T) HRC Ceramic

S505 Series



- Complies with IEC127, Standard Sheet V
- Approved to VDE (2A to 5A), SEMKO (1.6A to 4A)

Voltage rating (Vn) 250V ac
Breaking capacity 1500A @ Vn

Mfrs. List No. Single: S505 + Rating

204611

Order Multiple=10	Order Code	10+	250+	500+	1K+
500mA	112-3121	0.94	0.91	0.88	0.85
800mA	112-3124	0.94	0.91	0.88	0.85
1A	112-3115	0.37	0.33	0.31	0.29
1.25A	112-3112	0.37	0.33	0.31	0.29
1.6A	112-3113	0.37	0.33	0.31	0.29
2A	112-3118	0.37	0.33	0.31	0.29
2.5A	112-3116	0.37	0.33	0.31	0.29
3.15A	112-3119	0.37	0.33	0.31	0.29
4A	112-3120	0.37	0.33	0.31	0.29
5A	112-3122	0.37	0.33	0.31	0.29
6.3A	112-3123	0.37	0.33	0.31	0.29
8A	112-3125	0.37	0.33	0.31	0.29
10A	112-3114	0.37	0.33	0.31	0.29

Antisurge (T) HRC Ceramic

20 x 5mm Fuses MCF03C Series



- Complies with IEC127, DIN41662 and BS4265

Voltage rating 250V Breaking capacity 1500A @ 250V

Mfrs. List No. MCF03C + Rating

204487

Current Rating	Order Code	10+	100+	500+	1K+	+
500mA	112-3136	0.52	0.49	0.44	0.38	--
630mA	112-3139	0.63	0.57	0.53	0.47	--
800mA	112-3140	0.52	0.49	0.44	0.38	--
1A	112-3131	0.52	0.49	0.44	0.38	--
1.25A	112-3126	0.52	0.49	0.44	0.38	--
1.6A	112-3127	0.52	0.49	0.44	0.38	--
2A	112-3133	0.52	0.49	0.44	0.38	--
2.5A	112-3132	0.52	0.49	0.44	0.38	--
3.15A	112-3134	0.52	0.49	0.44	0.38	--
4A	112-3135	0.52	0.49	0.44	0.38	--
5A	112-3137	0.52	0.49	0.44	0.38	--
6.3A	112-3138	0.52	0.49	0.44	0.38	--
8A	112-3141	0.52	0.49	0.44	0.38	--
10A	112-3128	0.52	0.49	0.44	0.38	--

Antisurge (T) Glass

20 x 5mm Fuses MCF06G Series



- Complies with IEC127, DIN41662 and BS4265

Mfrs. List No. MCF06G + rating

Voltage rating 250V
Breaking capacity 32MA to 3.15A, 35A @ 250V, 4A to 6.3A 10 x IN @ 250V

21

Fuses, Circuit Breakers & Consumer Units

Compliant
Non-compliant
+ Limited stock - RoHS replacement available

RoHS

204488

Current Rating	Order Code	Price Each				
		10+	100+	500+	1K+	+
32mA	112-3202	1.41	1.29	1.11	0.81	--
40mA	112-3204	1.41	1.29	1.11	0.81	--
50mA	112-3207	1.44	1.32	1.14	0.84	--
63mA	112-3213	1.44	1.32	1.14	0.84	--
80mA	112-3215	1.20	1.11	0.98	0.78	--
100mA	112-3190	1.44	1.32	1.14	0.84	--
125mA	112-3193	0.49	0.44	0.38	0.28	--
160mA	112-3194	0.52	0.47	0.41	0.31	--
200mA	112-3197	0.47	0.42	0.37	0.26	--
250mA	112-3198	0.33	0.29	0.26	0.18	--
315mA	112-3201	0.30	0.27	0.23	0.17	--
400mA	112-3203	0.30	0.27	0.23	0.17	--
500mA	112-3206	0.30	0.27	0.23	0.17	--
630mA	112-3212	0.30	0.27	0.23	0.17	--
800mA	112-3214	0.30	0.27	0.23	0.17	--
1A	112-3195	0.30	0.27	0.23	0.17	--
1.25A	112-3188	0.30	0.27	0.23	0.17	--
1.6A	112-3189	0.30	0.27	0.23	0.17	--
2A	112-3199	0.30	0.27	0.23	0.17	--
2.5A	112-3196	0.30	0.27	0.23	0.17	--
3.15A	112-3200	0.30	0.27	0.23	0.17	--
4A	112-3205	0.31	0.28	0.25	0.17	--
5A	112-3209	0.32	0.29	0.26	0.18	--
6.3A	112-3211	0.32	0.29	0.26	0.18	--
10A	112-3192	0.32	0.29	0.26	0.18	--

Antisurge (T) Glass Enhanced Breaking Capacity



Voltage rating 250V ac
Mfrs. List No. 219 + Rating

Designed to meet the new IEC 127 Part 2, sheet 6 requirements for enhanced breaking capacity glass fuses. A cost effective alternative to ceramic fuses in applications that require a fuse with a breaking capacity of 150A

Breaking capacity 150A @ 250V ac

FUS268X/204463

Rating	Order Code	Price Each				
		10+	100+	500+	1K+	+
1A	665-060	0.38	0.34	0.30	0.23	
1A	992-2458	0.38	0.34	0.30	0.23	
1.25A	665-071	0.38	0.34	0.30	0.23	
1.25A	992-2466	0.38	0.34	0.30	0.23	
1.6A	665-083	0.38	0.34	0.30	0.23	
1.6A	992-2474	0.38	0.34	0.30	0.23	
2A	665-095	0.38	0.34	0.30	0.23	
2A	992-2482	0.38	0.34	0.30	0.23	
2.5A	665-101	0.38	0.34	0.30	0.23	
2.5A	992-2490	0.38	0.34	0.30	0.23	
3.15A	665-113	0.38	0.34	0.30	0.23	
3.15A	992-2504	0.38	0.34	0.30	0.23	
4A	665-125	0.38	0.34	0.30	0.23	
4A	992-2512	0.38	0.34	0.30	0.23	
5A	665-137	0.38	0.34	0.30	0.23	
5A	992-2520	0.38	0.34	0.30	0.23	
6.3A	665-149	0.38	0.34	0.30	0.23	
6.3A	992-2539	0.38	0.34	0.30	0.23	

Antisurge (T) Glass - Spiral Element 213 Series



- Complies with IEC 127, BS4265, Standard Sheet III
- Approved to VDE, SEMKO, and BSI

Voltage rating (Vn): 250Vac
Breaking Capacity: 250mA to 3.15A, 35A @ Vn, 40A @ Vn

Mfrs. List No.: 213 + Rating

FUS245/204439

Rating	Order Code	Price Each				
		10+	100+	500+	1K+	+
250mA	533-932	0.41	0.38	0.34	0.27	
250mA	992-2210	0.41	0.38	0.34	0.27	
315mA	533-944	0.41	0.38	0.34	0.27	
315mA	992-2229	0.41	0.38	0.34	0.27	
500mA	533-956	0.41	0.38	0.34	0.27	
500mA	992-2237	0.41	0.38	0.34	0.27	
1A	533-968	0.41	0.38	0.34	0.27	
1A	992-2245	0.41	0.38	0.34	0.27	
1.25A	533-970	0.41	0.38	0.34	0.27	
1.25A	992-2253	0.41	0.38	0.34	0.27	
1.6A	533-981	0.41	0.38	0.34	0.27	
1.6A	992-2261	0.41	0.38	0.34	0.27	
2A	533-993	0.41	0.38	0.34	0.27	
2A	992-2270	0.41	0.38	0.34	0.27	
2.5A	534-006	0.41	0.38	0.34	0.27	

Rating	Order Code	Price Each				
		10+	100+	500+	1K+	+
2.5A	992-2288	0.41	0.38	0.34	0.27	
3.15A	534-018	0.41	0.38	0.34	0.27	
3.15A	992-2296	0.41	0.38	0.34	0.27	
4A	534-020	0.41	0.38	0.34	0.27	
4A	992-2300	0.41	0.38	0.34	0.27	

Antisurge (T) Glass - Spiral Element S504 Series



- Complies with IEC127, BS4265, Standard Sheet III
- Approved to BSI, SIMKO, VDE and IMQ

Voltage rating (Vn): 250V ac
Breaking capacity: 35A @ 250V ac, 50Hz, pf = 1.0
Mfrs. List No. Single: S504 + Rating

FUS10X/204368

Rating	Order Code	Price Each				
		10+	100+	500+	1K+	+
50mA	534-031	1.53	1.35	1.17	0.93	
63mA	534-043	1.53	1.35	1.17	0.93	
80mA	534-055	1.59	1.44	1.23	0.96	
100mA	534-067	0.58	0.55	0.48	0.35	
125mA	534-079	0.58	0.55	0.48	0.35	
160mA	534-080	0.58	0.55	0.48	0.35	
200mA	534-092	0.58	0.55	0.48	0.35	
250mA	534-109	0.38	0.34	0.30	0.22	
315mA	534-110	0.38	0.34	0.30	0.22	
400mA	534-122	0.38	0.34	0.30	0.22	
500mA	534-134	0.38	0.34	0.30	0.22	
630mA	534-146	0.55	0.34	0.30	0.22	
800mA	534-158	0.38	0.34	0.30	0.22	
1A	534-160	0.38	0.34	0.30	0.22	
1.25A	534-171	0.38	0.34	0.30	0.22	
1.6A	534-183	0.38	0.34	0.30	0.22	
2A	534-195	0.38	0.34	0.30	0.22	
2.5A	534-201	0.38	0.34	0.30	0.22	
3.15A	534-213	0.38	0.34	0.30	0.22	
5A	534-225	0.38	0.34	0.30	0.22	
6.3A	534-237	0.38	0.34	0.30	0.22	

Antisurge (T) Glass - Plated Wire 20 x 5mm Fuses S506 Series



- Complies with IEC127, BS4265, Standard Sheet III
- Approved to VDE, BSI, SEMKO (not 5A) and IMQ (1A to 6.3A)

Voltage rating (Vn) 250V ac
Breaking capacity 35A @ Vn
Mfrs. List No. Single: S506 + Rating

204379

Order Multiple=10		Price Each				
Rating	Order Code	10+	250+	500+	1K+	+
500mA	112-3239	0.23	0.21	0.19	0.18	
630mA	112-3240	0.23	0.21	0.19	0.18	
1A	112-3241	0.23	0.21	0.19	0.18	
1.25A	112-3242	0.19	0.17	0.16	0.15	
1.6A	112-3243	0.23	0.21	0.19	0.18	
2A	112-3244	0.23	0.21	0.19	0.18	
2.5A	112-3246	0.19	0.17	0.16	0.15	
3.15A	112-3247	0.23	0.21	0.19	0.18	
5A	112-3248	0.23	0.21	0.19	0.18	
6.3A	112-3249	0.23	0.21	0.19	0.18	

20 x 5mm Fuse Kit



- A range of 18, 20 x 5mm quick blow and antisurge fuses supplied in a compartment storage box.
- The kit can be restocked when required.

H = 50, W = 260, D = 165

Kit contains 10 of each of the following:

Antisurge (ceramic)	S 505 Series	2A, 3.15A, 5A
Quick blow (glass)	S 500 Series	500mA, 1A, 2A, 3.15A, 5A, 6.3A
Antisurge (glass)	S 504 Series	315mA, 500mA, 630mA
Antisurge (glass)	S 506 Series	500mA, 1A, 1.25A, 1.6A, 2A, 3.15A

204398

20 x 5mm Kit	Order Code	Price Each		
		1+	5+	10+
	120-2373	74.03	65.88	58.11

Prices are in Singapore Dollars and exclusive of GST.
Due to the volatile nature of certain products,
prices are subject to change without notice.

20 x 5mm Panel Mount Fuseholders

Bayonet Release

20 x 5mm Panel Mount



- Moulded in black polycarbonate
- Features a nylon screwdriver release bayonet cap
- UL Recognised, CSA and SEMKO approved

Length 45.7, Dia (bezel) = 15.0
Depth behind panel = 40.2
Panel cut-out = 12.7 dia
Single flat = 12.0,
Panel thickness 0.8 to 6.5
Tabs = 4.8 x 0.51

Rating 6.3A, 250V ac
Operating temperature 65°C max
Mfrs. List No. MCHTC70M

204504

Order Code	Price Each					
	5+	25+	100+	250+	+	+
899-290	2.62	2.22	1.92	1.65	--	--

Screw Cap/Finger Release

20 x 5mm Panel Mount



Length=34.2, Dia (Bezel)
=16.0,
Depth behind panel=23.2,
Panel cut-out=13 dia
Key Way=1.0 x 1.8,
Panel thickness 1 to 2.8

- Moulded in black polycarbonate
- Features a nylon finger release screw cap, with additional screwdriver slot

Rating 6.3A, 250Vac Mfrs. List No. MCHTC30M
Operating temperature 75°C max

204494

Order Code	Price Each					
	5+	25+	100+	250+	+	+
899-252	2.03	1.62	1.35	1.08	--	--

Screw Cap



Length=37.5, Dia (Bezel)=15.0
Depth behind panel=32.0
Panel cut-out=12.7
Single flat=12.0,
Panel thickness=0.8 to 6.5
Tabs=3.0 x 0.51

- Moulded in black polycarbonate
- Features a nylon screwdriver release screw cap

Rating 6.3A, 250Vac Operating temperature 75°C max
Mfrs. List No. MCHTC35M

204502

Order Code	Price Each					
	5+	25+	100+	250+	+	+
899-288	2.50	2.01	1.65	1.35	--	--

Front Mount - Sealed Option

FPG-1 Series



Body L 41.5 (Finger release 46.5), Dia. Bezel=15, Depth behind panel=34.5
Panel hole dia=13, Panel hole - 1 flat=12.7 x 12, Panel hole - 2 flat=12.7 x 11.7
Panel thickness=6 max

- Available with screwdriver or finger release carriers
- IP67 sealed option available
- Solder/quick connect terminals
- Bayonet cap carriers
- Compact design
- UL recognised, VDE, SEV, SEMKO and CSA approved
- Shocksafe category PC2

Rating 10A @ 250V - VDE, SEMKO and SEV
16A @ 250V - UL and CSA
Materials PBTP thermoplastic UL94V-0
Mfrs. List No: 3101.0010 = 113-4122, 3101.0110 = 108-1794
3101.0015 = 113-4123, 3101.0115 = 113-4124

204506

	Order Code	5+	Price Each 10+	50+
Unsealed (IP40)				
Screwdriver release	113-4122	2.32	2.04	1.81
Finger release	113-4123	2.65	2.33	2.07
Sealed (IP67)				
Screwdriver release	108-1794	3.59	3.16	2.80
Finger release	113-4124	3.99	3.51	3.11

Rear Mount
FPG2 Series

L Overall=41.5 (Finger release 46.5), Dia Bezel=16.1, Depth behind panel=28
Panel hole dia=13, Panel hole - 1 flat=12.7 x 12
Panel hole - 2 flats=12.7 x 11.7, Panel thickness=8 max

- Panel rear mount - allows pre-wiring
- Available with screwdriver or finger release
- Solder/quick connect terminals 4.8 x 0.5
- Compact design
- Bayonet cap carriers
- Shocksafe category PC2
- UL recognised, VDE, SEV, SEMKO and CSA approved

Rating 10A @ 250V Contact resistance ≤5mΩ @ 20mV
Materials PBTP thermoplastic UL94V-0 Contacts Copper alloy
Operating temperature -40°C to +85°C

Mfrs. List No:3101.0020= 113-4125,3101.0025= 108-1795

204507

	Order Code	1+	Price Each 50+	100+
Screwdriver release	113-4125	2.47	2.18	1.93
Finger release	108-1795	2.61	2.30	2.04

Finger Release/Screw Cap



- Moulded in black phenolic with solder tab terminations

L (overall)=35.8
Dia (bezel)=15.2
Depth behind panel=26.5
Panel cutout=12.9
Panel keyway=1.7 x 1.1
Panel thickness=3.6 max

Rating 6.3A @ 250V ac Operating temperature -55°C to +70°C
Breakdown voltage ≥4kV (sea-level)

204525

Mfrs. List No.	Order Code	1+	Price Each 50+	+	+
E6011B	319-340	5.65	5.05	--	--

Screw Cap



- Moulded in black phenolic and designed to meet the safety requirements of BS415, IEC257 approved, UL Recognised
- The cap with slot is easily removed using a small coin.
- Solder tab terminations.

L (overall)=34.1, Dia (bezel)=14.6, Depth behind panel=27.0
Panel cutout=12.9, Panel keyway=1.7 x 1.1, Panel thickness=3.6max

Rating 6.3A @ 250 V ac Operating temperature -55°C to +70°C
Breakdown voltage >4kV dc

Mfrs. List No. L2006A

204543

Order Code	1+	Price Each 50+	200+	+	+
319-363	8.19	6.32	6.00	--	--

21

Fuses, Circuit Breakers & Consumer Units

Compliant
Non-compliant
RoHS
Limited stock - RoHS replacement available

Touchproof® - Screw CapHigh and Low Profile Styles
20 x 5mm Panel Mount

L (overall)=44.1 Dia. (bezel)=15.9
Depth behind panel=41.7
Panel cutout keyway=12.8 dia, 2.4 x 1.15
Panel cutout 'D' type (single flat) 12.0 x 12.8 dia
Panel thickness=8.7 max. Tabs=2.8



L (overall) = 44.1 Dia. (Bezel) = 15.9
Depth behind panel = 31.8
Panel cutout keyway = 12.8 dia, 2.4 x 1.15
Panel cutout 'D' type (single flat) 12.0 x 12.8 dia
Panel thickness=5.6 max Tabs=2.8

- Panel mounting fuseholder with polyester body
- Available in 'D' type or key-way fixing styles
- Approved to **VDE, SEMKO and CSA, UL** Recognised
- Designed to conform with **BT172D**

Rating 10A @ 250V ac Operating temperature -20°C to +100°C
Breakdown voltage 7kV ac @ 50Hz

Mfrs. List No. FX0454 = 248-447, FX0455 = 319-405, FX0454S = 248-459, FX0455S = 319-375

204555

Fixing	Order Code	1+	100+	250+	500+	+
Low Profile						
D' type	319-405	3.51	3.27	3.05	2.54	--
Key-way	248-447	3.51	3.27	3.05	2.54	--
High Profile						
D' type	319-375	3.51	3.27	3.05	2.54	--
Key-way	248-459	3.51	3.27	3.05	2.54	--

IP66 Sealed - Screwdriver Slot or Finger Release

20 x 5mm Panel Mount



L (overall)=45.3
Dia. (bezel)=17.1
Depth behind panel=27.8
Panel cut-out (single flat)
=12.0 x 12.9 dia.
Panel thickness=7.1 max.
Tabs=2.8



L (overall) = 44.5
Dis. (bezel) = 20.6
Depth behind panel = 27.8
Panel cut-out (single flat) = 12.0
x 12.9 dia
Panel thickness = 7.1 max.
Tabs = 2.8

'D' type panel mounting fuseholder to **BS5490**, moulded from glass filled nylon. The **IP66** sealing is retained even with the cap removed since the fuseholder is both panel and barrier sealed.

Warning: Tab positions on fuseholder must not be adjusted.

Rating 6.3A @ 250V ac Operating temperature -20°C to +85°C
Breakdown voltage 3.5kV @ 50Hz Insertion resistance ≤10mΩmR
Insulation resistance ≥1000MΩ @ 500V dcMR

Mfrs. List No. FX0345 Screwdriver release, FX0365 Finger release

204580

	Order Code	1+	100+	250+	500+	+
Screwdriver Release	319-430	9.89	9.02	8.86	8.47	--
Finger Release	319-442	9.89	9.02	8.86	8.47	--

20 x 5mm PCB Mount Fuseholders**Finger Release Bayonet Cap**

Horizontal and Vertical Styles



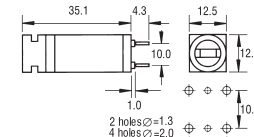
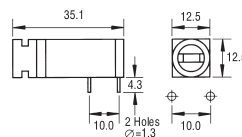
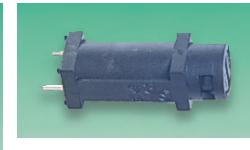
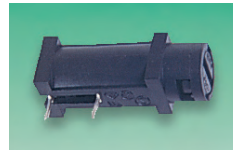
- Moulded in black polycarbonate
- Feature a nylon finger release bayonet cap with screwdriver slot
- **CSA, SETI and SEMKO** approved, **UL** Recognised.

Length (body and cap)=33.1,
Length (body only)=28.1
Diameter=12 with 11.7 flat, Cap diameter=10.0

Rating 6.3A @ 250V ac Operating temperature 218°C max.
Mfrs. List No. MCHTC45M (vertical), MCHTC50M (horizontal)

204503

	Order Code	5+	50+	100+	500+	+
Horizontal	149-185	1.53	1.44	1.35	1.20	--
Vertical	149-187	2.00	1.74	1.47	1.20	--

Touchproof® Bayonet Cap - Horizontal
20 x 5mm PCB Mount

Designed to **BS3042** for user safety with black polyester moulded body and nylon cap/end bung. Contacts are silver plated brass. Approved to **CSA, VDE, SEMKO, UL** Recognised and conforms to **IEC257**.

Rating 10A @ 250V ac Operating temperature -20°C to +100°C
Breakdown voltage 4kV @ 50Hz

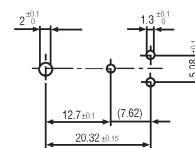
Mfrs. List No. FX0457 = 149-920, FX0456 = 149-919

204583

	Order Code	1+	100+	250+	500+	+
Horizontal						
	149-920	4.17	3.85	3.37	3.21	--
Vertical						
	149-919	4.17	3.85	3.37	3.21	--

Vertical and Horizontal Mount
EPG4 and FPG5 Series

Length overall = 32
(Finger release 37)
Height above PCB=12.7
Drilling plan



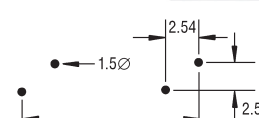
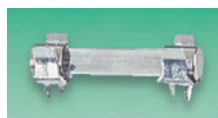
Height overall=37.8 (finger release 42.8)
Height above PCB=32.6 (Finger release 37.6)
Base 12.5 x 12.5, Drilling 4 holes 7.62 x 5.08 x 1.3 dia

- Vertical or horizontal pcb mount
- Available in screw driver or finger release
- Bayonet cap carriers
- Compact design
- Shock safe category **PC2**
- **UL** recognised, **VDE, SEV, SEMKO** and **CSA** approved

Rating 10A @ 250V - **VDE, SEMKO** and **SEV** Contact resistance ≤5mΩ @ 20mVmR
16A @ 250V - **UL** and **CSA** Max. power dissipation 2.5W @ 40°
Materials PBTP thermoplastic UL94V-0
Operating Temp. -40 to +85°C Contacts Copper alloy
Mfrs. List No. 3101.0040 = 122-2690 3101.0045 = 122-2691
3101.0050 = 122-2692 3101.0055 = 122-2693

204495

	Order Code	5+	10+	50+
Vertical Mount (FPG4)				
Screwdriver release	122-2690	2.57	2.26	2.01
Finger release	122-2691	2.54	2.24	1.98
Horizontal Mount (FPG5)				
Screwdriver release	122-2692	2.34	2.06	1.82
Finger release	122-2693	2.54	2.24	1.98

Fuse Clips

PCB drilling plan

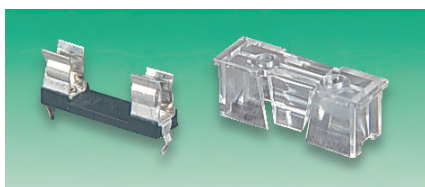
Hot tin dipped, hard brass fuse clips. Each clip has two mounting lugs suitable for 0.1" matrix board use.

Rating 6.3A (dependent on track size of PCB) Mfrs. List No. HTC210M.

204588

	Order Code	1+	50+	125+	250+	+	+
200 Per Pack	926-851	12.02	10.88	9.76	8.28	--	--

Prices are in Singapore Dollars and exclusive of GST.
Due to the volatile nature of certain products,
prices are subject to change without notice.

Open
20 x 5mm PCB Mount

Fuse Holder
H=14.3, W=6.4, D=23.4
Fixing centres=22.9 x 2.0

Fuse Cover
H=10.9, W=9.6,
D=29.0

Open fuseholder with a glass filled nylon base and matching clear cover.

Rating 6.3A @ 250V ac Mfrs. List No. FX0321 = 319-491
Operating temperature 0°C to +90°C 12760 = 471-677

204591

Order Multiple=5

	Order Code	5+	100+	250+	500+	+
Fuse Holder	319-491	1.57	1.44	1.35	1.19	--
Fuse Cover	471-677	0.54	0.47	0.44	0.36	--

Open

Open fuseholder with a synthetic resin bonded paper base.

H=9.5, W=6.4, D=23.8
Fixing centres=22.9 x 2.0

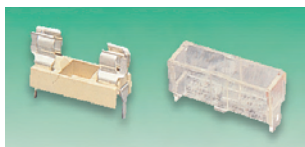
Rating 6.3A Breakdown voltage >3kV Operating temperature -40°C to +40°C

204593

Mfrs. List No.	Order Code	1+	125+	500+	1K2+
L1426	319-508	4.01	3.21	2.70	2.46

Open with Cover
20 x 5mm PCB Mount

146-123
Fuseholder
H=15, W=9.0, D=23
F.C.=22.3 x 1.5
Fixing hole=2.9



146-124
Cover
H=15, W=9.0, D=26.5

Manufactured in a glass filled thermoplastic with central fixing hole. A plastic cover is available, transparent to allow visual inspection.

Rating 6.3A @ 250V Breakdown voltage 2.5kV Operating temperature 75°C max (holder) 75°C max (cover)

Mfrs. List No. Holder MCHTE15M Transparent cover MCHTC150M

204589

	Order Code	10+	100+	500+	1K+
Holder	146-123	0.30	0.20	0.16	0.15
Transparent cover	146-124	0.13	0.10	0.09	0.09

Semi-Enclosed
20 x 5mm PCB Mount

Moulded in black glass filled nylon with a small window which allows easy visual inspection of the fuse.

Rating 5A @ 250V Operating temperature -40°C to +110°C

Mfrs. List No. MCHTC-100M

H=11.4, W=9.4, D=24.4,
F.C.=22.6 pins x 0.5 x 1.2

204590

Order Code	10+	50+	100+	500+	+
976-120	0.58	0.56	0.55	0.50	--

20 x 5mm In-Line Fuseholders**Bayonet Fit**

Moulded from black nylon with a bayonet locking action.

L=43.2, Dia.=14.2
Wire dia.=4.0 max.

Rating 5A @ 50V Breakdown voltage 2kV Operating temperature Mfrs. List No. +85°C max. A003300

204586

Order Code	5+	50+	100+	250+	+
152-233	1.64	1.51	1.35	0.87	--

Screw Fit

Standard
L=50.4, Dia.=15.9,
Wire dia.=4.0 max.

IP66 Sealed
L=78.9, Dia.=16.5
Wire dia.=1.0 to 1.4mm, 1.5 to 1.9mm,
2.0 to 2.64mm dependent
where 3 section grommet is cut.

Moulded from clear polybutene with nickel plated brass grub screw terminations, available in either standard or IP66 sealed versions.

Rating 10A @ 250V Operating temperature -20°C to +70°C Mfrs. List No. FX0380 = 319-480 FX0385 = 272-176

Note: When assembled current must not flow through the spring
250V rated in equipment, otherwise 50V ac/dc

204432

	Order Code	1+	50+	100+	250+	+
Standard	319-480	3.18	2.86	2.70	2.57	--
IP66 Sealed	272-176	4.65	4.24	3.85	3.49	--

Push on Fuse Caps

Lead Length=40
Lead dia.=0.65 (20mm x 5mm), 0.8 (1 1/4" x 1/4")

Maximum rating 8A

Mfrs. List No. 776-6980 = 268, 581-460 = 19266

204396

100 Per Pack	Order Code	1+	5+	10+	50+	+
20mm x 5mm	776-6980	30.43	21.94	18.29	16.11	--
1 1/4" x 1/4"	581-460	44.74	32.26	26.39	20.91	--

20 x 5mm Base Mount Fuseholders

- Moulded in beige polyphenylene oxide
- Features a central counter-sunk fixing hole

Length (overall)=39.8
Length (Body)=22.0, Height=13.5, Width=10.3

Rating 6.3A @ 250V ac Operating temperature 150°C max.

204501

Mfrs. List No.	Order Code	5+	25+	100+	250+	+
MCHTC-10M	899-240	1.26	0.81	0.63	0.47	--

15.9 x 4.76mm Fuses (5/8" x 3/16"), Size '00'**Quick Blow Glass**

Voltage rating (Vn) up to 500mA 250V ac ac
1A, 2.5A 150V ac ac
4A - 7A 60V ac ac
Breaking capacity 35A @ Vn
Mfrs. List No. L562 + Rating

21

Fuses, Circuit Breakers & Consumer Units

Compliant
Non-compliant
Limited stock - RoHS replacement available

RoHS

204380

Rating	Order Code	10+	100+	500+	1K+
50mA	968-7971	3.96	3.15	2.82	2.70
100mA	968-7980	4.11	2.67	2.52	2.19
250mA	968-7998	3.69	3.24	2.94	2.88
500mA	968-8005	2.40	2.00	--	--
1A	968-8013	2.79	2.31	2.01	2.00
2.5A	968-8021	2.79	2.31	2.01	2.00
2.5A	968-8021	2.79	2.31	2.01	2.00
4A	968-8030	2.40	2.00	--	--
5A	968-8048	2.52	2.07	2.00	--
7A	968-8056	3.18	2.55	2.19	2.00

Miniature, Size 00 Glass

5/8" x 3/16" (15.9 x 4.7mm)



Dia. = 4.7, L = 15.9mm

Belling Lee

NEW

Current Rating (I _n)	Rated Voltage V dc	Rated Voltage V ac	Time to blow	Mfrs List No.	Order Code
50mA	900	250	10 sec @ 3 x I _n	L562 50MA	968-7971
100mA	900	250	10 sec @ 3 x I _n	L562 100MA	968-7980
250mA	600	250	10 sec @ 2 x I _n	L562 250MA	968-7998
500mA	300	250	10 sec @ 2 x I _n	L562 500MA	968-8005
1A	200	150	10 sec @ 2 x I _n	L562 1A	968-8013
2.5A	150	150	10 sec @ 2 x I _n	L562 2.5A	968-8021
4A	60	60	10 sec @ 2 x I _n	L562 4A	968-8030
5A	60	60	10 sec @ 2 x I _n	L562 5A	968-8048
7A	60	60	10 sec @ 2 x I _n	L562 7A	968-8056

412860

Current Rating	Order Code	10+	100+	500+	1K+
100mA	968-7980	4.11	2.67	2.52	2.19
250mA	968-7998	3.69	3.24	2.94	2.88
500mA	968-8005	2.40	2.00	--	--
1A	968-8013	2.79	2.31	2.01	2.00
2.5A	968-8021	2.79	2.31	2.01	2.00
4A	968-8030	2.40	2.00	--	--
5A	968-8048	2.52	2.07	2.00	--
7A	968-8056	3.18	2.55	2.19	2.00

25 x 5mm Fuses

Quick Blow (F) HRC Ceramic

70-010-04 Series

SIBA



- Conforms to DIN 41 572 Part 1
- Colour coded

Voltage Rating 250V Breaking capacity 1500A @ 250V

Mfrs. List No. 70-010-04 + Rating

204544

Rating	Colour Code	Order Code	1+	5+	10+	50+
1.6A	Orange	117-5156	6.00	5.67	5.40	4.98
2A	Blue	117-5157	6.00	5.67	5.40	4.98
3.15A	Black	117-5158	6.00	5.67	5.40	4.98
4A	Brown	117-5159	6.00	5.67	5.40	4.98
5A	White	117-5160	6.00	5.67	5.40	4.98
6.3A	Green	117-5161	6.00	5.67	5.40	4.98
8A	Grey	117-5162	6.00	5.67	5.40	4.98
10A	Red	117-5163	6.00	5.67	5.40	4.98

Medium Blow (M) HRC Ceramic

70-010-05 Series

SIBA



- Conforms to DIN 41 576 Part 2 except 10A
- Colour coded

Voltage Rating 250V Breaking capacity 1500A @ 250V

Mfrs. List No. 70-010-05 + Rating

204545

Rating	Colour Code	Order Code	1+	5+	10+	50+
500mA	White	117-5164	6.48	6.27	6.00	5.82
1A	Red	117-5165	6.99	6.78	6.36	6.18
1.6A	Orange	302-8549	5.64	5.52	5.25	5.01
2A	Blue	117-5167	5.51	--	--	--
3.15A	Black	302-8562	5.64	5.52	5.25	5.01
4A	Brown	117-5168	5.64	5.52	5.25	5.01
5A	White	117-5169	5.64	5.52	5.25	5.01
6.3A	Green	117-5170	5.64	5.52	5.25	5.01
10A	Red	117-5171	5.22	5.11	4.95	4.74

25.4 x 6.35mm Fuses (1" x 1/4")

Mains Quick Blow Ceramic

TDC180 Series

Bussmann

Bulk Pack

Available



- Available in bulk pack of 1000 fuses

Voltage Rating (Vn) 250V ac
Breaking capacity 6000A @ VnMfrs. List No. Single: TDC180 + Rating
Bulk: BK/TDC180 + Rating

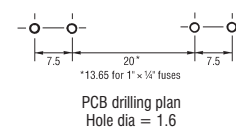
204381

Complies with
BS1362: 1973
ASTA Certified -
2A to 13A.

Rating	Order Code	10+	250+	500+	1K+
1A	112-3029	0.45	0.40	0.37	0.35
2A	112-3032	0.41	0.37	0.34	0.32
3A	112-3033	0.41	0.37	0.34	0.32
5A	112-3034	0.41	0.37	0.34	0.32
7A	112-3035	0.41	0.37	0.34	0.32
10A	112-3030	0.41	0.37	0.34	0.32
13A	112-3031	0.41	0.37	0.34	0.32
Bulk Packs Rating		1+	2+	3+	
1A	112-3021	249.98	238.27	234.52	
2A	112-3024	249.98	238.27	234.52	
3A	112-3025	249.98	238.27	234.52	
5A	112-3027	249.98	238.27	234.52	
7A	112-3028	249.98	238.27	234.52	
10A	112-3022	249.98	238.27	234.52	
13A	112-3023	249.98	238.27	234.52	

25.4 x 6.35mm Fuses (1" x 1/4") 31.5 x 6.35mm Fuses (1 1/4") PCB Fuseholder

Fuse Clips



Tin plated phosphor bronze fuse clips. Each clip has two mounting lugs and ear stops.

Rating 15A (dependent on track size of PCB)

204416

100 Per Pack	Order Code	1+	25+	100+	250+
	117-5125	12.79	12.43	11.98	11.65

31.75 x 6.35mm Fuses (1 1/4" x 1/4"), Size '0'

Ultra Rapid (FF) Ceramic

70-125-40 Series

SIBA



Ceramic sand filled fuses with very short cut-off time, one tenth of a cycle at 10 times overload, designed to protect thyristors, rectifiers and any semiconductors sensitive from overload.

UL recognised (except 16A)

Voltage Rating (Vn) 700V ac up to 2A
Breaking capacity 500V ac 2.5A & above

Mfrs. List No. 70-125-40 + Rating

204383

Rating	Order Code	10+	100+	500+	1K+
1A	117-5102	3.30	2.88	2.37	2.28
1.6A	117-5112	2.99	2.73	2.38	2.25
2A	117-5103	2.76	2.46	2.16	2.04
2.5A	117-5113	2.99	2.73	2.38	2.25
3.15A	117-5104	2.76	2.46	2.16	2.04
4A	117-5114	2.99	2.73	2.38	2.25
5A	117-5106	2.76	2.46	2.16	2.04
6.3A	117-5107	2.76	2.46	2.28	--
8A	117-5108	2.76	2.46	2.28	--
10A	117-5109	2.76	2.46	2.28	--
12.5A	117-5110	2.76	2.46	2.28	--
16A	117-5111	2.76	2.46	2.28	--

Quick Blow (F) Ceramic
MCF07C Series

multicomp



- Manufactured to meet UL and CSA time/current characteristics
- CSA approved up to 15A

Voltage rating 250V ac Breaking capacity @ 250V ac
Up to 500mA = 35A 750mA to 3A = 100A
4A to 7A = 200A 8A to 15A = 750A
20A = 1000A

Mfrs. List No. MCF07C + Rating

204513

Rating	Order Code	10+	100+	500+	1K+	+
125mA	119-0663	0.91	0.84	0.74	0.60	--
500mA	119-0664	0.79	0.76	0.69	0.52	--
1A	119-0665	0.79	0.75	0.69	0.51	--
2A	119-0666	0.79	0.75	0.69	0.51	--
3A	119-0667	0.79	0.75	0.69	0.51	--
5A	119-0668	0.79	0.75	0.69	0.51	--
6A	119-0669	0.79	0.75	0.69	0.51	--
8A	119-0670	0.79	0.75	0.69	0.51	--
10A	119-0671	0.79	0.75	0.69	0.51	--
12A	119-0673	0.79	0.75	0.69	0.51	--
15A	119-0674	0.79	0.75	0.69	0.51	--
20A	119-0675	0.92	0.85	0.75	0.61	--

Quick Blow (F) HRC Ceramic
70-065-63 Series

SIBA



UL Recognised (up to 6.3A)

Voltage Rating (Vn) 500V ac
Breaking capacity 1500A @ Vn
Mfrs. List No. 70-065-63 + rating

204388

Rating	Order Code	10+	100+	500+	1K+
500mA	117-5115	0.72	0.66	0.60	0.57
1A	117-5116	0.72	0.66	0.60	0.57
2A	117-5118	0.72	0.66	0.60	0.57
3A	117-5119	0.72	0.66	0.60	0.57
5A	117-5120	0.72	0.66	0.60	0.57
6.3A	117-5124	0.69	0.63	0.57	0.54
7A	117-5121	0.72	0.66	0.60	0.57
10A	117-5122	0.72	0.66	0.60	0.57
16A	117-5123	0.81	0.72	0.60	0.54

Quick Blow (F) Ceramic
L693 Series

Belling Lee



Complies with DEF-59-96

Voltage Rating 440V ac ac230V dc dc
Breaking capacity 33000A @ Vn cos φ = 0.3
Mfrs. List No. L693 + rating

204389

Rating	Order Code	10+	100+	500+	1K+
250mA	968-8064	4.14	3.15	2.74	--
500mA	968-8072	4.62	3.54	2.97	2.74
1A	968-8080	4.62	3.54	2.97	2.74
2A	968-8099	4.14	3.15	2.74	--
3A	968-8102	4.14	3.15	2.74	--
5A	968-8110	3.87	3.09	2.74	--
7A	968-8129	4.14	3.15	2.74	--
10A	968-8137	4.62	3.54	2.97	2.74

Quick Blow (F) Glass
MCF01G Series

multicomp



- CSA approved

Voltage rating 250V Breaking capacity 250mA to 1A
1.25 to 3A 35A @ 250V ac
4A to 10A 100A @ 250V ac
200A @ 250V ac

Mfrs. List No. MCF01G + Rating

204486

Rating	Order Code	10+	100+	500+	1K+	+
500mA	119-0653	0.33	0.29	0.26	0.24	--
1A	119-0654	0.31	0.28	0.26	0.24	--
2A	119-0655	0.33	0.30	0.27	0.24	--
3A	119-0656	0.31	0.28	0.26	0.24	--
4A	119-0657	0.31	0.28	0.26	0.24	--
5A	119-0658	0.31	0.28	0.26	0.24	--
6A	119-0661	0.31	0.28	0.26	0.24	--
10A	119-0662	0.31	0.28	0.26	0.24	--

Quick Blow (F) Glass
TDC10 Series

Bussmann



Complies with BS2950A

Voltage rating (Vn): 60mA - 250mA 1000V ac 1.5A - 5A 250V ac
500mA 750V ac 7.5A 150V ac
750mA 500V ac 10A 100V ac
1A - 1.25A 350V ac 12A - 25A 32V ac
10 x In @ Vn Mfrs. List No. TDC10 + Rating

204395

Rating	Order Code	10+	100+	500+	1K+
60mA	534-869	1.20	1.08	0.99	0.96
100mA	534-870	1.56	1.38	1.26	1.20
150mA	534-882	1.20	1.08	0.99	0.96
250mA	534-894	0.36	0.32	0.30	0.28
500mA	534-900	0.37	0.33	0.31	0.29
750mA	534-912	0.36	0.32	0.30	0.28
1A	534-924	0.28	0.26	0.24	0.23
1.25A	534-936	0.28	0.26	0.24	0.23
1.5A	534-948	0.28	0.26	0.24	0.23
2A	534-950	0.28	0.26	0.24	0.23
2.5A	534-961	0.28	0.26	0.24	0.23
3A	534-973	0.28	0.26	0.24	0.23
5A	534-985	0.28	0.26	0.24	0.23
7.5A	534-997	0.28	0.26	0.24	0.23
10A	535-000	0.30	0.28	0.26	0.24
12A	535-011	0.38	0.33	0.29	0.27
15A	535-023	0.30	0.28	0.26	0.24
20A	535-035	0.38	0.33	0.29	0.27
25A	535-047	0.38	0.33	0.29	0.27

Antisurge (T), Ceramic
70-065-65 Series

SIBA



- UL Recognised up to 16A

Voltage Rating (V) 500V ac (up to 10A)
440V ac (12.5A-25A)
250V ac (32A)
Breaking capacity 1500A @ V (up to 25A)
1000A @ V (32A)
Maximum voltage drop 800-150mV

Please note that when using 8A or over, consideration should be given to heat dissipation

Mfrs. List No. 70-065-65 + Rating

204524

Rating	Order Code	10+	100+	500+	1K+	+
500mA	117-5139	0.96	0.84	0.78	0.69	--
1A	117-5140	0.96	0.84	0.78	0.69	--
2A	117-5141	0.96	0.84	0.78	0.69	--
2.5A	117-5143	0.96	0.84	0.78	0.69	--
3.15A	117-5144	0.96	0.84	0.78	0.69	--
4A	117-5145	0.96	0.84	0.78	0.69	--
5A	117-5146	0.96	0.84	0.78	0.69	--
6.3A	117-5147	0.96	0.84	0.78	0.69	--
8A	117-5148	0.96	0.84	0.78	0.69	--
10A	117-5149	0.96	0.84	0.78	0.69	--
12.5A	117-5150	0.91	0.85	0.75	0.72	--
16A	117-5151	0.91	0.85	0.75	0.72	--
20A	117-5152	1.68	1.50	1.38	1.23	--
25A	117-5153	2.07	1.89	1.71	1.53	--
32A	117-5155	2.97	2.55	2.31	2.07	--

Antisurge (T) Ceramic
MCF08C Series

multicomp



- Manufactured to meet UL and CSA time/current characteristics
- CSA approved up to 10A

Voltage rating 250V ac Breaking capacity @ 250V ac
Up to 3A = 100A 4A to 20A = 400A

Mfrs. List No. MCF08C + Rating

204512

Rating	Order Code	10+	100+	500+	1K+	+
100mA	119-0676	4.06	3.42	2.94	2.30	--
1A	119-0677	1.02	0.93	0.77	0.60	--
2A	119-0678	1.02	0.93	0.77	0.60	--
4A	119-0679	1.05	0.96	0.89	0.70	--
5A	119-0680	1.05	0.96	0.89	0.70	--
6.25A	119-0681	1.05	0.96	0.89	0.70	--
7A	119-0682	1.05	0.96	0.89	0.70	--
10A	119-0683	1.02	0.93	0.77	0.60	--
15A	119-0685	1.02	0.93	0.77	0.60	--
20A	119-0686	1.02	0.93	0.77	0.60	--

21

Fuses, Circuit Breakers & Consumer Units

Compliant
Non-compliant
+ Limited stock - RoHS replacement available
RoHS

Antisurge (T) Glass - Spring Element
TDC11 Series

Bussmann



Voltage Rating (Vn) 250V ac
Breaking capacity 10 x In @ Vn
Mfrs. List No. TDC11 + rating

204415

Rating	Order Code	Price Each			
		10+	100+	500+	1K+
150mA	539-971	2.85	2.58	2.37	2.22
250mA	539-983	1.29	1.17	1.08	1.02
500mA	539-995	1.29	1.17	1.08	1.02
600mA	540-006	1.32	1.20	1.11	1.02
750mA	540-018	1.23	1.11	1.02	0.96
1A	540-031	1.23	1.11	1.02	0.96
1.25A	540-043	1.35	1.20	1.11	1.05
1.5A	540-055	2.04	1.86	1.71	1.59
2A	540-067	2.04	1.86	1.71	1.59
2.5A	540-079	2.04	1.86	1.71	1.59
3A	540-080	2.01	1.80	1.68	1.59
5A	540-092	2.01	1.80	1.68	1.59

Antisurge (T) Glass
MCF02G Series

multicomp



● CSA Approved (up to 6.5A)

Voltage Rating 250V to >6.25A = 32V
Breaking capacity 125mA to 500mA 35A @ 250V
750mA to 3A 100A @ 250V
4A to 6.25A 200A @ 250V
8A to 10A 300A @ 32V
Mfrs. List No. MCF02G + Rating

204489

Rating	Order Code	Price Each				
		10+	100+	500+	1K+	+
125mA	119-0642	3.01	2.74	2.45	1.88	--
500mA	119-0643	0.60	0.53	0.46	0.39	--
1A	119-0644	0.60	0.53	0.46	0.39	--
2A	119-0645	0.60	0.53	0.46	0.39	--
3A	119-0646	0.60	0.53	0.46	0.39	--
4A	119-0648	0.57	0.51	0.44	0.37	--
5A	119-0649	0.57	0.51	0.44	0.37	--
6.25A	119-0650	0.57	0.51	0.44	0.37	--
8A	119-0651	0.57	0.51	0.44	0.37	--
10A	119-0652	0.59	0.55	0.52	0.49	--

Antisurge (T) Glass - Plated Wire
TDC436 Series

Bussmann



Voltage Rating (Vn) 250V ac
Breaking capacity 50A @ Vn
Mfrs. List No. TDC436 + rating

204424

Rating	Order Code	Price Each			
		10+	100+	500+	1K+
1A	540-110	0.99	0.75	0.63	0.57
1.6A	540-134	0.99	0.75	0.66	0.57
2A	540-146	0.99	0.75	0.66	0.57
2.5A	540-158	0.99	0.75	0.66	0.57
3.15A	540-160	0.99	0.75	0.66	0.57
4A	540-171	0.99	0.75	0.66	0.57
5A	540-183	0.99	0.75	0.66	0.57
6.3A	540-195	0.99	0.75	0.66	0.57

31.75 x 6.35mm (1 1/4" x 1/4"), Size '0' Panel
Fuseholders

20A - Touchproof™

BULGIN



- Low profile panel mounting Touchproof™ fuseholder to IEC 127/6 category PC2
- Screw cap, screwdriver release
- 6.3mm fast-on tags

L (overall) = 58, Dia. (Bezel) = 19.1
Depth behind panel = 54.9, Panel cut-out = 16
Panel thickness = 1 to 8

Rating @ 250V 16A SEMKO, VDE 20A UL, CSA Breakdown voltage >2kV
Max power dissipation 2.5W

Mfrs. List No. FX0417

204509

Screwdriver release	Order Code	Price Each			
		1+	50+	100+	250+
	535-953	8.85	6.64	5.78	4.74

Touchproof™ - Screw Cap

BULGIN



L (overall) = 65.9, Dia. (Bezel) = 19.1
Depth behind panel = 54.4
Panel cut-out = 16
Panel keyway = 2.5 x 1.2
Panel thickness = 0.8 to 5.5, Tabs = 4.8

L (overall) = 60.4, Dia. (Bezel) = 19.1
Depth behind panel = 54.4
Panel cut-out = 16
Panel keyway = 2.54 x 1.3
Panel thickness = 0.8 to 5.5, Tabs = 4.8

Moulded in glass filled nylon, UL Recognised, and conforming to IEC257.

Rating 13A @ 250V ac Operating temperature -20°C to +100°C
Breakdown voltage 4kV ac @ 50Hz

Mfrs. List No. FX0415 = 319-570 FX0415/S = 319-582

204599

Order Code	Price Each				
	1+	100+	250+	500+	+
319-570	6.64	5.71	5.62	5.33	--
319-582	6.44	5.71	5.62	5.30	--

Touchproof® Screw Cap
Panel Mount, IP67

BULGIN



NEW

6.3 x 32mm

5 x 20mm

Designed for user safety, touchproof category PC2 with polyester moulded body and nylon cap/end bung. The screw cap can be either screwdriver or hand released. Contacts are silver plated brass.

Approved to CSA, VDE, SEMKO. UL Recognised

Fuse Size 963-0180 963-0198
Terminations 6.3 series tab 2.8 series tab
Max. Rating: 16A @ 250V ac 10A @ 250V ac
20A @ 250V UL 16A @ 250V UL & CSA
Max. Power Dissipation 4W @ 23°C 2.5W @ 23°C
Operating Temperature -20 to 85°C -20 to 85°C

Mfrs. List No. FX0419=963-0180

FX0462=963-0198

411159

Fuse Type	Order Code	Price Each			
		1+	25+	100+	250+
	963-0180	7.75	6.93	6.51	6.15
	963-0198	3.65	3.26	3.06	2.86

31.75 x 6.35mm (1 1/4" x 1/4"), Size '0' In-Line
Fuseholders

Arcoelectric



Moulded from natural colour nylon, conforming to UL94V-2.

L = 58.2
Dia = 15.2
Wire dia. = 4.0 max.

Rating 5A @ 50V Mfrs List No. A003500AAB

204602

Order Code	Price Each				
	5+	50+	100+	250+	+
149-866	1.28	1.19	1.12	0.93	--

Screw Fit

BULGIN



Standard
L = 61.9, Dia. = 15.9,
Wire dia. = 4.0 max.

IP66 Sealed
L = 90.6, Dia = 15.5
Wire dia. = 1.0 to 1.4mm, 1.5 to 1.9mm,
Wire dia. = 2.0 to 2.64mm dependent
where grommet is cut.

Moulded from clear polybutene with nickel plated brass grub screw terminations and available in either standard or IP66 sealed versions.

Rating 10A @ 250V ac Mfrs. List No.
Operating temperature -20°C to +70°C (319-612) FX0180 = (319-612)
Operating temperature -20°C to +70°C (272-188) FX0185 = (272-188)

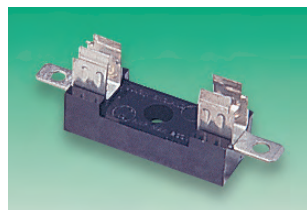
Note: When assembled current must not flow through the spring
250V rating in equipment, otherwise 50V ac/dc

204431

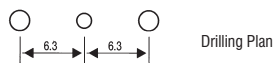
	Order Code	1+	50+	100+	250+	+
Standard	319-612	3.40	3.08	2.89	2.73	--
IP66 Sealed	272-188	4.98	4.49	4.14	3.63	--

31.75 x 6.35mm (1 1/4" x 1/4"), Size '0' Panel Mount

Open

BULGIN

Manufactured from black phenolic with tin plated phosphor bronze contact clips.



Centre fixing hole = 3.2 dia.
Outer pin locating holes = 3.5 dia. Tabs = 6.35

Rating	13A @ 250V ac	Operating temperature	-40°C to +70°C
Breakdown voltage	>5kV @ 50Hz	Mfrs List No.	FX0326

204605

Order Code	1+	100+	250+	500+	+
149-918	3.27	2.15	1.96	1.77	--

Fuse Boxes

Belling Lee

L1045C3
H = 34.2, W = 61.9, D = 20.6
Fixing centres = 9.5 x 4.0 dia.

L1033C4
H = 35.7, W = 35.7, D = 63.5
Fixing centres = 13.5 x 4 dia.

Moulded in black phenolic, the fuses are held in the lid and automatically isolated from the circuit when the lid is raised. Screw terminations.

Rating	10A
Breakdown voltage	4kV dc (to chassis)
Operating temperature	-40°C to +85°C

Mfrs. List No. L1045/C3 = 319-650 L1033/C4 = 319-661

204607

	Order Code	1+	25+	100+	250+
Single fuse box	319-650	34.56	27.75	24.22	20.13
Double fuse box	319-661	44.74	35.02	28.86	28.54

Fuse Kit

20 x 5mm Fuse Kit

Bussmann

- A range of 18, 20 x 5mm quick blow and antisurge fuses supplied in a compartment storage box.
- The kit can be restocked when required.

H = 50, W = 260, D = 165

Kit contains 10 of each of the following:

Antisurge (ceramic)	S 505 Series	2A, 3.15A, 5A
Quick blow (glass)	S 500 Series	500mA, 1A, 2A, 3.15A, 5A, 6.3A
Antisurge (glass)	S 504 Series	315mA, 500mA, 630mA
Antisurge (glass)	S 506 Series	500mA, 1A, 1.25A, 1.6A, 2A, 3.15A

204398

	Order Code	1+	5+	10+
20 x 5mm Kit	120-2373	74.03	65.88	58.11

Assorted Fuse Kit



A range of 18 quick blow, antisurge and mains fuses in 20mm, 1" and 1 1/4" lengths supplied in an 18 compartment storage box. The kit can be restocked when required.

H = 50, W = 260, D = 165

Kit contains 10 each of the following:
20 x 5mm quick blow fuses (glass) - 1A, 2A, 3.15A, 5A.
20 x 5mm antisurge fuses (glass) - 1A, 2A, 3.15A.
1" mains quick blow fuses (ceramic) - 1A, 2A, 3A, 5A, 13A.
1 1/4" x 1/4" quick blow fuses (glass) - 1A, 2A, 5A, 10A, 15A.
1 1/4" x 1/4" antisurge fuses (ceramic) - 10A.

Mfrs. List No. FUSEKIT E

204403

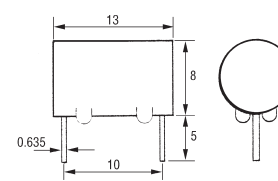
	Order Code	1+	5+	10+
Assorted Fuse Kit	151-655	74.67	68.19	62.79

Hazardous Environment Fuses

Sub-Miniature - BASEEFA Approved

Littelfuse

Quick Blow (F)



Hermetically sealed within a nylon body, this range of quick blow fuses are approved to **BASEEFA BS5501** and **EN50014-39**.

Voltage Rating (Vn)	125Vac/dc	Breaking Capacity	50A@125V ac 300A@125V dc
---------------------	-----------	-------------------	-----------------------------

Mfrs. List No. 259 + Rating

Rating	Order Code	10+	50+	100+	250+
62mA	664-625	6.14	5.42	5.01	4.66
125mA	664-637	5.86	5.13	4.76	4.35
250mA	664-649	5.70	4.98	4.63	4.22
375mA	664-650	5.70	5.01	4.60	4.22
500mA	664-662	5.10	4.63	4.25	4.06
750mA	664-674	4.69	4.25	3.91	3.75
1A	664-686	5.17	4.69	4.32	4.10

204458

Order Multiple=10

Rating	Order Code	10+	50+	100+	250+
62mA	994-3528	6.14	5.42	5.01	4.66
125mA	994-3536	5.86	5.13	4.76	4.35
250mA	994-3544	5.70	4.98	4.63	4.22
375mA	994-3552	5.70	5.01	4.60	4.22
500mA	994-3560	5.10	4.63	4.25	4.06
750mA	994-3579	4.69	4.25	3.91	3.75
1A	994-3587	5.17	4.69	4.32	4.10

Barrier Network Fuses

Littelfuse

L=8.4, Dia=3.02 Lead dia.=0.6

Axial barrier network fuses featuring high break capacity in a compact size. Designed for industrial applications in barrier circuits.

Voltage rating (Vn)	250Vac/dc	Breaking Capacity	4000A
---------------------	-----------	-------------------	-------

21

Fuses, Circuit Breakers & Consumer Units

Compliant
Non-compliant
RoHS
Limited stock - RoHS replacement available

Mfrs. List No. 242 + Rating

204462

Rating	Order Code	5+	25+	50+	100+	+
50mA	118-3970	6.62	5.61	4.76	3.59	--
80mA	118-3971	7.06	5.92	4.91	3.56	--
100mA	118-3972	6.24	5.20	4.32	3.15	--
160mA	992-2423	6.24	5.20	4.32	3.15	--
200mA	992-2431	6.24	5.20	4.32	3.15	--
250mA	992-2440	6.24	5.20	4.32	3.15	--

Wire Ended Circuit Protectors

Fast Acting 491 Series



Lead dia = 0.64 L = 7.62 Dia = 2.62

- Fast acting protection from excess current
- Designed for protection of circuits on the secondary side of the transformer

Voltage Rating 60V Mfrs. List No. 491 + Rating

Rating	Order Code	10+	50+	100+	250+	+	+
250mA	975-795	0.94	0.91	0.82	0.76	--	--
315mA	975-801	0.98	0.94	0.88	0.79	--	--
400mA	975-813	0.98	0.94	0.91	0.79	--	--
500mA	975-825	1.01	0.98	0.94	0.79	--	--
630mA	975-837	0.98	0.94	0.88	0.79	--	--
750mA	975-849	0.98	0.94	0.88	0.79	--	--
1A	975-862	0.98	0.94	0.91	0.79	--	--
1.25A	975-874	0.94	0.91	0.88	0.76	--	--
1.6A	975-886	0.98	0.94	0.91	0.79	--	--
2A	975-898	1.01	0.94	0.91	0.79	--	--
2.5A	975-904	0.81	0.78	0.75	0.75	--	--
3A	975-916	1.01	0.94	0.91	0.79	--	--
3.15A	975-928	1.01	0.94	0.91	0.79	--	--
4A	975-930	1.01	0.94	0.91	0.79	--	--
5A	975-941	1.01	0.94	0.91	0.79	--	--

204518

Rating	Order Code	10+	50+	100+	250+	+	+
250mA	994-3919	0.94	0.91	0.82	0.76	--	--
315mA	994-3927	0.98	0.94	0.88	0.79	--	--
400mA	994-3935	0.98	0.94	0.91	0.79	--	--
500mA	994-3943	1.01	0.98	0.94	0.79	--	--
630mA	994-3951	0.98	0.94	0.88	0.79	--	--
750mA	994-3960	0.98	0.94	0.88	0.79	--	--
1A	994-3986	0.98	0.94	0.91	0.79	--	--
2A	994-3994	1.01	0.94	0.91	0.79	--	--
2.5A	994-4001	0.81	0.78	0.75	0.75	--	--
3A	994-4010	1.01	0.94	0.91	0.79	--	--
3.15A	994-4028	1.01	0.94	0.91	0.79	--	--
4A	994-4036	1.01	0.94	0.91	0.79	--	--
5A	994-4044	1.01	0.94	0.91	0.79	--	--

Wire Ended Fuses

Subminiature - Axial Lead

Fast Acting, Washable - 125V ac/dc



Length: Body = 7.1mm, Lead = 38mm Dia: Body = 3.18mm

- Hermetically sealed
- Manufactured from high temperature epoxy plastic
- Tin-lead plated copper lead wires
- Interrupt 50A at 125V ac/dc
- Flammability rated to **UL94V-0**
- **CSA** approved and **UL** Recognised.

NEW

Voltage Rating 125V ac/dc Interrupt rating -dc 50A Mfrs. List No. 300A BK1/MCRW + rating

407009

Rating	Order Code	1+	100+	500+
100mA	120-2387	2.51	2.28	1.95
125mA	120-2389	1.82	1.66	1.40
150mA	120-2391	1.82	1.66	1.40
200mA	120-2392	1.82	1.66	1.40
250mA	120-2393	1.82	1.66	1.40
375mA	120-2394	1.82	1.66	1.40
500mA	120-2395	1.82	1.66	1.40
750mA	120-2396	1.82	1.66	1.40
1A	120-2397	1.82	1.66	1.40
1.5A	120-2398	1.82	1.66	1.40
2A	120-2399	1.82	1.66	1.40

Rating	Order Code	1+	100+	500+
2.5A	120-2400	1.82	1.66	1.40
3A	120-2401	1.82	1.66	1.40
4A	120-2402	1.82	1.66	1.40
5A	120-2403	1.82	1.66	1.40
7A	120-2404	1.82	1.66	1.40
10A	120-2405	1.82	1.66	1.40
12A	120-2407	1.82	1.66	1.40
15A	120-2408	1.82	1.66	1.40

Axial Lead

PicoFuse - 125V ac/dc

L = 7.1, Dia. = 2.4 (446-932 to 446-981 = 3.2), Lead dia. = 0.64 (446-920 = 0.81)
Supplied bandoliered on tape (reel = 1K pcs)

Quick blow and antisurge fuses with solder coated axial leads.

UL Recognised and **CSA** approved.Breaking capacity 300A @ 125V dc, 50A @ 125V ac (446-804 to 446-919)
300A @ 32V dc, 50A @ 32V ac (446-920)
50A @ 125V ac/dc (446-932 to 446-981)

Operating temperature -55°C to +125°C

Mfrs. List No. Quick Blow: 251 + Rating Antisurge: 473 + Rating

204433

Rating	Order Code	10+	50+	100+	500+	+
Quick Blow (F)						
62mA	446-804	1.83	1.73	1.64	1.32	--
62mA	992-1931	1.83	1.73	1.64	1.32	--
125mA	446-816	3.28	3.12	2.93	2.36	--
125mA	992-1940	3.28	3.12	2.93	2.36	--
250mA	446-828	3.72	3.53	3.37	2.65	--
250mA	992-1958	3.72	3.53	3.37	2.65	--
500mA	446-830	3.12	2.96	2.77	2.20	--
500mA	992-1966	3.12	2.96	2.77	2.20	--
1A	446-841	3.24	3.06	2.90	2.30	--
1A	992-1974	3.24	3.06	2.90	2.30	--
1.5A	446-853	2.96	2.80	2.65	2.11	--
1.5A	992-1982	2.96	2.80	2.65	2.11	--
2A	446-865	3.15	2.99	2.84	2.27	--
2A	992-1990	3.15	2.99	2.84	2.27	--
3A	446-877	2.99	2.87	2.68	2.17	--
3A	992-2008	2.99	2.87	2.68	2.17	--
4A	446-889	3.46	3.31	3.12	2.49	--
4A	992-2016	3.46	3.31	3.12	2.49	--
5A	446-890	3.06	2.90	2.74	2.20	--
5A	992-2024	3.06	2.90	2.74	2.20	--
7A	446-907	3.46	3.31	3.12	2.49	--
7A	992-2032	3.46	3.31	3.12	2.49	--
10A	446-919	3.34	3.15	2.99	2.39	--
10A	992-2040	3.34	3.15	2.99	2.39	--
15A	446-920	3.69	3.50	3.28	2.61	--
15A	992-2059	3.69	3.50	3.28	2.61	--
Antisurge (T)						
500mA	446-932	2.43	2.30	2.20	1.95	--
500mA	992-2067	2.43	2.30	2.20	1.95	--
1A	446-944	2.36	2.27	2.14	1.92	--
1A	992-2075	2.36	2.27	2.14	1.92	--
2A	446-956	2.55	2.46	2.30	2.11	--
2A	992-2083	2.55	2.46	2.30	2.11	--
3A	446-968	2.55	2.46	2.30	2.11	--
3A	992-2091	2.55	2.46	2.30	2.11	--
4A	446-970	2.90	2.74	2.55	2.11	--
4A	992-2105	2.90	2.74	2.55	2.11	--
5A	446-981	2.58	2.49	2.33	2.11	--
5A	992-2113	2.58	2.49	2.33	2.11	--

◆ = 32V ac/dc working voltage only

Axial Lead, Very Fast Acting

PicoFuse - 250V ac



L = 7.6, Dia. = 3.7, Lead dia. = 0.64 Supplied in Ammo pack (pack = 100)

- Solder coated axial leads

- **UL** recognised and **CSA** approved

Breaking capacity 50A @ 250V ac Mfrs. List No. 263 + Rating
Operating temperature -55°C to +125°C

204552

Rating	Order Code	10+	100+	500+	1K+
62mA	305-7306	2.90	2.24	1.92	1.67
125mA	305-7318	2.90	2.24	1.92	1.67
250mA	305-7320	2.90	2.24	1.92	1.67
375mA	305-7331	2.90	2.24	1.92	1.67
500mA	305-7343	2.90	2.24	1.92	1.67

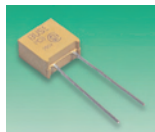
Prices are in Singapore Dollars and exclusive of GST.
Due to the volatile nature of certain products,
prices are subject to change without notice.

Rating	Order Code	10+	100+	500+	1K+
750mA	305-7355▲	2.18	1.73	1.53	1.30
1A	305-7367▲	2.90	2.24	1.92	1.67
1.5A	305-7379▲	2.90	2.24	1.92	1.67
2A	305-7380▲	2.90	2.24	1.92	1.67
2.5A	305-7392▲	2.18	1.73	1.53	1.30
3A	305-7409▲	2.90	2.24	1.92	1.67
3.5A	305-7410▲	2.31	1.82	1.59	1.37
4A	305-7422▲	2.90	2.24	1.92	1.67
5A	305-7434▲	2.90	2.24	1.92	1.67

Rating	Order Code	10+	100+	500+	1K+
62mA	992-1630●	2.90	2.24	1.92	1.67
125mA	992-1648●	2.90	2.24	1.92	1.67
250mA	992-1656●	2.90	2.24	1.92	1.67
375mA	992-1664●	2.90	2.24	1.92	1.67
500mA	992-1672●	2.90	2.24	1.92	1.67
750mA	992-1680●	2.18	1.73	1.53	1.30
1A	992-1699●	2.90	2.24	1.92	1.67
1.5A	992-1702●	2.90	2.24	1.92	1.67
2A	992-1710●	2.90	2.24	1.92	1.67
2.5A	992-1729●	2.18	1.73	1.53	1.30
3A	992-1737●	2.90	2.24	1.92	1.67
3.5A	992-1745●	2.31	1.82	1.59	1.37
4A	992-1753●	2.90	2.24	1.92	1.67
5A	992-1761●	2.90	2.24	1.92	1.67

Radial Lead, Ultra Rapid (FF)

PC-Tron™ - 125/250V ac



H = 8.89, W = 8.89, D = 4.67,
Lead pitch = 5.1, Lead dia. = 0.38
Lead length 19

Supplied banded on tape (reel of 500 pieces) or bulk packed with lead length of 2.54.

The PC-Tron™ high speed subminiature fuse offers excellent short circuit performance, the I²t energy let-through being a fraction of that of a typical glass fuse. The fuse may be directly soldered to a printed circuit or alternatively plugged into a two pin socket and is fully board washable. **UL** Recognised and **CSA** approved.

Voltage rating 250V ac (149-125 = 250V ac) Interrupt rating 50A @ 250V ac, 10000A @ 125V ac

Lead Length 19

Fuse Rating	Cold Resistance Ω 10% Rated Current Nominal Value	Order Code	Fuse Rating	Cold Resistance Ω 10% Rated Current Nominal Value	Order Code
500mA	1.65	112-3055	2A	0.15	112-3059
750mA	0.735	112-3060	2.5A	0.1	112-3058
1A	0.518	112-3057	3A	0.071	112-3061
1.5A	0.248	112-3056	5A	0.02	112-3070

Lead Length 2.54

Fuse Rating	Cold Resistance Ω 10% Rated Current Nominal Value	Order Code	Fuse Rating	Cold Resistance Ω 10% Rated Current Nominal Value	Order Code
500mA	1.65	112-3064	2A	0.15	112-3067
750mA	0.735	112-3068	2.5A	0.1	112-3066
1A	0.518	112-3065	3A	0.071	112-3069
1.5A	0.248	112-3062	5A	0.02	112-3071

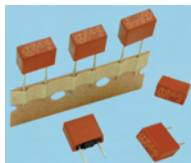
Mfrs. List No. Lead Length 19 = TR/PCB + Rating

Lead Length 2.54 = PCC + Rating

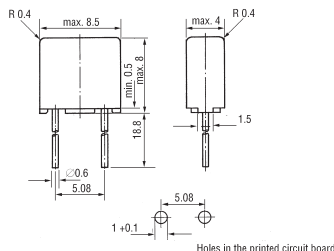
204444

Order Code	10+	50+	100+	500+
All Values	2.85	2.73	2.55	2.37

TE5 Fuses



Supplied on tape, concertina folded into 1250 pcs per box



Available in quick blow (F) or antisurge (T), this range of sub miniature fuses can be mounted into a 2 pin socket or soldered into a PCB. Thermoplastic fuse body is flame retardant to **UL94V-0**. **CSA** and **MITI** approved, **UL** Recognised except antisurge 1A and the quick blow range, where approvals are pending.

Voltage Rating 125V Breaking capacity 100A 125V ac

FOR SUBSTITUTABLE SOCKET SEE ORDER CODE 108-7070

N.B. Leads will need to be cut down to fit into socket

204460

Rating	Order Code	5+	50+	100+	500+	+
Quick Blow (F)						
50mA	529-310	2.84	2.20	2.19	--	--
100mA	529-321	1.73	1.35	1.20	0.98	--
125mA	529-333	1.29	1.04	0.91	0.74	--
160mA	529-345	1.29	1.04	0.91	0.75	--
200mA	951-6212●	1.29	1.04	0.91	0.72	--
250mA	529-369	1.29	1.04	0.91	0.78	--
315mA	529-370	1.29	1.04	0.91	0.74	--
500mA	529-382	0.74	--	--	--	--
1A	529-394	1.29	1.04	0.91	0.74	--
1.6A	529-412	1.29	1.04	0.91	0.66	--
2A	529-424	1.29	1.04	0.91	0.75	--
3.15A	529-436	1.29	1.04	0.91	0.72	--
4A	951-6220●	1.29	1.04	0.91	0.72	--
Antisurge (T)						
50mA	951-6239●	2.08	1.64	1.32	--	--
100mA	951-6247●	1.42	1.17	1.07	--	--
125mA	529-473	1.42	1.17	1.01	0.91	--
160mA	951-6255●	1.42	1.17	1.01	0.87	--
200mA	951-6263●	1.42	1.17	1.01	0.72	--
250mA	951-6271●	1.42	1.17	1.01	0.79	--
315mA	529-515	1.35	1.10	0.94	0.80	--
500mA	529-527	1.35	1.10	0.99	--	--
630mA	529-539	1.35	1.10	0.94	0.81	--
800mA	529-540	1.35	1.10	0.94	0.75	--
1A	951-6280●	1.35	1.10	0.94	0.77	--
1.25A	951-6298●	1.35	1.10	0.94	0.75	--
1.6A	951-6301●	1.35	1.10	0.94	0.79	--
2A	951-6310●	1.35	1.10	0.94	0.78	--
2.5A	951-6328●	1.35	1.10	0.94	0.81	--
3.15A	951-6336●	1.35	1.10	0.94	0.80	--
4A	951-6344●	1.35	1.10	0.94	0.80	--
5A	951-6352●	1.35	1.10	0.94	0.74	--

European Subminiature Fuses & Accessories

TR5 Fuses



H = 8, Dia = 8.5
Lead pitch = 5
Lead length = 4.3
Lead dia = 0.6

- European TR5 fuse is available with either quick blow (F) or anti-surge (T) characteristics.
- The fuses can be either soldered directly into a printed circuit board or alternatively plugged into a two pin socket (951-6360).
- This socket can in turn be soldered into a printed circuit board.
- A panel mounting and PCB fuseholder with clear plastic cover is also available (951-6387, 951-6379).

Complies with IEC127-3.

Approved to VDE and SEMKO.

UL Recognised

Rated Voltage 250V ac
Breaking capacity 35A @ Vn or 10 X In @ Vn, whichever is greater.

Mfrs. List No. Quick blow = 19370K + rating
Antisurge = 19372K + rating

204382

Rating	Order Code	10+	50+	100+	500+
Quick Blow (F)					
50mA	951-5887●	3.02	--	--	--
100mA	951-5895●	1.61	1.26	1.10	0.94
125mA	951-5909●	1.73	1.39	1.20	0.98
160mA	951-5917●	1.73	1.39	1.20	0.98
200mA	951-5925●	1.61	1.26	1.10	0.94
250mA	951-5933●	1.61	1.26	1.10	0.94
315mA	951-5941●	1.51	1.20	1.04	0.88
500mA	951-5950●	1.51	1.20	1.04	0.88
1A	951-5968●	1.39	1.13	0.98	0.82
1.25A	951-5976●	1.39	1.13	0.98	0.82
1.6A	951-5984●	1.39	1.13	0.98	0.82
2A	951-5992●	1.39	1.13	0.98	0.82
2.5A	951-6000●	1.39	1.13	0.98	0.82
3.15A	951-6018●	1.39	1.13	0.98	0.82
4A	951-6026●	1.39	1.13	0.98	0.82
Antisurge (T)					
50mA	951-6034●	2.08	1.58	1.26	1.07
100mA	951-6042●	1.70	1.35	1.17	1.01
125mA	951-6050●	1.70	1.35	1.17	1.01
160mA	951-6069●	1.86	1.51	1.26	1.04
200mA	951-6077●	1.70	1.35	1.17	1.01
250mA	951-6085●	1.61	1.29	1.10	0.94
315mA	951-6093●	1.51	1.20	1.04	0.88
500mA	951-6107●	1.51	1.20	1.04	0.88
630mA	951-6115●	1.51	1.20	1.04	0.88
800mA	951-6123●	1.51	1.20	1.04	0.88
1A	951-6131●	1.51	1.20	1.04	0.88
1.25A	951-6140●	1.51	1.20	1.04	0.88
1.6A	951-6158●	1.51	1.20	1.04	0.88
2A	951-6166●	1.51	1.20	1.04	0.88

21

Fuses, Circuit Breakers & Consumer Units

Compliant
Non-compliant
RoHS
Limited stock - RoHS replacement available

Rating	Order Code	10+	50+	100+	500+
Antisurge (T)					
2.5A	951-6174	1.51	1.20	1.04	0.88
3.15A	951-6182	1.51	1.20	1.04	0.88
4A	951-6190	1.58	1.26	1.07	0.94
5A	951-6204	1.70	1.35	1.17	0.91
	118-5363	1.06	0.90	0.80	0.71

Radial Lead Micro Fuse

Bussmann

- Fast acting or time delay versions available
- Can be soldered directly into a print circuit board or plugged into a fuseholder (303-1780)
- SEMKO and VDE approved except for 5A
- UL recognised and CSA approved
- Complies with IEC60127-3

H = 7.7 Dia. = 8.4 Lead pitch = 5
Lead length = 4.3 Lead dia. = 0.6

Voltage rating 250V ac Mfrs. List No. Fast Acting = BK/EFF + rating
Breaking capacity 35A or 10 times rated current Time Delay = BK/ETF + rating
(whichever is the greater)

204549

Rating	Order Code	10+	50+	100+	500+
Fast Acting					
250mA	303-0015	1.56	1.23	1.05	0.87
315mA	303-0027	1.56	1.23	1.05	0.87
400mA	303-0039	1.56	1.23	1.05	0.87
500mA	303-0040	1.56	1.23	1.05	0.87
630mA	303-0052	1.56	1.23	1.05	0.87
800mA	303-0064	1.56	1.23	1.05	0.87
1A	303-0076	1.32	1.08	0.93	0.78
1.25A	303-0088	1.32	1.08	0.93	0.78
1.6A	303-0090	1.32	1.08	0.93	0.78
2A	303-0106	1.32	1.08	0.93	0.78
2.5A	303-0118	1.32	1.08	0.93	0.78
3.15A	303-0120	1.32	1.08	0.93	0.78
4A	303-0131	1.32	1.08	0.93	0.78
5A	303-0143	1.32	1.08	0.93	0.78
Time Delay					
80mA	302-9864	1.86	1.47	1.17	0.99
100mA	302-9876	1.65	1.32	1.14	0.93
160mA	302-9888	1.65	1.32	1.14	0.93
250mA	302-9890	1.65	1.32	1.14	0.93
315mA	302-9906	1.65	1.32	1.14	0.93
400mA	302-9918	1.65	1.32	1.14	0.93
500mA	302-9920	1.56	1.23	1.05	0.87
800mA	302-9931	1.32	1.08	0.93	0.79
1A	302-9943	1.32	1.08	0.93	0.78
1.25A	302-9955	1.32	1.08	0.93	0.78
1.6A	302-9967	1.32	1.08	0.93	0.78
2A	302-9979	1.32	1.08	0.93	0.78
2.5A	302-9980	1.32	1.08	0.93	0.78
3.15A	302-9992	1.32	1.08	0.93	0.78
4A	303-0003	1.32	1.08	0.93	0.78

Automotive Fuses & Accessories

Mini Blade - Fast Acting (F)

Littelfuse

- Miniature blade style fuse
- Popular in automotive applications and compact portable equipment
- Colour coded for easy identification of value

Voltage rating 32V dc Breaking capacity 1000A @ 32V dc
Mfrs. List No. 297 + rating

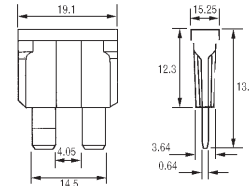
H = 8.75 W = 10.92 D = 3.81 Blade L = 7.5

Rating	Colour Code	Order Code	5+	25+	50+	100+	+
2A	Grey	975-369	1.26	1.20	1.10	0.72	--
3A	Violet	975-370	1.26	1.20	1.10	0.72	--
4A	Pink	975-382	1.01	0.98	0.94	0.85	--
5A	Tan	975-394	1.26	1.20	1.10	0.72	--
7.5A	Brown	975-400	1.26	1.20	1.10	0.72	--
10A	Red	975-412	1.26	1.20	1.10	0.72	--
15A	Blue	975-424	1.26	1.20	1.10	0.72	--
20A	Yellow	975-436	1.26	1.20	1.10	0.72	--
25A	Natural	975-448	1.26	1.20	1.10	0.72	--
30A	Green	975-450	1.26	1.20	1.10	0.72	--

204516

Rating	Colour Code	Order Code	5+	25+	50+	100+	+
2A	Grey	994-3811	1.26	1.20	1.10	0.72	--
3A	Violet	994-3820	1.26	1.20	1.10	0.72	--
4A	Pink	994-3838	1.01	0.98	0.94	0.85	--
5A	Tan	994-3846	1.26	1.20	1.10	0.72	--
7.5A	Brown	994-3854	1.26	1.20	1.10	0.72	--
10A	Red	994-3862	1.26	1.20	1.10	0.72	--
15A	Blue	994-3870	1.26	1.20	1.10	0.72	--
20A	Yellow	994-3889	1.26	1.20	1.10	0.72	--
25A	Natural	994-3897	1.26	1.20	1.10	0.72	--
30A	Green	994-3900	1.26	1.20	1.10	0.72	--

ATO Series - Fast Acting (F)

Littelfuse

Blade type fuses designed specifically for use in automotive applications although now particularly common in portable electronics. Fuses are colour coded for ease of identification.

Voltage rating 32V Breaking capacity 1000A Mfrs. List No. 257 + rating

204435

Current Rating	Colour	Order Code	10+	50+	100+	250+	+
1A	Black	581-483	0.50	0.44	0.44	0.41	--
1A	Black	994-3471	0.50	0.44	0.44	0.41	--
2A	Grey	581-495	0.46	0.43	0.38	0.30	--
2A	Grey	994-3480	0.46	0.43	0.38	0.30	--
3A	Violet	540-286	0.69	0.66	0.57	0.46	--
3A	Violet	994-3390	0.69	0.66	0.57	0.46	--
4A	Pink	581-501	0.91	0.82	0.72	0.62	--
4A	Pink	994-3498	0.91	0.82	0.72	0.62	--
5A	Tan	540-298	0.61	0.55	0.50	0.40	--
5A	Tan	994-3404	0.61	0.55	0.50	0.40	--
7.5A	Brown	540-304	0.55	0.51	0.43	0.36	--
7.5A	Brown	994-3412	0.55	0.51	0.43	0.36	--
10A	Red	540-316	0.69	0.61	0.57	0.43	--
10A	Red	994-3420	0.69	0.61	0.57	0.43	--
15A	Blue	540-328	0.61	0.58	0.50	0.40	--
15A	Blue	994-3439	0.61	0.58	0.50	0.40	--
20A	Yellow	540-330	0.43	0.38	0.36	0.32	--
20A	Yellow	994-3447	0.43	0.38	0.36	0.32	--
25A	Clear	540-341	0.43	0.38	0.36	0.32	--
25A	Clear	994-3455	0.43	0.38	0.36	0.32	--
30A	Green	540-353	0.39	0.35	0.33	0.29	--
30A	Green	994-3463	0.39	0.35	0.33	0.29	--
40A	Amber	581-513	0.36	0.33	0.29	0.26	--
40A	Amber	994-3501	0.36	0.33	0.29	0.26	--

Resettable Thermal Overcurrent

E-T-A

1610-H2

1610-21
H = 28.8, W = 20.3, D = 6

- Automotive press to reset circuit breaker
- Colour coded
- Suitable for standard fuse mounting block
- Miniaturised design allows interchangeability with existing automotive blade fuses with improved electrical protection
- Typical applications: low voltage wiring systems on all types of vehicles and marine craft

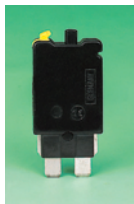
Maximum voltage rating 28V dc Operating temperature -30°C to +60°C
Typical voltage drop ≤200mV
Service short circuit breaking capacity 300 operations at 50A

Mfrs. List No. 1610-21-25A = 597-740 1610-H2 15A = 856-7239
1610-21-6A = 597-697 1610-21 30A = 856-7336 1610-H2 20A = 856-7247
1610-21-15A = 597-727 1610-H2 6A = 856-7204 1610-H2 25A = 856-7255
1610-21-8A = 597-703 1610-H2 8A = 856-7212 1610-H2 30A = 856-7263
1610-21-20A = 597-739 1610-H2 10A = 856-7220 1610-8-WAY BASE & LID = 856-7344
1610-21-10A = 597-715

204616/406026

Current Rating	Actuator Colour	Order Code	1+	10+	25+	50+
1610-21						
6A	Moss Green	597-697	18.39	16.74	15.84	15.21
8A	Honey	597-703	18.39	16.74	15.84	14.74
10A	Red	597-715	18.39	16.74	15.84	15.21
15A	Blue	597-727	18.39	16.74	15.84	15.21
20A	Yellow	597-739	18.39	16.74	15.84	14.64
25A	Pearl	597-740	18.39	16.74	15.84	14.64
30A	Light-Green	856-7336	25.52	19.76	17.64	--
1610-H2, With Manual Release						
6A	Mossy-Green	856-7204	26.17	20.25	18.07	--
8A	Honey	856-7212	26.17	20.25	18.07	--
10A	Red	856-7220	26.17	20.25	18.07	--
15A	Blue	856-7239	26.17	20.25	18.07	--
20A	Yellow	856-7247	26.17	20.25	18.07	--
25A	Pearl	856-7255	26.17	20.25	18.07	--
30A	Light-Green	856-7263	26.17	20.25	18.07	--
Mounting Base (with lid)						
8 way		856-7344	34.70	26.85	23.92	--

Resettable Thermal Circuit Breaker



- Combine full feature circuit breaker protection and convenience with low cost ownership benefit
- Blade terminals suitable on all types of vehicles and marine craft with plug-in mounting
- Trip free, tease free and snap action mechanism
- Colour coded
- Manual trip/release

H = 45, W = 22, D = 9.8

Maximum voltage rating

28V dc

Typical life

6000 ops at I_N
 3000 ops at $2 \times I_N$; 20A
 1000 ops at $2 \times I_N$; 25A

Operating temperature

-30°C to +60°C

Interruption capacity

200A, for 5-15A
 400A, for 20-25A

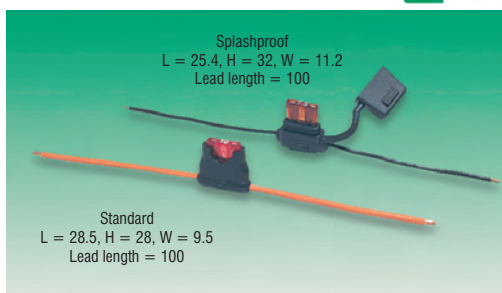
Voltage drop

<150mV

204372/406027

Mfrs. List No.	Current Rating	Order Code	1+	10+	100+	+
1170-01-6A	6A	188-748	19.56	18.88	--	--
1170-01-10A S	10A	188-761	20.94	18.88	--	--
1170-01-15A	15A	188-773	19.56	18.83	--	--
1170-01-20A	20A	188-785	19.56	18.88	--	--
1170-01-25A	25A	188-797	19.56	18.88	--	--
Mounting Base (with lid)						
1170-6-WAY BASE & LID		NEW 856-7352	87.43	67.64	60.35	--

Fuseholder



In-line fuseholders suitable for use with automotive blade type fuses.

Maximum voltage rating 30A @ 32V, 20A @ 32V

Operating temperature -35°C to +100°C

Mfrs. List No. 01500260LXN = 994-3099 0FHAC0001LXN = 994-3382 0FHA0001LXN = 994-3110

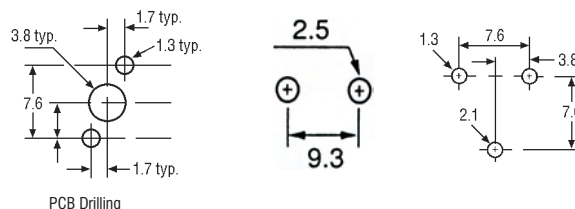
204434

Standard	Order Code	1+	25+	50+	100+	+
20A	994-3110	3.73	3.53	3.37	3.05	--
30A	994-3099	3.17	3.02	2.82	2.66	--
Splashproof						
20A	994-3382	5.67	5.52	5.04	4.62	--

PCB Fuseholders - ATO and Mini Blade Fuses



Interlocking PCB Mount ATO Fuseholder which can be stacked end on or side on. Horizontal and vertical mounting Mini Blade PCB fuseholders



204407

	Order Code	1+	25+	50+	100+	+
ATO Fuseholder						
Vertical	994-3510	3.54	3.37	2.95	2.34	--
Mini Blade Fuseholder						
Vertical	994-3790	3.34	3.24	2.82	2.27	--
Horizontal	994-3803	3.94	3.85	3.37	2.70	--

MEGA Fuseholder



- Glass filled thermoplastic body with tethered cover
- Choice of 6 cable entry locations

Fixing centres 101.6 @ 6.35 Dia.
 Note: Dimensions include cover

Maximum ratings 250A @ 32V
 Operating temperature -40°C to +125°C

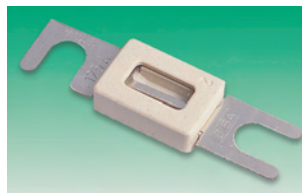
204537

Mfrs. List No.	Order Code	1+	25+	50+	100+
02981001Z.	302-9323	16.86	14.44	12.04	9.66
Price Each					
Mfrs. List No.	Order Code	1+	25+	50+	100+
02981001Z	994-3200	16.86	14.44	12.04	9.66

Fork Lift Truck



Fuse Holder and Fuses



L (overall)=82, L (body)=32, W=22, H=10,
 Fixing centres=60, Lug spacing=11

H = 54, W = 85, D = 24, Termi-
 nal Pitch = 62mmmm

A range of heavy duty 80V fuses to DIN43560/1 specially designed for battery powered industrial trucks, fork lift etc. strong ceramic case incorporates shatterproof glass inspection window and 60mm spacing integral lugs for direct stud mounting.

Max. Working voltage 80Vdc

Time current Characteristics				
I_n	1.5 I_n	1.8 I_n	2.5 I_n	4 I_n
All	$\geq 1hr$	$\geq 1hr$	0.8-10s	0.2-2s

Mfrs. List No. 90-058-05 + Rating

204409

Rating	Order Code	1+	20+	100+
Fuses				
50A	607-654	8.28	6.87	6.03
80A	607-666	8.28	6.87	6.03
100A	607-678	8.28	6.87	6.03
160A	607-680	8.67	7.20	6.36
200A	607-691	8.67	7.20	6.36
250A	607-708	9.90	8.19	7.08
325A	607-710	10.38	8.55	7.08
355A	607-721	10.38	8.55	7.08
500A	607-733	10.38	8.55	7.08
Fuse Holder				
Maximum Current Rating		1+	10+	25+
425A	307-282	41.61	39.99	37.80

Compliant
 Non-compliant
 Limited stock - RoHS replacement available

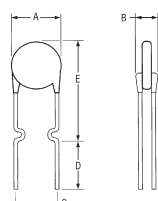
RoHS

Resettable Fuses

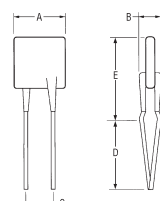
Multifuse - MF-R Series



- Resettable overcurrent circuit protection
- Reset by removing the fault condition and supply voltage
- Flame retardant epoxy polymer encapsulation meets the requirements of **UL94V-0**



Style 1



Style 2

Operating temperature				-40°C to +85°C		Voltage rating			60V and 30V		
Dimensions											
(A) * I Hold	(A) ** I Trip	A Max.	B Max.	C Min.	D Max.	E Min.	F Max.	Lead Dia	Case Style	Mfrs. List No.	Order Code
60V											
0.1	0.15	7.4	3.1	4.3	5.8	7.6	12.7	0.51	1	MF-R010	772-252
0.17	0.34	7.4	3.1	4.3	5.8	7.6	12.7	0.51	1	MF-R017	369-5992
0.2	0.3	7.4	3.1	4.3	5.8	7.6	12.7	0.51	1	MF-R020	772-264
0.25	0.38	7.4	3.1	4.3	5.8	7.6	12.7	0.51	1	MF-R025	772-276
0.3	0.45	7.4	3.1	4.3	5.8	7.6	13.0	0.51	1	MF-R030	772-288
0.4	0.6	7.4	3.1	4.3	5.8	7.6	13.5	0.51	1	MF-R040	772-290
0.5	0.75	7.9	3.1	4.3	5.8	7.6	13.7	0.51	1	MF-R050	772-306
0.65	0.98	9.7	3.1	4.3	5.8	7.6	14.5	0.51	1	MF-R065	772-318
0.75	1.13	10.4	3.1	4.3	5.8	7.6	15.2	0.51	1	MF-R075	772-320
0.9	1.35	11.7	3.1	4.3	5.8	7.6	15.8	0.51	1	MF-R090	772-331
30V											
1.1	2.2	8.9	3.0	4.3	5.8	7.6	14.0	0.51	1	MF-R110	772-343
1.35	2.7	8.9	3.0	4.3	5.8	7.6	18.9	0.51	1	MF-R135	772-355
1.6	3.2	10.2	3.0	4.3	5.8	7.6	16.8	0.51	1	MF-R160	772-367
1.85	3.7	12.0	3.0	4.3	5.8	7.6	18.4	0.51	1	MF-R185	772-379
2.5	5	12.0	3.0	4.3	5.8	7.6	18.3	0.81	1	MF-R250	772-380
3	6	12.0	3.0	4.3	5.9	7.6	18.3	0.81	2	MF-R300	772-392
4	8	14.4	3.0	4.3	5.9	7.6	24.8	0.81	2	MF-R400	772-409
5	10	17.4	3.0	9.4	10.9	7.6	24.9	0.81	2	MF-R500	772-410
6	12	19.3	3.0	9.4	10.9	7.6	31.9	0.81	2	MF-R600	772-422
7	14	21.1	3.0	9.4	10.9	7.6	29.8	0.81	2	MF-R700	772-434
8	16	24.2	3.0	9.4	10.9	7.6	32.9	0.81	2	MF-R800	772-446
9	18	24.2	3.0	9.4	10.9	7.6	32.9	0.81	2	MF-R900	369-6716

* I Hold - Current at which Multifuse will not trip

** I Trip - Current at which Multifuse will trip

204492

Hold Current (A)	Order Code	5+	50+	100+	250+	+
0.1	772-252▲	1.78	1.62	1.50	0.69	--
0.17	369-5992▲	1.65	1.50	1.41	0.66	--
0.2	772-264▲	2.00	1.80	1.68	0.78	--
0.25	772-276▲	2.00	1.80	1.68	0.78	--
0.3	772-288▲	2.00	1.80	1.68	0.78	--
0.4	772-290▲	2.09	1.89	1.77	0.81	--
0.5	772-306▲	2.09	1.89	1.77	0.81	--
0.65	772-318▲	2.09	1.89	1.77	0.81	--
0.75	772-320▲	2.09	1.89	1.77	0.81	--
0.9	772-331▲	2.09	1.89	1.77	0.81	--
1.1	772-343▲	1.97	1.77	1.68	0.78	--
1.35	772-355▲	1.97	1.77	1.68	0.78	--
1.6	772-367▲	2.90	1.98	1.86	0.87	--
1.85	772-379▲	2.90	1.98	1.86	0.87	--
2.5	772-380▲	2.75	2.16	2.04	0.99	--
3	772-392▲	2.90	2.25	2.13	1.02	--
4	772-409▲	3.06	2.34	2.22	1.05	--
5	772-410▲	3.09	2.40	2.28	1.08	--
6	772-422▲	3.40	2.58	2.46	1.17	--
7	772-434▲	3.49	2.67	2.55	1.23	--
8	772-446▲	3.65	2.79	2.64	1.26	--
9	369-6716▲	3.12	2.85	2.61	1.20	--

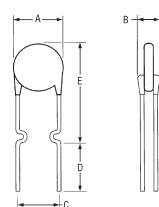
Multifuse - MF-R Series



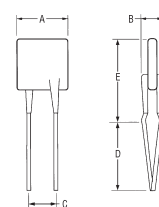
- Resettable overcurrent circuit protection
- Reset by removing the fault condition and supply voltage
- Flame retardant epoxy polymer encapsulation meets the requirements of **UL94V-0**



NEW



Style 1



Style 2

Operating temperature				-40°C to +85°C			Voltage rating			60 and 30 volts		
Dimensions (mm)												
(A) *	(A) **	A	B	C	D	E	Lead	Case	Mfrs.	Order		
I Hold	I Trip	Max.	Max.	Nom.	±	Min.	Max.	Dia	Style	List No.	Code	
V _{max} = 60V												
0.1	0.15	7.4	12.7	5.1	0.7	7.6	3.1	0.51	1	MF-R010-0-99	935-0365	
0.17	0.34	7.4	12.7	5.1	0.7	7.6	3.1	0.51	1	MF-R017-0-99	935-0101	
0.2	0.3	7.4	12.7	5.1	0.7	7.6	3.1	0.51	1	MF-R020-0-99	935-0373	
0.25	0.38	7.4	12.7	5.1	0.7	7.6	3.1	0.51	1	MF-R025-0-99	935-0390	
0.3	0.45	7.4	13	5.1	0.7	7.6	3.1	0.51	1	MF-R030-0-99	935-0403	
0.4	0.6	7.4	13.5	5.1	0.7	7.6	3.1	0.51	1	MF-R040-0-99	935-0411	
0.5	0.75	7.9	13.7	5.1	0.7	7.6	3.1	0.51	1	MF-R050-0-99	935-0420	
0.65	0.98	9.7	14.5	5.1	0.7	7.6	3.1	0.51	1	MF-R065-0-99	935-0438	
0.75	1.13	10.4	15.2	5.1	0.7	7.6	3.1	0.51	1	MF-R075-0-99	935-0446	
0.9	1.35	11.7	15.8	5.1	0.7	7.6	3.1	0.51	1	MF-R090-0-99	935-0454	
V _{max} = 30V												
1.1	2.2	8.9	14.2	5.1	0.7	7.6	3	0.51	1	MF-R110-0-99	935-0462	
1.35	2.7	8.9	13.5	5.1	0.7	7.6	3	0.51	1	MF-R135-0-99	935-0470	
1.6	3.2	10.2	15.2	5.1	0.7	7.6	3	0.51	1	MF-R160-0-99	935-0489	
1.85	3.7	12.0	15.7	5.1	0.7	7.6	3	0.51	1	MF-R185-0-99	935-0497	
2.5	5	12.0	18.3	5.1	0.7	7.6	3	0.81	2	MF-R250-0-99	935-0500	
3	6	11.4	17.3	5.1	0.7	7.6	3	0.81	2	MF-R300-0-99	935-0519	
4	8	14	20.1	5.1	0.7	7.6	3	0.81	2	MF-R400-0-99	935-0527	
5	10	16.5	24.9	10.2	0.7	7.6	3	0.81	2	MF-R500-0-99	935-0535	
6	12	16.5	24.9	10.2	0.7	7.6	3	0.81	2	MF-R600-0-99	935-0543	
7	14	16.5	24.9	10.2	0.7	7.6	3	0.81	2	MF-R700-0-99	935-0551	
8	16	24.1	29.7	10.2	0.7	7.6	3	0.81	2	MF-R800-0-99	935-0560	
9	18	24.1	29.7	10.2	0.7	7.6	3	0.81	2	MF-R900-0-99	935-0110	

* I Hold - Current at which Multifuse will not trip

** I Trip - Current at which Multifuse will trip

405969

Hold Current (A)	Order Code	5+	50+	100+	250+	+
0.1	935-0365●	1.78	1.62	1.50	0.69	--
0.17	935-0101●	1.65	1.50	1.41	0.66	--
0.2	935-0373●	2.00	1.80	1.68	0.78	--
0.25	935-0390●	2.00	1.80	1.68	0.78	--
0.3	935-0403●	2.00	1.80	1.68	0.78	--
0.4	935-0411●	2.09	1.89	1.77	0.81	--
0.5	935-0420●	2.09	1.89	1.77	0.81	--
0.65	935-0438●	2.09	1.89	1.77	0.81	--
0.75	935-0446●	2.09	1.89	1.77	0.81	--
0.9	935-0454●	2.09	1.89	1.77	0.81	--
1.1	935-0462●	1.97	1.77	1.68	0.78	--
1.35	935-0470●	1.97	1.77	1.68	0.78	--
1.6	935-0489●	2.90	1.98	1.86	0.87	--
1.85	935-0497●	2.90	1.98	1.86	0.87	--
2.5	935-0500●	2.75	2.16	2.04	0.99	--
3	935-0519●	2.90	2.25	2.13	1.02	--
4	935-0527●	3.06	2.34	2.22	1.05	--
5	935-0535●	3.09	2.40	2.28	1.08	--
6	935-0543●	3.40	2.58	2.46	1.17	--
7	935-0551●	3.49	2.67	2.55	1.23	--
8	935-0560●	3.65	2.79	2.64	1.26	--
9	935-0110●	3.12	2.85	2.61	1.20	--

Multifuse MF - RX Series

PTC - Radial lead



- Radial Lead devices
- 72V rated
- Cured, flame retardant insulating material meets **UL 94V-0** requirements
- Reset by removing the fault condition and supply voltage
- **UL Recognised**

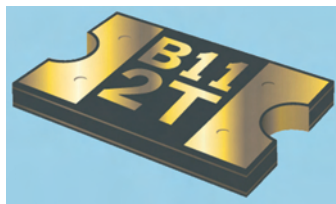
Operating temperature -40°C to +85°C
 V_{max} 60V
 I_{max} 40A

Dimensions											
(A) * I Hold	(A) ** I Trip	A Max.	B Max.	C Nom.	D Tol. ±	E Min.	Lead Dia	Case Style	Mfrs. List No.	Order Code	
1.1	2.2	10.84	12.7	5.1	0.7	7.6	3.1	0.81	MF-RX110/72-0	935-0128	
1.35	2.7	12.26	12.7	5.1	0.7	7.6	3.1	0.51	MF-RX135/72-0	935-0136	
1.6	3.2	13.94	12.7	5.1	0.7	7.6	3.1	0.51	MF-RX160/72-0	935-0144	
1.85	3.7	15.18	12.7	5.1	0.7	7.6	3.1	0.51	MF-RX185/72-0	935-0152	
2.5	5	17.84	12.7	10.2	0.7	7.6	3.1	0.51	MF-RX250/72-0	935-0160	
3	6	20.67	12.7	10.2	0.7	7.6	3.1	0.51	MF-RX300/72-0	935-0179	
3.75	7.5	23.51	12.7	10.2	0.7	7.6	3.1	0.51	MF-RX375/72-0	935-0187	

Hold Current (A)	Order Code	5+	50+	100+	250+	+
1.1	935-0128	1.80	1.65	1.53	0.72	--
1.35	935-0136	1.98	1.77	1.65	0.78	--
1.6	935-0144	2.16	1.92	1.80	0.84	--
1.85	935-0152	2.16	1.92	1.80	0.84	--
2.5	935-0160	2.31	2.10	1.92	0.90	--
3	935-0179	2.31	2.10	1.92	0.90	--
3.75	935-0187	2.46	2.25	2.10	0.96	--

Multifuse MF - MSMF Series

PTC - SMD 1812 Style



- Fast tripping resettable circuit protection
- Standard 4532mm (1812) footprint for automated assembly
- Reduced component size and resistance
- CSA and TÜV Approved, UL Recognised

NEW

Operating temperature -40°C to +85°C
Max Surface Temp. (Tripped) 125°C
Power Dissipation (Tripped) 0.8W

(A) *	(A) **	Height (mm)	Width (mm)	Depth (mm)	Mfrs. List No.	Order Code
V_{max} = 60V						
0.10	0.20	3.24	4.55	0.685	MF-MSMF010-2	935-0276
0.14	0.34	3.24	4.55	0.685	MF-MSMF014-2	935-0284
V_{max} = 30V						
0.20	0.40	3.24	4.55	0.685	MF-MSMF020-2	935-0292
0.35	0.75	3.2	3.2	0.665	MF-MSMF035-2	935-0306
V_{max} = 15V						
0.50	1.00	3.24	4.55	0.50	MF-MSMF050-2	935-0314
V_{max} = 13.2V						
0.75	1.50	3.24	4.55	0.5	MF-MSMF075-2	935-0322
V_{max} = 6V						
1.10	2.20	3.24	4.55	0.50	MF-MSMF110-2	935-0330
1.25	2.50	3.24	4.55	0.38	MF-MSMF125-2	935-0349
1.5	3.00	3.24	4.55	0.38	MF-MSMF150-2	935-0357

* I_H Hold - Current at which Multifuse will not trip
** I_T Trip - Current at which Multifuse will trip

405982

Hold Current (A)	Order Code	5+	50+	100+	250+	+
0.10	SMD 935-0276	1.80	1.65	1.53	0.72	--
0.14	SMD 935-0284	1.80	1.65	1.53	0.72	--
0.20	SMD 935-0292	1.65	1.50	1.41	0.66	--
0.35 *	SMD 935-0306	1.80	1.65	1.53	0.72	--
0.50	SMD 935-0314	1.65	1.50	1.41	0.66	--
0.75	SMD 935-0322	1.65	1.50	1.41	0.66	--
1.10	SMD 935-0330	1.65	1.50	1.41	0.66	--
1.25	SMD 935-0349	1.65	1.50	1.41	0.66	--
1.5	SMD 935-0357	1.65	1.50	1.41	0.66	--

* 1206 Case Style

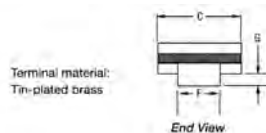
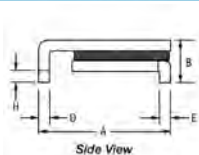
Multifuse MF - SM Series

PTC - SMD EIA 481-2 Style



- Surface mount overcurrent devices
- Industry standard EIA 481-2 standard package
- CSA and TÜV Approved, UL Recognised

NEW



Order Codes	V _{max} (V)	I _{max} (I)	Operating temperature (all Order Codes)	9350195, 9350209	9350217, 9350225	9350233, 9350241	9350250, 9350268
				60	30	15	15
				40	80	100	100
				-40°C to +85°C			
(A) *	(A) **	Dimensions (mm)	Mfrs. List No.	Order Code			
Hold	Trip	A B C D & E F G H					
0.3	0.6	7.98 5.44 3.18 0.71	2.41 1.37 0.43	MF-SM030-2-99	935-0195		
0.5	1	7.98 5.44 3.18 0.71	2.41 1.37 0.43	MF-SM050-2-99	935-0209		
0.75	1.5	7.98 5.44 3.18 0.71	2.41 1.37 0.43	MF-SM075-2-99	935-0217		
1.1	2.2	7.98 5.44 3.0 0.71	2.41 1.37 0.43	MF-SM100-2-99	935-0225		
1.25	2.5	7.98 5.44 3.00 0.71	2.41 1.37 0.43	MF-SM125-2-99	935-0233		

(A) *	(A) **	A	B	C	D & E	F	G	H	Mfrs.	Order
1.50	3.00	7.98	6.71	3.00	0.71	2.41	1.37	0.43	MF-SM150-2-99	935-0241
2.00	4.00	7.98	6.71	3.00	0.71	2.41	1.37	0.43	MF-SM200-2-99	935-0250
2.50	5.00	9.5	6.71	3.00	0.71	2.41	1.37	0.43	MF-SM250-2-99	935-0268

* I_H Hold - Current at which Multifuse will not trip
** I_T Trip - Current at which Multifuse will trip

405903

Hold Current (A)	Order Code	5+	50+	100+	250+	+
0.3	SMD 935-0195	2.16	1.92	1.80	0.84	--
0.5	SMD 935-0209	2.16	1.92	1.80	0.84	--
0.75	SMD 935-0217	2.16	1.92	1.80	0.84	--
1.1	SMD 935-0225	2.16	1.92	1.80	0.84	--
1.25	SMD 935-0233	2.16	1.92	1.80	0.84	--
1.50	SMD 935-0241	2.31	2.10	1.92	0.90	--
2.00	SMD 935-0250	2.31	2.10	1.92	0.90	--
2.50	SMD 935-0268	2.31	2.10	1.92	0.90	--

POLYSWITCH™

tyco Electronics Raychem

The PolySwitch resettable fuse is a positive temperature coefficient (PTC) resistor that undergoes a large and abrupt change in resistance when an overcurrent or high temperature heats it above a specific point.

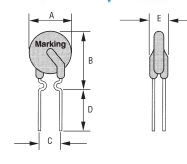
Under normal operating conditions the device resistance is just tens of milli-ohms. In the overcurrent condition the resistance substantially increases, thus limiting the fault current to a safe level. The polyswitch is reset by removing the fault condition and the supply voltage.

Note: The PolySwitch device is not intended for continual and repeated tripping. They are designed for over current and over temperature protection only.

213849

PolySwitch - RXE Series

tyco Electronics Raychem



Lead dia. = 0.51 (24 AWG).

RXE series of general purpose resettable fuses for applications with a maximum voltage of up to 60V

Maximum voltage 60V & 72V rms
Operating temperature -40°C to +85°C
Case meets the requirements of UL94V-0
Approved to CSA and TUV, UL Recognised

Maximum interrupt current 40A
Typical reset time <20s
Max surface temperature 125°C in tripped state

V max (V) rms	I _H (A)	I _T (A)	A Max.	B Max.	C Typ.	D Min.	E Max.	Mfrs. List No.	Order Code
60	0.1	0.2	7.4	12.7	5.1	7.6	3	RXEF010	117-5857
60	0.17	0.34	7.4	12.7	5.1	7.6	3	RXEF017	117-5858
72	0.2	0.4	7.4	12.2	5.1	7.6	3	RXEF020	117-5859
72	0.25	0.5	7.4	12.7	5.1	7.6	3	RXEF025	117-5860
72	0.3	0.6	7.4	13	5.1	7.6	3	RXEF030	117-5861
72	0.4	0.8	7.6	13.5	5.1	7.6	3	RXEF040	117-5862
72	0.5	1	7.9	13.7	5.1	7.6	3	RXEF050	117-5864
72	0.65	1.3	9.7	14.5	5.1	7.6	3	RXEF065	117-5867
72	0.75	1.5	10.4	15.2	5.1	7.6	3	RXEF075	117-5868
72	0.9	1.8	11.7	15.7	5.1	7.6	3	RXEF090	117-5869

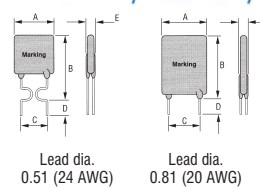
I_H = Hold current. The maximum current at which the device will not trip at 20°C
I_T = Trip current. The minimum current at which the device will always trip at 20°C

204468

I Hold (A)	Order Code	5+	50+	100+	250+	+
0.1	117-5857	1.11	0.98	0.88	0.78	--
0.17	117-5858	1.11	0.98	0.88	0.78	--
0.2	117-5859	1.11	0.98	0.88	0.78	--
0.25	117-5860	1.11	0.98	0.88	0.78	--
0.3	117-5861	0.85	0.75	0.65	0.59	--
0.4	117-5862	0.98	0.88	0.78	0.72	--
0.5	117-5864	0.88	0.81	0.72	0.65	--
0.65	117-5867	1.07	0.98	0.85	0.78	--
0.75	117-5868	0.94	0.85	0.75	0.68	--
0.9	117-5869	0.98	0.88	0.78	0.68	--

PolySwitch - RUE Series

tyco Electronics Raychem



Lead dia. 0.51 (24 AWG)

Lead dia. 0.81 (20 AWG)

RUE series of high current resettable fuses designed for applications that require a hold current between 0.9 and 9.0A, and a maximum voltage of 30V

Fuses, Circuit Breakers & Consumer Units

Compliant
Non-compliant
Limited stock - RoHS replacement available

RoHS

Maximum voltage 30V
Operating temperature -40°C to +85°C
Case meets the requirements of **UL94V-0**
Approved to **CSA, TUV**, and **UL** Recognised

Maximum interrupt current 40A
Typical reset time <20s
Max surface temperature 125°C in tripped state

Dimensions							Mfrs. List No.	Order Code
I _H (A)	I _T (A)	A Max.	B Max.	C Typ	D Min.	E Max.		
0.9	1.8	7.4	12.2	5.1	7.6	3	RUEF090	117-5843
1.1	2.2	7.4	14.2	5.1	7.6	3	RUEF110	117-5844
1.35	2.7	8.9	13.5	5.1	7.6	3	RUEF135	117-5845
1.6	3.2	8.9	15.2	5.1	7.6	3	RUEF160	117-5846
1.85	3.7	10.2	15.7	5.1	7.6	3	RUEF185	117-5847
2.5	5	11.4	18.3	5.1	7.6	3	RUEF250	117-5848
3	6	11.4	17.3	5.1	7.6	3	RUEF300	117-5849
4	8	14	20.1	5.1	7.6	3	RUEF400	117-5850
5	10	14	24.9	10.2	7.6	3	RUEF500	117-5851
6	12	16.5	24.9	10.2	7.6	3	RUEF600	117-5852
7	14	19.1	26.7	10.2	7.6	3	RUEF700	117-5854
8	16	21.6	29.2	10.2	7.6	3	RUEF800	117-5855
9	18	24.1	29.7	10.2	7.6	3	RUEF900	117-5856

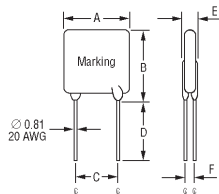
I_H = Hold current. The maximum current at which the device will not trip at 20°C
I_T = Trip current. The minimum current at which the device will always trip at 20°C

204467

Price Each						
I Hold (A)	Order Code	5+	50+	100+	250+	+
0.9	117-5843	0.94	0.85	0.75	0.68	--
1.1	117-5844	0.94	0.85	0.75	0.68	--
1.35	117-5845	1.04	0.94	0.85	0.75	--
1.6	117-5846	1.07	0.98	0.85	0.78	--
1.85	117-5847	1.14	1.01	0.91	0.81	--
2.5	117-5848	1.20	1.07	0.94	0.85	--
3	117-5849	1.27	1.14	1.01	0.91	--
4	117-5850	1.37	1.24	1.11	0.98	--
5	117-5851	1.46	1.30	1.17	1.04	--
6	117-5852	1.63	1.43	1.27	1.14	--
7	117-5854	2.25	2.02	1.79	1.59	--
8	117-5855	1.76	1.56	1.40	1.27	--
9	117-5856	1.89	1.69	1.50	1.33	--

Polyswitch - RGE Series

tyco Electronics Raychem



- Designed for low voltage applications (<16V) but with high current
- Feature faster trip time, lower resistance and smaller dimensions than other series
- Wide range of computer, medical and automotive applications

Maximum voltage 16V
Operating temperature -40°C to +85°C
Approved to CSA, TUV, UL

Maximum interrupt current 100A
Max surface temperature 125°C in tripped state

Dimensions							Mfrs. List No.	Order Code
I _H (A)	I _T (A)	A	B	C	Pd (w)			
3	5.1	7.4	10.2	5.1	2.3		RGE300	136-724
4	6.8	8.9	12.8	5.1	2.4		RGE400	136-736
5	8.5	10.4	13.5	5.1	2.6		RGE500	136-748
7	11.9	11.2	18.8	5.1	3.0		RGE700	136-761
9	15.3	14.0	20.8	5.1	3.3		RGE900	136-773
11	18.7	17.5	25.1	5.1	3.7		RGE1100	136-785
12	20.4	17.5	28.0	10.2	4.2		RGE1200	136-797
14	23.8	27.9	27.9	10.2	4.6		RGE1400	136-803

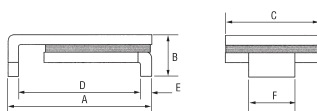
I_H = Hold current. The maximum current at which the device will not trip at 20°C
I_T = Trip current. The minimum current at which the device will always trip at 20°C

204523

Price Each						
I Hold (A)	Order Code	5+	50+	100+	250+	+
3	136-724	2.37	2.10	1.95	1.65	--
4	136-736	1.14	0.94	0.85	0.78	--
5	136-748	1.14	0.94	0.85	0.78	--
7	136-761	1.30	1.07	0.94	0.88	--
9	136-773	1.53	1.27	1.14	1.02	--
11	136-785	1.89	1.53	1.37	1.25	--
12	136-797	2.02	1.66	1.46	1.34	--
14	136-803	2.21	1.79	1.59	1.46	--

Polyswitch - SMD Series

tyco Electronics Raychem



Surface mount series of resettable fuses. Suitable for all types of reflow soldering, but not suitable for wave soldering when fitted on the underside of the board.

Note: A device should not be reworked.

Operating temperature -40°C to +85°C
Max surface temperature in tripped state 125°C
Approved to **CSA** and **TUV**. **UL** Recognised

V_{max} (0.3, 0.5A) (0.75, 1.1A) (1.25, 2.5A)

Dimensions								Mfrs. List No.	Order Code	
I _H (A)	I _T (A)	V _{Max} (V)	I _{Max} (A)	A Max	B Max	C Max	E Min			F Max
0.3	0.6		10	7.98	3.2	5.44	0.56	2.41	SMD030F-2	117-5870
0.5	1		10	7.98	3.2	5.44	0.20	2.41	SMD050F-2	117-5871
0.75	1.5		40	7.98	3.2	5.44	0.56	2.41	SMD075F-2	117-5872
1.1	2.2		40	7.98	3	5.44	0.56	2.41	SMD100F-2	117-5873
1.25	2.5		40	7.98	3	5.44	0.56	2.41	SMD125F-2	117-5874
1.5	3		40	9.5	3	6.71	0.56	3.94	SMD150F-2	117-5875
2	4		40	9.5	3	6.71	0.56	3.94	SMD200F-2	117-5876
2.5	5		40	9.5	3	6.71	0.56	3.94	SMD250F-2	117-5878

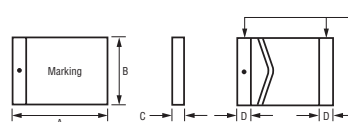
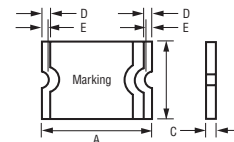
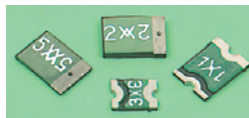
I_H = Hold current - maximum current device will pass without interruption in 20°C still air environment
I_T = Trip current - minimum current that will switch the device from low resistance to high resistance in 20°C still air
V_{max} = Maximum voltage device can withstand without damage at rated hold current

204466

Price Each						
I Hold (A)	Order Code	5+	50+	100+	250+	+
0.3	SMD117-5870	1.14	1.01	0.91	0.81	--
0.5	SMD117-5871	1.14	1.01	0.91	0.81	--
0.75	SMD117-5872	1.14	1.01	0.91	0.81	--
1.1	SMD117-5873	1.14	1.01	0.91	0.81	--
1.25	SMD117-5874	1.07	0.94	0.85	0.75	--
1.5	SMD117-5875	1.14	1.01	0.91	0.81	--
2	SMD117-5876	1.14	1.01	0.91	0.81	--
2.5	SMD117-5878	1.14	1.01	0.91	0.81	--

Polyswitch - miniSMD Series

tyco Electronics Raychem



- Designed for high density SMD applications
- Current range from 0.2A to 1.1A
- Typical applications include disk drives, palmtop computers and telecommunications products
- Approved to **CSA** and **TUV**, **UL** Recognised

Max. Interrupt current 40A (except 0.2A = 10A)
Approved to CSA, TUV

Operating temperature -40°C to +85°C
Max surface temperature 125°C in tripped state

Dimensions							Mfrs. List No.	Order Code	
I _H (A)	I _T (A)	A max.	B max.	C max.	D max.	E max.			
0.2	0.4	4.73	3.41	0.81	0.65	0.50	0.8	MINISMD020F-2	117-5838
0.35	0.75	4.73	2.80	0.62	0.30	0.50	0.6	MICROSMD035F-2	117-5837
0.5	1	4.73	3.41	0.62	0.65	0.30	0.8	MINISMD050F-2	117-5839
1.1	2.2	4.73	3.41	0.62	0.30	0.50	0.8	MINISMD110F-2	117-5842

I_H = Hold current. The maximum current at which the device will not trip at 20°C
I_T = Trip current. The minimum current at which the device will always trip at 20°C

227524

Price Each						
I Hold (A)	Order Code	5+	50+	100+	250+	+
0.2	SMD117-5838	1.50	1.37	1.20	1.07	--
0.35	SMD117-5837	0.91	0.81	0.72	0.65	--
0.5	SMD117-5839	1.11	0.98	0.88	0.78	--
1.1	SMD117-5842	1.11	0.98	0.88	0.78	--

Thermal Protection

Thermal Fuse - Microtemp

THERMODYSC



Body: L=14.7, Dia=4.0 Lead dia.=1.0

- Highly reliable, low cost non-resettable axial fuses
- VDE, CSA, FEMKO approvals and UL Recognised
- The leads have a strain relief system to support a load of up to 1.35kgs (3lbs)
- For upper limit temperature protection

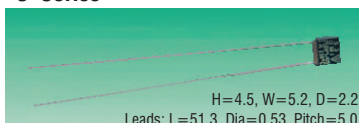
Rating 10A @ 250V ac
Break down (when open) 1200V ac
Operating temperature tolerance 0°C to -4°C

Max. rupture current: 20A inductive
40A resistive

204508

Opening Temperature	Mfrs. List No.	Order Code	5+	50+	100+	500+
72°C	G4A01072C	476-560	1.32	1.26	1.17	1.11
84°C	G4A01084C	476-572	1.32	1.26	1.17	1.11
93°C	G4A01093C	187-008	1.14	1.08	0.99	0.93
98°C	G4A01098C	476-584	1.32	1.26	1.17	1.11
104°C	G4A01104C	187-010	1.14	1.08	0.99	0.93
110°C	G4A01110C	187-021	1.14	1.08	0.99	0.93
117°C	G4A01117C	187-033	1.14	1.08	0.99	0.93
121°C	G4A01121C	476-596	1.32	1.26	1.17	1.11
128°C	G4A01128C	187-045	1.14	1.08	0.99	0.93
144°C	G4A01144C	187-057	1.14	1.08	0.99	0.93
152°C	G4A01152C	187-069	1.14	1.08	0.99	0.93
167°C	G4A01167C	476-602	1.32	1.26	1.17	1.11
184°C	G4A01184C	476-614	1.32	1.26	1.17	1.11
192°C	G4A01192C	187-070	1.14	1.08	0.99	0.93
216°C	G4A01216C	187-082	1.14	1.08	0.99	0.93
229°C	G4A01229C	760-961	1.32	1.26	1.17	1.11
240°C	G4A01240C	187-094	1.14	1.08	0.99	0.93

Thermal Fuse - 'S' Series



Sub-miniature non-resettable thermal fuses approved to **CSA** and **VDE**. **UL** Recognised. The case is completely isolated from either of the connecting leads. The compact size of the 'S' series cutoffs makes them ideal for todays high density mounting requirements.

Rating 1A @ 240V ac

ELCUT

Max. Rated Operating Temperature	Actual Opening Temperature	Order Code	5+	50+	100+	500+
102°C	98°C±2°C	106-419	1.47	1.29	1.20	1.14
115°C	112°C±3°C	106-420	1.47	1.29	1.20	1.14
130°C	126°C±2°C	106-421	1.47	1.29	1.20	1.14
150°C	145°C±2°C	106-422	1.47	1.29	1.20	1.14

American Midget Fuses

A range of midget fuses manufactured in accordance with American standards suitable for use as replacement fuses in Fluke multimeters.

Fluke Multimeter Replacement Fuse Selection Guide

Fluke Model No.	440mA Fuse Order Code	630mA Fuse Order Code	1A Fuse Order Code	2A Fuse Order Code	3A Fuse Order Code	15A Fuse Order Code	11A Fuse Order Code	20A Fuse Order Code
944-3331	105-559	944-3307	105-558	944-3315	944-3277	944-3340	944-3285	
21/23/27/75/77		x			x	x		x
Series II		x					x	
21-III/75-III		x						
76/29/79								
Series II			x			x		
83/85 87 (S/N 5650001)						x		
45						x		
25/27		x			x	x		x
73 Series II and 73-III						x		
863/865/867B								
83/85/87 (S/N.6565001)								
83-III/85-III/87-III/87E-III								
23-III / 75-III 77-III / 79-III	x					x	x	
8060A				x				

213851

High Performance Fast Acting - 10.3 x 35mm
Suitable For Multimeters

- UL recognised

Voltage rating 1000V ac/dc
Breaking capacity 10000A @ 1000V ac/dc

204530

Rating	Mfrs. List No.	Order Code	1+	5+	25+
440mA	OFLU.440T..TA000	305-7458	20.41	17.01	13.36
Rating	Mfrs. List No.	Order Code	1+	5+	25+
440mA	OFLU.440T..TA000	994-3331	20.41	17.01	13.36

High Performance Fast Acting - 10.3 x 35mm
BLS Series - Suitable For Multimeters

- For high ac fault current circuitry
- UL recognised
- CSA approved

Voltage rating 600V ac
Breaking capacity 10000A @ 600V ac/dc

204531

Rating	Mfrs. List No.	Order Code	1+	5+	25+
1A	BLS1	303-1792	5.30	—	—
3A	BLS3	303-1809	5.34	—	—

Rating	Mfrs. List No.	Order Code	1+	5+	25+
1A	BLS1	994-3307	5.30	—	—
3A	BLS3	994-3315	5.34	—	—

High Performance Fast Acting - 10.3 x 38mm
Suitable For Multimeters

- UL recognised

Voltage rating 1000V ac
Breaking capacity 17000A @ 250V ac/dc

204529

Rating	Mfrs. List No.	Order Code	1+	5+	25+
11A	OFLU011.T..TA000	305-7460	20.41	17.01	13.36

Rating	Mfrs. List No.	Order Code	1+	5+	25+
11A	OFLU011.T..TA000	994-3340	20.41	17.01	13.36

High Performance Fast Acting - 10.3 x 38mm
BLN Series - Suitable For Multimeters

- UL recognised
- CSA approved

Voltage rating 250V ac
Breaking capacity 100000A @ 250V ac

204528

Rating	Mfrs. List No.	Order Code	1+	10+	25+
15A	BLN15	303-1822	5.10	4.41	3.24
15A	BLN15	994-3323	5.10	4.41	3.24

High Performance Fast Acting - 10.3 x 38mm
CLK Series - Suitable For Multimeters

- For high ac fault current circuitry
- UL recognised (to 3A)
- CSA approved

Voltage rating 600V ac
Breaking capacity 100000A @ 600V ac

204527

Rating	Mfrs. List No.	Order Code	1+	10+	25+
1A	OKLK001.T.	302-9335	10.08	8.82	6.11
2A	OKLK002.T.	302-9347	11.97	10.24	7.40
3A	OKLK003.T.	302-9359	10.90	9.51	5.45
4A	OKLK004.T.	302-9360	10.90	9.51	5.45
5A	OKLK005.T.	302-9372	10.90	9.51	5.45
10A	OKLK010.T.	302-9384	11.97	10.24	7.40
15A	OKLK015.T.	302-9396	10.08	8.82	5.13
20A	OKLK020.T.	302-9402	10.08	8.82	5.13
30A	OKLK030.VX832.	302-9414	10.08	8.82	5.13

204527

Rating	Mfrs. List No.	Order Code	1+	10+	25+
1A	OKLK001.T	994-3218	10.08	8.82	6.11
2A	OKLK002.T	994-3226	11.97	10.24	7.40
3A	OKLK003.T	994-3234	10.90	9.51	5.45
4A	OKLK004.T	994-3242	10.90	9.51	5.45
5A	OKLK005.T	994-3250	10.90	9.51	5.45
10A	OKLK010.T	994-3269	11.97	10.24	7.40
15A	OKLK015.T	994-3277	10.08	8.82	5.13
20A	OKLK020.T	994-3285	10.08	8.82	5.13
30A	OKLK030.VX832	994-3293	10.08	8.82	5.13

Compliant
Non-compliant
Limited stock - RoHS replacement available

RoHS

High Performance Fast Acting - 10.38 x 38
KTK Series Suitable for Multimeters**Bussmann**

- For high ac fault current circuitry
- UL Recognised
- CSA certified

Voltage rating 600V
Breaking capacity 100000A @ 600V

227525

Rating	Mfrs. List No.	Order Code	1+	10+	25+
0.1A	KTK-1/10	348-2789	9.60	9.30	8.88
0.25A	KTK-1/4	348-2807	9.33	8.85	8.31
0.5A	KTK-1/2	348-2819	9.33	8.85	8.31
1A	KTK-1	348-2820	7.77	7.29	6.90
1.5A	KTK-1-1/2	348-2832	7.77	7.29	6.90
2A	KTK-2	348-2844	7.77	7.29	6.90
3A	KTK-3	348-2856	7.77	7.29	6.90
4A	KTK-4	348-2868	7.77	7.29	6.90
5A	KTK-5	348-2870	7.77	7.29	6.90
6A	KTK-6	348-2881	7.77	7.29	6.90
8A	KTK-8	348-2900	9.84	9.21	8.64
9A	KTK-9	348-2911	7.77	7.29	6.90

High Performance Quick Blow (F) - 10.3 x 38
KTK-R Series**Bussmann**

High performance, fast acting, single-element ceramic fuses for protection of branch circuits, motor control circuits, lighting ballasts and control transformers. A grooved ferrule permits mounting in rejection-type as well as standard fuseholders. UL Recognised and CSA approved.

Voltage rating 600V ac
Breaking capacity 200000A @ 600V ac

Mfrs. List No. KTK-R + Rating

204412

Rating	Order Code	1+	10+	50+	100+
1A	218-923	13.26	11.49	10.50	9.78
2A	218-935	15.21	12.69	10.68	9.78
4A	218-947	14.37	—	—	—
5A	218-959	15.21	12.69	10.68	9.78
10A	218-960	15.21	12.69	10.68	9.78
15A	218-972	15.21	12.69	10.68	9.78
20A	218-984	15.84	13.20	11.10	10.17
30A	218-996	15.84	13.20	11.10	10.17

10 x 38mm (1½") HRC Cartridge Fuses and Accessories**gR Ultra Rapid Semiconductor Fuses****SIBA**

- European style industrial ceramic ultra rapid fuses for protection of thyristors, diodes etc.
- UL Recognised

Current Rating	Voltage Power Dissipation (W)	Pre-arcing I ² t	Total I ² t @ 600V	Order Code
4A	1.1	1.1	6	607-745
6A	1.8	6	18	607-757
10A	1.7	9	28	607-769
16A	4.8	36	120	607-770
20A	5.8	60	200	607-782
25A	6.8	120	420	607-794
30A	7.8	195	650	607-800

Mfrs. List No. 60-033-05 + Rating

204397

Rating	Order Code	1+	10+	100+	200+
4A	607-745	11.34	10.14	9.69	9.15
6A	607-757	11.34	10.14	9.69	9.15
10A	607-769	11.34	10.14	9.69	9.15
16A	607-770	11.34	10.14	9.69	9.15
20A	607-782	11.34	10.14	9.69	9.15
25A	607-794	11.34	10.14	9.69	9.15
30A	607-800	11.34	10.14	9.69	9.15

gL (General Line)**GOULD**

European style industrial HRC ceramic fuses manufactured in accordance with IEC269-2, NFC63-210 and UNE21.103. Suitable for cable protection and applications where there are no surges to be absorbed.

Voltage rating 500V (32A 499493 = 400V) Breaking capacity 120000

204429

Rating	Order Code	5+	50+	250+	500+
2A	248-708	1.32	1.19	1.06	0.94
4A	248-710	1.32	1.19	1.06	0.94
6A	248-721	1.32	1.19	1.06	0.94
10A	248-733	1.32	1.19	1.06	0.94
16A	248-745	1.32	1.19	1.06	0.94
20A	499-470	1.32	1.19	1.06	0.94
25A	499-481	1.32	1.19	1.06	0.94
32A	499-493	1.32	1.19	1.06	0.94

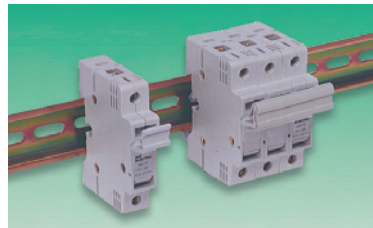
aM (Motor Rated)**GOULD**

European style industrial HRC ceramic fuses manufactured in accordance with IEC269-2, NFC63-210 and UNE21.103. Suitable for applications where an initial surge has to be absorbed (i.e. motor starts).

Voltage rating 500V ac (248-691 = 400V ac) Breaking capacity 120000

204428

Rating	Order Code	5+	25+	100+	250+
2A	248-630	1.62	1.47	1.41	1.38
4A	248-642	1.59	1.44	1.35	1.29
6A	248-654	1.59	1.44	1.35	1.29
10A	248-666	1.59	1.44	1.35	1.29
16A	248-678	1.59	1.44	1.35	1.29
20A	248-680	1.74	1.59	1.50	1.47
25A	248-691	2.04	1.86	1.74	1.71

Fuseholders, DIN Rail Mounting**GOULD**

Single pole
H=78, W=17.5
D (inc. lever)=73.5
D (excl. lever)=58
Terminal capacity=16mm²
Rating 32A @ 400V

Triple pole
H=78, W=52.5
D (inc. lever)=75.5
D (excl. lever)=52
Terminal capacity=16mm²
Rating 32A @ 400V

204427

	Order Code	1+	10+	25+	50+
Single Pole	248-757	8.78	8.12	7.67	7.42
Triple Pole	542-787	32.99	30.56	28.86	27.86

14 x 51mm HRC Cartridge Fuses and Accessories**gR, gL and aM Lines****GOULD****SIBA**

Mfrs. List No: 50-124-06+Rating

204376

Rating (A)	Pre-arcing I ² t	Total I ² t @660V	Order Code	1+	10+	100+	250+
20	21	190	187-161	12.33	11.61	10.92	10.65
25	32	340	187-173	16.28	—	—	—
32	63	620	187-185	12.69	11.91	11.22	10.98
40	140	1050	187-197	12.69	11.91	11.22	10.98

gL (General Line)

- European style industrial ceramic fuses for cable protection and applications where there are no surges to be absorbed
- Manufactured in accordance with IEC 269-2, NFC60.200, 63.210, 63.211 and UNE21.108
- Approved by Lloyds Register of Shipping and Bureau Veritas

Voltage rating 690Vac (20A, 25A) 500Vac (32A, 40A) 400Vac (50A) Breaking capacity 80kA (20A, 25A) 120kA (32A upwards)

Rating (A)	Order Code	5+	25+	100+	250+
20	187-306	2.25	2.15	1.99	1.99
25	187-203	2.31	2.21	2.05	1.95
32	187-215	2.34	2.25	2.08	1.95
40	187-227	2.34	2.25	2.08	1.95
50	187-239	2.52	2.37	2.19	2.07

aM (Motor Rated)

- European style industrial HRC fuses for applications where an initial surge has to be absorbed (i.e. motor start)
- Manufactured in accordance with **IEC 269-2, NFC60.200, 63.210, 63.211 and UNE21.103**
- Approved by **Lloyds Register of Shipping and Bureau Veritas**

Voltage rating	690Vac (20A, 25A) 500Vac (32A, 40A) 400Vac (50A)	Breaking capacity	80kA (20A, 25A) 120kA (32A upwards)
----------------	--	-------------------	--

Rating (A)	Order Code	5+	25+	100+	250+
20	187-240	2.70	2.52	2.37	2.31
25	187-252	2.70	2.52	2.37	2.31
32	187-264	2.64	2.57	2.34	2.21
40	187-276	2.64	2.57	2.38	2.34
50	187-288	2.70	2.60	2.44	2.38

Fuseholder for 14 x 51mm fuses

- Manufactured in accordance with **IEC 269-2, 947-3, NFC63.210-63001, VDE0636-1 and UNE 20129-21103**
- Approved by **Lloyds Register of Shipping and Bureau Veritas**

Voltage rating	690Vac (up to 25A) 500Vac (32A, 40A) 400Vac (50A)
----------------	---

H=106, W=26, D(incl. lever)=81, D(excl. lever)=61.6, Terminal capacity=16mm²

	Order Code	1+	5+	20+	50+
Single Pole Fuseholder	187-290	17.71	17.22	16.27	15.49

22 x 58mm HRC Cartridge Fuses and Accessories

gR, gL-gG and aM Lines**GOULD****gR Ultra Rapid Semiconductor Fuses**

- European style industrial ceramic ultra rapid fuses for protection of thyristors, diodes, power transistors etc.
- Indicator striker pin option
- UL recognised

Voltage rating	700V ac (UL), 600V ac IEC	Breaking capacity	200kA
Power dissipation	9.6 to 19W		

Mfrs. List No. 50-140-06+Rating (standard), 50-142-06+Rating (with indicator pin)

Rating (A)	Pre-arcing I ² t	Total I ² t @ 660V	Order Code	1+	10+	100+	200+
Standard							
32	63	315	329-5497	18.15	16.20	14.31	12.87
40	140	610	329-5503	25.11	22.53	19.86	17.97
50	210	910	329-5515	25.11	22.53	19.86	17.97
63	510	2260	329-5527	25.44	23.01	20.19	18.27
80	1000	4400	329-5539	25.44	23.01	20.19	18.27
100	2050	8900	329-5540	30.12	27.21	24.00	21.45

gL-gG (General Line)

- European style industrial HRC fuses for cable protection and applications where there are no surges to be absorbed
- Manufactured in accordance with **IEC 269-3-1, NFC61.201 and UNE21.103**
- Approved by **Lloyds Register of Shipping and Bureau Verit**

Voltage rating	660Vac (up to 80A) 500Vac (100A) 400Vac (125A)	Breaking capacity	80kA (up to 80A) 80kA (100, 125A)
----------------	--	-------------------	--------------------------------------

Rating (A)	Order Code	1+	10+	100+	200+
32	329-5552	4.38	3.99	3.51	3.15
40	329-5564	4.07	3.78	3.35	2.99
50	329-5576	4.13	3.84	3.39	3.03
63	329-5588	4.38	3.99	3.51	3.15
80	329-5590	4.69	4.33	3.78	3.42
100	329-5606	4.98	4.50	3.93	3.57
125	329-5618	5.40	4.86	4.29	3.87

aM (Motor Rated)

- European style industrial HRC fuses for applications where an initial surge has to be absorbed (e.g. motor start)
- Manufactured in accordance with **IEC 269-3-1, NFC61.201 and UNE21.103**
- Approved by **Lloyds Register of Shipping and Bureau Veritas**

Voltage rating	660Vac (up to 80A) 500Vac (100A) 400Vac (125A)	Breaking capacity	80kA (up to 80A) 80kA (100, 125A)
----------------	--	-------------------	--------------------------------------

Rating (A)	Order Code	1+	10+	100+	200+
63	329-5655	4.50	4.02	3.57	3.21
80	329-5667	5.08	4.69	4.17	3.74
125	329-5680	5.27	4.88	4.33	3.97

Fuseholder for 22 x 58mm fuses

- Manufactured in accordance with **IEC 269-2-1, 947-3, NFC63210-63001, VDE0636-1 and UNE20129-21103**

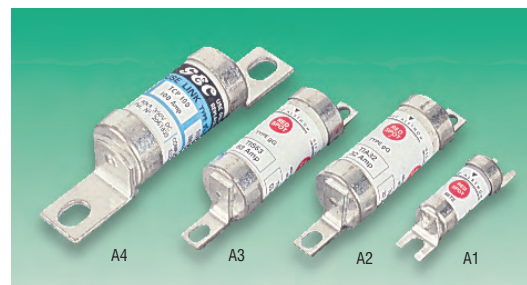
- Approved by **Lloyds Register of Shipping and Bureau Veritas**

Voltage rating	660V ac (up to 80A) 500V ac (100A) 400V ac (125A)	Breaking capacity	80kA (up to 80A) 120kA (100, 125A)
----------------	---	-------------------	---------------------------------------

H = 140, W = 35, D (incl. lever) = 88, D (excl. lever) = 58, Terminal capacity = 16mm²

227526

	Order Code	1+	10+	25+	50+
Single Pole Fuseholder	329-5692	29.67	26.82	24.12	21.76

Industrial HRC Fuses**'Redspot'® Series****GECA LVE**

Redspot range of HRC Fuselinks, **ASTA20** approved, complying with **BS88 Pt2 1988** at **80kA** and **40kA** dc (see table).

They have **Class 01** fusing factors to **BS88-2-1988** providing close access current protection of PVC insulated cables enabling compliance with the **16th Edition of the IEE wiring regulations for Electrical Installations**.

Suitable for use in motor circuits, use of the extended range for motor circuits enhances this capability. All fuselinks have power dissipation values well within the limits of **BS88 Pt2 1988** and are approved by most authorities, including **Lloyds and Ministry of Defence**.

Motor Circuit fuselinks are also listed where there is a requirement for a fuse to withstand the starting surge currents of the motor and be able to carry the **Full Load Current (FLC)** of the motor, e.g. 32M63, a motor current fuse able to withstand the starting surge current of the motor, but the FLC must not exceed the lesser of the two values, i.e. 32A.

Size	Max L	Max Dia.	Max Tag	Fixing Centres Nom.	Max Bolt Size
A1	55.6	14.3	11.1	44.5	M4
A2	85.8	23.8	8.7	73	M5
A3 (40-63)	85.8	23.8	8.7	73	M5
A3 (63M80, 63M100)	90.5	27.8	12.7	73	M5
A4	111	34.9	19.1	93.7	M8
B2 (125-200)	136.5	34.9	19.1	111	M8
B2 (200M250)	136.5	41.3	19.1	111	M8

Current Rating Amps	Max. Voltage Rating ac	dc	BS88-2 Reference	Mfrs. List No.
2-20	550	250	A1	NIT
20M25, 20M32	415	—	A1	NIT
6-32	660	460	A2	TIA
32M40-32M50	660	460	A2	TIA
40-63	660	460	A3	TIS
63M80-63M100	660	460	A3	TIS
80, 100	660	460	A4	TCP
100M125, 100M160	660	—	A4	TCP
125-200	660	350	B2	TF
200M250	660	460	B2	TF

204618

Current Rating	Order Code	1+	Price Each 50+	100+
Size A1 — Open-ended Slotted Tag - NIT				
2A	177-573	5.43	4.89	4.56
4A	177-574	5.43	4.89	4.56
6A	177-575	5.43	4.89	4.56
10A	177-576	5.43	4.89	4.56
16A	177-577	5.70	5.13	4.74

Current Rating	Order Code	1+	Price Each 50+	100+
Size A1 — Open-ended Slotted Tag - NIT				
20A	177-578	7.29	6.54	6.06
20M25A	177-579	8.34	7.47	6.93
20M32A	177-580	8.34	7.47	6.93
Size A2 — Bolted Tag - TIA				
6A	177-581	8.67	7.80	7.26
10A	177-582	8.67	7.80	7.26
16A	177-583	9.45	8.49	7.89
20A	177-584	9.45	8.49	7.89
25A	177-585	10.17	9.15	8.46
32A	177-586	10.17	9.15	8.46
32M40A	177-588	12.06	10.83	10.05
32M50A	177-589	12.06	10.83	10.05
Size A3 — Bolted Tag - TIS				
40A	177-591	17.16	15.51	14.40
63A	177-593	19.77	17.85	16.53
63M80A	177-594	24.96	22.53	20.85
63M100A	177-595	24.96	22.53	20.85
Size A4 — Bolted Tag - TCP				
80A	177-596	33.06	29.88	27.69
100A	177-597	33.06	29.88	27.69
100M125A	177-598	39.84	35.91	33.30
100M160A	177-599	40.17	34.89	32.34
Size B2 — Bolted Tag - TF				
125A	178-451	54.42	49.08	45.45
160A	178-452	58.65	52.89	48.96
200A	178-453	61.89	55.77	51.72
200M250A	178-454	69.66	62.70	58.17

Low Voltage Industrial HRC

Bussmann

Industrial HRC fuselinks to **BS88** and **IEC269 (parts 1 and 2)** available in general purpose and dual rated motor circuit styles.

Voltage rating	550V ac	Breaking capacity	80kA	
	Overall Length	Diameter	Fixing Centres	Suitable Fuseholder
Size				Mfrs List No.
F1 (NS)	58.7	13.8	—	556-154 NSD
A1	54.5	13.8	44.5	556-361 NITD
A2	85	13.8	73	556-373 AAO
A3	87	21.4	73	556-385 BAO
A4	111	21.4	94	177-607 CEO

204453

Current Rating	Order Code	1+	Price Each 25+	50+	100+
Size F1 — Offset Blade Tag - NSD					
2A	120-2348	3.62	3.30	3.08	2.90
4A	120-2349	3.62	3.30	3.08	2.90
6A	120-2350	3.62	3.30	3.08	2.90
10A	120-2351	3.62	3.30	3.21	—
16A	120-2353	3.62	3.30	3.21	—
20A	120-2354	3.62	3.30	3.21	—
25A	120-2409	3.62	3.30	3.21	—
32A	120-2410	3.62	3.30	3.21	—
Size A1 — Open Ended Slotted Tag - NITD					
2A	120-2355	3.62	3.30	3.08	2.90
4A	120-2356	3.62	3.30	3.08	2.90
6A	120-2357	3.62	3.30	3.08	2.90
10A	120-2358	3.62	3.30	3.08	2.90
16A	120-2359	3.62	3.30	3.08	2.90
20A	120-2360	4.78	4.35	4.23	—
25A	120-2409	3.62	3.30	3.21	—
32A	120-2410	3.62	3.30	3.21	—
20M25A	120-2413	3.99	3.63	3.39	3.19
20M32A	120-2361	3.94	3.58	3.35	3.15
32M40A	120-2414	6.56	5.97	5.81	—
32M63A	120-2415	6.62	6.02	5.86	—
Size A2 — Offset Bolted Tag - AAO					
2A	120-2416	6.58	6.38	5.92	5.76
4A	120-2417	5.41	4.92	4.60	4.33
6A	120-2362	5.72	5.21	4.86	4.58
10A	120-2363	5.72	5.21	4.86	4.58
16A	120-2365	6.30	5.73	5.36	5.04
20A	120-2366	6.30	5.73	5.36	5.04

Current Rating	Order Code	1+	Price Each 25+	50+	100+
Size A2 — Offset Bolted Tag - AAO					
25A	120-2367	6.62	6.02	5.62	5.29
32A	120-2368	6.62	6.02	5.62	5.29
32M40A	120-2419	5.99	5.45	5.09	4.79
32M50A	120-2421	5.99	5.45	5.09	4.79
32M60A	120-2422	6.14	5.59	5.22	4.91
Size A3 — Offset Bolted Tag - BAO					
40A	120-2369	11.66	10.61	9.91	9.32
50A	120-2370	11.66	10.61	9.91	9.32
63A	120-2371	12.60	11.47	10.71	10.08
63M80A	120-2423	12.23	11.13	10.40	9.79
63M100A	120-2424	12.23	11.13	10.40	9.79
Size A3 - OSD					
80A	120-2385	18.66	17.44	16.97	—
100A	120-2386	20.10	18.30	17.81	—
Size A4 — Offset Bolted Tag - CEO					
100A	120-2372	26.93	24.51	22.89	21.55
100M125A	120-2425	28.30	25.75	24.05	22.64
100M160A	120-2426	28.30	25.75	24.05	22.64
100M200A	120-2427	28.30	25.75	24.05	22.64

"NS" Series - Size 'F1'

GECA LVE



Industrial "NS" size HRC fuselinks having **Class Q1** fusing factors in accordance with the IEE Wiring Regulations.

L (overall)=61.7 max.
L (body)=35.6 max
Diameter=13.9
Tag width=11.0

Voltage rating

440V ac/250V dc

204617

Current Rating	Order Code	1+	Price Each 20+	50+
2A	177-781	5.34	4.20	4.14
4A	177-782	5.22	4.14	4.14
6A	177-783	4.98	4.14	—
10A	177-784	5.94	4.62	4.14
16A	177-785	6.36	4.95	4.46
20A	177-786	8.34	6.48	5.81
25A	177-787	9.00	7.05	6.28
32A	177-788	9.00	7.05	6.28

High Speed HRC Fuses

BS88 Semiconductor Fuses
Ultra Rapid Blowing Characteristic**SIBA**

LET Type



LMT Type



Microswitch



Trip indicator

- Fuses conform to BS88, Part 2, 1988
- Ultra rapid blowing characteristic
- Often referred to a rectifier fuse or semiconductor fuse
- Principle application is for thyristor protection

Dimensions (mm)	Tip to Tip	Fixing centres	Body length	Body diameter
LCT Type	46	38	27	8
LET Type	55	41.8	29.2	17.5
LMT Type	83	59	31	35
CT Type	73	64	54	8.4
ET Type	78.5	63.5	48	17.5
MT Type	113	85	52	35

Trip Indicator Kits: Kits are available for the LET, LMT, ET and MT range of fuses. Each kit contains 2 clips and an indicator. The indicator is clipped to the fuse to provide local indication of the fuse condition.

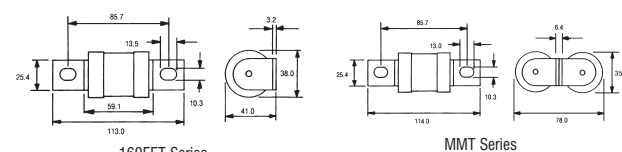
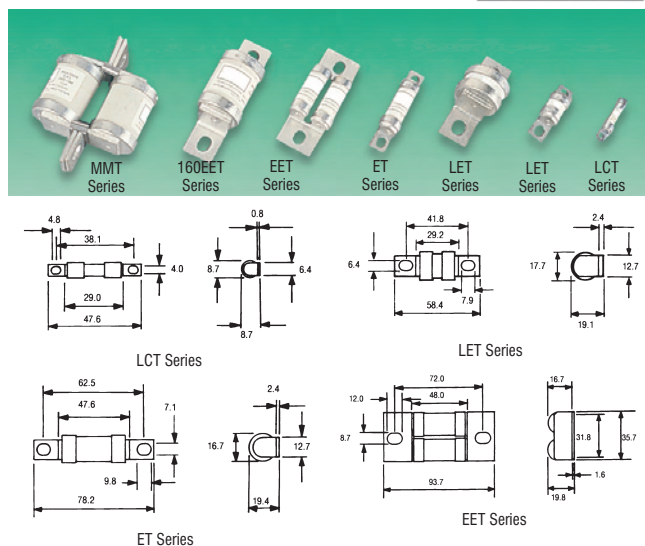
Available to fit the indicator is a micro-switch. This enables remote fuse condition indication via 1 x NO and 1 x NC contacts rated at 5A@250V ac

311858

Rating	Mfrs. List No.	Order Code	1+	10+	50+	100+
LCT Type						
5A	50-076-06/5A	444-0705	6.87	6.48	6.21	5.94
10A	50-076-06/10A	444-0717	6.87	6.48	6.21	5.94
16A	50-076-06/16A	444-0729	6.87	6.48	6.21	5.94
20A	50-076-06/20A	444-0730	7.65	—	—	—
LET Type						
10A	50-053-06/10A	444-0742	14.94	13.56	12.93	12.51
16A	50-053-06/16A	444-0754	13.35	—	—	—
20A	50-053-06/20A	444-0766	15.99	14.28	12.93	12.51
25A	50-053-06/25A	444-0778	15.99	14.28	12.93	12.51
32A	50-053-06/32A	444-0780	15.99	14.28	12.93	12.51
35A	50-053-06/35A	444-0791	15.99	14.28	12.93	12.51
50A	50-053-06/50A	444-0808	15.99	14.28	12.93	12.51
63A	50-053-06/63A	444-0810	15.99	14.28	12.93	12.51
75A	50-053-06/75A	444-0821	15.99	14.28	12.93	12.51
80A	50-053-06/80A	444-0833	15.99	14.28	12.93	12.51
100A	50-053-06/100A	444-0845	18.21	15.96	14.31	13.53
125A	50-053-06/125A	444-0857	19.38	16.44	14.73	13.65
160A	50-053-06/160A	444-0869	20.70	17.01	14.88	13.56
180A	50-053-06/180A	444-0870	20.70	17.40	14.88	13.65
LMT Type						
160A	50-054-06/160A	444-0882	41.76	37.95	34.62	32.40
160A	50-054-06/200A	444-0894	41.73	38.34	34.68	33.27
250A	50-054-06/250A	444-0900	42.87	37.20	34.68	33.27
160A	50-054-06/315A	444-0912	46.80	43.59	40.65	39.03
350A	50-054-06/350A	444-0924	46.80	43.59	40.65	39.03
CT Type						
6A	50-077-06/6A	444-0936	9.03	8.76	8.31	8.16
10A	50-077-06/10A	444-0948	9.03	8.76	8.31	8.16
16A	50-077-06/16A	444-0950	9.03	8.76	8.31	8.16
20A	50-077-06/20A	444-0961	9.03	8.76	8.31	8.16
ET Type						
10A	50-073-06/10A	444-0973	19.47	15.06	12.87	12.09
16A	50-073-06/16A	444-0985	19.47	15.06	12.87	12.09
20A	50-073-06/20A	444-0997	19.47	15.06	12.87	12.09
25A	50-073-06/25A	444-1000	19.47	15.06	12.87	12.09
32A	50-073-06/32A	444-1011	19.47	15.06	12.87	12.09
35A	50-073-06/35A	444-1023	19.47	15.06	12.87	12.09
40A	50-073-06/40A	444-1035	19.47	15.06	12.87	12.09
45A	50-073-06/45A	444-1047	21.84	17.22	14.73	13.80
56A	50-073-06/56A	444-1059	21.84	17.22	14.73	13.80
63A	50-073-06/63A	444-1060	24.51	21.00	19.11	17.52
75A	50-073-06/75A	444-1072	24.66	24.15	21.99	20.97
80A	50-073-06/80A	444-1084	24.66	24.15	21.99	20.97
100A	50-073-06/100A	444-1096	32.10	25.38	23.64	22.95
MT Type						
100A	50-074-06/100A	444-1102	47.01	44.07	42.15	41.25
200A	50-074-06/200A	444-1114	45.90	44.58	42.72	41.67
250A	50-074-06/250A	444-1126	59.10	56.49	52.56	51.27
Accessories						
Trip Ind.	LET KIT	444-1138	12.15	11.61	10.71	10.11
Trip Ind.	LMT KIT	444-1140	12.45	11.91	10.95	10.38
Trip Ind.	ET KIT	444-1151	16.29	15.57	14.34	13.56
Trip Ind.	MT KIT	444-1163	16.59	15.87	14.61	13.83
Microswitch BS 58-053-05.1		444-1175	13.99	13.39	12.32	11.66

Semi-conductor Protection Fuses

Bussmann



Designed for semiconductor protection

240 Volt RMS Series		I ² t Rating (A ² S)		Former IR		Bussmann		Order	
Rating (A)	Max Power Loss (Watts)	Pre-Arcing (Min)	Max @ 120V	Max @ 240V	List No.	List No.	List No.	Code	Code
6	1	1.7	6	9	A350-6	6LCT	120-2308		
10	2.5	3.8	12	22	A350-10	10LCT	120-2309		
12	2.5	7	22	32	—	12LCT	120-2428		
16	2.5	20	50	100	A350-16	16LCT	120-2310		
20	4	25	80	160	A350-20	20LCT	120-2311		
7	1.5	1.7	10	17	L350-7	7LET	120-2312		
10	1.8	3.8	23	35	L350-10	10LET	120-2313		
12	2	7	42	58	L350-12	12LET	120-2314		
16	2.5	15	70	140	L350-16	16LET	120-2316		
25	4	19	120	250	L350-25	25LET	120-2317		
32	5	32	200	400	L350-32	32LET	120-2318		
35	5	51	320	650	L350-35	35LET	120-2319		
50	7	100	500	1400	—	50LET	120-2429		
63	9	180	1100	2200	L350-63	63LET	120-2320		
80	10	300	1900	3800	L350-80	80LET	120-2321		
100	10	600	3800	7500	L350-100	100LET	120-2322		
125	16	600	3800	7500	L350-125	125LET	120-2323		
160	20	1100	7000	15000	L350-160	160LET	120-2324		
160	17	1100	7000	15000	—	160LMT	120-2326		
180	21	1800	12000	24000	L350-180	180LET	120-2325		

660 Volt RMS Series		I ² t Rating (A ² S)		Former IR		Bussmann		Order	
Rating (A)	Max Power Loss (Watts)	Pre-Arcing (Min)	Max @ 415V	Max @ 660V	List No.	List No.	List No.	Code	Code
8	3.2	1.7	10	15	E1000-8	8ET	120-2328		
12	3.7	7	38	55	E1000-12	12ET	120-2329		
15	4.6	11	60	95	E1000-15	15ET	120-2330		
20	7.5	18	100	180	E1000-20	20ET	120-2331		
25	7	24	150	250	E1000-25	25ET	120-2332		
32	11	32	190	350	E1000-32	32ET	120-2333		
40	9	100	600	900	E1000-40	40ET	120-2334		
56	14	160	950	1500	E1000-56	56ET	120-2335		
80	18	410	2500	4000	E1000-80	80ET	120-2336		
65	20	210	1100	1700	EE1000-65	65EET	120-2337		
75	20	420	2000	3000	EE1000-75	75EET	120-2338		
90	19	480	3000	4500	EE1000-90	90EET	120-2341		
110	27	600	4000	6500	EE1000-110	110EET	120-2342		
160	26	2400	15000	25000	M1000-160	160MT	120-2343		
225	42	4600	25000	40000	MM1000-225	225MMT	120-2344		
280	47	7400	45000	70000	MM1000-280	280MMT	120-2345		
315	51	9600	60000	90000	MM1000-315	315MMT	120-2346		
355	54	18000	100000	150000	MM1000-355	355MMT	120-2347		

Former IR product List No. are electrically identical to Bussmann List No. IR's range of fuses were manufactured by Bussmann and then re-branded.

204609

Current Rating	Order Code	1+	20+	40+	100+
240 Volt RMS Series					
6A	120-2308	6.93	6.21	5.97	5.94
10A	120-2309	6.93	6.21	5.97	5.94
12A	120-2428	7.59	6.96	6.30	6.00
16A	120-2310	7.20	—	—	—
20A	120-2311	6.93	6.21	5.97	5.94
		1+	10+	50+	100+
7A	120-2312	15.06	13.83	13.05	12.84
10A	120-2313	15.06	13.83	13.05	12.84
12A	120-2314	16.59	14.70	13.59	13.38
16A	120-2316	16.59	14.70	13.59	13.38
25A	120-2317	16.35	14.73	14.01	13.68
32A	120-2318	16.35	14.73	14.01	13.68
35A	120-2319	16.35	14.73	14.01	13.68
50A	120-2429	16.35	14.73	14.01	13.68
63A	120-2320	16.35	14.73	14.01	13.68
80A	120-2321	16.35	14.73	14.01	13.68
100A	120-2322	18.87	17.55	16.05	15.72
125A	120-2323	20.13	17.70	16.62	16.29
160A	120-2324	21.03	18.57	17.55	17.28
160A	120-2326	38.88	34.53	32.37	31.74
180A	120-2325	21.03	18.57	17.55	17.28
		1+	10+	50+	100+
660 Volt RMS Series					
8A	120-2328	20.34	18.30	16.50	15.99
12A	120-2329	20.34	18.30	16.50	15.99
15A	120-2330	20.34	18.30	16.50	15.99
20A	120-2331	20.34	18.30	16.50	15.99
25A	120-2332	20.34	18.30	16.50	15.99
32A	120-2333	20.34	18.30	16.50	15.99
40A	120-2334	20.34	18.30	16.50	15.99
56A	120-2335	20.34	18.30	16.50	15.99
80A	120-2336	21.99	19.95	18.12	16.62
65A	120-2337	44.19	39.78	37.44	35.91
75A	120-2338	44.19	39.78	37.44	35.91

Fuses, Circuit Breakers & Consumer Units

Compliant
Non-compliant
+ Limited stock - RoHS replacement available

RoHS

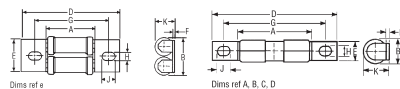
660 Volt RMS Series

		Price Each			
	Order Code	1+	10+	50+	100+
90A	120-2341	44.19	39.78	37.44	35.91
110A	120-2342	44.19	39.78	37.44	35.91
160A	120-2343	45.75	42.75	40.71	40.08
		1+	5+	10+	25+
225A	120-2344	96.03	85.29	81.21	78.99
280A	120-2345	96.03	85.29	81.21	78.99
315A	120-2346	96.03	85.29	81.21	78.99
355A	120-2347	96.03	85.29	81.21	78.99

BS88 Semiconductor Fuse Links

Trip Indication Available

GECA LVE



Dims Ref	A	B	D	E	F	G	H	J	K
A	28	8	47.6	6.4	0.8	38.1	3.8	5	8.7
B	29.2	17.3	58.4	12.7	1.6	41.8	6.4	7.9	18.2
C	55	8	74.6	6.4	0.8	65	3.8	5	8.7
D	50	17.3	79.5	12	1.6	61.8	6.4	7.9	18.2
E	48	35.7	95	31.8	1.6	72	8.3	13.4	19
F	55	34.6	107	25.4	6.4	81.7	10.3	15.5	77.6

- HRC fuse links for Semiconductor applications
- Fast acting fuse links are designed to disconnect failed semiconductor devices
- Ultra fast acting fuse links are designed to provide short circuit protection of semiconductors
- AC and DC ratings
- ASTA certified to BS88

GSA Series - Fast Acting

Voltage Rating 240V ac 200V dc

Current Rating (A)	Pre-Arcing I ² T (min)	Power Dissipation	Top Cap Temp rise @ 20°C Ambient	Dims Ref	Mfrs. List No.	Order Code
5	1.1	0.8	11	A	GSA5	870-420
10	4.3	1.6	18	A	GSA10	870-432
15	12	2.5	25	A	GSA15	870-444
20	17	3.5	33	A	GSA20	870-456
25	74	2.6	18	B	GSA25	870-468
35	150	4	27	B	GSA35	870-470
50	400	5.2	34	B	GSA50	870-481

Mfrs. List No. GS1PAS, Order Code 772-884

Rating	Order Code	1+	20+	100+	250+	+
5A	870-420	8.55	7.68	7.11	--	--
10A	870-432	9.28	8.33	7.71	7.42	--
15A	870-444	8.55	7.68	7.11	--	--
20A	870-456	8.55	7.68	7.11	--	--
25A	870-468	19.11	17.16	15.93	15.86	--
35A	870-470	19.11	17.16	15.93	15.86	--
50A	870-481	19.11	17.16	15.93	15.86	--

GSB Series - Fast Acting

Voltage Rating 600V ac 400V dc

Current Rating (A)	Pre-Arcing I ² T (min)	Power Dissipation	Top Cap Temp rise @ 20°C Ambient	Dims Ref	Mfrs. List No.	Order Code
10	2.3	3.6	36	C	GSB10	870-500
15	11	3.9	33	C	GSB15	870-511
20	28	7.3	52	C	GSB20	870-523
25	40	6.7	44	D	GSB25	870-535

Rating	Order Code	1+	20+	100+	250+	+
5A	870-493	9.57	8.58	7.95	7.90	--
10A	870-500	9.57	8.58	7.95	7.90	--
15A	870-511	9.57	8.58	7.95	7.90	--
20A	870-523	9.57	8.58	7.95	7.90	--
25A	870-535	22.86	20.55	19.05	18.97	--

GSGB Series - Ultra Fast Acting

Voltage Rating 660Vac, 400Vdc (16-160A) 350Vdc (200-350A)

Current Rating (A)	Pre-Arcing I ² T (min)	Power Dissipation	Top Cap Temp rise @ 20°C Ambient	Dims Ref	Mfrs. List No.	Order Code
16	8	4.7	35	D	GSGB16	870-559
25	23	8.3	44	D	GSGB25	870-560
30	36	9.6	48	D	GSGB30	870-572
35	70	9.3	48	D	GSGB35	870-584
40	110	9.3	48	D	GSGB40	870-596
45	140	10.8	50	D	GSGB45	870-602
55	205	14.7	58	D	GSGB55	870-614
75	280	23	83	E	GSGB75	870-626
85	560	20	58	E	GSGB85	870-638
110	800	30	88	E	GSGB110	870-640

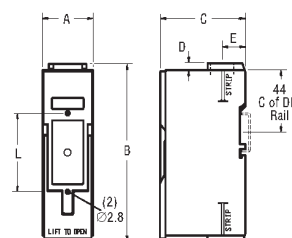
Rating	Order Code	1+	5+	20+	100+	+
150	870-559	20.73	20.10	18.33	17.21	--
200	870-560	23.01	22.20	20.31	19.16	--
235	870-572	23.01	22.20	20.31	19.16	--
300	870-584	23.64	22.92	20.88	19.67	--
350	870-596	23.64	22.92	20.88	19.67	--
	870-602	23.64	22.92	20.88	19.67	--
	870-614	23.64	22.92	20.88	19.67	--
	870-626	49.89	48.24	44.04	41.39	--
	870-638	49.89	48.24	44.04	41.39	--
	870-640	50.55	48.93	44.64	41.85	--
	870-651	53.46	51.51	47.13	44.18	--
	870-663	100.80	90.78	90.12	--	--
	870-675	100.80	90.78	90.12	--	--
	870-687	109.20	98.31	97.51	--	--
	870-699	110.70	99.69	99.09	--	--
	870-705	110.70	99.69	99.09	--	--

204496

Fuse Carriers

Camaster

Bussmann



A range of fully shrouded HRC fuseholders designed to accommodate offset bolted tag HRC fuselinks to BS88 (Parts 1 & 2) and IEC 269-1 & 2 1986.

These fuseholders feature a lever operated cam for easy removal of the fuse carrier from the base. This allows increased pressure between fuse carrier and fuse base contacts thus enhancing the electrical performance. Fuselink fixing screws remain captive in the fuse carrier to prevent their loss when fuse changing. Suitable for DIN rail or panel mounting. Supplied as front connection.

Fuse Size	Rating Amps	Max. Cable mm ²	Fuse Type	Dimensions A	B	C	D	E	Mfrs. List No.	Order Code
A1	32	16	NITD	25.4	93.7	60	3.2	17.5	CM32FC.	556-361
A2	32	16	AAO	31.8	117.5	60	3.2	17.5	CM32F.	556-373
A3	63	70	BAO	35.6	125	60	4.75	16.4	CM63F.	556-385
A3	100	70	OCD	35.6	125	60	4.75	16.4	CM100F.	968-766

204445

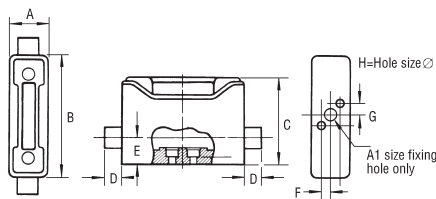
Fuse	Fuse Type	Order Code	1+	10+	20+	50+
A1	NITD	556-361	16.49	15.79	14.96	14.16
A2	AAO	556-373	23.43	22.31	21.12	20.00
A3	BAO	556-385	28.50	27.16	25.78	24.33
A3	OCD	968-766	45.60	43.37	41.12	38.78

'Redspot'™ Series

A1 to A4 and B2

GECA LVE





Fuse Carrier Size	Fuse Size	Max. Cable Size (mm ²)	Max Current Rating	A	B	C	D	E	F	G	H
A1	A1	10	20A	27	80	54	15	22	—	—	5.5
A2	A2	16	32A	32	104	70	15	22	6.4	3.2	5.5
A3	A3	50	63A	35	110	76	15	24	6.4	3.2	6.6
A4	A4	70	100A	51	140	100	15	28	9.5	11.1	6.6
B2	B2	120	200A	70	216	137	22	32	19	28.6	6.6

Notes: A1 size fuse carrier has one central fixing hole. A2, A3, A4 and B2 sizes are two hole fixing (see diagram above). B2 size fuse carrier has a different style handle to that shown in the diagram above.

GEC 'Redspot' fuse carriers are widely accepted as an industry standard for use with BS88 fuses.

Moulded from a flame retardant non-hygroscopic phenolic resin to **BS771** they are available in black or white (B2 Black only).

The patented non-twist cable clamping screw of large diameter complies with **CEGB** requirements for **Class II duty**, whilst contacts are single screw fixing with large contact area and anti-vibration features.

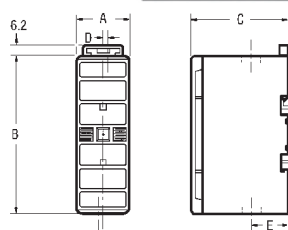
Approved by Lloyds register for marine applications, **CEGB approval Nr.29** for **Category II duty**.

Size	Mfrs. List No.	Black Order Code	White Order Code
A1	RS20H	177-604	237-346
A2	RS32H	177-605	237-358
A3	RS63H	177-606	237-360
A4	RS100H	177-607	237-371
B2	RS200H	177-608	—

204620

Size	Colour	Order Code	1+	10+	50+	100+
A1	Black	177-604	17.70	16.44	15.99	15.57
A1	White	237-346	23.70	21.99	21.41	20.83
A2	Black	177-605	25.70	23.91	23.21	22.57
A2	White	237-358	33.05	30.66	29.79	29.02
A3	Black	177-606	31.38	29.11	28.34	27.57
A3	White	237-360	40.72	37.72	36.72	35.70
A4	Black	177-607	70.44	65.32	63.53	61.79
A4	White	237-371	88.30	83.78	79.80	76.14
B2	Black	177-608	261.29	241.75	235.20	228.68

Safeloc



Dimensions	A	B	C	D
	25.4	76.2	46.5	2.3

Designed to accommodate the F1 size of **BS88** offset blade fuselinks. Featuring a unique slide action carrier, which retains the fuselink for easy insertion to the base. The fuselink blades connect directly with the shrouded base contacts for improved reliability and lower losses. Terminal screws are semi-captive and are front connection. Suitable for 35mm DIN rail or single screw mounting.

Rating	32A	Fuse size	F1
Max. cable size	16mm ²		
Mfrs. List No.	32NNSF		

204443

Fuse Size	Order Code	1+	10+	25+	100+
F1 (NS)	556-154	9.72	9.21	8.73	8.31

1,000's of products added every month,
check out the very latest products,
news and information at:
www.farnell-newarkinone.com.sg

The very latest NEW products

European 'D' Fuses & Accessories

Ultra Rapid (gr).

DII & DIII Series



- High breaking capacity, low power loss
- Class gR
- For protection of semiconductors and small drive units
- Conforms to **DIN49515** and **VDE0636-33**
- Suitable for 3-phase applications

Working voltage	500Vac	440Vdc
Breaking Capacity	50kA	

L DII=50, DIII=50
Dia DII=22, DIII=27

204481

Current Rating (A)	Dissipation (W)	Order Code	1+	25+	100+	250+	+	+
Type D11								
2	1.8	901-908	6.18	5.28	4.86	4.50	--	--
4	3.1	901-910	6.18	5.28	4.86	4.50	--	--
6	4	901-921	5.55	4.74	4.35	4.02	--	--
10	6	901-933	5.55	4.74	4.35	4.02	--	--
16	7	901-945	5.55	4.74	4.35	4.02	--	--
20	8	901-957	5.55	4.74	4.35	4.02	--	--
25	10	901-969	5.85	4.98	4.59	4.23	--	--
30	12	901-970	5.85	4.98	4.59	4.23	--	--
Type D111								
35	13	902-056	7.83	6.66	6.15	5.67	--	--
50	16	902-068	7.83	6.66	6.15	5.67	--	--
63	19	902-070	7.83	6.66	6.15	5.67	--	--

General Line (gl)

D01/D02 Series



- Low power loss
- Conforms to **DIN 49-522**, **IEC269**, **VDE0636**
- Approved to **VDE**, **DEMKO (6-25A)**

Voltage rating	400Vac, 250Vdc
Breaking capacity	50kA (cos φ=0.2)

Type D01 - L = 36, Dia = 11mm
Type D02 - L = 36, Dia = 15mm

204482

Order Code	5+	25+	100+	250+	+	+
Type D01						
2A	901-805	0.99	0.87	0.78	0.72	--
4A	901-817	0.99	0.87	0.78	0.72	--
6A	901-829	0.99	0.87	0.78	0.72	--
10A	901-830	0.90	0.78	0.69	0.63	--
16A	901-842	0.90	0.78	0.69	0.63	--
Type D02						
20A	901-854	0.99	0.87	0.78	0.72	--
25A	901-866	0.99	0.87	0.78	0.72	--
35A	901-878	1.17	0.96	0.93	0.84	--
50A	901-880	1.44	1.20	1.11	1.02	--
63A	901-891	1.44	1.20	1.11	1.02	--

gL (General Line)



gL-D-II Series
2A to 25A

L=50, Dia=21.8
Thread=E27

gL-D-III Series
35A to 63A

L=50, Dia=28
Thread=E33

D11 and D111 style delayed acting HRC fuses approved to **DIN49515**, **VDE0635** and **VDE0636**. They have a voltage rating of 500V ac or dc. The state of the fuse element is indicated by a coloured disc in the end cap. The fuses have low internal wattage and on continuous load capacity are non ageing. Suitable for cable protection and applications where there are no surges to be absorbed.

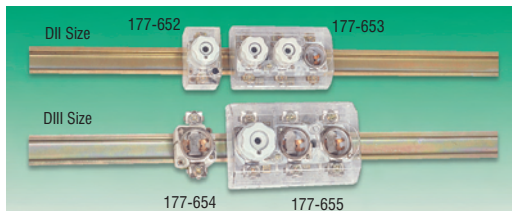
Mfrs. List No. gLDII + Rating or gLDIII + Rating.

Compliant
Non-compliant
Limited stock - RoHS replacement available
RoHS

204612

Current Rating	Order Code	Price Each			
		5+	25+	100+	250+
gLD-11 Series					
2A	170-436	2.10	1.89	1.71	1.56
4A	170-437	2.10	1.89	1.71	1.56
6A	170-438	2.10	1.89	1.71	1.56
10A	170-439	1.35	1.26	1.14	1.07
16A	170-440	1.50	1.38	1.26	1.17
20A	170-441	1.50	1.38	1.26	1.17
25A	170-442	1.50	1.38	1.26	1.17
gLD-111 Series					
35A	170-443	2.67	2.43	2.22	2.05
50A	170-444	2.67	2.43	2.22	2.05
63A	170-445	2.67	2.43	2.22	2.05

Fuse Bases



Wide range of ceramic European fuse bases, screw caps shrouds and gauge rings, approved to **VDE0636** excluding the gauge rings which are to **DIN49362**, **DIN49326**, **DIN49327** and **DIN49524**. All creepage and clearance paths are specified to **VDE0636 Pt. 41** with climatic tests complete to **IEC68** constant to **Parts 2 and 3** and cyclic **Parts 2 to 30**. Two sizes of fuse base and screw caps are available as follows:-

DII Range 2 - 25A 177-652, 177-653

Either single or triple pole fuse bases having snap-on fastening to top hat DIN rail. Single or triple pole shrouds are supplied with relevant fuse base. Each shroud has top and bottom knockouts to accommodate different cable sizes.

DIII Range 35A - 63A, 177-654, 177-655

Either single or triple pole fuse bases having snap-on fastening to top hat DIN rail. The single pole base does not have a shroud, but the triple pole base is supplied with a shroud which has top and bottom knockouts as above. Each fuse base is supplied as a separate item and does not include a screw cap which should be ordered separately. The single pole fuseholder (177-652) and triple pole fuseholders (177-653 and 177-655) can be surface mounted, by removing the DIN rail attachment. The 177-654 is suitable for DIN rail mounting only.

	Dimensions				Connections	Mfrs. List No.	Order Code
	H	W	D1★	D2★			
Single pole (with shroud)	74	45	53	80	M5	S27-1/C+H	177-652
Triple pole (with shroud)	76	123	53	80	M5	S27/C	177-653

D111 Size 35A - 63A							
	H	W	D1★	D2★	Connections	Mfrs. List No.	Order Code
Single pole (no shroud)	79	45	45	80	M6	S33-1/C	177-654
Triple pole (with shroud)	97	150	53	80	M6	S33/C	177-655

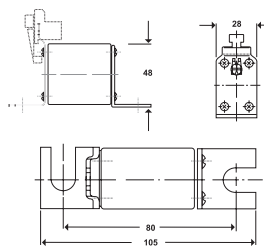
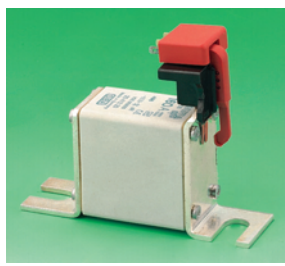
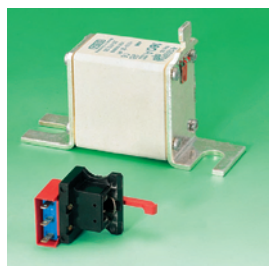
	Rated voltage		Terminal capacities:	
	D11, 500V ac	D111, 660V ac		
Creepage + clearance	VDE0636 Pt 41		D11 solid core	1 to 10mm ²
Rated current	D11, 25A max.		D11 stranded flexible core with ferrules	0.75 to 10mm ²
	D111, 63A max.		D111 solid core	2.5 to 16mm ²
Heat loss/current path at uninterrupted current	D11, 2.5W		D111 stranded or flexible core with ferrules	1.5 to 25mm ²
	D111, 5W			

204613

	Order Code	Price Each		
		1+	5+	15+
D11 single pole fuse base and shroud	177-652	22.60	19.45	17.08
D11 triple pole fuse base and shroud	177-653	43.37	37.88	33.29
D111 single pole fuse base (no shroud)	177-654	18.09	15.73	13.80
D111 triple pole fuse base and shroud	177-655	77.75	67.41	59.22

European DIN 80 Fuses

uR - 00 Size



Voltage rating
Breaking capacity

- European style '00' size ultra rapid industrial semiconductor fuses
- Suitable for thyristor control applications eg. high speed switching inverters, variable speed drives
- Trip indication microswitch option for fuse interruption signalling
- UL recognised

600V rms
300kA @ 600V
200kA @ 700V

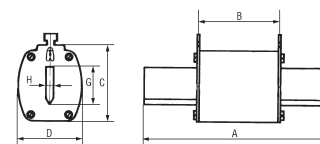
Current Rating (A)	Power Loss (W)	Pre-arcing I ² t (A ² s)	Total I ² t @ 660V (A ² s)	Mfrs List No.	Order Code
35	8	66	360	20-412-20 35A	329-5199
50	8	140	770	20-412-20 50A	329-5205
63	14	250	1400	20-412-20 63A	329-5217
80	17	470	2600	20-412-20 80A	329-5229
100	21	730	4000	20-412-20 100A	329-5230
125	25	1300	7200	20-412-20 125A	329-5242
160	31	2800	15400	20-412-20 160A	329-5254
200	37	5000	27500	20-412-20 200A	329-5266
315	53	15600	86000	20-412-20 315A	329-5278

227528

Rating	Order Code	1+	5+	10+	20+	+
35A	329-5199	53.94	48.60	42.93	34.14	--
50A	329-5205	53.94	48.60	42.93	34.14	--
63A	329-5217	55.41	49.89	43.95	35.10	--
80A	329-5229	55.41	49.89	43.95	35.10	--
100A	329-5230	61.23	55.08	48.66	38.76	--
125A	329-5242	62.41	--	--	--	--
160A	329-5254	64.14	57.84	51.03	41.62	--
200A	329-5266	77.28	69.51	61.38	48.87	--
315A	329-5278	90.90	81.90	73.65	59.67	--
Trip Indication Microswitch	329-5291	48.98	43.25	38.90	30.96	--

Industrial NH Fuses

NH Series



	Dimensions					
	A	B	C	D	G	H
gL (General Line)						
Size C00	78	47	40.5	20.5	15	6
Size 00	78	47	46	29.5	15	6
Size 1	135	65	51.5	42	20	6
Size 2	150	65	59	53	26	6
aM (Motor Rated) 63A to 125A	Size 00	78	50	44	28	15
UR (Ultra Rapid) 63A to 160A	Size 00	78	50	44	28	15

Industrial HRC low voltage fuses with a high breaking capacity, designed to give maximum protection against all faults, i.e. small overcurrents and short circuits. Status of operation of the fuse is shown by the visible leaf spring indicator. Construction from a corrosion resistant ceramic body with a high quality blade contact material. Manufactured in accordance with **DIN57636**, and **IEC269**.

gL (General Line)

Suitable for cable protection and applications where there are no surges to be absorbed. Approved to **VDE**, **SEV** and **OVE**.

Voltage Rating 500V ac

204430

	Current Rating	Order Code	Price Each			
			1+	25+	100+	250+
Size C00	16A	248-538	9.18	8.04	7.41	7.20
	20A	248-540	9.18	8.04	7.41	7.20
	25A	248-551	9.18	8.04	7.41	7.20
	35A	248-563	9.18	8.04	7.41	7.20
	50A	248-575	9.18	8.04	7.41	7.20
Size 00	63A	248-587	9.18	8.04	7.41	7.20
	80A	248-599	9.48	8.34	7.65	7.44
	100A	248-605	9.48	8.34	7.65	7.44
	125A	248-617	9.81	8.58	7.98	7.74
	160A	248-629	7.26	6.51	6.02	5.86
Size 1	160A	975-953	15.10	13.51	11.75	11.00
	200A	975-965	14.55	13.02	11.29	11.15
	250A	975-977	14.55	13.14	--	--
Size 2	315A	975-989	24.87	22.20	19.37	18.42
	400A	975-990	24.87	22.78	--	--

Prices are in Singapore Dollars and exclusive of GST.
Due to the volatile nature of certain products,
prices are subject to change without notice.

**aM (Motor Rated)**

Suitable for applications where an initial surge has to be absorbed (i.e. motor starters).

Voltage rating 500V ac

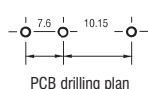
Size 00	Current Rating	Order Code	Price Each			
			1+	25+	100+	250+
	63A	499-535	11.85	10.03	9.57	9.31
	80A	499-547	11.75	9.90	9.18	9.02
	100A	499-559	11.75	9.90	9.30	—
	125A	499-560	15.81	13.02	12.03	11.73

**UR (Ultra Rapid)**

Suitable for Thyristor control unit applications (eg. variable speed drives).

Voltage rating 500V ac

Size 00	Current Rating	Order Code	Price Each			
			1+	25+	100+	250+
	63A	499-572	37.17	32.49	29.13	27.39
	80A	499-584	37.17	32.49	29.13	27.39
	100A	499-596	41.43	36.27	32.49	30.57
	125A	976-003	51.78	42.66	39.39	36.48
	160A	976-015	54.00	44.55	41.13	38.62

Circuit Breakers for Equipment**Thermal PCB Mounting - Low Profile 1410 Series**L=28, W=9, H=10
Actuator L=4.5, W=3

PCB drilling plan

- Fast acting thermal circuit breaker for PCB mounting in a low profile housing with side fitted re-set slide
- Suitable for replacing fuses in many PCB applications
- Approved to **VDE, CSA** and Circuit Breaker for Equipment to **EN 60934** (CBE), **UL** Recognised.

Voltage rating 250Vac, 28Vdc
Insulation resistance 100M Ω @ 500Vdc
Maximum interrupt current x In
Typical life 300 ops @ 2 x In

Current Rating	Internal Resistance	Mfrs. List No.	Order Code
1A	0.7 Ω	1410-L210-L2F1-S02-1A	237-383
1.5A	0.5 Ω	1410-L210-L2F1-S02-1.5A	237-395
2A	0.4 Ω	1410-L210-L2F1-S02-2A	237-401
3.15A	0.06 Ω	1410-L210-L2F1-S02-3.15A	237-425
5A	0.04 Ω	1410-L210-L2F1-S02-5A	237-437
6.3A	0.03 Ω	1410-L210-L2F1-S02-6.3A	237-449
8A	0.05 Ω	1410-L210-L2F1-S02-8A	976-210

343246

Current Rating	Order Code	1+	10+	25+	50+	+
1A	237-383	13.18	11.36	10.97	10.58	—
1.5A	237-395	13.18	11.36	10.97	10.58	—
2A	237-401	14.49	12.75	11.46	10.79	—
3.15A	237-425	13.18	11.36	10.97	10.58	—
5A	237-437	13.18	11.36	10.97	10.70	—
6.3A	237-449	14.49	12.75	11.46	10.79	—
8A	976-210	14.49	12.75	11.46	10.79	—

Thermal Panel Mounting

- Panel mounting single pole press to reset thermal circuit breaker with push-on connectors
- **VDE** and **CSA** approved, **UL** Recognised
- Typical applications: battery chargers, power supplies, motors, wheelchairs, stairlifts, etc.

H=32, W=14, D=27
Panel cut-out=9.5 dia
Tabs=6.3 x 0.8

Voltage rating 250Vac or 28Vdc
Current rating trip current is 125% of rated current
Tripping time in seconds at 21°C 100% - NO TRIP 200% - 5 to 25
300% - 1.5 to 8 400% - 1 to 5

Insulation resistance 100M Ω

Mfrs. List No. 1658-G21-02-P10-8A + Rating

204391

Current Rating	Order Code	1+	10+	25+	50+	+
8A	954-0636	15.60	13.73	12.34	11.63	—
10A	954-0644	15.60	13.73	12.34	11.63	—
15A	954-0660	15.60	13.73	12.34	11.63	—
20A	954-0679	15.60	13.73	12.34	11.63	—
25A	954-0687	15.60	13.73	12.34	11.63	—

Thermal Panel Mounting-SubminiatureH=19, W=11, D=27.6,
Panel cut-out=9.5 dia,
Tabs=2.8 x 0.8, 446-786=6.3 x 0.8

Voltage rating 250Vac, 48Vdc
Current derating 10% for rise of 10°C
Test voltage 4000V for 1 minute
Insulation resistance 710M Ω (500V)

Max. interrupt rating 6 x In (0.1A to 2A)
5 x In (3A to 10A)
Calibration temperature 23°C
Operating temperature -20°C to +60°C

Current Rating	Internal Resistance	Mfrs. List No.	Order Code
0.5A	3.3 Ω $\pm$ 5%	106-P30 0.5A	143-569
1A	0.9 Ω $\pm$ 5%	106-P30 1A	143-570
2A	0.25 Ω $\pm$ 20%	106-P30 2A	143-571
3A	0.11 Ω $\pm$ 20%	106-P30 3A	143-827
4A	0.07 Ω	106-P30 4A	143-572
5A	0.05 Ω	106-P30 5A	143-828
6A	0.05 Ω	106-P30 6A	178-740
10A	0.05 Ω	106-P10-10A	446-786
Splashproof cover		X201.285.01	178-741
Reset disc		Y301.059.01	178-742

204369

Current Rating	Order Code	1+	10+	25+	50+	+
0.5A	143-569	15.86	13.96	12.55	11.76	—
1A	143-570	15.86	13.96	12.55	11.67	—
2A	143-571	15.86	13.96	12.55	11.81	—
3A	143-827	15.86	13.96	12.55	11.81	—
4A	143-572	15.86	13.96	12.55	11.02	—
5A	143-828	15.86	13.96	12.55	11.76	—
6A	178-740	15.86	13.96	12.55	11.81	—
10A	446-786	15.86	13.96	12.55	11.76	—
Splashproof cover	178-741	4.06	3.58	3.24	2.98	—
Reset disc	178-742	1.18	1.04	0.96	0.88	—

Thermal Circuit Breaker

Push to Reset - W28 Series



- Single pole thermal circuit breaker
- Push to reset snap action mechanism
- Button extends for visual trip indication
- Approved by **CSA** and **VDE**, **UL** Recognised

Note: NOT **CSA**, **UL** on 20A, NOT **VDE** on 16A or 20AH=19.31, W=19.31, D=38.99mm
Panel Cut-Out= 15.875-16.129mm Dia.

Max. Operating Voltage 250V ac, 32V dc, 50/60 Hz
Dielectric Strength >1500V ac
Interrupting capacity 1000A @ 250V ac, 50/60 Hz and 32V dc
Resettable Overload Capacity 6 x rated current 2A, 10 x rated current 3A to 20A
Termination 6.35 x 0.813mm Quick Connect
Mounting Snap-in (from panel front)

Current Rating	Internal Resistance (Ω) @ 25°C	Mfrs. List No.	Order Code
3A	0.069	W28-XQ1A-3	965-9072
5A	0.030	W28-XQ1A-5	965-9080
10A	0.011	W28-XQ1A-10	965-9099
15A	0.007	W28-XQ1A-15	965-9102
20A	0.006	W28-XQ1A-20	965-9110

411550

Current Rating	Order Code	1+	25+	100+	250+	+
3A	965-9072	8.92	7.91	7.10	6.28	—
5A	965-9080	8.92	7.91	7.10	6.28	—
10A	965-9099	8.92	7.91	7.10	6.28	—
15A	965-9102	8.92	7.91	7.10	6.28	—
20A	965-9110	8.92	7.91	7.10	6.28	—

Thermal Circuit Breaker

Push to Reset - W54 Series



- Push button to reset breaker
- Cannot be manually tripped
- Button extends for visual trip indication
- **UL** Recognised

H=35, W=14.6, D=31
Panel Cut-Out=11.2mm Dia.

21

Fuses, Circuit Breakers & Consumer Units

Compliant
Non-compliant
RoHS
Limited stock - RoHS replacement available

204426

Max. Operating Voltage 250V ac, 50V dc, 50/60 Hz
 Dielectric Strength >1500V ac
 Interrupting capacity 1000A @ 250V ac, 50/60 Hz and 32V dc
 Resettable Overload Capacity 10 x rated current
 Termination 6.3 x 0.031mm Quick Connect
 Mounting 9.8 x 12.6mm (from panel front)
 Operating temperature 0 to 60°C

Current Rating	Internal Resistance (Ω) @ 25°C	Mfrs. List No.	Order Code
10A	0.025	W54-XB1A4A10-10	965-9137
15A	0.017	W54-XB1A4A10-15	965-9145
20A	0.012	W54-XB1A4A10-20	965-9153
30A	0.008	W54-XB1A4A10-30	965-9161

411558

Current Rating	Order Code	1+	25+	100+	250+	+
10A	965-9137	5.01	4.43	3.97	3.55	--
15A	965-9145	5.01	4.43	3.97	3.55	--
20A	965-9153	5.86	5.24	4.65	4.10	--
30A	965-9161	5.86	5.24	4.65	4.10	--

Thermal Circuit Breaker Compact Push to Reset - W57 Series

tyco Electronics RB



- Compact design with plastic M11 thread
- Push button to reset breaker
- Cannot be manually tripped
- Button extends for visual trip indication
- UL Recognised

NEW

H=29.2, W=22.6, D=14.5
 Panel Cut-Out=11.2mm Dia.

Max. Operating Voltage 250V ac, 50V dc, 50/60 Hz
 Dielectric Strength >1500V ac
 Interrupting capacity 1000A @ 250V ac, 50/60 Hz and 32V dc
 Resettable Overload Capacity 10 x rated current
 Termination 6.3 x 0.031mm Quick Connect
 Mounting 9.8 x 9.6mm (from panel front)
 Operating temperature 0 to 60°C

Current Rating	Internal Resistance (Ω) @ 25°C	Mfrs. List No.	Order Code
10A	0.025	W57-XB1A4A10-10	965-9188
15A	0.017	W57-XB1A4A10-15	965-9196
20A	0.012	W57-XB1A4A10-20	965-9200

411559

Current Rating	Order Code	1+	25+	100+	250+	+
10A	965-9188	5.27	4.65	4.17	3.71	--
15A	965-9196	5.27	4.65	4.17	3.71	--
20A	965-9200	5.27	4.65	4.17	3.71	--

Thermal Panel Mounting with Switch

E-T-A



L=66.6 (in OFF position)
 Bezel=19 x 19
 Depth behind panel=47.5

Panel cut-out (double flat)=13.8 x 16 dia
 Panel thickness=0.8 to 1.6
 Tabs=6.3 x 0.8

- Single pole 'fuseholder size' thermal circuit breaker featuring a unique latching push button operation which allows the breaker to be switched ON or OFF
- Two colour button also provides visual indication by showing a white band when the breaker is in the 'OFF' or 'tripped' position
- Approved to VDE, CSA, LRoS, BV, SEMKO and Circuit Breaker for Equipment to EN60934, UL Recognised.
- Typical applications: Motors, transformers, solenoids, office machines and instrumentation

Voltage rating	250Vac, 28Vdc	Typical life expectancy	10000 ops (0.5A to 3A)
	operating area 4000Vac	to 3A	
	mounting area 2000Vac	6000 ops (5A to 16A)	
Insulation resistance	>100MΩ	Max. interrupt current	8 In (0.5A to 3A)
		10 In (5A to 16A)	
Tripping Time @ 23°C		Operating temperature	0°C to +55°C
Rated Current	2 x In 3 x In 4 x In 5 x In 6 x In 8 x In 10 x In		
0.5A to 5A	13-46s	5.8-13s	3.9-7.5s
10A to 16A	10-38s	4.3-7.5s	2.5-4.4s
			1.3-3.2s
			0.8-2.1s
			0.56-1.0s
			0.43-0.7s

Mfrs. List No. 110-F112-P1M1-xxA, where xx = current rating in amps.

Current Rating	Internal Resistance (Ω)	Order Code	1+	10+	25+	50+
0.5A	4.5	248-460	28.32	24.24	21.98	20.00
1A	1.1	248-472	28.32	24.24	21.98	20.69
2A	0.25	248-484	28.32	24.24	21.98	20.88
3A	0.13	248-496	28.32	24.24	21.98	21.11
5A	0.05	248-502	28.32	24.24	21.98	20.09
10A	0.02	248-514	28.32	24.24	21.98	20.09
16A	0.02	248-526	28.32	24.24	21.98	21.06

Hydraulic - Magnetic

E-T-A



- Single pole hydraulic, magnetic circuit breaker with toggle actuation
- Medium delay characteristics
- Industry standard panel mounting
- Push-on connectors.
- Approved to VDE Circuit Breaker for Equipment standard EN60934, CSA, LRoS, BV and QPL, UL Recognised
- Typical applications: Control equipment, communication systems, transportation and power supplies

H=50.8, W=15, D=50.8, Fitting Hole Pitch=42.15
 Mounting Thread=M3, Max Depth=4.5

Voltage rating 240Vac, 80Vdc
 Typical life 10000 operations at 1x1N inductive load
 Temperature range -40°C to +85°C
 Dielectric strength 3000Vac
 Insulation resistance ≥100mΩ @ 500Vdc
 Max. interrupt rating 3500A
 Shock 100g (11 ms) at 0.8xIn to IEC68-2-27, test EA

Current Rating	Internal Resistance (Ω)	Mfrs. List No.	Order Code
1A	0.9	8340-F410-P1M2-A2H0-1A	954-0709
2A	0.2	8340-F410-P1M2-A2H0-2A	954-0717
5A	0.04	8340-F410-P1M2-A2H0-5A	954-0725
10A	≤0.02	8340-F410-P1M2-A2H0-10A	954-0733
15A	≤0.02	8340-F410-P1M2-A2H0-15A	954-0741
20A	≤0.02	8340-F410-P1M2-A2H0-20A	954-0750
25A	≤0.02	8340-F410-P1M2-A2H0-25A	954-0768

204393

Current Rating	Order Code	1+	25+	100+
1A	954-0709	43.05	39.75	36.45
2A	954-0717	43.05	39.75	36.45
5A	954-0725	43.05	39.75	36.45
10A	954-0733	43.05	39.75	36.45
15A	954-0741	43.05	39.75	36.45
20A	954-0750	43.05	39.75	36.45
25A	954-0768	43.05	39.75	36.45

Thermal Rocker with Switch

E-T-A



- Versatile single & double pole rocker switches combined with a thermal circuit breaker
- Returns to 'OFF' position when put in overload conditions
- UL Recognised, VDE, CSA and SEMKO approved.

Panel cut-out: a=50.5 x 21.5,
 b=44.5 x 22
 Tabs=6.35 or 2 x 2.8
 No volt release modules
 H=33.5, W=22, D=21

Voltage rating 250Vac/50Vdc
 Dielectric strength 3000Vac
 Insulation resistance >100MΩ @ 500V
 Typical life expectancy @ In >50000 ops
 Max. interrupt rating 200A (single pole)
 Operating temperature 300A (double pole)
 -30°C to +60°C

Current Rating	Internal Resistance (Ω)	Dimensions H W D	Cut-out	Mfrs. List No.	Order Code
5A	0.03	54	25 35 a	3120-F311-W01X-5A	954-0601
10A	0.02	54	25 35 a	3120-F311-W01X-10A	954-0610
16A	0.02	54	25 35 a	3120-F311-W01X-16A	954-0628
3A	0.06	48	25 35 b	3120-F521-W01X-3A	954-0490
5A	0.03	48	25 35 b	3120-F521-W01X-5A	954-0504
10A	0.02	48	25 35 b	3120-F521-W01X-10A	954-0512
16A	0.02	48	25 35 b	3120-F521-W01X-16A	954-0520

Current Rating	Order Code	1+	25+	100+
Single Pole				
5A	954-0601	24.02	18.81	17.44
10A	954-0610	25.89	20.28	18.09
16A	954-0628	25.89	20.28	18.09
Double Pole				
3A	954-0490	43.11	34.95	30.15
5A	954-0504	37.38	32.16	30.24
10A	954-0512	37.38	32.16	30.24
16A	954-0520	37.38	32.16	30.24

Prices are in Singapore Dollars and exclusive of GST.
 Due to the volatile nature of certain products,
 prices are subject to change without notice.

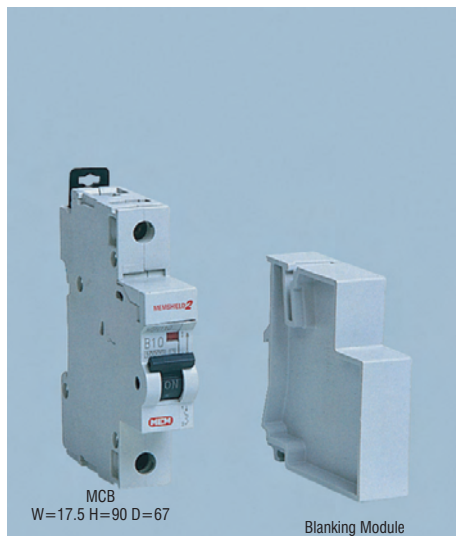
Current Rating	Internal Resistance (Ω)	Dimensions H W D	Cut-out	Mfrs. List No.	Order Code
5A	0.03	54 25 35	a	3120-F311-W01X-5A.	447-079
10A	0.02	54 25 35	a	3120-F311-W01X-10A.	447-080
16A	0.02	54 25 35	a	3120-F311-W01X-16A.	447-092
3A	0.06	48 25 35	b	3120-F521-W01X-3A.	147-785
5A	0.03	48 25 35	b	3120-F521-W01X-5A.	147-786
10A	0.02	48 25 35	b	3120-F521-W01X-10A.	147-787
16A	0.02	48 25 35	b	3120-F521-W01X-16A.	177-097

343231

Current Rating	Order Code	1+	25+	100+
Single Pole				
5A	447-079▲	24.02	18.81	17.44
10A	447-080▲	25.89	20.28	17.34
16A	447-092▲	25.89	20.28	18.09
Double Pole				
3A	147-785▲	43.11	34.95	30.15
5A	147-786▲	37.38	32.16	30.24
10A	147-787▲	37.38	32.16	30.24
16A	177-097▲	37.38	32.16	30.24

Minature Circuit Breakers & Consumer Units

Memshield 2 MCB's Outgoing Devices



The Memshield 2 MCB is a current limiting device with the capability to disconnect short circuits up to 10kA to **BS EN 60898**. Positive contact indication by flag within window. Available with Type B and Type C trip characteristics.

All outgoing devices in the Memshield 2 range are suitable for use in MEM distribution boards, or for DIN rail mounting in **OEM applications**.

204457

MCB's	Mfrs. List No.	Order Code	1+	5+	10+
Type B — Single Pole					
6A	MBH106	665-277	22.14	20.85	20.07
10A	MBH110	665-289	21.09	19.92	19.14
16A	MBH116	665-290	21.09	19.92	19.14
32A	MBH132	665-319	21.09	19.92	19.14
40A	MBH140	665-320	20.02	19.39	—
50A	MBH150	665-332	22.14	20.85	20.07
63A	MBH163	665-344	20.02	19.07	—
Type C — Single Pole					
6A	MCH106	665-356	20.02	18.85	18.69
10A	MCH110	665-368	19.11	18.07	17.81
16A	MCH116	665-370	21.09	19.92	19.14
20A	MCH120	665-381	21.09	19.92	19.14
32A	MCH132	665-393	19.07	18.03	17.81
Blanking Module	MBP	665-551	2.18	1.99	1.82



- FREE to all account holders
- Notification of obsolete, end of line and end of stock items
- Replacement or upgrade recommendations

**Advanced warning of
obsolete components**

RCBO, Combined MCB/RCD 6kA



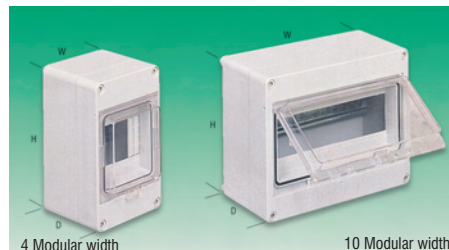
- Provide protection against the effects of earth leakage. Overload and short circuit currents
- Symmetrical DIN Rail mounting for all commercial, industrial and domestic electrical distribution systems
- 30mA sensitivity, breaking capacity 6kA, 2 pole switching (phase and neutral)
- Integrated filter prevents unwanted tripping due to transient voltages
- Visual indication of trip due to earth faults
- Complies with **BSEN 60898** and **BS EN61009**

H=81, W=36, D=75

204521

MCB Rating	Mfrs. List No.	Order Code	1+	5+	10+
6A	19661	158-100	172.52	—	—
10A	19663	158-112	167.63	—	—
16A	19665	158-124	167.63	—	—
20A	19666	158-136	167.59	—	—
25A	19667	158-148	159.45	152.70	142.50
32A	19668	158-150	167.59	—	—
40A	19669	158-161	172.56	—	—

Distribution IP55 MCB/RCCB



- Moulded in light grey polystyrene with transparent hinge cover
- Supplied with symmetrical DIN rail
- Optional plastic blanking plate with four full and two semi-cut modules
- Order Code 866-210 accepts 2 modules as standard or 3 modules with sides removed

Order Code	W	D	H
866-210	74	97	135
146-126	105	111	170
866-222	135	112	170
146-127	220	113	168
866-234	340	138	270

1 module=18mm

218854

No of Modules	Order Code	1+	10+	50+
2/3	866-210	34.45	31.29	28.15
4	146-126	57.32	52.23	51.36
6	866-222	59.35	53.95	48.53
10	146-127	82.67	74.60	70.43
16	866-234	181.76	168.61	151.68
Module blanking plate	146-128	9.67	—	—

IP65 Sealed Distribution Boxes



- **IP54 (IP65)** when using a suitable cable gland) rated Distribution Boxes for housing DIN Rail Mounting Components such as MCBs, RCCBs, Timers and Fuses.
- Designed to incorporate multiples of 17.5mm modules mounted on the DIN rail.
- Includes an Earth and Neutral Terminal Block and Blanking Strip for unused ways.
- Cable entry glands and labelling strips supplied.
- Offers widths to accommodate 2, 4, 8 or 12 modules to **DIN43880**
- Impact resistant non-flammable thermoplastic construction.

Temperature resistant up to +70°C

224477

H	W	D	Order Code	1+	10+	50+	+	+
130	94	81	531-741●	49.85	47.86	46.01	—	—
180	110	110	531-753●	68.19	64.05	62.13	—	—
180	182	110	531-765●	84.65	81.23	78.11	—	—
180	254	110	531-777●	118.51	112.08	108.43	—	—

21

Fuses, Circuit Breakers & Consumer Units

Compliant
Non-compliant
+ Limited stock - RoHS replacement available

RoHS

Circuit Breakers for Distribution & Motors

C60H MCB Type B, C & D



- Type B, C and D circuit breakers
- Single, 2, 3 and 4-pole versions in ratings from 1 to 63 amps
- Positive contact indication in accordance with **16th Edition (BS7671) IEE Wiring Regulations**
- Equipped with tunnel terminals for bare cable connection :- 1 to 25A - 25mm sq., 32 to 63A - 35mm sq.
- Magnetic tripping in accordance with **BSEN 60898**
- Suitable for direct panel or DIN rail mounting or for use with Merlin Gerin type A and B pan assemblies
- Full range of auxiliaries and accessories available

The Merlin Gerin, Multi 9, C60H range of miniature circuit breakers are suitable for interrupting fault currents up to 10kA 415 volts according to BSEN 60898.

C60H Type B - suitable for protection of circuits against overload and short circuits in commercial and industrial distribution and domestic applications. Tripping range 3 to 5 times rated current.

C60H Type C - suitable for protection of circuits against overload and short circuits in general commercial and industrial distribution and in applications with moderate inrush currents, such as certain lighting systems. Tripping range 5 to 10 times rated current.

C60H Type D - suitable for protection of circuits against overload and short circuits in general commercial and industrial distribution and in applications with high inrush currents, such as transformers, motors and certain lighting systems. Tripping range 10 to 14 times rated current.

Dimensions				Dimensions				Dimensions			
	H	W	D		H	W	D		H	W	D
1 pole	81	18	70	3 pole	81	54	70	4 pole	81	72	70
2 pole	81	36	70								

213859

Type B	Mfrs. List No.	Order Code	1+	Price Each	5+	10+
Single Pole						
1A	C60HB101	716-2364	27.06	--	--	--
2A	C60HB102	716-2376	26.18	--	--	--
4A	C60HB104	716-2388	25.34	--	--	--
6A	C60HB106	716-2406	23.62	--	--	--
10A	C60HB110	716-2418	22.60	--	--	--
16A	C60HB116	716-2420	22.65	--	--	--
20A	C60HB120	716-2431	22.65	--	--	--
25A	C60HB125	716-2443	22.65	--	--	--
32A	C60HB132	716-2455	22.65	--	--	--
40A	C60HB140	716-2467	24.74	--	--	--
50A	C60HB150	716-2479	25.95	--	--	--
63A	C60HB163	716-2595	26.23	--	--	--
Two Pole						
1A	C60HB201	716-2601	79.70	--	--	--
2A	C60HB202	716-2613	78.68	--	--	--
4A	C60HB204	716-2625	74.26	--	--	--
6A	C60HB206	716-2637	72.08	--	--	--
10A	C60HB210	716-2686	66.12	--	--	--
16A	C60HB216	716-2698	66.12	--	--	--
20A	C60HB220	716-2704	73.23	66.12	--	--
25A	C60HB225	716-2716	73.23	66.12	--	--
32A	C60HB232	716-2728	66.12	--	--	--
40A	C60HB240	716-2730	72.21	--	--	--
50A	C60HB250	716-2741	75.66	--	--	--
63A	C60HB263	716-2753	75.05	--	--	--
Three Pole						
1A	C60HB301	716-2765	116.99	--	--	--
2A	C60HB302	716-2777	113.69	--	--	--
4A	C60HB304	716-2789	109.65	--	--	--
6A	C60HB306	716-2790	103.79	--	--	--
10A	C60HB310	716-2807	98.30	--	--	--
16A	C60HB316	716-2819	98.30	--	--	--
20A	C60HB320	716-2820	98.30	--	--	--
25A	C60HB325	716-2832	98.30	--	--	--
32A	C60HB332	716-2844	98.30	--	--	--
40A	C60HB340	716-2856	104.95	--	--	--
50A	C60HB350	716-2868	110.21	--	--	--
63A	C60HB363	716-2870	111.32	--	--	--
Four Pole						
1A	C60HB401	716-2881	160.17	--	--	--
2A	C60HB402	716-2893	173.17	--	--	--
4A	C60HB404	716-2900	168.61	--	--	--
6A	C60HB406	716-2911	169.82	--	--	--
16A	C60HB416	716-2935	159.40	--	--	--
20A	C60HB420	716-2947	159.40	--	--	--
25A	C60HB425	716-2959	159.40	--	--	--
32A	C60HB432	716-2960	159.40	--	--	--

Type B	Mfrs. List No.	Order Code	1+	Price Each	5+	10+
Four Pole						
40A	C60HB440	716-2972	168.06	150.18	143.37	--
50A	C60HB450	716-2984	156.00	149.45	--	--
63A	C60HB463	716-2996	180.05	--	--	--
Type C						
Single Pole						
1A	C60HC101	716-4245	28.36	--	--	--
2A	C60HC102	716-4257	27.20	--	--	--
4A	C60HC104	716-4269	25.58	--	--	--
6A	C60HC106	716-4270	24.74	--	--	--
10A	C60HC110	716-4282	22.65	--	--	--
16A	C60HC116	716-4294	22.60	--	--	--
20A	C60HC120	716-4300	22.65	--	--	--
25A	C60HC125	716-4312	22.65	--	--	--
32A	C60HC132	716-4324	22.65	--	--	--
40A	C60HC140	716-4336	24.74	--	--	--
50A	C60HC150	716-4348	25.95	--	--	--
63A	C60HC163	716-4350	26.92	--	--	--
Two Pole						
1A	C60HC201	716-4361	80.40	--	--	--
2A	C60HC202	716-4373	77.70	--	--	--
4A	C60HC204	716-4385	74.12	--	--	--
6A	C60HC206	716-4397	71.38	--	--	--
10A	C60HC210	716-4403	65.52	--	--	--
16A	C60HC216	716-4415	65.52	--	--	--
20A	C60HC220	716-4427	65.52	--	--	--
25A	C60HC225	716-4439	65.52	--	--	--
32A	C60HC232	716-4440	65.52	--	--	--
40A	C60HC240	716-4452	71.52	--	--	--
50A	C60HC250	716-4464	74.96	--	--	--
63A	C60HC263	716-4476	83.19	75.66	--	--
Three Pole						
1A	C60HC301	716-4488	110.86	--	--	--
2A	C60HC302	716-4490	110.81	--	--	--
4A	C60HC304	716-4506	108.16	--	--	--
6A	C60HC306	716-4518	104.72	--	--	--
10A	C60HC310	716-4520	98.30	--	--	--
16A	C60HC316	716-4531	98.30	--	--	--
20A	C60HC320	716-4543	98.30	--	--	--
25A	C60HC325	716-4555	98.30	--	--	--
32A	C60HC332	716-4567	98.25	--	--	--
40A	C60HC340	716-4579	102.90	101.93	--	--
50A	C60HC350	716-4580	110.16	--	--	--
63A	C60HC363	716-4592	111.69	--	--	--
Four Pole						
1A	24872	434-5733	178.17	172.26	164.07	--
2A	24873	434-5745	178.05	--	--	--
4A	24875	434-5757	168.06	162.45	154.74	--
6A	24876	434-5769	168.06	165.82	--	--
10A	24877	434-5770	157.77	152.52	149.51	--
16A	24878	434-5782	157.96	--	--	--
20A	24879	434-5794	157.77	152.52	145.26	--
25A	24880	434-5800	157.96	--	--	--
32A	24881	434-5812	157.96	--	--	--
40A	24882	434-5824	168.28	--	--	--
50A	24883	434-5836	176.70	--	--	--
63A	24884	434-5848	180.51	--	--	--
Type D						
Single Pole						
1A	C60HD101	434-5850	28.18	--	--	--
2A	C60HD102	434-5861	27.53	--	--	--
4A	C60HD104	434-5873	26.10	26.04	--	--
6A	C60HD106	716-4701	25.35	25.34	--	--
10A	C60HD110	434-5885	23.67	23.67	--	--
16A	C60HD116	716-4713	23.72	--	--	--
20A	C60HD120	434-5897	23.72	--	--	--
25A	C60HD125	434-5903	23.72	--	--	--
32A	C60HD132	716-4725	23.72	--	--	--
40A	C60HD140	434-5915	25.85	--	--	--
50A	C60HD150	434-5927	27.12	27.11	--	--
63A	C60HD163	716-4737	27.30	--	--	--
Two Pole						
1A	C60HD201	434-5939	81.33	--	--	--
2A	C60HD202	434-5940	77.61	--	--	--
4A	C60HD204	434-5952	76.05	74.73	--	--
6A	C60HD206	716-4749	73.89	72.54	--	--
10A	C60HD210	434-5964	67.80	--	--	--
16A	C60HD216	716-5067	67.80	--	--	--
20A	C60HD220	434-5976	67.74	67.70	--	--
25A	C60HD225	434-5988	69.70	--	--	--
32A	C60HD232	716-5079	69.70	--	--	--
40A	C60HD240	434-4790	73.98	--	--	--
50A	C60HD250	434-4807	77.66	--	--	--
63A	C60HD263	716-5080	78.35	--	--	--
Three Pole						
1A	C60HD301	434-4819	116.19	112.32	106.98	--
2A	C60HD302	434-4820	115.05	113.55	--	--
4A	C60HD304	434-4832	112.89	110.90	--	--
6A	C60HD306	716-5092	109.59	107.65	--	--

Prices are in Singapore Dollars and exclusive of GST.
Due to the volatile nature of certain products,
prices are subject to change without notice.

Type B	Mfrs. List No.	Order Code	1+	Price Each	5+	10+
Three Pole						
10A	C60HD310	434-4844	102.72	100.90	--	--
16A	C60HD316	716-5109	102.72	100.90	--	--
20A	C60HD320	434-4856	102.72	100.90	--	--
25A	C60HD325	434-4868	102.72	100.90	--	--
32A	C60HD332	716-5110	102.72	100.90	--	--
40A	C60HD340	434-4870	109.59	107.65	--	--
50A	C60HD350	434-4881	115.05	113.00	--	--
63A	C60HD363	716-5122	116.19	114.06	--	--
Four Pole						
1A	25211	434-4893	190.11	183.75	175.02	
2A	25212	434-4900	179.31	173.37	165.12	
4A	25214	434-4911	179.31	173.37	169.35	
6A	25215	434-4923	179.31	173.37	165.12	
10A	25216	434-4935	168.33	162.72	158.98	
16A	25217	434-4947	168.33	162.72	154.98	
20A	25218	434-4959	168.33	162.72	154.98	
25A	25219	434-4960	168.33	162.72	154.98	
32A	25220	434-4972	168.33	162.72	154.98	
40A	25221	434-4984	179.31	173.37	165.12	
50A	25222	434-4996	188.31	182.07	177.86	
63A	25223	434-5009	190.11	183.75	179.58	

Accessories	Mfrs. List No.	Order Code	1+	Price Each	5+	10+
Al. sw. SD	26927	717-1778	38.87	--	--	--
MN Uv rel 220/240V ac	26960	716-5663	97.23	--	--	--
MX Uv rel. 48V ac	26961	716-5675	95.34	85.71	--	--
Shield 1 Pole	26975	716-5699	6.66	5.94	5.67	
Shield 2 Pole	26976	716-5705	7.32	7.30	--	
Sealable Shield	26981	716-5729	5.16	--	--	
Barrier	27001	716-5742	6.79	--	--	
Lock C60H	20718	716-5766	14.32	--	--	
Lock RMG	20719	716-5778	14.32	--	--	

RMG Earth Leakage Protection RCDs



- 2 and 4-pole versions in ratings from 16 to 100A
- Positive contact indication in accordance with 16th Edition of the IEE Wiring Regulations
- Sensitivity 10, 30, 100 or 300mA
- Voltage rating 2 pole - 110/240V, 4 pole-240/415V
- Equipped with tunnel terminals for bare cable connection: 16-80A - 35mm², 100A - 50mm²
- Suitable for use as an incoming device on Merlin Gerin type A pan assembly
- Complete range of accessories available

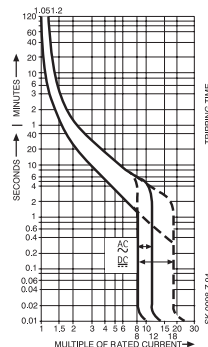
The Merlin Gerin, Multi 9, RMG range of residual current devices provides the functions of isolation, switching and earth leakage protection of electrical circuits. The time-delayed version provides the above features whilst enabling discrimination with downstream devices.

Rating(A)	Poles	Sensitivity (mA)	Mfrs. List No	Order Code
RCDs				
16	2	10	RMG160102	716-8172
25	2	10	RMG250102	716-8184
25	2	30	RMG250302	716-8196
25	4	30	RMG250304	716-8202
25	4	300	RMG253004	716-8214
40	2	30	RMG400302	716-8226
40	4	30	RMG400304	716-8238
40	2	300	RMG403002	716-8240
40	4	300	RMG403004	716-8251
63	2	30	RMG630302	716-8263
63	4	30	RMG630304	716-8275
63	2	100	RMG631002	716-8287
63	4	100	RMG631004	716-8299
63	4	300	RMG633004	716-8317
80	2	30	RMG800302	716-8329
100	2	30	RMG1000302	716-8354
Time Delayed				
63	-	300	23146	716-8494
Accessories				
MX shunt trip release:			Mfrs. List No	Order Code
110V dc or 220/415V ac			26946	716-8548
48V dc or 48-130V ac			26947	716-8550
MN undervoltage release:	220/240V ac		26960	716-5663
Aux sw.OFS	RCD Monitor		26923	716-8603
Aux sw. OF	RCD Monitor		26924	716-8615

Rating (A)	Pole	Mfrs. List No.	Order Code	1+	Price Each	5+	10+
RMG RCDs							
16	2-2	RMG160102	716-8172	184.74	--	--	--
25	2-2	RMG250102	716-8184	201.90	--	--	--
25	2-2	RMG250302	716-8196	134.85	134.66	--	--
25	4-4	RMG250304	716-8202	174.10	--	--	--
25	4-4	RMG253004	716-8214	150.99	--	--	--
40	2-2	RMG400302	716-8226	142.20	--	--	--
40	4-4	RMG400304	716-8238	186.00	--	--	--

Rating (A)	Pole	Mfrs. List No.	Order Code	1+	Price Each	5+	10+
RMG RCDs							
40	2-2	RMG403002	716-8240	129.22	--	--	--
40	4-4	RMG403004	716-8251	162.80	--	--	--
63	2-2	RMG630302	716-8263	170.98	--	--	--
63	4-4	RMG630304	716-8275	250.54	--	--	--
63	2-2	RMG631002	716-8287	157.12	--	--	--
63	4-4	RMG631004	716-8299	209.39	--	--	--
63	4-4	RMG633004	716-8317	184.98	--	--	--
80	2-2	RMG800302	716-8329	209.72	--	--	--
100	2-2	RMG1000302	716-8354	239.66	--	--	--
63		23146	716-8494	249.05	--	--	--
Accessories							
MX rel. 110 - 415V ac			716-8548	57.85	--	--	--
MX rel. 48V ac/dc			716-8550	51.00	--	--	--
Aux sw.OFS			716-8603	44.53	--	--	--
Aux sw. OF			716-8615	38.10	37.64	--	--
MN Uv rel 220/240V ac			716-5663	97.23	--	--	--

Type K Miniature Circuit Breakers

ABB Control Limited **ABB**

- Single, double and triple pole versions available
- Designed to offer optimal protection in one unit for both overload and short circuit conditions
- Allows for high inrush currents without nuisance tripping
- Thermal settings are identical to that of a conventional thermal overload with a maximum of 1.2 times the rated current
- Electromagnetic trip accepts inrush currents in excess of 8 times rated current without tripping (see tripping curve)
- MCB selected using the rated current of the motor and the selection table below
- Complies to IEC947-4-1
- Padlock accessories include adaptor and padlock with keys

Selection Table	Current @380VA	Nominal @15VA	Nominal 'K' Type MCB
Standard Motor Range kW			
0.06	0.22	0.2	0.2
0.09	0.33	0.3	0.3
0.12	0.42	0.4	0.3
0.18	0.64	0.6	0.5
0.25	0.88	0.74	0.75/0.5
0.37	1.22	1.1	1
0.55	1.5	1.4	1
0.75	2	2	1.6/2.0
1.1	2.6	2.5	2
1.5	3.5	3.5	3
2.2	5	5	4
3	6.6	6.5	6
4	8.5	8.1	8
5.5	11.5	11	10
7.5	15.5	14.5	16/10
11	22	21	20
15	30	28	25
18.5	37	35	32
22	44	40	40
30	60	55	50
37	72	66	63
Breaking capacity	6kA		
Voltage ratings	230/400V ac		
	60/110V dc		
Operating temperature	-25°C to 55°C		

204568

Rating	Mfrs. List No.	Order Code	1+	Price Each	5+	10+	25+
Single Pole							
1	S271K1	717-5620	28.44	26.61	25.38	24.51	
2	S271K2	717-5644	28.44	26.61	25.38	24.51	
3	S271K3	717-5656	28.44	26.61	25.38	24.51	
4	S271K4	717-5668	28.44	26.61	25.38	23.95	
6	S271K6	717-5670	28.44	26.61	25.38	24.25	
8	S271K8	717-5681	28.44	26.61	25.38	24.51	
10	S271K10	717-5693	25.89	24.18	23.10	22.21	
16	S271K16	717-5700	25.89	24.18	23.10	22.25	
20	S271K20	717-5711	28.44	26.61	25.38	24.51	
25	S271K25	717-5723	29.46	27.51	26.28	25.34	
32	S271K32	717-5735	29.46	27.51	26.28	25.34	

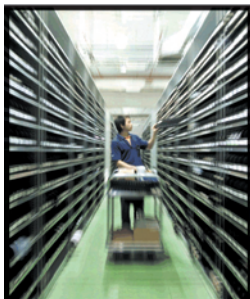
21

Fuses, Circuit Breakers & Consumer Units

Compliant
Non-compliant
RoHS

Limited stock - RoHS replacement available

Rating	Mfrs. List No.	Order Code	Price Each			
			1 +	5+	10+	25+
Double Pole						
0.5	S272K0.5	717-5784	78.96	73.80	70.44	67.98
2	S272K2	717-6480	78.96	73.80	70.44	67.98
4	S272K4	717-6508	78.96	73.80	70.44	67.98
6	S272K6	717-6510	78.96	73.80	70.44	67.98
10	S272K10	717-6533	68.49	64.02	61.08	58.96
16	S272K16	717-6545	68.49	64.02	61.08	58.96
20	S272K20	717-6557	75.63	70.65	67.44	65.10
Triple Pole						
8	S273K8	717-6661	110.70	105.42	102.95	--
10	S273K10	717-6673	95.70	91.14	89.00	--
16	S273K16	717-6685	95.70	91.14	89.00	--
20	S273K20	717-6697	105.87	100.80	98.44	--
32	S273K32	717-6715	109.35	104.13	101.70	--
Padlock Accessories						
Adaptor	SA1	717-6910	5.28	5.04	4.93	--
Padlock + 2 Keys	SA2	717-6922	14.61	13.89	13.58	--



In stock and ready to despatch,
300,000 products in our Asia, US
and Europe warehouses.

300,000 products at your fingertips



- Fast access to over 300,000 products
- Over 125,000 technical datasheets
- Technical attribute search
- Quick buy facility
- Instant order confirmation

www.farnell-newarkinone.com.sg