



Gears & Fuse Gears

American General Purpose Fuses UltraSafe Range US3J, US6J - Class J Fuses

Ultrasafe Modular Fuse Holders



Ferraz Shawmut ULTRASAFE™ modular 600 volt Fuse Holders for Class J fuses introduce a new level of safety and ease for installing or replacing Class J fuses. ULTRASAFE holders qualify as “finger safe” to an IP20 grade of protection under IEC standards. The US3J accommodates 30A Class J or 22 x 58 mm French Ferrule* fuses. The US6J is for 60A Class J fuses. ULTRASAFE holders are available in compact 1, 2, or 3 pole units, with or without blown-fuse indicators in each pole. Multi-pole units can also be made up in the field by using the multiple-pole Assembly Kits. All units have provisions for locking in the open position for safety during fuse changeouts or equipment servicing. US3J and US6J holders can be snap-mounted to 35 mm DIN rail and they have a unique latch which will stay open to allow re-positioning of the holder in the future. Ultrasafe body material is tough and durable polyamide.

*Holder not UL listed with these fuses

Ratings

- 600VAC: 30A & 60A
- Withstand rating: 200kA I.R.
- Min. voltage to operate indicator light: 90VAC, 115VDC [Less than 0.7 mA leakage current at 600V]

Approvals

- All Ultrasafe Fuse Holders meet the requirements of UL512
- UL Listed Guide IZLT, File E52283
- CSA Certified Class 6225 File 32169
- IEC 60269-2



Highlights

- Finger Safe
- Optional Indicator Lights
- DIN Rail Mount
- Compact Footprint
- Quick, Easy Fuse Change

Applications:

- 600 volt motors, transformers, lighting, heating, control circuits, general loads
- Non-load disconnect

Recommended fuse usage

US3J, US6J use with AJT, A4J



American General Purpose Fuses UltraSafe Range US3J, US6J - Class J Fuses



Ultrasafe Modular Fuse Holders

Catalog and Reference Numbers & Descriptions For use with 30A Class J Fuses

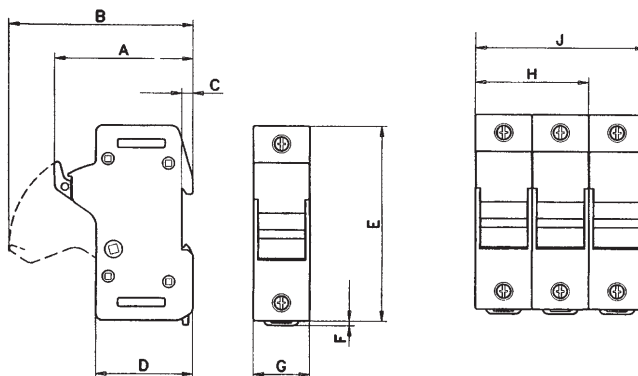
Cat. Number	Ref. Number	Description
US3J1	E212409	1 Pole
US3J2	A213440	2 Pole
US3J3	J214460	3 Pole
US3J1I	M212922	1 Pole with Indicator
US3J2I	W213942	2 Pole with Indicators
US3J3I	K214967	3 Pole with Indicators
US3JN	N215476	1 Pole - Neutral
US3J2PAK	R215985	2 Pole Assembling Kit
US3J3PAK	C217007	3 Pole Assembling Kit
US3J4PAK	X218037	4 Pole Assembling Kit

Catalog and Reference Numbers & Descriptions For use with 60A Class J Fuses

Cat. Number	Ref. Number	Description
US6J1	M219592	1 Pole
US6J2	P222791	2 Pole
US6J3	V205017	3 Pole
US6J1I	F222047	1 Pole with Indicator
US6J2I	D223310	2 Pole with Indicators
US6J3I	M211381	3 Pole with Indicators
US6JN	N212923	1 Pole - Neutral
US6J2PAK	T201129	2 Pole Assembling Kit
US6J3PAK	T211893	3 Pole Assembling Kit
US6J4PAK	F212410	4 Pole Assembling Kit

Dimensions

Dimension	US3J		US6J	
	mm	In	mm	In
A	80	3.15	89	3.50
B	106	4.17	115	4.53
C	6.5	0.26	6.5	0.26
D	56	2.20	62	2.44
E	114	4.49	122	4.80
F	3	0.12	3	0.12
G	32.5	1.28	40	1.57
H	65	2.56	80	3.15
J	97.5	3.84	120	4.72



Terminal screws: Phillips/slot head

Suggested screw torque: 30A - 35 in-lbs. (4 N.m)

60A - 45 in-lbs. (5.2 N.m)

Connector type: Pressure plate

Wire range: 2 mm² to 30 mm² - #2 to #14 (solid/stranded Cu)

Load-break disconnect: No



Gears & Fuse Gears

American General Purpose Fuses UltraSafe Range USCC - USM - for Class CC and Midget Fuses

Ultrasafe Modular Fuse Holders



Ferraz Shawmut ULTRASAFE™ modular 24, 48 and 600 volt Fuse Holders introduce a new level of safety for Class CC (USCC) and Midget 1-1/2" x 13/32" (USM) as well as DC rated fuses up to 30 amperes. ULTRASAFE holders qualify as "finger safe" under IEC and DIN standards to an IP20 grade of protection, including fuse changing (with the flick of a finger). ULTRASAFE holders are available in 1, 2, 3 or 4 poles, with or without blown-fuse indicators in each pole.

AC indicators are orange and DC are red. The multi-pole units can also be made up by ordering pin-tie handles for field assembly.

ULTRASAFE holders save up to 15% mounting space and any combination can be snapped onto 35mm DIN rail for extra savings in panel building time.

ULTRASAFE holders with Class CC fuses chosen for Type "2" protection give one of the safest protection packages in the industry. Ultrasafe body material is tough and durable polyamide, with exceptional insulating properties.

Approvals

- All Ultrasafe Fuse Holders meet the requirements of UL512
- UL Listed Class CC Guide IZLT, File E52283
- UL Recognized, Component, Midget, Guide IZLT2, File E52283
- CSA Certified Class CC & Midget, C22.2, Class 6225 File 32169
- IEC 60269 690VAC, 32A Midget version only.



Ratings

- USCC: 600VAC/30A
- USM: - 800VAC/1000VDC 30A as per UL 512
- - 690VAC/32A as per IEC 60269-2
- - 750VAC/32A as per CSA 22-2
- Special Indicator for 24VDC, 30A
- Special Indicator for 48VDC, 30A
- Withstand rating:
 - Class CC 200kA I.R.
 - Midget Fuse 100kA I.R.
- Min. voltage to operate indicator light: 90VAC (less than 0.7 mA leakage current at 600V)

Highlights

- Finger Safe
- Optional Indicator Lights
- DIN Rail Mount
- Compact Footprint
- Quick, Easy Fuse Change

Recommendes fuse usage

- USCC use with ATDR*, ATMR, ATQR
- USM use with ATQ, ATM*, A6Y-2B, A25Z-2, TRM, OTM, A13X-2, GFN, GGU, A60Q-2

* Recommended for DC Applications

Applications:

- All circuits up to 600 volts for motors, control circuits, transformers, etc.
- Non-load disconnect
- 12, 24 and 48 volt DC circuits

Gears & Fuse Gears



American General Purpose Fuses

UltraSafe Range

USCC - USM - for Class CC and Midget Fuses

Ultrasafe Modular Fuse Holders

For use with Class CC Fuses

Cat. Number	Ref. Number	Description
USCC1	B213441	1 pole
USCC1I	X213943	1 pole with indicator
USCC2	P216489	2 pole
USCC2I	D217008	2 pole with indicators
USCC3	M217522	3 pole
USCC3I	Y218038	3 pole with indicators
USCC3IN	N219593	3 pole with indicators and a 4th neutral pole
USCC3N	G222048	3 pole with a 4th neutral pole
USCC4	Q222792	4 pole
USCC4I	E223311	4 pole with indicators

Dimensions

Dimension	mm	In
A	17.5	0.69
B	35.0	1.38
C	52.5	2.07
D	70.0	2.76
E	78.0	3.07
F	2.5	0.10
G	78.0	3.07
H	59.0	2.32
I	12.5	0.49
J	42.5	1.67
K	5.0	0.20
L	45.0	1.77

For use with Midget (1-1/2" x 13/32") Fuses

Cat. Number	Ref. Number	Description
USM1	Y213944	1 pole
USM1I	L214462	1 pole with indicator
USM2	N217523	2 pole
USM2I	Z218039	2 pole with indicators
USM3	C218548	3 pole
USM3I	Y219073	3 pole with indicators
USM3IN	P219594	3 pole with indicators and a 4th neutral pole
USM3N	H222049	3 pole with a 4th neutral pole
USM4	R222793	4 pole
USM4I	F223312	4 pole with indicators

Special Indicator Options For use with Low Voltage DC Rated Class CC & Midget Fuses

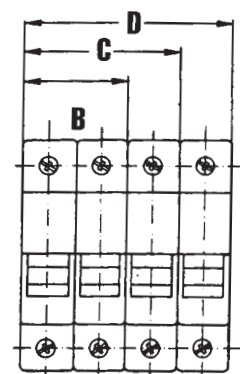
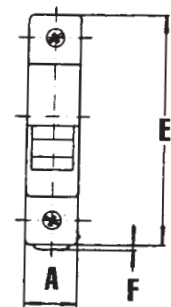
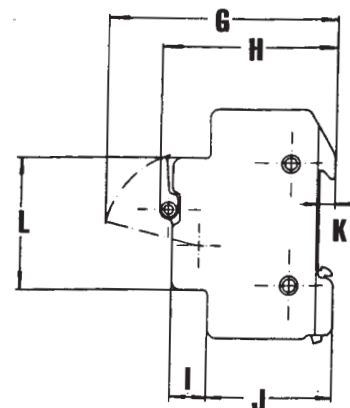
Catalog Number	Reference Number	Indicator type	operating Voltage	leakage Current
USM1I-DC24	T215987	LED	12 to 24 VDC	10mA max.(@24vdc)
USM1I-DC24P	Q216490	LED	20 to 24 VDC	1mA max.(@24vdc)
USM1I-DC48	E217009	LED	35 to 48 VDC	10mA max.(@48vdc)
USCC1I-DC24	P215477	LED	12 to 24 VDC	10mA max.(@24vdc)
USCC1I-DC48	S215986	LED	35 to 48 VDC	10mA max.(@48vdc)

Neutral Link Pole

Cat. Number	Ref. Number	Description
USN	W201131	1 Pole with Integral Neutral Link

Accessories

Cat. Number	Ref. Number	Description
USPTH2	F201646	Pin-tie handle for 2 poles
USPTH3	C205047	Pin-tie handle for 3 poles
USPTH4	P211383	Pin-tie handle for 4 poles



Terminal screws: Phillips/slot head
Suggested screw torque: 14.75 in.-lbs. (2N.m)

Connector type: Pressure plate

Wire range: 2mm² to 10 mm² - #6 to #14 (solid/stranded Cu)

Load-break disconnect: No



American General Purpose Fuses UltraSafe Range Highlights



The brand-new innovative and comprehensive "MODULOSTAR®" range of Ferraz Shawmut Modular Fuseholders and Fuse disconnectors is global and designed to accommodate a multitude of fuses from around the world, including - UL class CC, Midget - Special protection class (UR, gR, gD) in 4 sizes: 10x38, 14x51, 22x58 and 27x60 mm. All MODULOSTAR® products are manufactured in accordance with IEC 60269-2, IEC 60947 - 1 & 3, UL512 and CSA 22-2 Standards.

General characteristics

- **Impulse withstand voltages :**
 - The range is tested at respectively $U_{imp} = 6KV$ and $8KV$ according to part 8.3.3.4.1 of IEC 60947-1 between neighboring poles, between phase and wires, between phase and microswitch. Insulation voltage rating $U_i = 690VAC$ and $800VAC$
 - The blown fuse light indicators are available for 24VDC to 700VDC and 110VAC to 690-700VAC
- **European RoHS Directive:**
Modulostar® product range is develop in accordance with European Directive 2002/95/CE dated 27 January 2003, as free of halogene (PBB, PBDE), chlorine, mercury, cadmium and lead.
- **Environmental aspects**
Modulostar® range is design following "ecoconception" method, with software tool EIME (Environmental Information & Management Explorer), which takes into account the following criteria: Water Toxicity, Water Eutrophication, Hazardous Waste Production, Raw Material Depletion, Energy Depletion, Water Depletion, Global Warming, Air Toxicity, Photochemical Ozone Creation, Air Acidification
- **Plastic material used are UL 94 V0 to V2 with UL Recognized Yellow card**
RTI (Relative Thermal Index) $> 120^{\circ}C$
CTI (Comparative Tracking Index) $> 350V$
Bodies are in Polyamide 6 with 20% reinforced material
Handles are in Polyamide 6.6 with 25% reinforced material or in Thermodur BMC
- **Homologations:** CB report according IEC 60269-2 and IEC 60947-3 standards
UL CSA Listed (600V AC) for class CC products ranges, UL CSA recognition (800V AC - 1000V DC) for Midget and IEC products
- **Vibration withstand:**
Tests with sine vibrations carried out at ambient temperature with scanning each of the three main axis of the holder .
Spectrum: 1st segment (2 to 16Hz) constant displacement $x=5mm$ peak
2nd segment (16 to 250 Hz) constant acceleration $\gamma = 5g$ peak
Exponential scanning speed: 1 octave per minute.
Duration : 2 hours per axis.
- **Climatic usage conditions:** Modulostar® is designed for temperate climates . For more severe climates we recommend the following:

Maximum temperature	20°C	30°C	40°C	50°C
Maximum relative humidity	95%	90%	80%	50%
Curent derating	1	0.95	0.9	0.8



American General Purpose Fuses UltraSafe Range Highlights



Fuse ranges used in Ferraz Shawmut fusegear

Class \ Size	10.3 x 38 / CC	14 x 51	22 x 58	27 x 60
600V Class J Time delay			AJT 1 to 30A	AJT 31 to 60A
600V Class J Fast acting			A4J 1 to 30A	A4J 31 to 60A
600V Midget fast acting	6JX, ATM, SBS 0.25 to 30A			
600V Class CC Time delay	ATDR, ATQR, ATMR 1/4 to 30A			
600V Class RK5 Time delay		TR 1 to 30A		
250V Class RK1 Fast acting		A2K 1 to 30A		
250V Class K-5		OT, OTN 1 to 30A		
250V Class RK1 Time delay		A2D, 1 to 30A		
500V Midget Time delay	ATQ 0.1 to 10A			
250V-300V Midget	OTM, TRM, A25Z-2 0.1 to 30A			
125V Midget Fast acting	GGU, GFN 3 to 30A			
aM	400V 25 to 32A 500V 0.16 to 20A 690V 0.16 to 12 or 20A*	500V 32 to 50A 690V 0.25 to 40A	500V 100 to 125A 690V 1 to 80A	
gG	400V 32A 500V 0.5 to 25A 690V 0.5 to 12 or 20A*	400V 50A 500V 32 to 40A 690V 1 to 32A	400V 125A 500V 100A 690V 4 to 80A	
60gD		600V 10 to 30A	600V 35 to 60A	600V 65 to 100A
gG with striker	400V 2 to 32A	400V 50A 500V 2 to 40A 690V 2 to 32A*	400V 125A 500V 80 to 100A 690V 4 to 80A*	690V 63 to 160A*
aM with striker	400V 2 to 32A	500V 1 to 15A 690V 10 to 40A*	500V 63 to 100A 690V 1 to 80A*	690V 63 to 160A*
UR	600V 0.1 to 0.8	690V 6 to 50A	690V 25 to 100A	
gR	690V 1 to 32A	690V 1 to 50A	690V 25 to 100A	
UR with striker	500V 1 to 30A	690V 6 to 50A	690V 25 to 100A	690V 63 to 250V 1000V 32 to 170A
gR with striker		690V 1 to 50A	690V 25 to 100A	800V 8 to 110A
I _n maxi	32A	50A	125A	170A

* development in progress



Gears & Fuse Gears

American General Purpose Fuses UltraSafe Range New USCC & US10 - Class CC & 10x38 Fuses



UL fuse holders: USCC

Electrical characteristics

Nominal Voltage Ui AC/DC	Voltage Isolation Uimp	Nominal Current	Max. power losses in the fuse links	Fuse links rating	Maxi RMS* Current for 1,2, 3 and 3+N poles with FS fuse links For 4, 5 and 6 poles x by 0.9 For 7, 8, 9 poles x 0.8 For ≥ 10 poles x by 0,7			Cable wire section (mm²) recommended
					ATDR	ATM	ATMR	
600V AC	6 kV	30 A	3 W	≤20	20	20	20	2.5
				25	25	25	25	4
				30	30	30	30	6

Note: UL Listed 600V AC

* Datas for ambiente temperature = 20°C.

Wire range : Rigid wire = 1 - 16 mm² (18 - 6 AWG) Multistrand wire = 0,75 - 10 mm² (18 - 8 AWG)

Ferraz Shawmut recommends to use screwdrivers PZ 2 or Flat 5.5 x 1 mm (maximum diameter 6 mm)

Maximum Tightening Torque : 2.5 Nm (22lb-in)

IR with UL Class CC fuse links : 200KA @ 600V

ULTRASAFE Fuse holders

for Class CC fuse links



Nb of Pole	ULTRASAFE™ Fuse holder without fuse light melting indicator			Nb of Mod. (17.5 mm)	Pckg box of
	Catalog Number	Ref Number	Description		
1	USCC1	H305033	ULTRASAFE™ CC 1P	1	12
2	USCC2	K305035	ULTRASAFE™ CC 2P	2	6
3	USCC3	L305036	ULTRASAFE™ CC 3P	3	4
4	USCC4	N305038	ULTRASAFE™ CC 4P	4	3
2	USCC1N	J305034	ULTRASAFE™ CC 1P+N	2	6
4	USCC3N	M305037	ULTRASAFE™ CC 3P+N	4	3

Nb of Pole	ULTRASAFE™ Fuse holder with fuse light melting indicator			Nb of Mod. (17.5 mm)	Pckg box of
	Catalog Number	Ref Number	Description		
1	USCC1I	P305039	ULTRASAFE™ CC 1P C/I	1	12
2	USCC2I	R305041	ULTRASAFE™ CC 2P C/I	2	6
3	USCC3I	S305042	ULTRASAFE™ CC 3P C/I	3	4
4	USCC4I	V305044	ULTRASAFE™ CC 4P C/I	4	3
2	USCC1NI	Q305040	ULTRASAFE™ CC 1P+N C/I	2	6
4	USCC3NI	T305043	ULTRASAFE™ CC 3P+N C/I	4	3

Accessories

Description	Catalog Number	references Number	Nb of Mod. (17.5 mm)	Maxi. RMS current (A)	Number of poles	Pckg
Kit for Multi-Phase connection links	CMS810PAK	Z233725				12
Lock	LOCK	M223525				1
Tag and lockout	TAGLOCKCMS810	A235773				1
jumping bars 1 phase size 8/10 *	CMS810BB1F13	T210306	13	63	1	10
jumping bars 2 phases size 8/10 *	CMS810BB2F6	V210307	6	63	2	10
jumping bars 3 phases size 8/10 *	CMS810BB3F4	W210308	4	100	3	10
jumping bars 4 phases size 8/10 *	CMS810BB4F3	X210309	3	100	4	10
1 phase lateral incoming power supply	TBB1C	E210316		90		50
2 & 3 phases lateral incoming power supply	TBB23C	G210318		90		50
1 phase axial incoming power supply	TBB1A	D210315		90		50
2 & 3 phases axial incoming power supply	TBB23A	F210317		90		50

Note *: It is possible to use a rigid cable 16 mm² with a jumping bar 1.5 mm thick.



American General Purpose Fuses UltraSafe Range New USCC & US10 - Class CC & 10x38 Fuses

IEC fuse holders: US10

Electrical characteristics

Nominal Voltage Ui AC/DC	Voltage Isolation Uimp	Nominal Current	Max. power losses in the fuse links	Fuse links rating	Maxi RMS* Current for 1,2, 3 and 3+N poles with FS fuse links For 4, 5 and 6 poles x by 0.9 For 7, 8, 9 poles x 0.8 For ≥ 10 poles x by 0.7				Cable wire section (mm²) recommended
					6JX	ATM, SBS, GNF, GGU	ATO, OTM, TMR	URD / gRB	
690V AC AC20B	6 kV	30 A	3 W	≤16	16	16	16	16	2.5
				20	20	20	20	19	2.5
				25	25	25	25	22	4
				30	30	30	30	25	6
				32				25	6

Note: UL recognized Voltage are 800V AC and 1000V DC

* Datas for ambiante temperature = 20°C.

Wire range : Rigid wire = 1- 16 mm² (18 - 6 AWG) Multistrand wire = 0,75 - 10 mm² (18 - 8 AWG)

Ferraz Shawmut recommends to use screwdrivers PZ 2 or Flat 5.5 x 1 mm (maximum diameter 6 mm)

Maximum Tightening Torque : 2.5 Nm (22lb-in)

IR for fuses : 120KA @ 500V IEC - 80KA @ 690V IEC - 80 KA @ 700V UL

MODULOSTAR® Fuse holders

for Midget and 10 x 38 fuse links

Nb of Pole	Catalog Number	MODULOSTAR® Fuse holder without fuse light melting indicator		Nb of Mod. (17.5 mm)	Pckg box of
		Ref Number	Description		
1	US10N	H305056	MODULOSTAR® US10 NEUTRE 	1	12
1	US101	B305050	MODULOSTAR® US10 1P 	1	12
2	US101N	C305051	MODULOSTAR® US10 1P+N 	2	6
2	US102	D305052	MODULOSTAR® US10 2P 	2	6
3	US103	E305053	MODULOSTAR® US10 3P 	3	4
4	US103N	F305054	MODULOSTAR® US10 3P+N 	4	3
4	US104	G305055	MODULOSTAR® US10 4P 	4	3

Nb of Pole	Catalog Number	MODULOSTAR® Fuse holder with fuse light melting indicator		Nb of Mod. (17.5 mm)	Pckg box of
		Ref Number	Description		
1	US101I	J305057	MODULOSTAR® US10 1P C/I 	1	12
2	US101NI	K305058	MODULOSTAR® US10 1P+N C/I 	2	6
2	US102I	L305059	MODULOSTAR® US10 2P C/I 	2	6
3	US103I	M305060	MODULOSTAR® US10 3P C/I 	3	4
4	US103NI	N305061	MODULOSTAR® US10 3P+N C/I 	4	3
4	US104I	P305062	MODULOSTAR® US10 4P C/I 	4	3



Accessories

Description	Catalog Number	references Number	Nb of Mod. (17.5 mm)	Maxi. RMS current (A)	Number of poles	Pckg
Kit for Multi-Phase connection links	US810PAK	Z233725				12
Lock	LOCK	M223525				1
Tag and lockout	TAGLOCKUS810	A235773				1
jumping bars 1 phase size 8/10 *	US810BB1F13	T210306	13	63	1	10
jumping bars 2 phases size 8/10 *	US810BB2F6	V210307	6	63	2	10
jumping bars 3 phases size 8/10 *	US810BB3F4	W210308	4	100	3	10
jumping bars 4 phases size 8/10 *	US810BB4F3	X210309	3	100	4	10
1 phase lateral incoming power supply	TBB1C	E210316		90		50
2 & 3 phases lateral incoming power supply	TBB23C	G210318		90		50
1 phase axial incoming power supply	TBB1A	D210315		90		50
2 & 3 phases axial incoming power supply	TBB23A	F210317		90		50

Note *: It is possible to use a rigid cable 16 mm² with a jumping bar 1.5 mm thick.



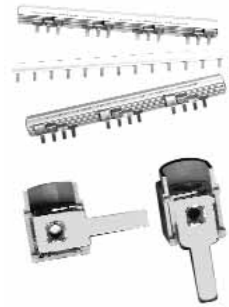
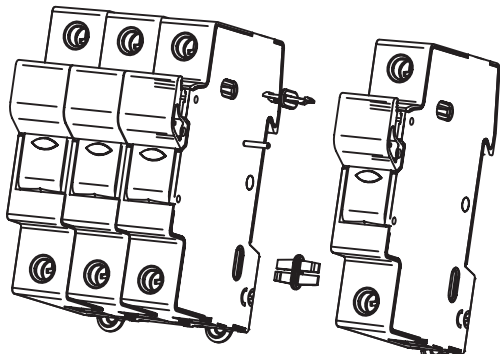
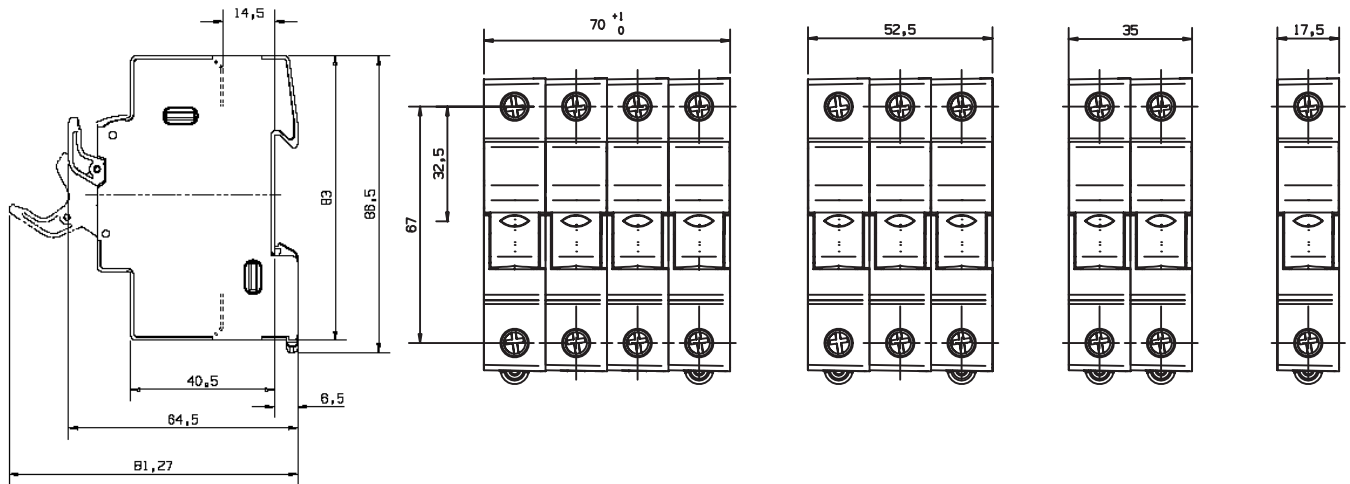
Gears & Fuse Gears

American General Purpose Fuses UltraSafe Range New USCC & US10 - Class CC & 10x38 Fuses



UL fuse holders: USCC & US10

Dimensions



Accessories

Description	Catalog Number	references Number	Nb of Mod. (17.5 mm)	Maxi. RMS current (A)	Number of poles	Pckg
Kit for Multi-Phase connection links	CMS810PAK	Z233725				12
Lock	LOCK	M223525				1
Tag and lockout	TAGLOCKCMS810	A235773				1
jumping bars 1 phase size 8/10 *	CMS810BB1F13	T210306	13	63	1	10
jumping bars 2 phases size 8/10 *	CMS810BB2F6	V210307	6	63	2	10
jumping bars 3 phases size 8/10 *	CMS810BB3F4	W210308	4	100	3	10
jumping bars 4 phases size 8/10 *	CMS810BB4F3	X210309	3	100	4	10
1 phase lateral incoming power supply	TBB1C	E210316		90		50
2 & 3 phases lateral incoming power supply	TBB23C	G210318		90		50
1 phase axial incoming power supply	TBB1A	D210315		90		50
2 & 3 phases axial incoming power supply	TBB23A	F210317		90		50

Note *: It is possible to use a rigid cable 16 mm² with a jumping bar 1.5 mm thick.



Gears & Fuse Gears

American General Purpose Fuses UltraSafe Range USFM Series - Class CC & Midget & 10x38 Fuses

Three poles fuse holders and fuse disconnectors: USFM10 - USFMM

Electrical characteristics

Nominal Voltage Ui AC/DC	Voltage Isolation Uimp	Nominal Current	Max. power losses in the fuse links	Fuse links rating	Maxi RMS* Current for 1 Three poles system with FS fuse links. For 2 to 7 Three poles systems x by 0.9				Cable wire section (mm²) recommended
					6JX	ATM, SBS, GNF, GGU	ATO, OTM, TMR	URD / gRB	
690 V IEC 600V UL AC20B	6 kV	32 A	3 W	≤12	≤12	≤12	≤12	≤12	2.5
				16	16	16	16	16	2.5
				20	20	20	20	19	2.5
				25	25	25	25	22	4
				30	30		26	25	6
				32		32	27	26	6

* Datos for ambiente temperature = 20°C.

Wire range : Rigid and Multistrand wire = 1- 4 mm² (18 - 10 AWG) - Multistrand wire 6 mm² (9 AWG) with strands repartition between each part of screw -

Maximum multistrand wire for each open lug = 2.6 mm² (12 AWG)

Maximum Tightening Torque : 1.5 Nm (13 lb-in)

Ferraz Shawmut recommends to use screwdrivers PZ 2 or Flat 5.5 x 0.8 mm (maximum diameter 6 mm)

IR with fuses : 120KA @ 500V IEC - 80KA @ 690V IEC - 80 KA @ 700V UL

MODULOSTAR® USFM10

for IEC 10x38 fuse links



Nb of Pole / Width	MODULOSTAR® USFM Fuse holder and Fuse disconnectors			Fonction	
	Catalog Number	Ref Number	Description	Fuse holder	Fuse disconnectors
3 poles system / 45 mm width	USFM10	S302765	USFM10 FUSE HOL 3P 690V 32A EU	w/o Indicator	
	USFM10M	T302766	USFM10M FUSEHOL+MC3P690V32A EU		w/o Indicator
	USFM10I	W302768	USFM10I FUS.HOL3P+V 690V32A EU	with Indicator	
	USFM10MI	V302767	USFM10MI FUS.HOL3P+MC+V690V EU		with Indicator

Pack: 1 piece

Fuse holder is without Prebreaking Microswitch (see accessories)

Fuse disconnectors is with mounted Prebreaking Microswitch

ULTRASAFE USFMM

for Midget and IEC 10x38 fuse links

Nb of Pole / Width	ULTRASAFE™ USFM Fuse holder and Fuse disconnecter			Fonction	
	Catalog Number	Ref Number	Description	Fuse holder	Fuse disconnecter
3 poles system / 45 mm width	USFMM	D302775	USFMM 3P 600V 30A UL	w/o Indicator	
	USFMMM	E302776	USFMMM 3P 600V 30A +MS UL		w/o Indicator
	USFMMI	G302778	USFMMI 3P 600V 30A +LIGHT UL	with Indicator	
	USFMMMI	F302777	USFMMMI 3P 600V 30A +LI+MS UL		with Indicator

Pack: 1 piece

Fuse holder is without Prebreaking Microswitch (see accessories)

Fuse disconnectors is with mounted Prebreaking Microswitch

Accessories

Description	Catalog Number	references Number	Number of systems interconnected	Maxi. RMS current (A)	Number of poles	Pckg
Lock	LOCK	M223525				1
Microswitch	USFMAC11	C302797	1		3	1
Additional Neutral			1			
jumping bars 3 phases			4		3	
Lateral incoming power supply	TBB23C	G210318		90		50
Axial incoming power supply	TBB23A	F210317		90		50
Interconnexion with SEI 30A Contactor			1		3	
Interconnexion with Rockwell 30A Contactor			1		3	
Interconnexion with SIEMENS 30A Contactor			1		3	
Interconnexion with ABB 30A Contactor			1		3	
Interconnexion with GE 30A Contactor			1		3	

Gears & Fuse Gears



American General Purpose Fuses

UltraSafe Range

USFM Series - Class CC & Midget & 10x38 Fuses



UL three poles fuse holders: USFMCC

Electrical characteristics

Nominal Voltage Ui AC/DC	Voltage Isolation Uimp	Nominal Current	Max. power losses in the fuse links	Fuse links rating	Maxi RMS* Current for 1 USFM with FS fuse links For 2 to 7 USFM x by 0.9			Cable wire section (mm²) recommended
					ATDR	ATM	ATMR	
600V AC	8 kV	30 A	3 W	≤20	20	20	20	4
				25	25	25	25	
				30	30	30	30	

* Datas for ambiante temperature = 20°C.

Wire range : Rigid and Multistrand wire = 1- 4 mm² (18 - 10 AWG) - Multistrand wire 6 mm² (9 AWG) with strands repartition between each part of screw - Maximum multistrand wire for each open lug = 2.6 mm² (12 AWG)

Maximum Tightening Torque : 1.5 Nm (13 lb-in)

Ferraz Shawmut recommends to use screwdrivers PZ 2 or Flat 5.5 x 0.8 mm (maximum diameter 6 mm)

IR with UL Class CC fuse links : 200KA @ 600V

ULTRASAFE™ USFMCC

for Class CC fuse links

Nb of Pole / Width	ULTRASAFE™ USFM Fuse holder and Fuse disconnecter			Fonction	
	Catalog Number	Ref Number	Description	Fuse holder	Fuse disconnecter
3 poles system / 45 mm width	USFMCC	P302762A	USFMCC 3 POLES 600V 30A UL	w/o Indicator	
	USFMCCM	B302796A	USFMCCM 3 POLES 600V 30A+M UL		w/o Indicator
	USFMCCI	Q302763A	USFMCCI 3 POLES 600V 30A LIGHT	with Indicator	
	USFMCCMI	R302764A	USFMCCMI 3POLES 600V 30A LI+MC		with Indicator

Pack: 1 piece

Fuse holder is without Prebreaking Microswitch (see accessories)

Fuse disconnecter is with mounted Prebreaking Microswitch





Gears & Fuse Gears

American General Purpose Fuses UltraSafe Range USFM Series - Class CC & Midget & 10x38 Fuses

USFM10, USFMM, USFMCC

Ferraz Shawmut Fuse usable in USFM* for Motors protection

P . Motor	Motor Voltage	Ie Motor	AM IEC fuse links	CC UL listed	GD UL recognized	JTD UL Listed ≤ 60A
4 kW	400/415V	9A	50 aM 10.10*	CC 15*	60 gD 14.12	AJT17.5
	500V	7A	50 aM 10.8*	CC 12*	60 gD 14.10	AJT15
	690V	5A	69 aM 10.6,3*	---	---	AJT10
5.5 kW	400/415V	12	50 aM 10.16*	CC 20*	60 gD 14.18	AJT20
	500V	10	50 aM 10.12*	CC 17*	60 gD 14.15	AJT17.5
	690V	7	69 aM 10.8*	---	---	AJT15
7.5 kW	400/415V	16	50 aM 10.20*	CC 25*	60 gD 14.25	AJT25
	500V	14	50 aM 10.16*	CC 25*	60 gD 14.20	AJT20
	690V	9	69 aM 10.10*	---	---	AJT17.5
11 kW	400/415V	23	50 aM 10.25*		60 gD 14.30	AJT40
13 kW	500V	20	50 aM 10.25*	CC 30*	60 gD 14.28	AJT35
10 kW	690V	12	69 aM 14.12	---	---	AJT20
15 kW	400/415V	30	40 aM 10.32	---	60 gD 22.35	AJT60
	500V	25	50 aM 10.25	---	60 gD 14.30	AJT45
	690V	18	69 aM 14.20	---	---	AJT30
18 kW	400/415V	37	50 aM 14.40	---	60 gD 22.55	
to	500V	30	50 aM 14.32	---	60 gD 14.45	AJT60
20 kW	690V	21	69 aM 14.25	---	---	AJT335
22 kW	400/415V	43	50 aM 14.50	---	60 gD 22.60	---
25 kW	500V	38	50 aM 14.40	---	60 gD 22.50	---
22 kW	690V	25	69 aM 14.32	---	---	AJT45
28 kW	400/415V	54	50 aM 22.63	---	60 gD 27.80	---
32 kW	500V	47	50 aM 22.50	---	60 gD 22.60	---
28 kW	690V	30	69 aM 14.40	---	---	AJT60
32 kW	400/415V	60	50 aM 22.80	---	60 gD 27.100	---
37 kW	500V	55	50 aM 22.63	---	60 gD 27.80	---
32 kW	690V	34	69 aM 14.40	---	---	AJT60
40 kW	400/415V	72	50 aM 22.80	---	60 gD 27.100	---
45 kW	500V	67	50 aM 22.80	---	---	---
40 kW	690V	42	69 aM 14.50	---	---	---
45 kW	400/415V	85	50 aM 22.100	---	---	---
55 kW	500V	80	50 aM 22.100	---	---	---
55 kW	690V	49	69 aM 14.63	---	---	---

* Respectively in USFM10-USFCC

Gears & Fuse Gears



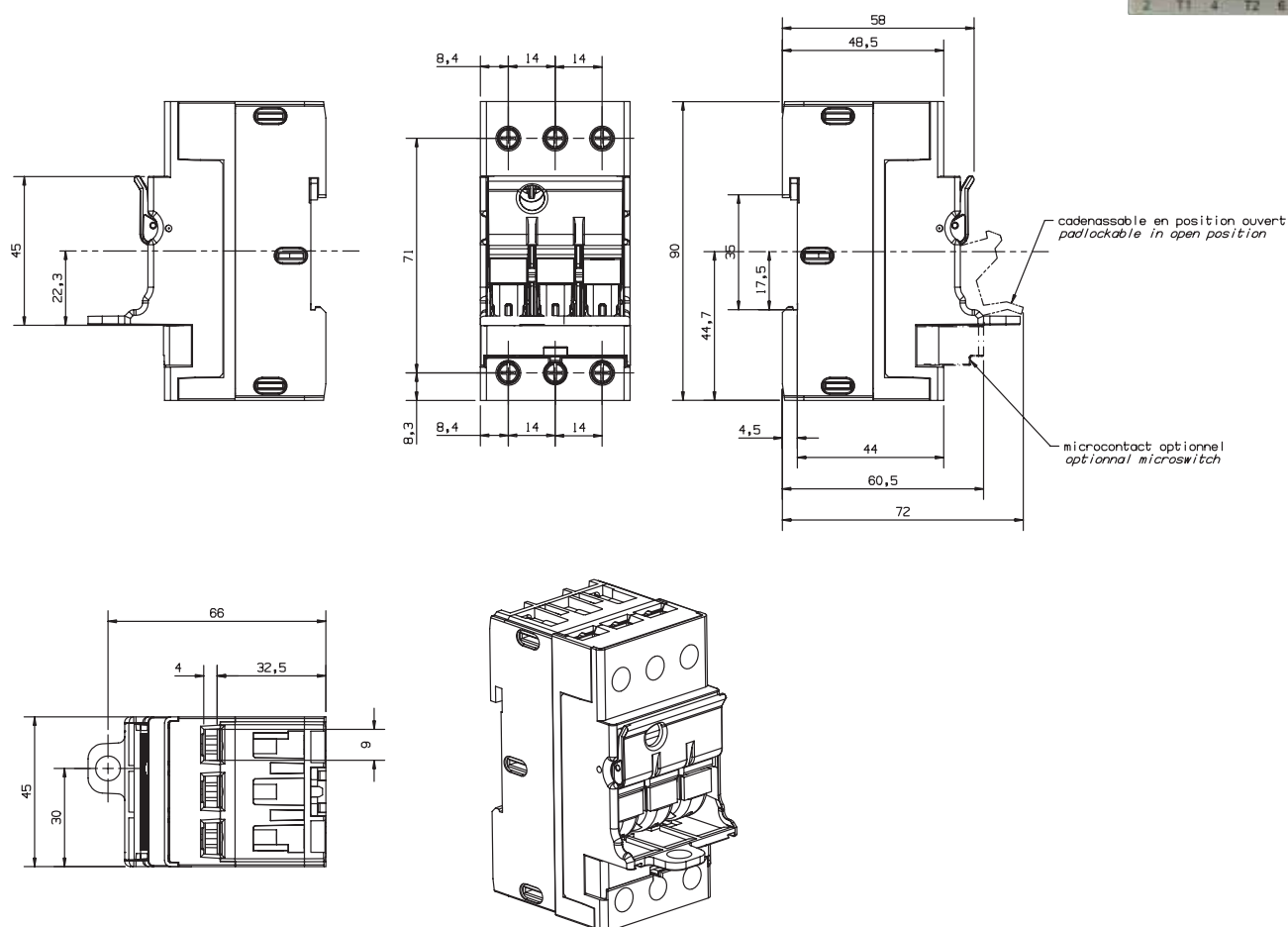
American General Purpose Fuses

UltraSafe Range

USFM Series - Class CC & Midget & 10x38 Fuses

USFM 10 - USFMM - USFMCC

Dimensions



Accessories

Description	Catalog Number	references Number	Number of systems interconnected	Maxi. RMS current (A)	Number of poles	Pckg
Lock	LOCK	M223525				1
Microswitch	USFMAC11	C302797	1		3	1
Additional Neutral jumping bars 3 phases			1			
Lateral incoming power supply	TBB23C	G210318	2	90	3	50
Axial incoming power supply	TBB23A	F210317		90		50
Interconnexion with SEI 30A Contactor			1		3	
Interconnexion with Rockwell 30A Contactor			1		3	
Interconnexion with SIEMENS 30A Contactor			1		3	
Interconnexion with ABB 30A Contactor			1		3	
Interconnexion with GE 30A Contactor			1		3	



Gears & Fuse Gears

American General Purpose Fuses UltraSafe Range US14 - US22



UL fuse holders: US 14

Electrical characteristics

Rated insulation voltage U_i AC/DC	Rated impulse withstand voltage U_{imp}	Rated current	Max. power dissipation per fuse	Fuse rating	Maximum current in use for 1, 2, 3 et 3+N poles with FS-fuses. for 4, 5 and 6 poles, multiply by 0.8 for 7, 8, 9 x 0.7 and for ≥ 10 x 0.6								Recommended wire cross-section (mm ²)
					<i>gG</i>	<i>60gD</i>	<i>aM</i>	<i>URD - URC</i>	<i>URGA</i> <i>URGB</i>	<i>gRB</i>	<i>gLB</i>		
750 V	8 kV	50 A	4,7 W	≤ 20		20	≤ 20	18	18	18	≤ 16	≤ 16	
				≤ 25		25	25	20	20	20	20	20	
				≤ 30	≤ 20	30		18	18	18	25	20	
				32	≤ 25		32	25	25	25	32	25	
				40	≤ 30		40	30	30	30	40	32	
				50		50	35	35	35	45	40		
				63			38				45		

* Values shown for 20°C ambient temperature.

Wiring: Rigid wire = 1.5 - 35 mm² (16 - 3 AWG) - Multistrand wire: Maximum 25 mm² (4 AWG)

Tightening torque: 3.5 Nm max / 30 lbs.in

Ferraz Shawmut recommends to use screwdrivers PZ 2 or Flat 5.5 x 1 mm (maximum diameter 6 mm).

ULTRASAFE™ US 14 fuse disconnectors

for 14x51 fuses with no striker, or with indicator light or with striker



X227904

Nb of Pole	Model without indicator light ready for accessories		Model with indicator light ready for auxiliary contact		Model fitted with auxiliary contact		Model fitted with auxiliary contact & indicator light		Nb of Mod. (17.5 mm)	Pckg box of
	Cat. Num	Ref. Num	Cat. Num	Ref. Num	Cat. Num	Ref. Num	Cat. Num	Ref. Num		
N	US14N	S227900							1.5	6
1	US141	T227901	US141I	V227902	US141M	W227903	US141MI	X227904	1.5	6
1 + N	US141N	Y227905	US141NI	Z227906	US141NM	A227907	US141NMI	B227908	3	3
2	US142	C227909	US142I	D227910	US142M	E227911	US142MI	F227912	3	3
2*					US142M2	G227913	US142M2I	H227914	3	3
3	US143	J227915	US143I	K227916	US143M	L227917	US143MI	M227918	4.5	2
3*					US143M2	N227919	US143M2I	P227920	4.5	2
3 + N	US143N	Q227921	US143NI	R227922	US143NM	S227923	US143NMI	T227924	6	1
3 + N*					US143NM2	V227925	US143NM2I	W227926	6	1
4	US144		US144I		US144M		US144MI		6	1
4*					US144M2		US144M2I		6	1

* Two auxiliary microswitches (see instructions for mounting) – The auxiliary microswitch function requires use of fuses with strikers

Accessories

Auxiliary contact kit
Y227928



Enlargement pin for
auxiliary contact - F213629



Auxiliary contact assembly pin
J214138

Description	Cat. Num	References	Nb of Mod. (17.5 mm)	Pckg
Auxiliary contact kit 1 pole US 14	USMSW1	Y227928	1.5	1
Auxiliary contact kit 3 poles US 14	USMSW2	Z227929	4.5	1
2 auxiliary contact kit 3 poles US 14	USMSW3	A227930	4.5	1
Auxiliary contact assembly pin (between 2 kits)	US1422PTH	J214138		10*
Enlargement pin for auxiliary contact	US1422BP	F213629		10*
Multi-pole assembly kit	US14PAK	X227927		10*
Indicator light kit	CMS1422LHI	A225653		1
Lock	LOCK	M223525		1

* 10 per bag

Gears & Fuse Gears



American General Purpose Fuses UltraSafe Range US14 - US22



UL fuse holders: US 22



C227932

Electrical characteristics

Rated insulation voltage Ui AC/DC	Rated impulse withstand voltage Uimp	Rated current	Max. power dissipation per fuse	Fuse rating	Maximum current in use for 1, 2, 3 et 3+N poles with FS-fuses. for 4, 5 and 6 poles, multiply by 0.8 for 7, 8, 9 x 0.7 and for ≥ 10 x 0.6								Recommended wire cross-section (mm²)
					gG	60gD	aM	URD - URC	URGA	URGB	gRB	gLB	
750 V	8 kV	125 A	9.5 W	≤ 16	≤ 16		≤ 16	≤ 16	≤ 16	≤ 16	≤ 16	≤ 16	2.5/12
				20	20		20	20	20	20	20	20	4/10
				25	25		25	25	25	25	25	25	6/10
				32-35	32	35	32	29	29	29	29	32	10/8
				40	40	40	40	35	35	35	35	40	10/8
				50	50	50	50	40	40	40	40	50	10/8
				60/63	60	60	63	52	51	52	52	63	16/6
				80			80	65	64	64	75	75	25/4
				100			100	76	74	74	76	85	35/2
				125			100	85					35/2

* Values shown for 20°C ambient temperature.

Wiring: Rigid wire = 1.5 - 50 mm² (16 - 1 AWG) - Multistrand wire: Maximum 35 mm² (3 AWG).

Tightening torque: max. 4.5 Nm - 45 lbs.in

Ferraz Shawmut recommends to use screwdrivers PZ 2 or Flat 6.5 x 1.2 mm (maximum diameter 7 mm).

ULTRASAFE™ US 22 fuse disconnectors

for 22x58 fuses with no striker, or with indicator light or with striker

Nb of Pole	Model without indicator light ready for accessories		Model with indicator light ready for auxiliary contact		Model fitted with auxiliary contact		Model fitted with auxiliary contact & indicator light		Nb of Mod. (17.5 mm)	Pckg box of
	Cat.Num	Ref.Num	Cat.Num	Ref.Num	Cat.Num	Ref.Num	Cat.Num	Ref.Num		
N	US22N	B227931							1.5	6
1	US221	C227932	US221I	D227933	US221M	E227934	US221MI	F227935	1.5	6
1 + N	US221N	G227936	US221NI	H227937	US221NM	J227938	US221NMI	K227939	3	3
2	US222	L227940	US222I	M227941	US222M	N227942	US222MI	P227943	3	3
2*					US222M2	Q227944	US222M2I	R227945	3	3
3	US223	S227946	US223I	T227947	US223M	V227948	US223MI	W227949	4.5	2
3*					US223M2	X227950	US223M2I	Y227951	4.5	2
3 + N	US223N	Z227952	US223NI	A227953	US223NM	B227954	US223NMI	C227955	6	1
3 + N*					US223NM2	D227956	US223NM2I	E227957	6	1
4	US224		US224I		US224M		US224MI		6	1
4*					US224M2		US224M2I		6	1

* Two auxiliary microswitches (see instructions for mounting) – The auxiliary microswitch function requires use of fuses with strikers



F227935

Accessories

Description	Cat.Num	References	Nb of Mod. (17.5 mm)	Pckg
Auxiliary contact kit 1 pole US 22	USMSW4	G227959	1.5	1
Auxiliary contact kit 3 poles US 22	USMSW5	H227960	4.5	1
2 auxiliary contact kit 3 poles US 22	USMSW6	J227961	4.5	1
Auxiliary contact assembly pin (between 2 kits)	US1422PTH	J214138		10*
Enlargement pin for auxiliary contact	US1422BP	F213629		10*
Multi-pole assembly kit	US22PAK	F227958		10*
Indicator light kit	CMS1422LHI	A225653		1
Lock	LOCK	M223525		1

* 10 per bag

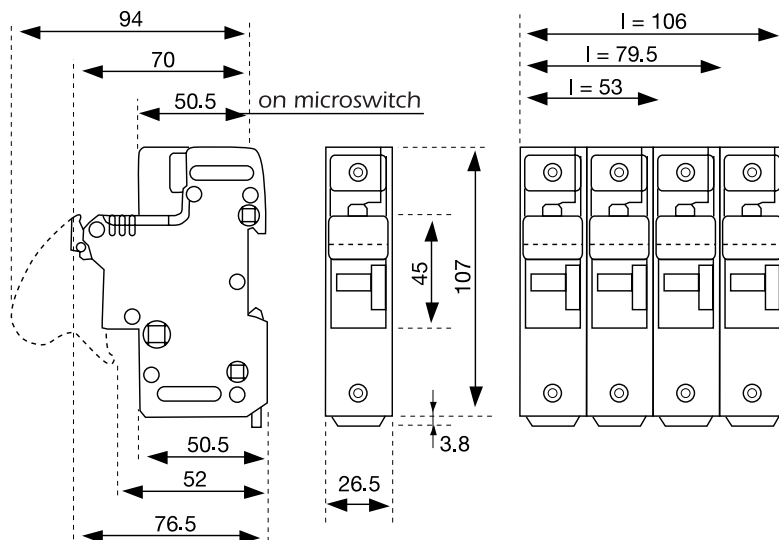




American General Purpose Fuses UltraSafe Range US14 - US22

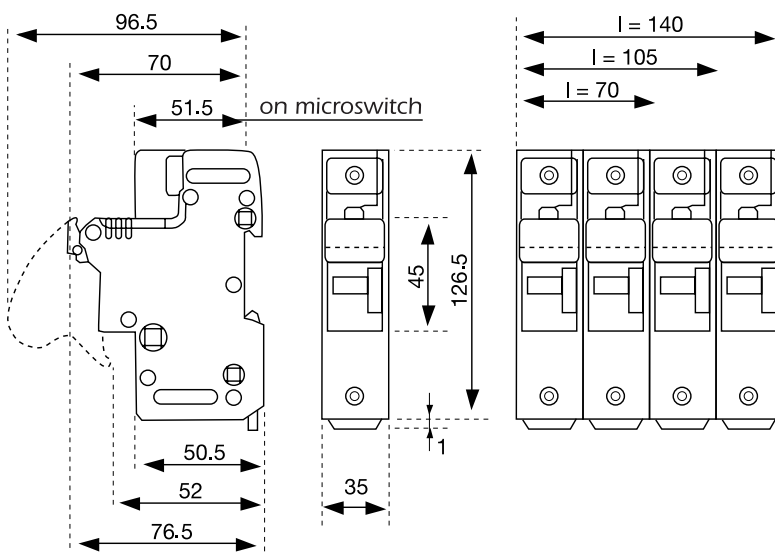
Mecanics for CMS/US 14 & 22

Dimensions of CMS 14 and US 14 products



Width depending on nb. of 17.5 mm modules	Nb poles	1	2	3	4	5	6
	Nb of modules	1.5	3	4.5	6	7.5	9
	mm	26.5	53	79.5	106	132.5	159

Dimensions of CMS 22 and US 22 products



Width depending on nb. of 17.5 mm modules	Nb poles	1	2	3	4	5	6
	Nb of modules	2	4	6	8	10	12
	mm	35	70	105	140	175	210

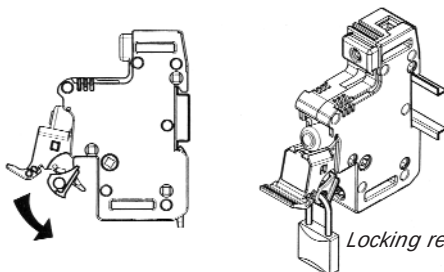
Gears & Fuse Gears



American General Purpose Fuses UltraSafe Range US14 - US22

Mechanics for CMS/US 14 & 22

Locking system

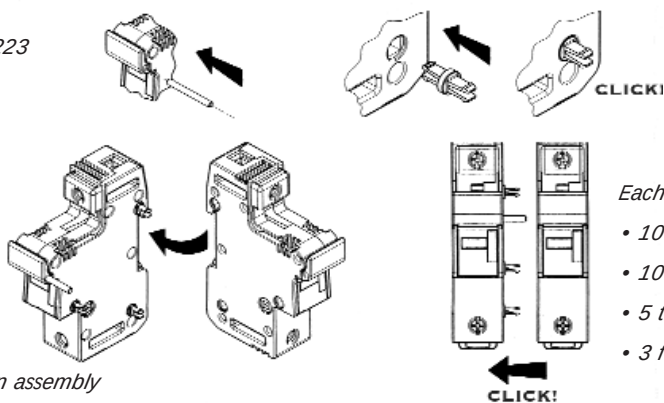


Locking reference: M223525

Multipole assembly

Assembly kit

CMS14 & CMS 22: Z218223



Assembly kit

US 14: X227927

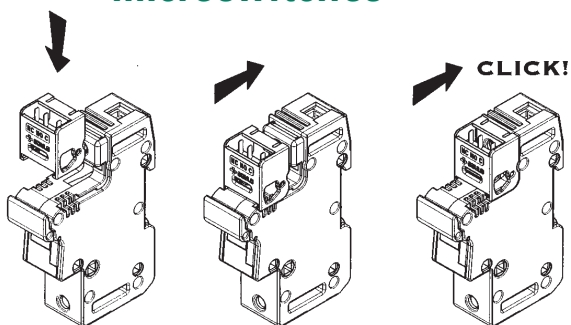
US 22: F227958

Each bag of kits is sufficient for:

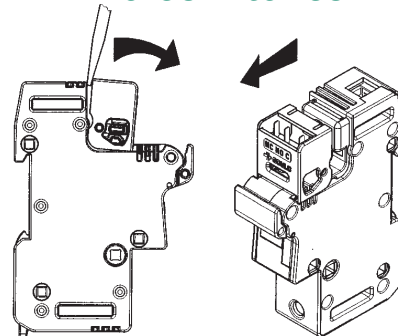
- 10 multipole assemblies
- 10 two-pole assemblies
- 5 three-pole assemblies
- 3 four-pole assemblies

NB: 6 poles maximum in an assembly

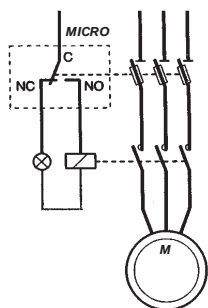
Mounting auxiliary microswitches



Dismounting auxiliary microswitches



Auxiliary microswitch functions



Fuse melting: A fuse holder containing a fuse with a striker sends out a signal when the fuse element melts

Pre-isolation: When the fuse holder opens

Presence: Sends a signal when the holder is closed with no fuse in it

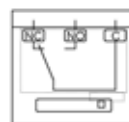
Characteristics of the auxiliary microswitch

Min. voltage and current for operation 10VAC-DC - 100mA

Rated current and breaking capacity (1) at 250V	6A	AC 12
	3A	AC 13
	0,3A	AC 14
	0,1A	DC 12/13/14

Rated current and breaking capacity (1) at 2 and 24 V	6A	DC 12/DC13
	5A	AC 13
	2A	AC 14/DC 13
	0,6A	DC 14

(1) as per standard IEC 947-5



With the fuse in the handle closed state.



No fuse
Fuse blown
Handle open



Gears & Fuse Gears

American General Purpose Fuses UltraSafe Range US14 - US22

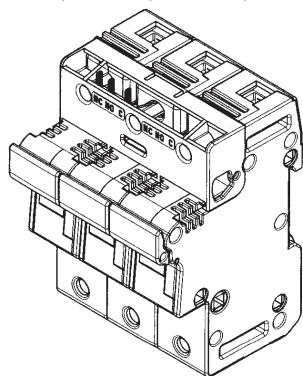
Mechanics for CMS/US 14 & 22

Microswitch options

Auxiliary microswitches can only be mounted on previously prepared fuse disconnectors.
Use of the auxiliary microswitch for fuse melting requires the use of fuses with strikers.

1 auxiliary microswitch

CMS 14 (C219261) - US14 (Z227929)
CMS 22 (L212093) - US 22 (H227960)

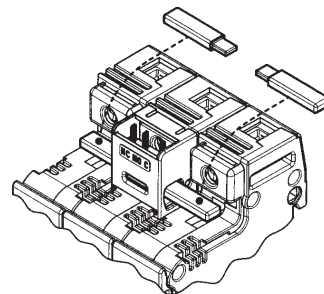


or

1 auxiliary microswitch

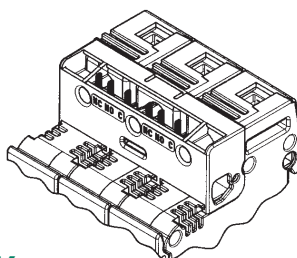
CMS 14 (M218741+F213629)
CMS 22 (E211581+F213629)

US 14 (Y227928+F213629)
US 22 (G229759+F213629)



2 auxiliary microswitches

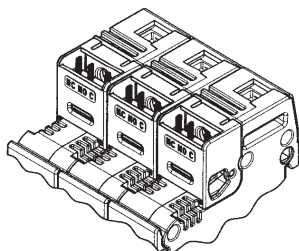
CMS 14 (D219791) - US14 (A227930)
CMS 22 (B212613) - US 22 (J227961)



3 independent auxiliary microswitches

CMS 14 (3 x M218741)
CMS 22 (3 x E211581)

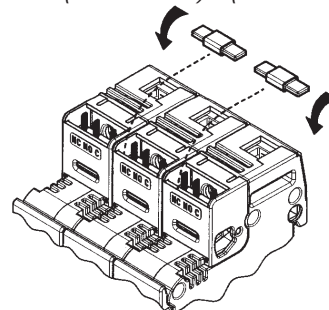
US 14 (3 x Y227928)
US 22 (3 x G227959)



3 mechanically interconnected auxiliary microswitches

CMS 14 (3 x M218741+2 x J214138)
CMS 22 (3 x E211581+2 x J214138)

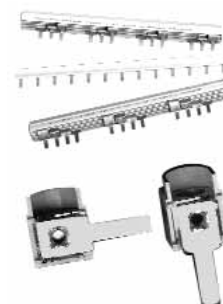
US 14 (3 x Y227928) + (2 x J214138)
US 22 (3 x G227959) + (2 x J214138)



NOTE: Do not fit with more than 3 microswitches

Supply wiring bars and terminals

Description	Cat. Number	Ref. Number	Maximum acceptable RMS current (A)	Pckg
jumping bar for 4 (CMS 14/US 14) 3 poles	CMS14BB3F4	A210312	100	5
jumping bar for 6 (CMS 14/US 14) 2 poles	CMS14BB2F6	Z210311	63	5
jumping bar for 12 (CMS 14/US 14) 1 pole	CMS14BB1F12	Y210310	63	5
jumping bar for 6 (CMS 22/US 22) 2 poles	CMS22BB2F6	C210314	150	5
jumping bar for 12 (CMS 22/US 22) 1 pole	CMS22BB1F12	B210313	90	5
Single-pole terminal, side	TBB1C	E210316	90	50
2/3-pole terminal, side	TBB23C	G210318	90	50
Single-pole terminal, axial	TBB1A	D210315	90	50
2/3-pole terminal, axial	TBB23A	F210317	90	50





American General Purpose Fuses UltraSafe Range US14 - US22



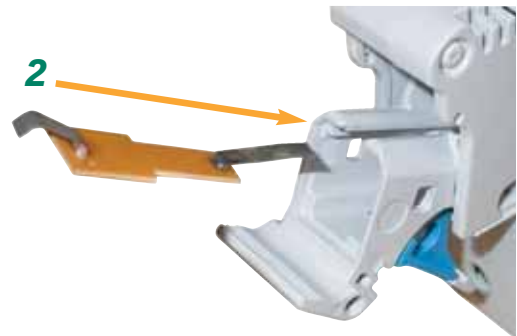
Indicator light kit

With the indicator light a blown fuse can be quickly located if power is still on

1 Carefully remove the cover with 2 screw drivers.



2 Slip the indicator light's top insert into the rails, being careful not to twist the contact tabs.



3 Put the cover back on



Assembly precautions in multipole assemblies

When fuse holders are side by side or very near each other (less than one module apart), they must be derated again, in addition to derating for temperature

Number of 17.5 mm modules	Derating factor
1-2-3	None = 1
4-5-6	0.8
7-8-9	0.7
> 10	0.6



American General Purpose Fuses UltraSafe Range US27



ULTRASAFE™: US27 Fuse Holder

- *Conforms to the standards:*
UL 512 AND UL 840
CSA 22-2 N° 39
EN 60947-1 & 3 (Class : AC20B)
- *Rated insulation voltage U_i = 800VAC-DC*
- *Full protection against accidentally touching live parts.*
Protection degree : IP 2XB in accordance with the IEC standard 60529.
- *High performance, conforming to European standards*
(Attachment to DIN rail - Modular fuse-disconnector).
- *The US27 models have cULUS approval.*

Electric Characteristics

Insulation voltage AC U_i in V AC/DC	Impulse withstand voltage U_{imp} (kV)	Current rating I_N (A)	Fuse current rating I_N (A)	Maxi fuse operating current (A)					Recommended copper wire gauge	
				660V URGD	60gD	660V URQ-URSCC	660V-800VgRB	1000V URB	AWG	mm ²
800 (CEI) / (US)	8	150	8	-		WITHOUT DERATING		-	18	1
			10	-		WITHOUT DERATING		-	18	1
			12	-		WITHOUT DERATING		-	18	1
			16	-		WITHOUT DERATING		-	18	1
			20	-		WITHOUT DERATING		-	18	1
			25	-		WITHOUT DERATING		-	12	4
			32	32		32	32	29	10	6
			40	40		40	40	36	8	10
			50	50		45	50	42	8	10
			63-65	55	65	55	63	50	6	16
			80	61	80	60	80	60	6	16
			100	75	100	72	96	72	4	25
			110	-		-	102	-	3	30
			125	91		90	-	90	3	35
			160	112		110	-	109	3	35
			170	-		-	-	112	3	35
			200	130		130	-	-	1	50*
			250	138		138	-	-	1	50*

* Busbar and ring lug connection



American General Purpose Fuses UltraSafe Range US27



ULTRASAFE™: US27 Fuse Holder

Designed for 27 x 60 mm (2 3/8 x 1 1/16 In.) ferrule fuses.
(800V AC - DC, Ith = 150A)

New Improved Design

Attractive design and colour

Designed for all 27 x 60 ferrule fuses

- UR curve (class UR)
- gR curve (class gR)
- Class J (UL)



The Only Fuse-Disconnecter which Conforms to the Standard

The only fuse-disconnector on the market that respects the pre-isolation time defined by the standard (EN60947-1: t > 20 ms), when it is equipped with a microswitch.

Ample Space for Wiring and Connection

Standard wiring with a choice of either :

- One 35 mm² cable (3AWG) flexible or rigid,
- Two 16 mm² flexible cables (6AWG),
- Wiring with B type connection plates for eye lugs (electronic market in the USA and Japan, global traction market).

Blown Fuse Indicator

The blown fuse indicator functions at between 100V and 800V AC and DC and is a standard part of the US 27 range. (Leak current less than 0.5mA)

UL Approval

The US 27 version has cULUS certification.

File Number E113357.

Fire smoke resistance classification : I3F2 in accordance with the standards NFF 16101 and NFF 16102 (US 27 version).

The Only Fuse-Holder With IP 20

- The only fuse-holder/fuse-disconnector on the market that offers certified IP 20B (open and closed)
- The only fuse-holder/fuse-disconnector on the market for this range of fuse (800V AC-DC 150A).

Identification of Terminals

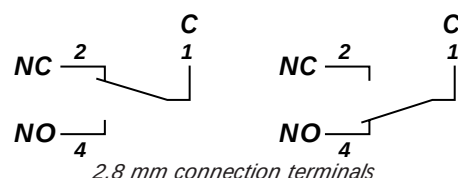
The terminals are easy to identify due to the marker kit provided with the standard product.

Blown Fuse Micro-Switch, Safe Pre-Isolation and fuse presence characteristics for the US 27 version

Rated and minimum use current : I_n = 5A, I_{mini} = 100 mA

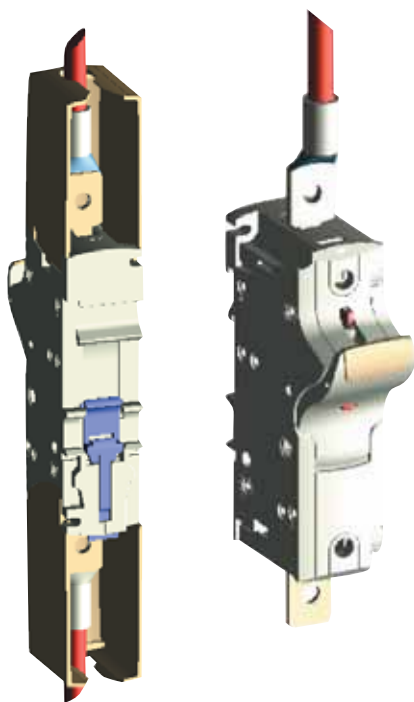
Rated and minimum use voltage : U_n = 250V, U_{mini} = 20V

Approvals : 





American General Purpose Fuses UltraSafe Range US27



ULTRASAFE™: US27 Fuse Holder

Versatile Methods of Mounting

Option of mounting the fuse-holder with phase and neutral poles, as well as micro-switches, due to the connection accessories.

Several Kinds of Attachment

- With M4 screws,
- 35 mm or 75 mm symmetric DIN rail*,
- Asymmetric DIN rail with adapter (Ref. Q098500).

* Need of 15 mm distance between DIN rail and panel

Possibility of Using Connection Plates

For a cable with a diameter greater than either a 35 mm² rigid or flexible cable, or two 16 mm² flexible cables, the connection can be made using ring lug.

Protection covers are provided with this series to safeguard against accidental contact. Connection to connection plates, for cables equipped with ring or fork-type lugs.

Climatic Conditions of Use

This range of products has been designed for use in temperate, tropical and equatorial climates, provided that the following temperature/humidity conditions are not exceeded:

Maximum temperature °C	20	40	50
Maximum relative humidity %	95	80	50

Resistance to Vibrations

Test with sinusoidal vibrations, scanning the three main axes of the holder.

- Spectrum :
- 1st segment (2-16Hz) constant displacement
x = 5 mm peak
 - 2nd segment (16-250Hz) constant acceleration
γ = 5g peak

Exponential scanning speed : 1 octave per minute.

Duration : 2 hours per axis.

27x60 Fuses used			Applications
Ranges	U _N	I _N	
(6,621 CP URGD 27.60 ...)	660VAC	63 to 250A	Class aR - Protection of semiconductor equipment, e.g. Soft starters, static relays, or regulators.
(6,621 CP URQ, URS 27.60...)	660VAC	32 to 250A	
(821 CP gRB 27.60...)	800VAC	8 to 110A	Class gR - Protection of cables, semiconductor equipment and AC instrument circuits.
(1021 CP URB 27.60...)	1000VAC	25 to 170A	Class aR - Protection of semiconductor equipment, e.g. Soft starters, static relays, regulators.
(CC 4,421 CP gLB 27.60...)	440VDC	125 to 160A	Protection of DC instrument circuits, traction auxiliary circuits, DC fed converters.
(CC 6,621 CP gRB 27.60...)	660VDC	0.8 to 125A	



American General Purpose Fuses UltraSafe Range US27



ULTRASAFE™: US27 Fuse Holder

Range Without Microswitch

Number of poles	Connections	Cat. Number	Designation	Ref. Number	Weight (g)	Pack
1	By screw, U bolt or connector	US271I	US 271I	J226420	285	3
1	By screw, U bolt or connector	CMS271	CMS 27 gR -UR	R210580	290	3
1	Ring lug connection	US271RING	US 27I ring lug	B223515	340	3
1 + N	By screw, U bolt or connector	US271NI	US 27 1N I	K226421	580	1
1 + N	By screw, U bolt or connector	CMS271N	CMS 27 gR-UR 1+N	S210581	570	1
1 + N	Ring lug connection	US271NIRING	US 27 I+NI ring lug	E223518	690	1
N	By screw, U bolt or connector	CMS27N	CMS 27 N	B210152	285	3
N	Ring lug connection	US27NIRING	US 27 N ring lug	F223519	340	3
2	By screw, U bolt or connector	US272I	US 27 2I	L226422	580	1
2	By screw, U bolt or connector	CMS272	CMS 27 gR - UR II	T210582	570	1
2	Ring lug connection	US272IRING	US 272 I ring lug	C223516	690	1
3	By screw, U bolt or connector	US273I	US 27 3 I	M226423	855	1
3	By screw, U bolt or connector	CMS273	CMS 27 gR - UR III	V210583	870	1
3	Ring lug connection	US273IRING	US 27 3 I ring lug	D223517	1030	1
3 + N	By screw, U bolt or connector	US273NI	US 27 3 NI	N226424	1200	1
3 + N	By screw, U bolt or connector	CMS273N	CMS 27 gR - UR III+N	W210584	1250	1
Assembly kit		US27PAK	KIT MULTIPOL CMS/US27	H227615	10	
Microswitch*		US27W1	microcontact unipolaire 1 MC	E227612	1	

* for US27 version only.

The ring lug connection, four-pole model does not exist in the configuration (3 + neutral).

The blown fuse indicators are available with the standard US 27 version.

The recognized US 27 equipment uses UL 94 VO plastic materials. The US27range is pre-equipped with blown fuse microswitch and safe pre-isolation accessories, to transform the products into fuse-disconnectors.

Range With Microswitch

Number of poles	Connections	Cat. Number	Designation	Nb of microswitches	Ref. Number	Weight	Pack (g)
1	By screw, U bolt or connector	US271MI	US 271 I PRE+1MC	1	R227600	295	3
1	Ring lug connection	US271MIRING	US 271 ring lug PRE+1MC	1	Z227607	355	1
2	By screw, U bolt or connector	US272M2I	US 27 2I PRE+1MC	2	T227602	600	1
2	Ring lug connection	US272M2IRING	US 27 2I ring lug PRE+1MC	2	B227609	710	1



American General Purpose Fuses UltraSafe Range US27



ULTRASAFE™: US27 Fuse Holder

Range of Accessories

Micro-switches and safe pre-isolation

Number of poles	Catalog Number	Reference number	Designation	Packaging
1	US27W1	E227612	Microswitch 1P	1

Note : 2 one-pole microswitches need to be purchased for a two-pole assembly (Ph+N or two-phase).

Pole Assembly Kit

Number of poles	Catalog Number	Reference number	Designation	Packaging
For 2, 3 and 4 poles	US27PAK	H227615	Kit Multipol CMS/US 27 for 10 Kits	1

The assembly kit is made up of staples to assemble the poles and pins for the handles.

Neutral Tubes

The neutral poles come with a neutral tube, which is sealed with plastic so that it cannot be removed.

35mm Mounting Rail

Type	Catalog Number	Reference number	Designation	Packaging
Symmetric		J213172	2 meters of DIN rail	40 lengths of 2 m
Symmetric drilled		C213672	2 meters of DIN drilled rail	40 lengths of 2 m
Symmetric reinforced		R215203	2 meters of DIN reinforced rail	20 lengths of 2 m
Adaptor for asymmetric DIN rail	ADAP-RASST	Q098500	Adaptor for asymmetric DIN rail	50



Symmetric



Symmetric drilled



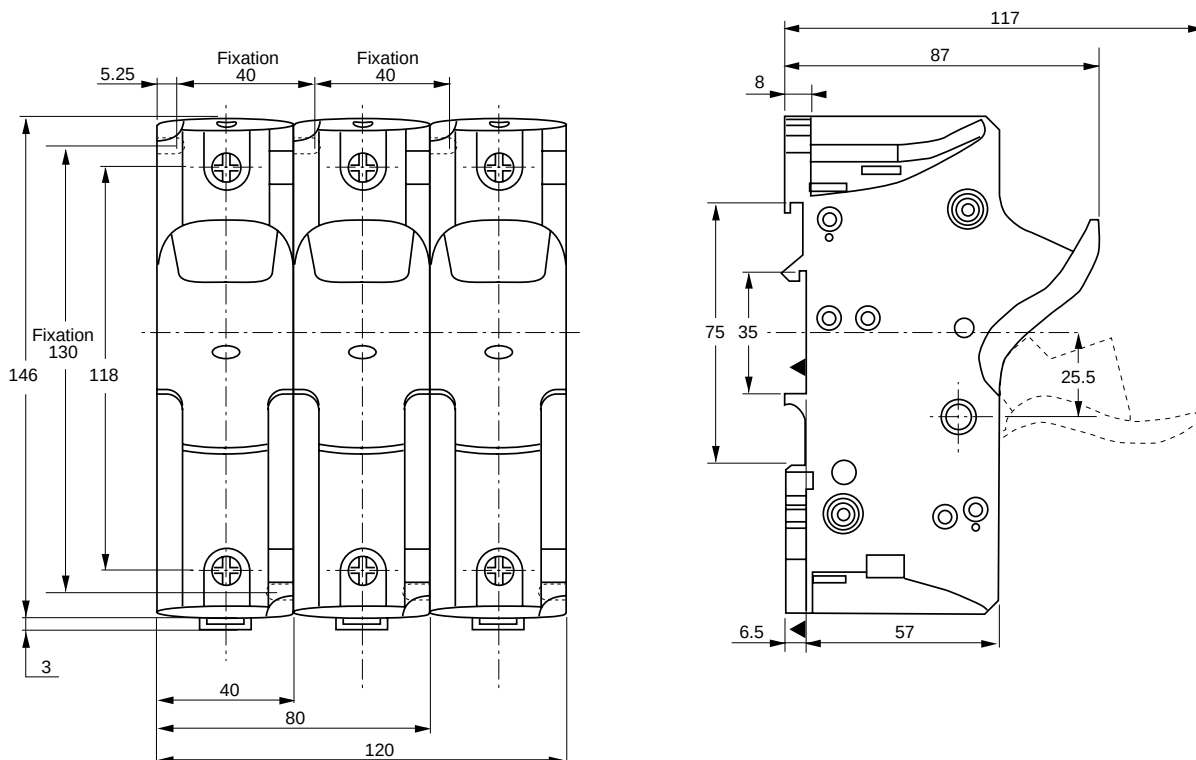
Symmetric reinforced



American General Purpose Fuses UltraSafe Range US27



Dimensions US27



Connection by fixed terminal screw-clamps for wires. Maximum section:

- One conductor, rigid or multistrand : Maximum 35 mm² (3 AWG)
- 2 conductors, multistrand : 16 mm² (6 AWG) or rigid with tightening torque : 2.8 - 3.5 Nm (30 lbs.in)
- Ferraz Shawmut recommends to use screwdrivers PZ 3 or Flat 8 x 1.2 mm (maximum diameter 8 mm).
- Ring lug connection.

Mounting:

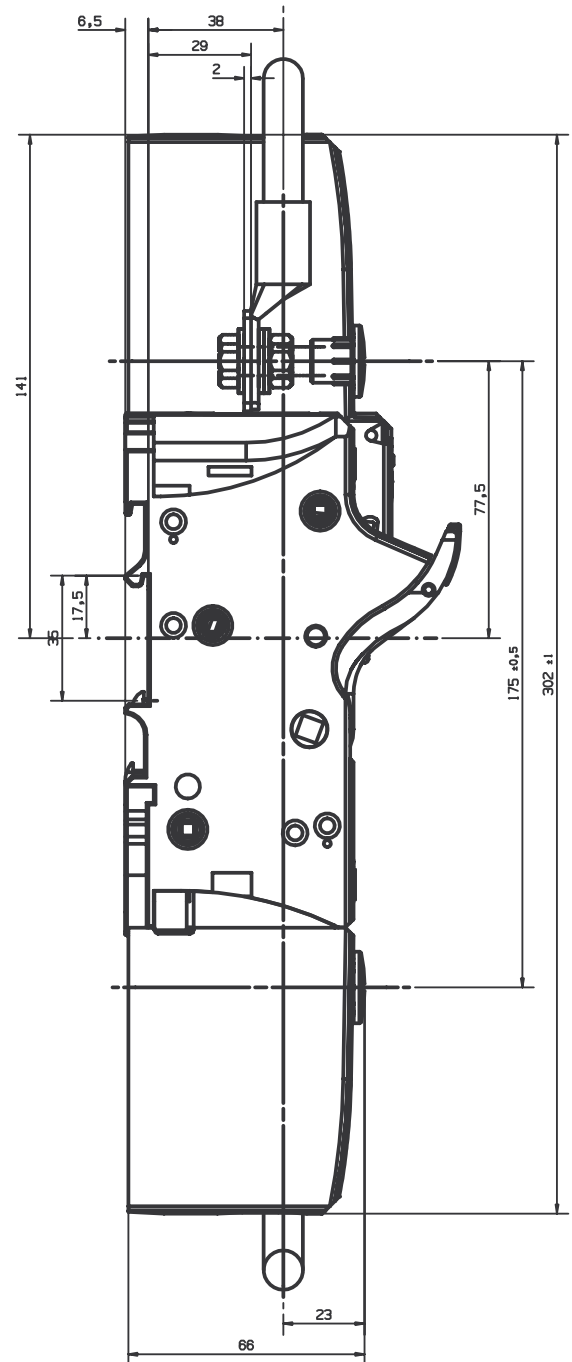
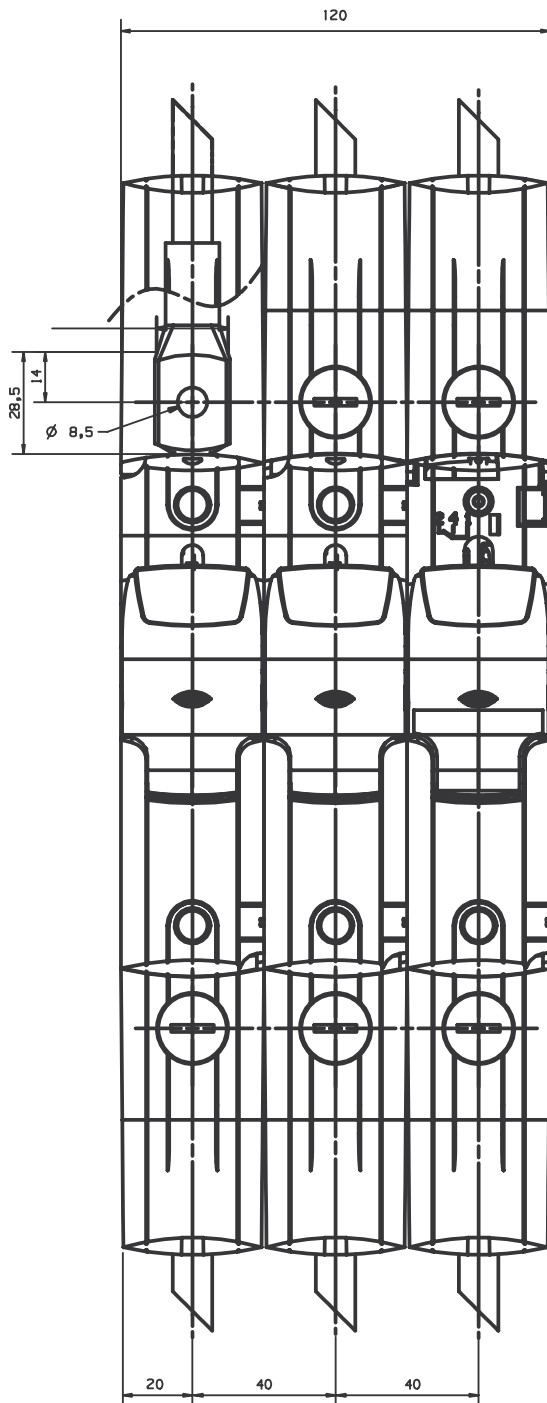
- Simple snap mounting on 35 mm symmetric DIN rail (standard EN 50022) and 75 mm with 2 locking positions*.
- Directly onto the board with M4 screws and tightening torque from 1 to 1.2 Nm (11 lbs.in)
- On 35 mm asymmetric DIN rail with adaptor (Ref. Q098500)

* Need of 15 mm distance between DIN rail and panel



American General Purpose Fuses UltraSafe Range US27

*Dimensions US27
for ring lugs connections*





Gears & Fuse Gears

American General Purpose Fuses Cylindrical & Blade Fuse Blocks Class J



CLASS J FUSE BLOCKS

Ferraz Shawmut Class J Fuse Blocks accommodate all Class J fuses. A choice of screw, pressure plate, box and special order stud connectors fit a wide range of stranded or solid copper or aluminum wire. Insulators are either molded glass-filled polycarbonate (GFPC) or phenolic with verified dielectric strength in excess of 2500V. 30 and 60A fuse blocks feature a unique adder block which can be snapped onto 1-, 2- or 3-pole blocks to form multi-pole segmented blocks of as many poles as desired. All fuse clips are made of high conductivity tin-plated copper, with a choice of spring reinforced or non-spring reinforced clips in 30A and 60A. Clips 100A and above are spring reinforced.

Ratings

- 600VAC: 30A, 60A, 100A, 200A, 400A, 600A
- Withstand rating: 200kA

Approvals

- All fuse blocks meet the requirements of UL Std. 512
- UL Listed, Guide IZLT, File E52283
- CSA Certified Class 6225, File 32169



Recommendes fuse usage

Class J Blocks (600V) . . .use with AJT, A4J

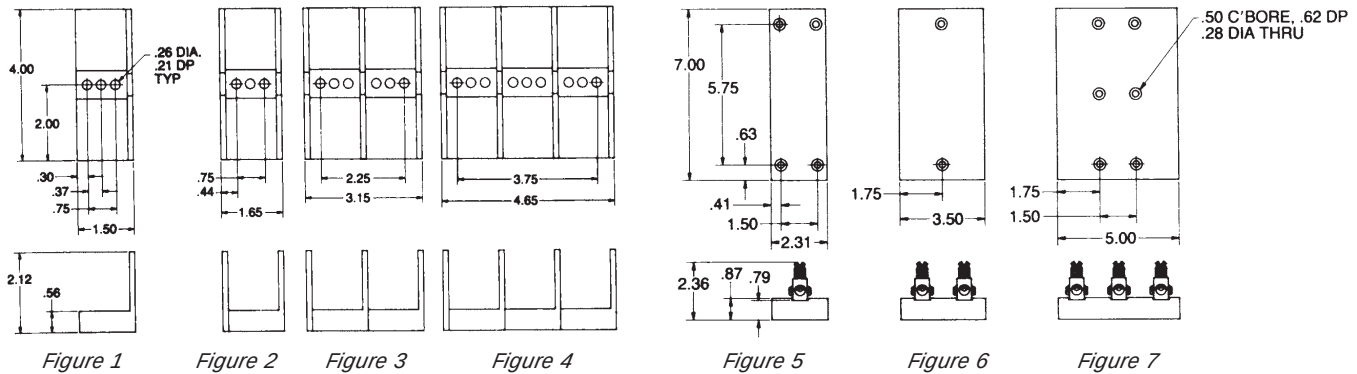
Clip & Connector Types

30A & 60A CLIPS	CONNECTORS	CONNECTORS	CONNECTORS	CONNECTORS
SPRING REINFORCED 	NON-SPRING REINFORCED: 30A & 60A BOX 	SPRING REINFORCED: 30A & 60A BOX 	SPRING REINFORCED: 100A BOX 	SPRING REINFORCED: 400A BOX IN-LINE CLIP 
NON-SPRING REINFORCED 	30A SCREW 	30A SCREW 	200A BOX SIDE-CLIP 	600A BOX IN-LINE CLIP 
	30A PRESSURE PLATE 	30A PRESSURE PLATE 	400A BOX SIDE-CLIP 	



American General Purpose Fuses Cylindrical & Blade Fuse Blocks Class J

CLASS J FUSE BLOCKS



30A and 100A figures are standard dimension fuse blocks. See also 30 A and 100A space-saving "SJ" Series.

Recommended mounting screws for all 30A, 60A and 100A fuse blocks: 1/4" (.250" dia.)

600 Volt, 30, 60 & 100 Ampere Class J Fuse Blocks

Amper Rating	Poles	Connector		Catalog Number		Reference Number		Fig.	Connector Torque In - lb
				Type of clip		Type of clip			
		Type	Wire Range	Non-spring Reinforced	Spring Reinforced	Non-spring Reinforced	Spring Reinforced		
30 GFPC INSULATOR	ADDER			60300J	60305J	D219584	K204893	1	
	1	BOX	Al/Cu	60301J	60306J	X222039	J211884	2	35
	2		#2-14	60302J	60307J	T223301	S213433	3	
	3			60303J	60308J	W201637	A214452	4	
	ADDER			60310J	60315J	E215468	N218029	1	
	1	SCREW	Cu	60311J	60316J	H215977	P219065	2	20
	2		#10-14	60312J	60317J	T216999	Y222040	3	
	3			60313J	60318J	E217515	V223302	4	
	ADDER			60320J	60325J	X201638	Y212403	1	
	1	PRESSURE	Cu	60321J	60326J	N204896	T213434	2	20
	2	PLATE	#10-14	60322J	60327J	D211373	B214453	3	
	3			60323J	60328J	K211885	F215469	4	
	ADDER			-	60355J	-	G216482	1	
	1	BOX	Cu*	-	60356J	-	P218030	2	35
	2		#4-14	-	60357J	-	Q219066	3	
	3			-	60358J	-	Z222041	4	
60 GFPC INSULATOR	ADDER			60600J	60605J	W223303	E211374	1	
	1	BOX	Al/Cu	60601J	60606J	M201123	L211886	2	45
	2		#2-14	60602J	60607J	Y201639	Z212404	3	
	3			60603J	60608J	R204899	F212916	4	
	ADDER			-	60655J	-	G215470	1	
	1	BOX	Cu*	-	60656J	-	K215979	2	45
	2		#4-14	-	60657J	-	H216483	3	
	3			-	60658J	-	W217001	4	
100 PHENOLIC INSULATOR	1	BOX	Al/Cu	-	61036J	-	Z201640	5	
	2		2/0-#6	-	61037J	-	F211375	6	120
	3			-	61038J	-	G212917	7	
	1	BOX	Cu*	-	61006J	-	F217516	5	
	2		2/0-#12	-	61007J	-	Q218031	6	50
	3			-	61008J	-	W218542	7	

Note: To convert 30A or 60A adder pole to single pole, use end barrier #U09617 (X227513).

*Fuse blocks have copper box connectors and clips and are for copper wires only. These are specifically designed with the same coefficient of expansion as copper wire for improved heat cycling and meet or exceed OEM "no aluminum" specifications.



Gears & Fuse Gears

American General Purpose Fuses Cylindrical & Blade Fuse Blocks Class J

CLASS J FUSE BLOCKS

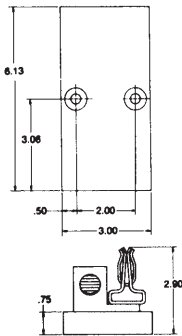


Figure 1

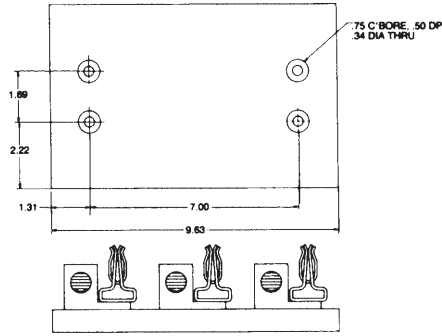


Figure 2

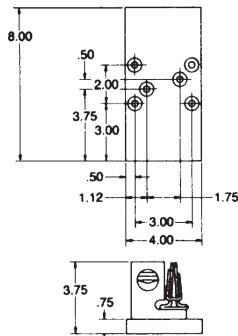


Figure 3

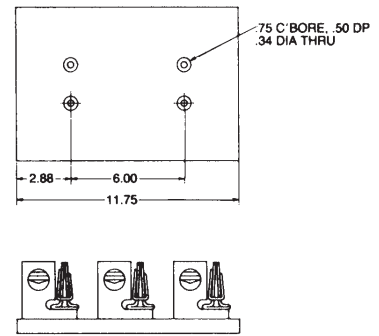


Figure 4

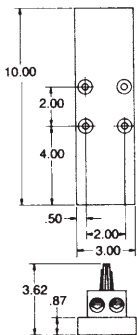


Figure 5

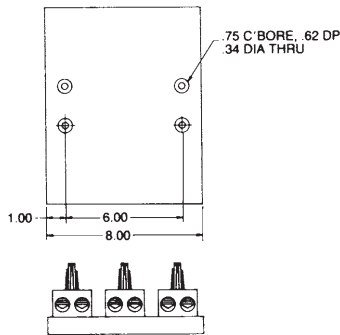


Figure 6

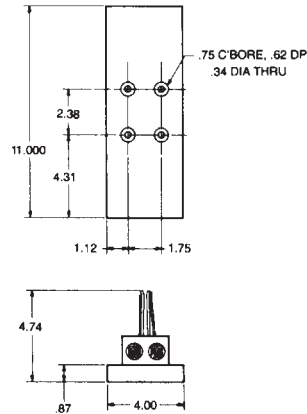


Figure 7

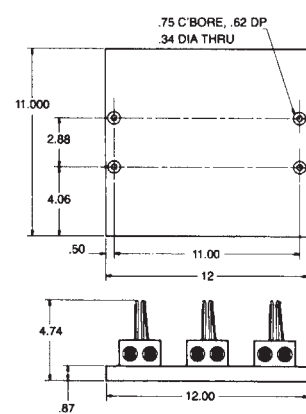


Figure 8

Recommended mounting screws: All 200A, 400A & 600A - 5/16" (.313" dia.)

600 Volt, 200, 400 & 600 Ampere Class J Fuse Blocks

Ampere Rating	Poles	Connector		Catalog Number	Reference Number	Fig.	Connector Torque In - lb
		Type	Wire Range	Spring Reinforced	Spring Reinforced		
200 PHENOLIC INSULATOR	1	BOX	Al/Cu	62001J	D214455	1	375
	3	SIDE-CLIP	350kcmil-#6	62003J	E214962	2	
	1	BOX	Cu**	62051J	J216484	1	275
	3	SIDE-CLIP	350kcmil-#6	62053J	X217002	2	
400 PHENOLIC INSULATOR	1	BOX*	Al/Cu	64001J	G217517	3	375
	3	SIDE-CLIP	1000-250kcmil	64003J	R218032	4	
	1	BOX	Al/Cu	64031J	X218543	5	275
	3	IN-LINE CLIP	(2) 350kcmil-#4	64033J	S219068	6	
	1	BOX*	Cu**	64051J	G219587	3	375
	3	SIDE-CLIP	1000-250kcmil	64053J	A222042	4	
	1	BOX	Cu**	64061J	J222786	5	275
	3	IN-LINE CLIP	(2) 350kcmil-#6	64063J	Y223305	6	
600 PHENOLIC INSULATOR	1	BOX	Al/Cu	6631J	P201125	7	500
	3	IN-LINE CLIP	(2) 500kcmil-#4	6633J	A201641	8	
	1	BOX	Cu**	6661J	J204984	7	375
	3	IN-LINE CLIP	(2) 500kcmil-#4	6663J	G211376	8	

* Not UL Listed or CSA Certified

**Fuse blocks have copper box connectors and clips and are for copper wires only. These are specifically designed with the same coefficient of expansion as copper wire for improved heat cycling and meet or exceed OEM "no aluminum" specifications.



Gears & Fuse Gears

American General Purpose Fuses Cylindrical & Blade Fuse Blocks Class SJ



SPACE-SAVING "SJ" FUSE BLOCKS

Ferraz Shawmut "SJ" Series Fuse Blocks rated 30A and 100A accommodate all 30A and 100A Class J fuses and occupy approximately 25% less mounting space than standard Class J fuse blocks. A patented built-in DIN rail adapter on the 30 ampere SJ block adds further design versatility. A choice of box, screw, or pressure plate connectors fit a wide range of stranded or solid copper or aluminum wire. Insulators are glass-filled polycarbonate with verified dielectric strength in excess of 2500V. The 30 ampere SJ block features a unique adder block which can be snapped onto 1-, 2- or 3-pole blocks to form multi-pole segmented blocks of as many poles as desired. 100A SJ blocks can also be snapped to each other to form multi-poles. All fuse clips are spring reinforced, made of high conductivity tin-plated copper.

Ratings

- 600VAC: 30A, 100A
- Withstand rating: 200kA

Approvals

- All fuse blocks meet the requirements of UL Std. 512
- UL Listed, Guide IZLT, File E52283
- CSA Certified Class 6225, File 32169



Recommendes fuse usage

Class J Blocks (600V) . . . use with AJT, A4J

Clip & Connector Types

30A CLIP

SPRING
REINFORCED



30A CONNECTORS

SPRING REINFORCED:
BOX



SCREW



PRESSURE PLATE



100A CONNECTOR

SIDE CLIP





American General Purpose Fuses Cylindrical & Blade Fuse Blocks Class SJ

SPACE-SAVING "SJ" FUSE BLOCKS

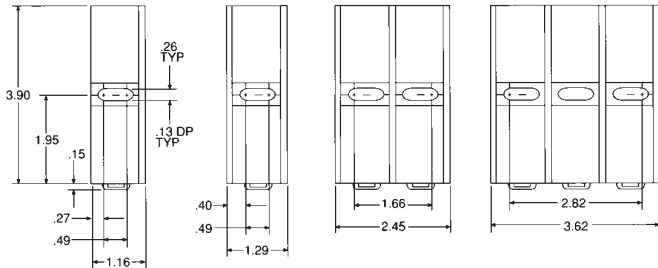


Figure 1

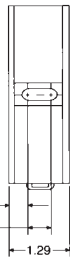


Figure 2

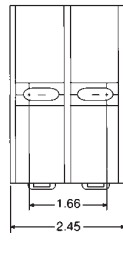


Figure 3

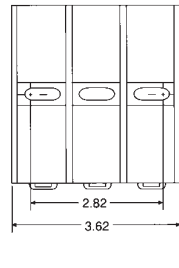


Figure 4

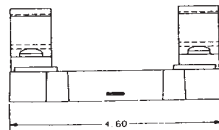
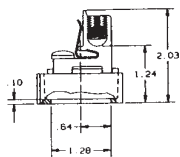


Figure 5

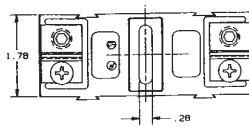


Figure 6

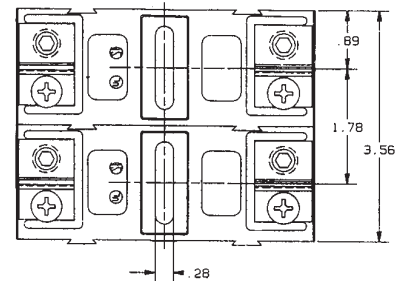
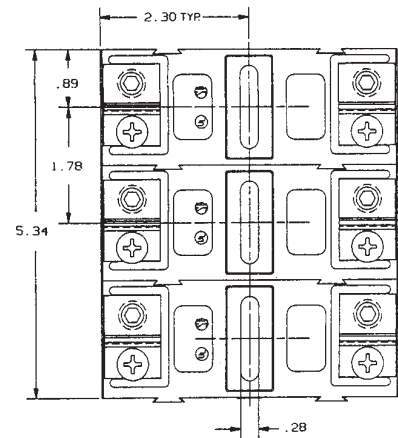


Figure 7



Recommended mounting screws for 30A and 100A fuse blocks: 1/4" (.250" dia.)

600 Volt, 30A & 100A Class J Fuse Blocks

Amper Rating	Poles	Connector		Catalog Number	Reference Number	Fig.	Connector Torque In - lb
		Type	Wire Range				
30 GFPC INSULATOR	ADDER	BOX	Al/Cu #2-14	60305SJ	C211372	1	35
	1			60306SJ	X212402	2	
	2			60307SJ	M213934	3	
	3			60308SJ	B214959	4	
	ADDER	SCREW	Cu #10-14	60315SJ	T218540	1	20
	1			60316SJ	E219585	2	
	2			60317SJ	G222784	3	
	3			60318SJ	L201122	4	
	ADDER	PRESSURE PLATE	Cu #10-14	60325SJ	E212915	1	20
	1			60326SJ	N213935	2	
	2			60327SJ	C214960	3	
	3			60328SJ	J215978	4	
	ADDER	BOX	Cu* #4-14	60355SJ	V217000	1	35
	1			60356SJ	V218541	2	
	2			60357SJ	F219586	3	
	3			60358SJ	H222785	4	
100 GFPC INSULATOR	1	BOX	Al/Cu	61036SJ	B204954	5	120
	2	SIDE CLIP	2/0-#6	61037SJ	M211887	6	
	3			61038SJ	Q213937	7	

Note: To convert 30A "SJ" adder pole to single pole, use end barrier #U09372 W227512).

* Fuse blocks have copper box connectors and clips and are for copper wires only. These are specifically designed with the same coefficient of expansion as copper wire for improved heat cycling and meet or exceed OEM "no aluminum" specifications.



American General Purpose Fuses Cylindrical & Blade Fuse Blocks Class H, K & R

CLASS H, K AND R FUSE BLOCKS

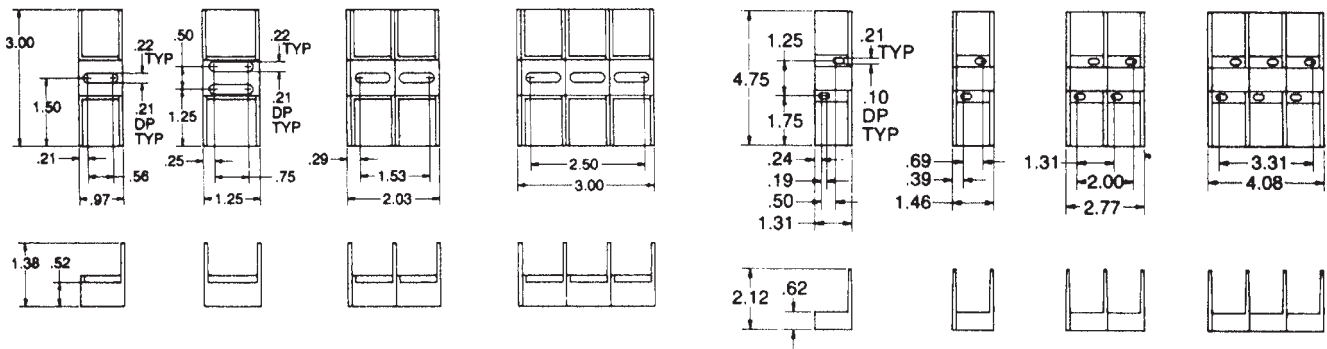


Figure 1

Figure 2

Figure 3

Figure 4

Figure 5

Figure 6

Figure 7

Figure 8

Recommended mounting screws for all 30A and 60A fuse blocks: #10 (.190" dia.)

250 Volt, 30 & 60 Ampere Class H, K and R Fuse Blocks

Amper Rating	Poles	Connector		Catalog Number.			Reference Number			Fig	Connector Torque In - lb
		Type	Wire Range	Class H&K Non-spring reinforced	Class H&K Spring reinforced	Class R Spring reinforced	Class H&K Non-spring reinforced	Class H&K Spring reinforced	Class R Spring reinforced		
30 GFPC INSULATOR	ADDER			20300	20305	20305R	Y223282	E211351	L211863	1	35
	1	BOX	Al/Cu	20301*	20306*	20306R*	N201101*	Z212381*	T213411*	2	
	2		#2-14	20302	20307	20307R	Z201617	A214429	C214937	3	
	3			20303	20308	20308R	C204702	F215446	K215956	4	
	ADDER			20310	20315	20315R	K216462	V218518	P219042	1	20
	1	SCREW	Cu	20311*	20316*	20316R*	V216977*	E219562*	Z222018*	2	
	2		#10-14	20312	20317	20317R	G217494	K222764	Z223283	3	
	3			20313	20318	20318R	P218007	P201102	A201618	4	
	ADDER			20320	20325	20325R	L204710	Q230520	A212382	1	20
	1	PRESSURE	Cu	20321*	20326*	20326R*	F211352*	V213412*	N213912*	2	
	2	PLATE	#10-14	20322	20327	20327R	M211864	F230511	B214430	3	
	3			20323	20328	20328R	E230510	D214938	L215957	4	
	ADDER			-	20355	20355R	-	L216463	W216978	1	35
	1	BOX	Cu**	-	20356*	20356R*	-	H217495*	Q218008*	2	
	2		#4-14	-	20357	20357R	-	W218519	Q219043	3	
	3			-	20358	20358R	-	F219563	A222019	4	
60 GFPC INSULATOR	ADDER			20600	20605	20605R	L222765	L204756	G211353	5	45
	1	BOX	Al/Cu	20601	20606	20606R	A223284	N211865	B212383	6	
	2		#2-14	20602	20607	20607R	Q201103	W213413	P213913	7	
	3			20603	20608	20608R	B201619	C214431	E214939	8	
	ADDER			-	20655	20655R	-	B223285	R201104	5	45
	1	BOX	Cu**	-	20656	20656R	-	C201620	M204757	6	
	2		#4-14	-	20657	20657R	-	H211354	P211866	7	
	3			-	20658	20658R	-	C212384	X213414	8	

Note: To convert 30A adder pole to single pole, use end barrier #U09322 (R227508). To convert 60A adder pole to single pole, use end barrier #U09365 (V227511).

* 1-pole, 30A block does not accept adder pole.

**Fuse blocks have copper box connectors and clips and are for copper wires only. These are specifically designed with the same coefficient of expansion as copper wire for improved heat cycling and meet or exceed OEM "no aluminum" specifications.



Gears & Fuse Gears

American General Purpose Fuses Cylindrical & Blade Fuse Blocks Class H, K & R

CLASS H, K AND R FUSE BLOCKS

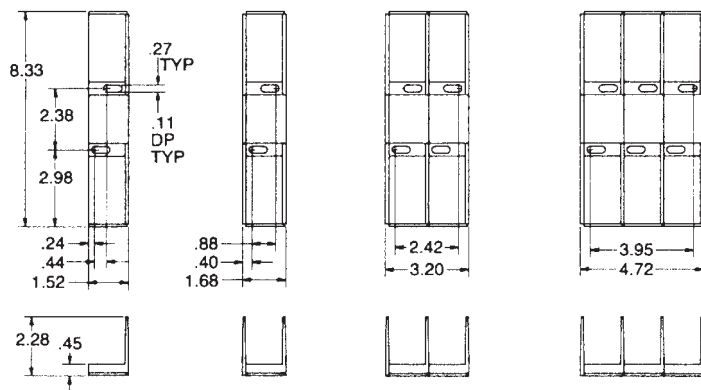


Figure 1

Figure 2

Figure 3

Figure 4

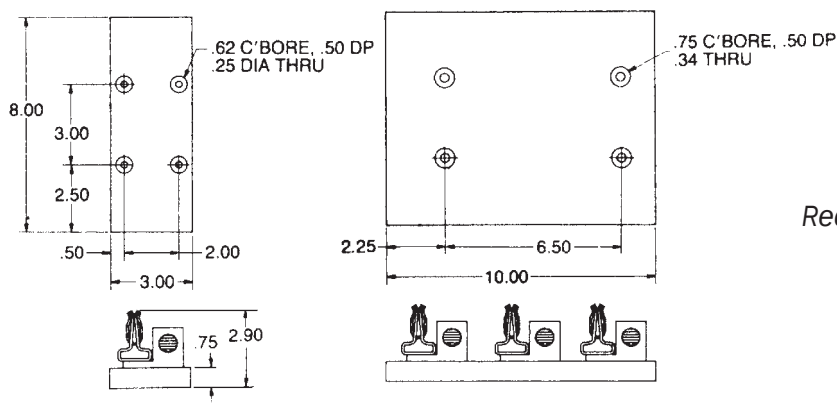


Figure 5

Figure 6

Recommended mounting screws:
All 100A-1/4" (.250" dia.)
200A, 1-pole - #10 (.190" dia.)
200A, 3-pole - 5/16" (.313" dia.)

250 Volt, 100 & 200 Ampere Class H, K and R Fuse Blocks

Amper Rating	Poles	Connector		Catalog Number Type of clip		Reference Number Type of clip		Fig.	Torque In - lb
		Type	Wire Range	Class H & K Spring Reinforced	Class R Spring Reinforced	Class H & K Spring Reinforced	Class R Spring Reinforced		
100 GFPC INSULATOR	ADDER	BOX	AL/Cu 2/0-#6	21035	21035R	N222767	C223286	1	120
	1			21036	21036R	S201105	D201621	2	
	2			21037	21037R	N204758	J211355	3	
	3			21038	21038R	Q211867	M212899	4	
	ADDER	BOX	Cu* 2/0-#12	21005	21005R	Q213914	D214432	1	50
	1			21006	21006R	F214940	H215448	2	
	2			21007	21007R	M215958	N216465	3	
	3			21008	21008R	Y216980	J217496	4	
200 PHENOLIC INSULATOR	1	BOX	AL/Cu	22001	22001R	Y213415	R213915	5	375
	3	SIDE-CLIP	350kcmil-#6	22003	22003R	E214433	G214941	6	
	1	BOX	Cu*	22051	22051R	N230472	K217497	5	275
	3	SIDE-CLIP	350kcmil-#6	22053	22053R	T218011	Y218521	6	

Note: To convert 100A adder pole to single pole, use end barrier #U09363 (T227510).

* Fuse blocks have copper box connectors and clips and are for copper wires only. These are specifically designed with the same coefficient of expansion as copper wire for improved heat cycling and meet or exceed OEM "no aluminum" specifications.



American General Purpose Fuses Cylindrical & Blade Fuse Blocks Class H, K & R

CLASS H, K AND R FUSE BLOCKS

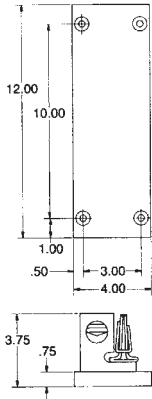


Figure 1

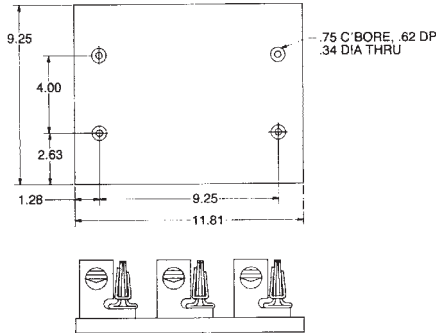


Figure 2

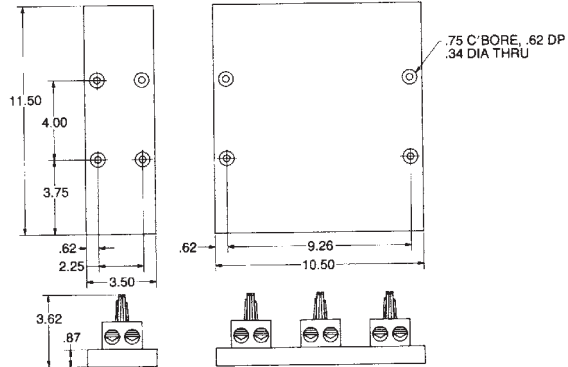


Figure 3

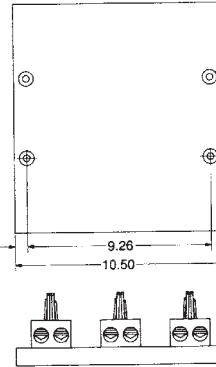


Figure 4

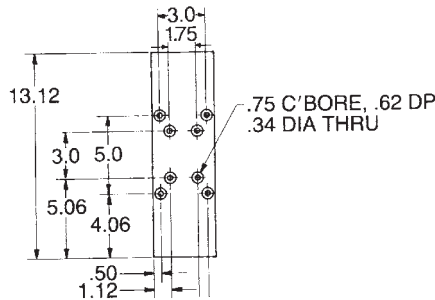


Figure 5

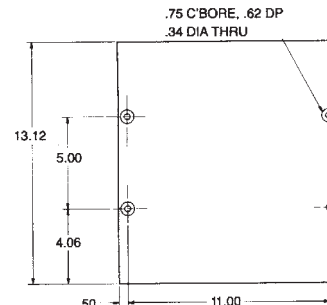


Figure 6

Recommended mounting screws for all 400A and 600A fuse blocks: 5/16 (.313" dia.)

250 Volt, 400 & 600 Ampere Class H, K and R Fuse Blocks

Amper Rating	Poles	Connector		Catalog Number Type of clip		Reference Number Type of clip		Fig.	Torque In - lb
		Type	Wire Range	Class H & K Spring Reinforced	Class R Spring Reinforced	Class H & K Non-spring Reinforced	Class R Spring Reinforced		
400 PHENOLIC INSULATOR	1	BOX*	Al/Cu	24001	24001R	T219046	J219566	1	375
	3	SIDE-CLIP	1000 - 250kcmil	24003	24003R	P230473	D222022	2	
	1	BOX*	Cu**	24051	24051R	P204759	K211356	1	375
	3	SIDE-CLIP	1000 - 250kcmil	24053	24053R	R211868	D212385	2	
600 PHENOLIC INSULATOR	1	BOX	Al/Cu	24031	24031R	P222768	D223287	3	275
	3	IN-LINE CLIP	(2) 350 kcmil-#4	24033	24033R	T201106	E201622	4	
	1	BOX	Cu**	24061	24061R	Q230474	N212900	3	275
	3	IN-LINE CLIP	(2) 350 kcmil-#6	24063	24063R	R230475	Z213416	4	
600 PHENOLIC INSULATOR	1	BOX	Al/Cu	2631	2631R	F214434	H214942	5	500
	3	IN-LINE CLIP	(2) 500 kcmil-#4	2633	2633R	K215450	P215960	6	
	1	BOX	Cu**	2661	2661R	Q216467	A216982	5	375
	3	IN-LINE CLIP	(2) 500 kcmil-#4	2663	2663R	L217498	V218012	6	

* Not UL Listed or CSA Certified

** Fuse blocks have copper box connectors and clips and are for copper wires only. These are specifically designed with the same coefficient of expansion as copper wire for improved heat cycling and meet or exceed OEM "no aluminum" specifications.



Gears & Fuse Gears

American General Purpose Fuses Cylindrical & Blade Fuse Blocks Class H, K & R

CLASS H, K AND R FUSE BLOCKS

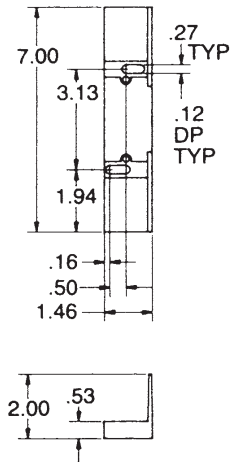


Figure 1

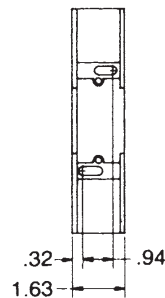


Figure 2

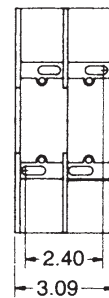


Figure 3

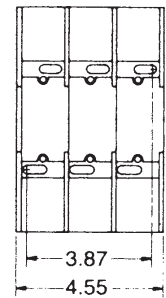


Figure 4

Recommended mounting screws for all 30A and 60A fuse blocks: 1/4" (.250" dia.)

600 Volt, 30 & 60 Ampere Class H, K and R Fuse Blocks

Amper Rating	Poles	Connector		Catalog Number.			Reference Number			Fig	Connector Torque In - lb
		Type	Wire Range	Class H&K Non-spring reinforced	Class H&K Spring reinforced	Class R Spring reinforced	Class H&K Non-spring reinforced	Class H&K Spring reinforced	Class R Spring reinforced		
30 GFPC INSULATOR	ADDER	BOX	Al/Cu #2-14	60300	60305	60305R	C218525	G223290	N211359	1	35
	1			60301	60306	60306R	Y219050	V211871	H212389	2	
	2			60302	60307	60307R	N219570	R212903	D213420	3	
	3			60303	60308	60308R	R222770	X213920	K214438	4	
	ADDER	SCREW	Cu #10-14	60310	60315	60315R	M214946	Q217502	Z218016	1	20
	1			60311	60316	60316R	P215454	D218526	Z219051	2	
	2			60312	60317	60317R	T215964	P219571	H222026	3	
	3			60313	60318	60318R	V216471	S222771	H223291	4	
	ADDER	PRESSURE PLATE	Cu #10-14	60320	60325	60325R	Y201110	W211872	J212390	1	20
	1			60321	60326	60326R	H201625	S212904	E213421	2	
	2			60322	60327	60327R	S204785	Y213921	L214439	3	
	3			60323	60328	60328R	P211360	N214947	Q215455	4	
	ADDER	BOX	Cu* #4-14	-	60355	60355R	-	V215965	W216472	1	35
	1			-	60356	60356R	-	E216986	R217503	2	
	2			-	60357	60357R	-	A218017	E218527	3	
	3			-	60358	60358R	-	A219052	Q219572	4	
60 GFPC INSULATOR	ADDER	BOX	Al/Cu #2-14	60600	60605	60605R	J222027	T204786	Q211361	1	45
	1			60601	60606	60606R	T222772	X211873	K212391	2	
	2			60602	60607	60607R	Z201111	T212905	F213422	3	
	3			60603	60608	60608R	J201626	Z213922	M214440	4	
	ADDER	BOX	Cu* #4-14	-	60655	60655R	-	A201112	V204787	1	45
	1			-	60656	60656R	-	R211362	Y211874	2	
	2			-	60657	60657R	-	L212392	G213423	3	
	3			-	60658	60658R	-	A213923	N214441	4	

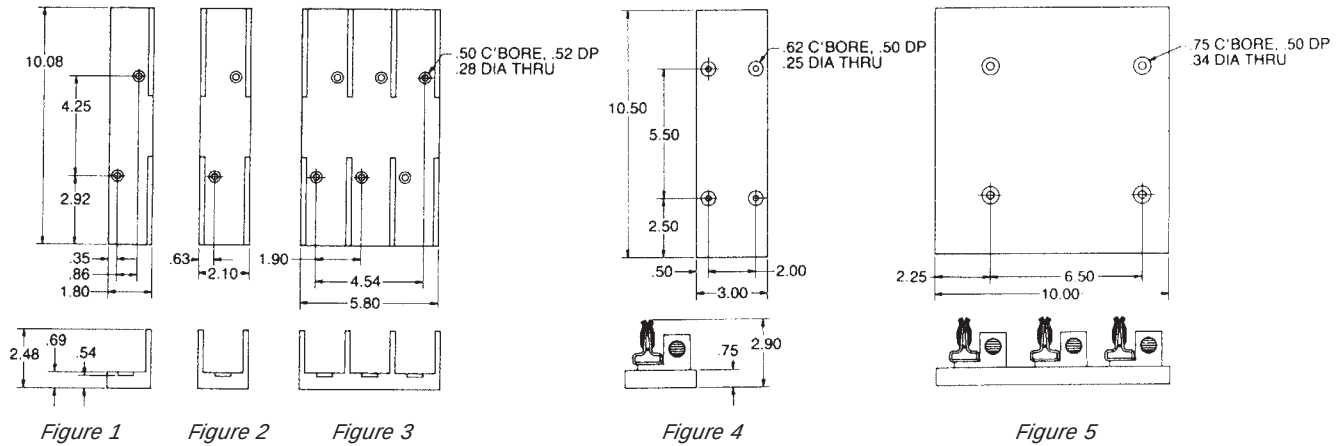
Note: To convert 30A or 60A adder pole to single pole, use end barrier #U09361 (\$227509).

* Fuse blocks have copper box connectors and clips and are for copper wires only. These are specifically designed with the same coefficient of expansion as copper wire for improved heat cycling and meet or exceed OEM "no aluminum" specifications.



American General Purpose Fuses Cylindrical & Blade Fuse Blocks Class H, K & R

CLASS H, K AND R FUSE BLOCKS



Recommended mounting screws:
 All 100A-1/4" (.250" dia.)
 200A, 1-pole - #10 (.190" dia.)
 200A, 3-pole - 5/16" (.313" dia.)

600 Volt, 100 & 200 Ampere Class H, K and R Fuse Blocks

Amper Rating	Poles	Connector		Catalog Number Type of clip		Reference Number Type of clip		Fig.	Connector Torque In - lb
		Type	Wire Range	Class H & K Spring Reinforced	Class R Spring Reinforced	Class H & K Non-spring Reinforced	Class R Spring Reinforced		
100 PHENOLIC INSULATOR	ADDER			61035	61035R	K223293	B201113	1	
	1	BOX	Al/Cu	61036	61036R	K201627	W204788	2	120
	3		2/0-#6	61038	61038R	S211363	Z211875	3	
	ADDER			61005	61005R	Q214949	S215457	1	
	1	BOX	Cu*	61006	61006R	X215967	X216473	2	50
	3		2/0-#12	61008	61008R	G216988	T217505	3	
200 PHENOLIC INSULATOR	1	BOX	Al/Cu	62001	62001R	M212393	V212906	4	375
	3	SIDE-CLIP	350	62003	62003R	H213424	B213924	5	
			kcmil-#6						
	1	BOX	Cu*	62051	62051R	Y216474	H216989	4	275
	3	SIDE-CLIP	350	62053	62053R	V217506	D218020	5	
			kcmil-#6						

Note: Adder poles can only be added to other fuse blocks. There is no end barrier to convert them to single pole fuse blocks.
 * Fuse blocks have copper box connectors and clips and are for copper wires only. These are specifically designed with the same coefficient of expansion as copper wire for improved heat cycling and meet or exceed OEM "no aluminum" specifications.



Gears & Fuse Gears

American General Purpose Fuses Cylindrical & Blade Fuse Blocks Class H, K & R

CLASS H, K AND R FUSE BLOCKS

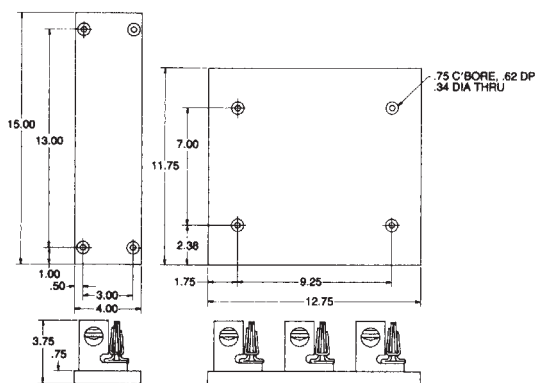


Figure 1

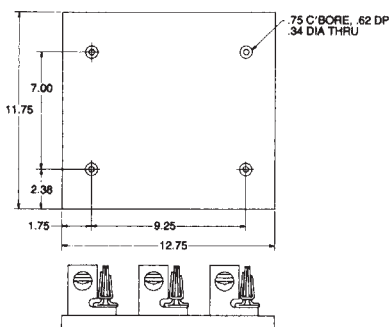


Figure 2

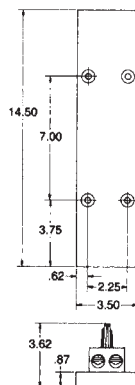


Figure 3

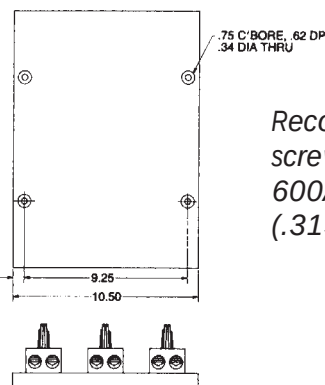


Figure 4

Recommended mounting
screws for all 400A and
600A fuse blocks: 5/16
(.313" dia.)

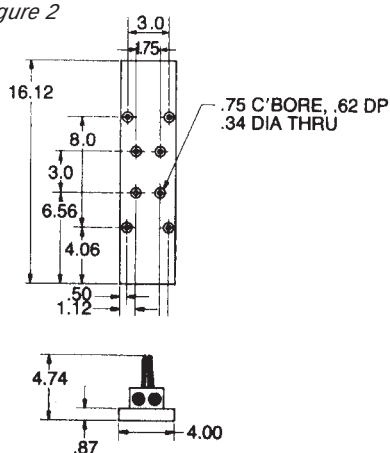


Figure 5

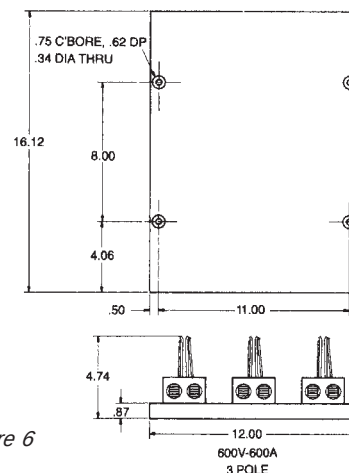


Figure 6

600 Volt, 400 & 600 Ampere Class H, K and R Fuse Blocks

Amper Rating	Poles	Connector		Catalog Number Type of clip		Reference Number Type of clip		Fig.	Connector Torque In - lb
		Type	Wire Range	Class H & K Spring Reinforced	Class R Spring Reinforced	Class H & K Spring Reinforced	Class R Spring Reinforced		
400 PHENOLIC INSULATOR	1	BOX*	Al/Cu	64001	64001R	H218530	D219055	1	375
	3	SIDE-CLIP	1000	64003	64003R	T219575	M222030	2	
			-250kcmil						
	1	BOX*	Cu**	64051	64051R	A211876	N212394	1	375
	3	SIDE-CLIP	1000	64053	64053R	W212907	J213425	2	
			-250kcmil						
	1	BOX	Al/Cu	64031	64031R	C201114	L201628	3	275
	3	IN-LINE CLIP	(2) 350 kcmil-#4	64033	64033R	H204845	T211364	4	
600 PHENOLIC INSULATOR	1	BOX	Cu**	64061	64061R	C213925	Q214443	3	275
	3	IN-LINE CLIP	(2) 350 kcmil-#6	64063	64063R	S214951	V215459	4	
	1	BOX	Al/Cu	6631	6631R	Z216475	J216990	5	500
	3	IN-LINE CLIP	(2) 500 kcmil-#4	6633	6633R	W217507	E218021	6	
	1	BOX	Cu**	6661	6661R	J218531	E219056	5	375
	3	IN-LINE CLIP	(2) 500 kcmil-#4	6663	6663R	V219576	N222031	6	

* Not UL Listed or CSA Certified

**Fuse blocks have copper box connectors and clips and are for copper wires only. These are specifically designed with the same coefficient of expansion as copper wire for improved heat cycling and meet or exceed OEM "no aluminum" specifications.



Gears & Fuse Gears

American General Purpose Fuses Cylindrical & Blade Fuse Blocks DFC Covers for Cylindrical Fuses



DFC DEAD-FRONT FUSE COVERS

Ferraz Shawmut DFC Dead-Front Fuse Covers snap on to individual fuses installed in fuse blocks, covering exposed live clips and terminals and reducing accidental contact by personnel. They are sized to fit Class G, H, J, K, R, CC or Midget fuses for increased safety and (optional) open-fuse indication. All DFC Dead-Front Fuse Covers are reusable when a fuse is replaced – simply detach from the open fuse and re-attach to the new replacement fuse. On indicator models an orange indicator light will illuminate to indicate an open fuse. DFC Fuse Cover ends can be easily cut to accommodate existing wiring, safety switches or special installations. A blank label is provided with each DFC to write in circuit or fuse information.

Features / Benefits

- Innovative design provides dead-front electrical safety to personnel
- Optional orange indicator light shows open fuse
- Many sizes to fit virtually all popular fuses/fuse blocks
- Reusable with no changes or additional cost
- Labels provided for write-in identification
- Thermoplastic flammability rating of UL 94-V2
- Low leakage current <0.6 mA at 600V

Ratings

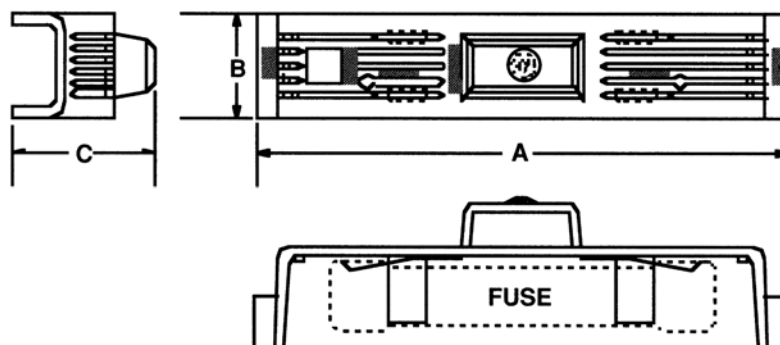
- Fit fuses rated 0 to 100A
- Indicating: 90 to 600VAC, 115 to 600VDC
- Non-Indicating: 0 to 600V AC/DC

Approvals

- UL Listed (All except Midget size) Guide JDVS, File E90426
- UL Recognized Component (Midget) Guide JDVS2, File E90426
- CSA Certified Class 6228, File 70159



Reference Numbers – Descriptions – Dimensions





American General Purpose Fuses Cylindrical & Blade Fuse Blocks DFC Covers for Cylindrical Fuses



DFC DEAD-FRONT FUSE COVERS

Reference Numbers – Descriptions – Dimensions

Catalog Number		Reference Number		Fuses Accommodated			Dimensions		
Indicating	Non-indicating	Indicating	Non-indicating	Amps	Volts	Class	A	B	C
DFC-1I	DFC-1	S222794	J222050	0-30 and 35-60	600 250	J R, K, H	5.02	1.03	1.94
DFC-2I	DFC-2	X201132	G223313	0-30	600	R, K, H	7.03	1.30	2.07
DFC-3I	DFC-3	X205065	G201647	65-100	600	J	7.03	1.30	2.33
DFC-4I	DFC-4	X211896	Q211384	65-100	250	R, K, H	8.20	1.30	2.18
DFC-5I	DFC-5	R212926	J212413	35-60	600	R, K, H	8.20	1.30	2.18
DFC-6I	DFC-6	A213946	E213444	35-60	600	J	4.98	1.17	2.14
DFC-7I	DFC-7	P214971	N214464	0-30	600	Midget, CC	3.82	0.75	1.72
DFC-8I	DFC-8	W215989	S215480	65-100	600	R, K, H	10.38	1.50	2.33
DFC-9I	DFC-9	G217011	S216492	0-30	250	R, K, H	3.82	0.75	1.72

WARNING: To avoid electrical shock, **TURN POWER OFF** before installing, removing or servicing.

Ferraz Shawmut Fuses and Fuse Blocks for use with DFC

FUSE	FUSE BLOCK	DFC	FUSE	FUSE BLOCK	DFC
AG(0-30)	40xxG	-7I, -7	A6K65-100R	610xxR	-8I, -8
AJT(0-30)	603xxJ	-1I, -1	A6Y(0-30)-2B	303xx	-7I, -7
AJT(35-60)	606xxJ	-6I, -6	A60Q(0-30)-2	303xx	-7I, -7
AJT(65-100)	610xxJ	-3I, -3	A60X(0-30)-1	603xx	-1I, -1
ATDR(0-30)	303xxR	-7I, -7	A70P(10-30)-1	203xx	-9I, -9
ATM(0-30)	303xx	-7I, -7	GFN(0-30)	303xx	-7I, -7
ATMR(0-30)	303xxR	-7I, -7	GGU(0-30)	303xx	-7I, -7
ATQ(0-30)	303xx	-7I, -7	OT(0-30)	203xx	-9I, -9
ATQR(0-30)	30xxR	-7I, -7	OT(35-60)	206xx	-1I, -1
A13X(1-30)-2	303xx	-7I, -7	OT(65-100)	210xx	-4I, -4
A2D(0-30)R	203xxR	-9I, -9	OTM(0-30)	303xx	-7I, -7
A2D(35-60)R	206xxR	-1I, -1	OTS(0-30)	603xx	-2I, -2
A2D(65-100)R	210xxR	-4I, -4	OTS(35-60)	606xx	-5I, -5
A2K(0-30)R	203xxR	-9I, -9	OTS(65-100)	610xx	-8I, -8
A2K(35-60)R	206xxR	-1I, -1	RF(0-30)	203xx	-9I, -9
A2K(65-100)R	210xxR	-4I, -4	RF(35-60)	206xx	-1I, -1
A2Y(0-30)	203xx	-9I, -9	RF(65-100)	210xx	-4I, -4
A2Y(35-60)	206xx	-1I, -1	RFS(0-30)	603xx	-2I, -2
A2Y(65-100)	210xx	-4I, -4	RFS(35-60)	606xx	-5I, -5
A25X(1-30)-1	203xx	-9I, -9	RFS(65-100)	610xx	-8I, -8
25Z(1-30)-2	303xx	-7I, -7	TR(0-30)R	203xx	-9I, -9
A4J(1-30)	603xxJ	-1I, -1	TR(35-60)R	206xx	-1I, -1
A4J(35-60)	606xxJ	-6I, -6	TR(65-100)R	210xx	-4I, -4
A4J(65-100)	610xxJ	-3I, -3	TRM(0-30)	303xx	-7I, -7
A50P(10-30)	203xx	-9I, -9	TRS(0-30)R	603xxR	-2I, -2
A6D(0-30)R	603xxR	-2I, -2	TRS(35-60)R	606xxR	-5I, -5
A6D(35-60)R	606xxR	-5I, -5	TRS(65-100)R	610xxR	-8I, -8
A6D(65-100)R	610xxR	-8I, -8	TRS(35-60)RDC	606xxR	-5I, -5
A6K(0-30)R	603xxR	-2I, -2	TRS(65-100)RDC	610xxR	-8I, -8
A6K(35-60)R	606xxR	-5I, -5			

Note: DFC Covers fit single pole blocks and each pole of multi-pole blocks.
Ask sales representative for data sheets on DFC trim instructions for safety switches.

WARNING: To avoid electrical shock, **TURN POWER OFF** before installing, removing or servicing.

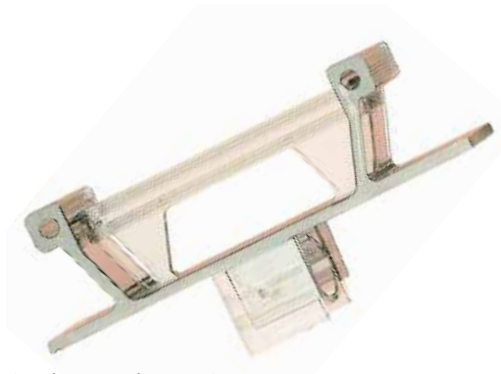


Gears & Fuse Gears

American General Purpose Fuses Cylindrical & Blade Fuse Blocks DFC Covers for Cylindrical Fuses

DFC3M / DFC3LP / DRM

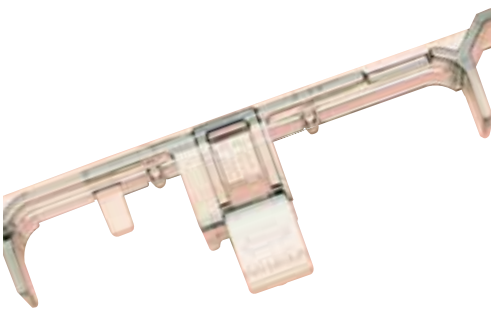
DFC3M safety puller protects personnel, cover live parts.



Catalog Number: DF3M
Reference Number: B218041

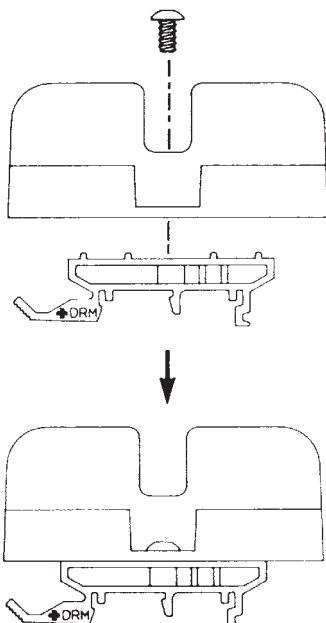
The DFC3M Safety Puller is intended to hold and safely enclose 1-1/2" x 13/32" Midget or Class CC fuses for insertion or removal from fuse clips, making fuse installation easy and safe without the use of a standard fuse puller. The DFC3M is made of clear polycarbonate, so the fuse can be identified when installed in a 303 series fuse block.

DFC3LP safety puller holds fuse, protects personnel and saves space.



Catalog Number: DFC3LP
Reference Number: Q217525

The DFC3LP holds and safely encloses 1-1/2" x 13/32" Midget or Class CC fuse, similar to the DFC3M, but with a lower profile in height so it takes less room where space is restricted. The DFC3LP is made of clear polycarbonate so the fuse can be seen after installation in a fuse block such as the Ferraz Shawmut 303 series.



Catalog Number: DRM
Reference Number: E218550

DRM adapts 303 series midget and class CC fuse blocks to DIN rail.

The DIN rail adapter, DRM, provides quick mounting for all Ferraz Shawmut 303 Series Midget and Class CC fuse blocks to all symmetrical 35mm DIN or asymmetrical 32mm "G" rail. A DRM adapter is attached to each pole with the screw provided. The DRM is molded of black polycarbonate and is mounted or dismounted from the rail simply by depressing the finger pull.



Gears & Fuse Gears

American General Purpose Fuses Cylindrical & Blade Fuse Blocks Class T



CLASS T FUSE BLOCKS

Ferraz Shawmut Class T Fuse Blocks accommodate Class T fuses up to 600A. Insulators are either of durable, glass-filled polycarbonate (GFPC) or phenolic with verified dielectric strength in excess of 2500V. Ferraz Shawmut is the only manufacturer to offer Class T blocks with copper connectors.

Features / Benefits

- Unique integral DIN rail adapters for 600V, 30 & 60A blocks
- Full barrier design (30 & 60A) increases pole to pole safety
- Unique adder-block design (30 & 60A) for design flexibility
- Spring reinforcing standard for all 30 & 60A clips
- Features high conductivity copper alloy fuse clips
- Cool running high amperage (100 - 600A) connectors
- Copper connectors available 30 - 600A

Ratings

- 300VAC: 30A, 60A, 100A, 200A, 400A, 600A
- 600VAC: 30A, 60A, 100A, 200A, 400A, 600A
- Withstand Rating: 200,000A Symmetrical

Approvals

- All fuse blocks meet the requirements of UL Std. 512
- UL Listed, Guide IZLT, File E52283
- UL Recognized Component Guide IZLT2, File E52283
- CSA Certified Class 6225, File 32169



Recommendes fuse usage

- Class T Blocks (300V) use with A3T
- Class T Blocks (600V) use with A6T

Clip & Connector Types

SPRING REINFORCED 30A & 60A CLIPS

300V - 30A
600V - 30A



300V - 60A



600V - 60A



CONNECTORS FOR SPRING REINFORCED 30A & 60A CLIPS

30A - 60A
BOX



30A - 60A
SCREW



30A - 60A
PRESSURE PLATE



CONNECTORS

100A BOX
SIDE CLIP



100A BOX



200A BOX



CONNECTORS

400A BOX



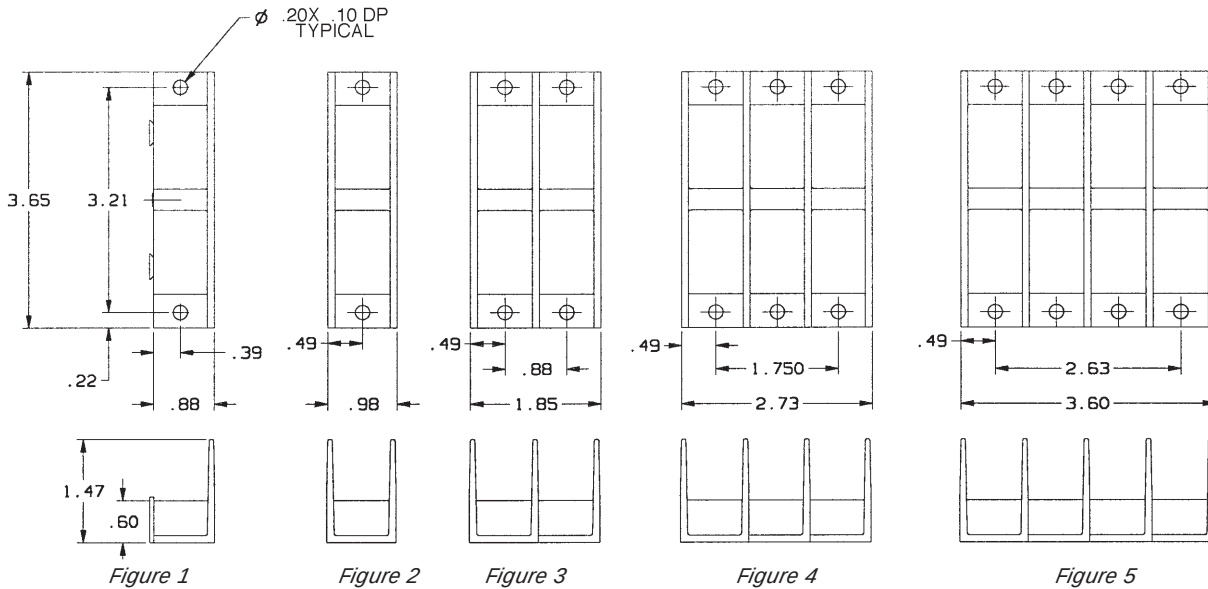
600A BOX





American General Purpose Fuses Cylindrical & Blade Fuse Blocks Class T

CLASS T FUSE BLOCKS



Recommended base mounting screws: #10 (.190" dia.)

300 Volt, 30 & 60 Ampere Class T Fuse Blocks

Amper Rating	Poles	Connector		Catalog Number	Reference Number	Fig.	Connector Torque In - lb (N.m)
		Type	Wire Range	Spring Reinforced	Spring Reinforced		
30 GFPC INSULATOR	ADDER	BOX	Al/Cu #2-14	30305T	J214943	1	35 (4)
	1			30306T	L215451	2	
	2			30307T	Q215961	3	
	3			30308T	R216468	4	
	4			30309T	B216983	5	
	ADDER	SCREW	Cu #10-14	30315T	M217499	1	20 (2.3)
	1			30316T	W218013	2	
	2			30317T	A218523	3	
	3			30318T	W219048	4	
	4			30319T	L219568	5	
	ADDER	PRESSURE PLATE	Cu #10-14	30325T	F222024	1	20 (2.3)
	1			30326T	Q222769	2	
	2			30327T	E223288	3	
	3			30328T	W201108	4	
	4			30329T	F201623	5	
	ADDER	BOX	Cu* #4-14	30355T	H204776	1	35 (4)
	1			30356T	L211357	2	
	2			30357T	S211869	3	
	3			30358T	F212387	4	
	4			30359T	Q212902	5	
60 GFPC INSULATOR	ADDER	SCREW	Cu #10-14	30615T**	R215962**	1	20 (2.3)
	1			30616T**	S216469**	2	
	2			30617T**	C216984**	3	
	3			30618T**	N217500**	4	
	4			30619T**	X218014**	5	
	ADDER	BOX	Al/Cu #2-14	30605T	B213418	1	45 (5)
	1			30606T	V213918	2	
	2			30607T	H214436	3	
	3			30608T	K214944	4	
	4			30609T	M215452	5	
	ADDER	BOX	Cu* #4-14	30655T	B218524	1	45 (5)
	1			30656T	X219049	2	
	2			30657T	M219569	3	
	3			30658T	G222025	4	
	4			30659T	F223289	5	

Note: *Fuse blocks have copper box connectors and clips and are for copper wires only. These are specifically designed with the same coefficient of expansion as copper wire for improved heat cycling and meet or exceed OEM "no aluminum" specifications.

** UL Component Recognized

**American General Purpose Fuses
Cylindrical & Blade Fuse Blocks
Class T**

CLASS T FUSE BLOCKS

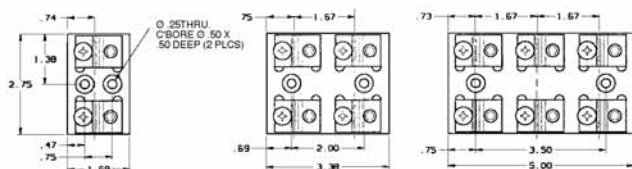


Figure 1

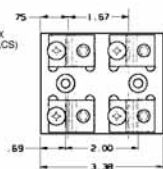


Figure 2

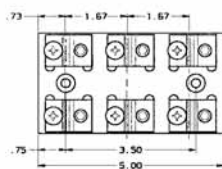


Figure 3

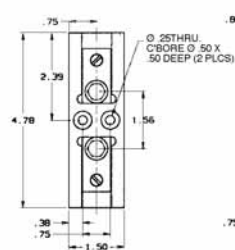


Figure 4

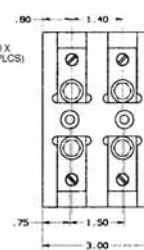


Figure 5

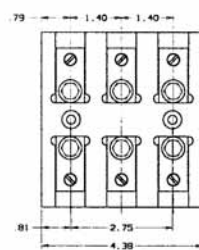


Figure 6

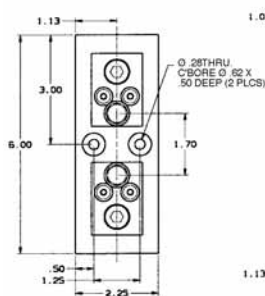


Figure 7

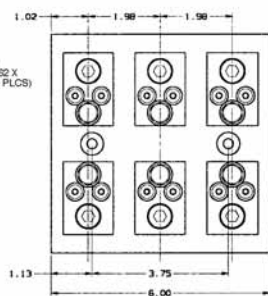


Figure 8

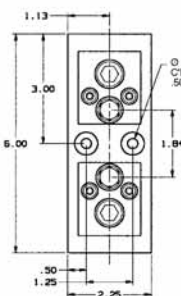


Figure 9

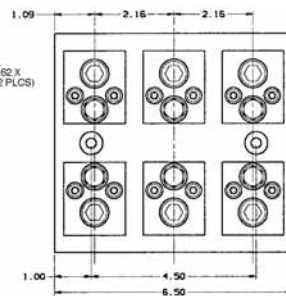


Figure 10

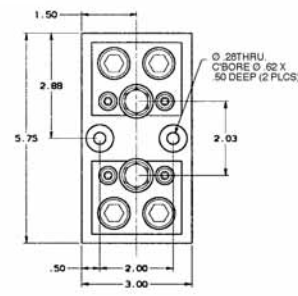


Figure 11

† Note: Height includes nominal fuse blade thickness. Recommended base mounting screws: 100A & 200A, #10 (.190" dia.), 400A & 600A, Zlv" (.250" dia.)

300 Volt, 100, 200, 400 & 600 Ampere Class T Fuse Blocks

Ampere Rating	Poles	Connector		Cat. Number Spring Reinforced	Ref. Number Spring Reinforced	Fig.	Torque In LBS (N.m)	
		Type	Wire Range				Connector	Fuse Bolt
100 PHENOLIC INSULATOR	1	BOX SIDE-CLIP	Al/Cu	31031T	M211358	1	120 (13)	–
	2		2/0-#6	31032T	T211870	2		
	3		31033T	G212388	3			
	1	BOX	Cu*	31001T	X201109	4	50 (5.6)	72 (8)
	2		2/0-#12	31002T	G201624	5		
	3		31003T	R204784	6			
200 PHENOLIC INSULATOR	1	BOX	Al/Cu	32031T	C213419	7	275 (31)	132 (15)
	3		350 kcmil-#6	32033T	W213919	8		
	1	BOX	Cu*	32051T	J214437	7	275 (31)	132 (15)
	3		350 kcmil-#6	32053T	L214945	8		
400 PHENOLIC INSULATOR	1	BOX	Al/Cu	34031T	N215453	9	600 (68)	228 (26)
	3		600 kcmil-#2	34033T	S215963	10		
	1	BOX	Cu*	34051T	T216470	9	375 (42)	228 (26)
	3		600 kcmil-#2	34053T	D216985	10		
600 PHENOLIC INSULATOR	1	BOX	Al/Cu	36031T	P217501	11	600 (68)	360 (40)
	1	BOX	(2) 600 kcmil-#2 Cu* (2) 600 kcmil-#2	36051T	Y218015	11	375 (42)	360 (40)

*Note: * Fuse blocks have copper box connectors and are for copper wires only. These are specifically designed with the same coefficient of expansion as copper wire for improved heat cycling and meet or exceed OEM "no aluminum" specifications.*



American General Purpose Fuses Cylindrical & Blade Fuse Blocks Class T

CLASS T FUSE BLOCKS

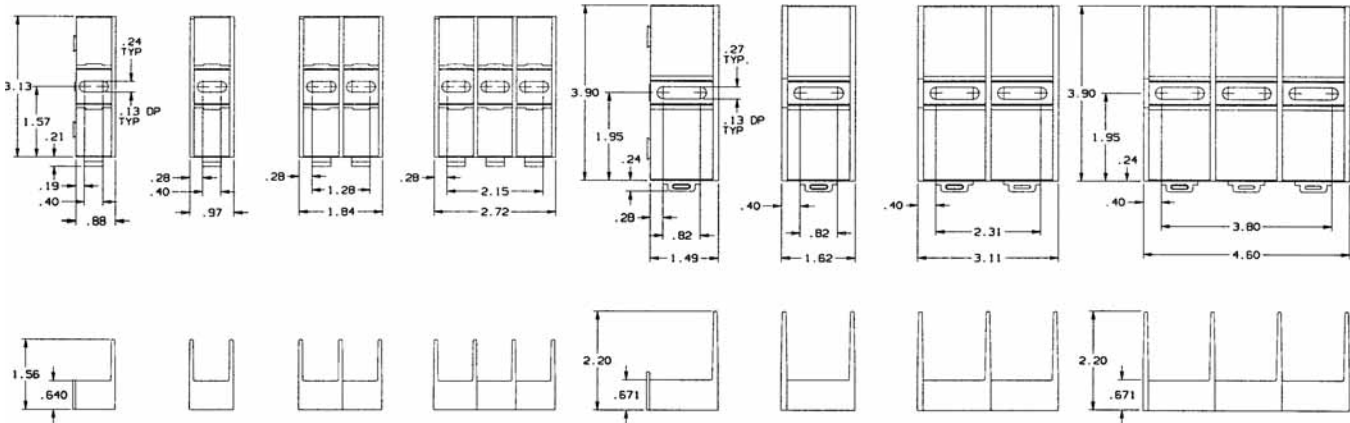


Figure 1

Figure 2

Figure 3

Figure 4

Figure 5

Figure 6

Figure 7

Figure 8

Recommended mounting screws: 30A, #10 (.190" dia.), 60A, 2 1/2" (.250" dia.)

600 Volt, 30 & 60 Ampere Class T Fuse Blocks

Amper Rating	Poles	Connector		Catalog Number	Reference Number	Fig.	Connector Torque In - lb (N.m)
		Type	Wire Range	Spring Reinforced	Spring Reinforced		
30 GFPC INSULATOR	ADDER	BOX	Al/Cu #2-14	60305T	B211877	1	35 (4)
	1			60306T	P212395	2	
	2			60307T	X212908	3	
	3			60308T	K213426	4	
	ADDER	SCREW	Cu #10-14	60315T	D213926	1	20 (2.3)
	1			60316T	R214444	2	
	2			60317T	T214952	3	
	3			60318T	W215460	4	
	ADDER	PRESSURE PLATE	Cu #10-14	60325T	Z215969	1	20 (2.3)
	1			60326T	A216476	2	
	2			60327T	K216991	3	
	3			60328T	X217508	4	
	ADDER	BOX	Cu* #4-14	60355T	F218022	1	35 (4)
	1			60356T	K218532	2	
	2			60357T	F219057	3	
	3			60358T	W219577	4	
60 GFPC INSULATOR	ADDER	SCREW	Cu #10-14	60615T**	N201630**	5	20 (2.3)
	1			60616T**	N204850**	6	
	2			60617T**	W211366**	7	
	3			60618T**	C211878**	8	
	ADDER	BOX	Al/Cu #2-14	60605T	P222032	5	45 (5)
	1			60606T	Z222777	6	
	2			60607T	N223296	7	
	3			60608T	E201116	8	
	ADDER	BOX	Cu* #4-14	60655T	Q212396	5	45 (5)
	1			60656T	Y212909	6	
	2			60657T	L213427	7	
	3			60658T	E213927	8	

Note: * Fuse blocks have copper box connectors and clips and are for copper wires only. These are specifically designed with the same coefficient of expansion as copper wire for improved heat cycling and meet or exceed OEM "no aluminum" specifications.

** UL Component Recognized



Gears & Fuse Gears

American General Purpose Fuses Cylindrical & Blade Fuse Blocks Class T

CLASS T FUSE BLOCKS

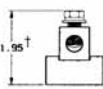
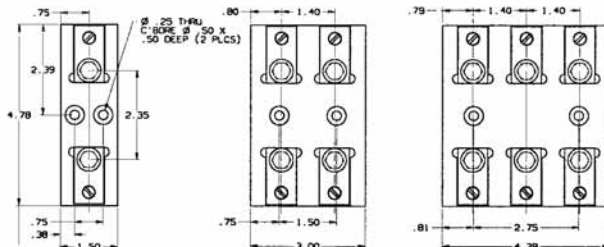


Figure 1

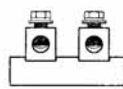


Figure 2

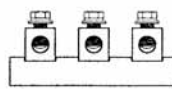


Figure 3

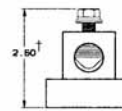
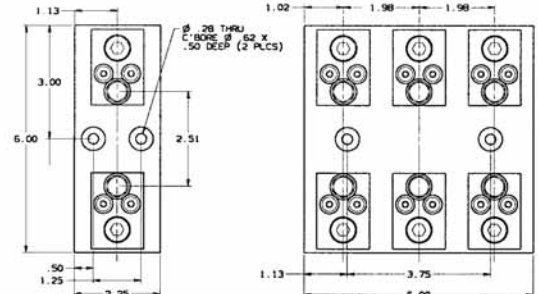


Figure 4



Figure 5

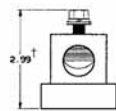
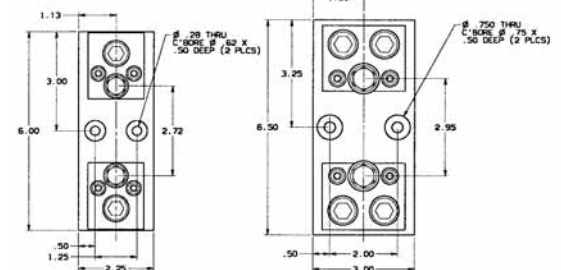


Figure 6

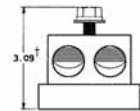


Figure 7

Recommended base mounting screws: 100A & 200A, #10 (.190" dia.), 400A & 600A, 2½" (.250" dia.)

† Note: Height includes nominal fuse blade thickness

600 Volt, 100, 200, 400 & 600 Ampere Class T Fuse Blocks

Ampere Rating	Poles	Connector		Cat. Numer	Ref. Number	Fig.	Torque In LBS (N.m)	
		Type	Wire Range				Connector	Fuse Bolt
100 PHENOLIC INSULATOR	1	BOX	Al/Cu	61031T	S214445	1	120 (13)	72 (8)
	2		2/0-#6	61032T	V214953	2		
	3			61033T	X215461	3		
200 PHENOLIC INSULATOR	1	BOX	Cu*	61051T	A215970	1	50 (5.6)	72 (8)
	2		2/0-#12	61052T	B216477	2		
	3			61053T	L216992	3		
200 PHENOLIC INSULATOR	1	BOX	Al/Cu	62031T	Y217509	4	275 (31)	132 (15)
	3		350 kcmil-#6	62033T	L218533	5		
	1	BOX	Cu*	62051T	G219058	4	275 (31)	132 (15)
400 PHENOLIC INSULATOR	3		350 kcmil-#6	62053T	X219578	5		
400 PHENOLIC INSULATOR	1	BOX	Al/Cu	64031T	Q222033	6	600 (68)	228 (26)
	1		600 kcmil-#2	64051T	A222778	6		
600 PHENOLIC INSULATOR	1	BOX	Cu*	66031T	P223297	7	600 (68)	360 (40)
	1		600 kcmil-#2	66051T	F201117	7		
600 PHENOLIC INSULATOR	1	BOX	Al/Cu	66031T	P223297	7	600 (68)	360 (40)
	1		(2) 600 kcmil-#2	66051T	F201117	7		
600 PHENOLIC INSULATOR	1	BOX	Cu*	66031T	P223297	7	600 (68)	360 (40)
	1		(2) 600 kcmil-#2	66051T	F201117	7		

Note: *Fuse blocks have copper box connectors and are for copper wires only. These are specifically designed with the same coefficient of expansion as copper wire for improved heat cycling and meet or exceed OEM "no aluminum" specifications.



Gears & Fuse Gears

American General Purpose Fuses Cylindrical & Blade Fuse Blocks Class G



CLASS G FUSE BLOCKS

Ferraz Shawmut Class G Fuse Blocks accommodate all 15, 20, 30 and 60 Ampere Class G fuses. A choice of box, screw or pressure-plate connectors fit a wide range of stranded or solid copper wire. Insulators are glass-filled polycarbonate (GFPC) with verified dielectric strength in excess of 2500V. Fuse blocks feature a unique adder block which can be snapped onto 1-, 2-, or 3-pole blocks to form multi-pole segmented blocks of as many poles as desired. All fuse clips are made of high conductivity tin-plated copper alloy.

Features / Benefits

- Unique integral DIN rail adapters for 15, 20 & 30A blocks
- Unique adder-block design (all ampere ratings) for design flexibility
- Spring reinforcing standard for 60A clips
- Features high conductivity copper alloy fuse clips

Ratings

- 600VAC: 15A & 20A
- 480VAC: 30A & 60A
- Withstand Rating: 100kA using screw, pressure plate or box connections, 10kA using quick connects.
- Temperature/flammability: GFPC insulators rated 125°C RTI, 94V-0 flammability

Approvals

- All fuse blocks meet the requirements of UL Std. 512
- UL Listed Guide IZLT, File E52283
- CSA Certified Class 6225, File 32169



Recommendes fuse usage

- Class G Blocks use with AG

Clip & Connector Types

15, 20, 30, 60A G

COPPER BOX CONNECTOR
OR ALUMINUM BOX
CONNECTOR



15, 20, 30A G

SCREW WITH DOUBLE
QUICK-CONNECTS



15, 20, 30A G

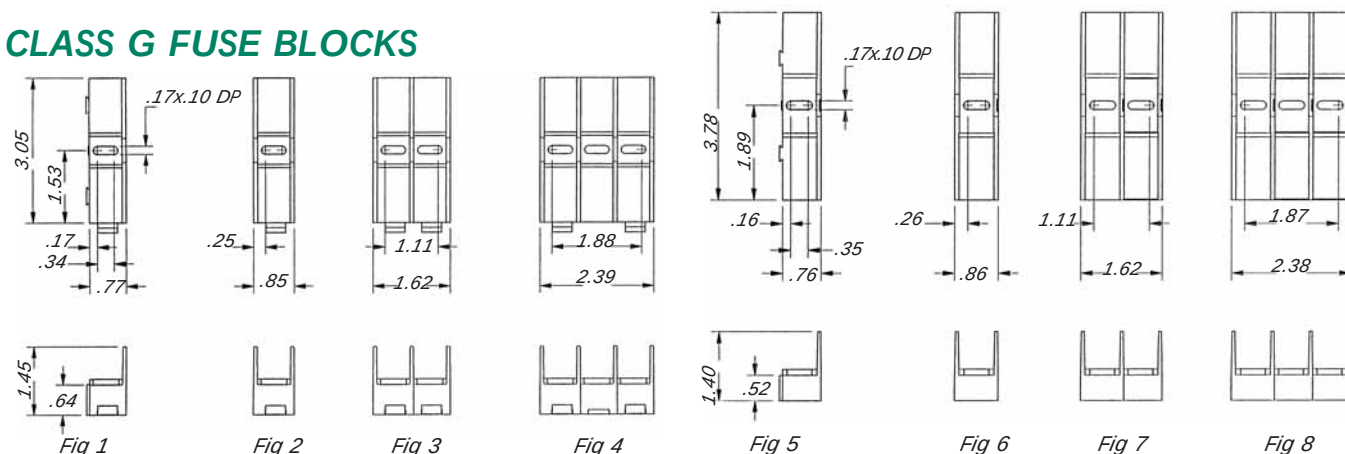
PRESSURE PLATE WITH
DOUBLE-QUICK
CONNECTS





American General Purpose Fuses Cylindrical & Blade Fuse Blocks Class G

CLASS G FUSE BLOCKS



600 Volt, 15 & 20 Ampere; 480 Volt 30 & 60 Ampere Class G Fuse Blocks

Ampere Rating	Poles	Connector Type	Wire Range	Cat. Numer Reinforced	Ref. Number Reinforced	Fig.	Torque In-LB (N.m)
15 GFPC INSULATOR	ADDER	SCREW W/DOUBLE QUICK CONNECTS AT BOTH ENDS	Cu #10-14	40110G	L219062	1	20 (2.3)
	1			40111G	B219582	2	
	2			40112G	V222037	3	
	3			40113G	E222782	4	
	ADDER	PRESSURE PLATE (SEMS) W/DOUBLE QUICK CONNECTS AT BOTH ENDS	Cu #10-14	40120G	R223299	1	20 (2.3)
	1			40121G	K201121	2	
	2			40122G	T201635	3	
	3			40123G	Y204882	4	
	ADDER	COPPER BOX	Cu #6-14	40150G	A211370	1	35 (4)
	1			40151G	G211882	2	
	2			40152G	V212400	3	
	3			40153G	C212913	4	
20 GFPC INSULATOR	ADDER	SCREW W/DOUBLE QUICK CONNECTS AT BOTH ENDS	Cu #10-14	40210G	Q213431	1	20 (2.3)
	1			40211G	K213932	2	
	2			40212G	Y214450	3	
	3			40213G	A214958	4	
	ADDER	PRESSURE PLATE (SEMS) W/DOUBLE QUICK CONNECTS AT BOTH ENDS	Cu #10-14	40220G	C215466	1	20 (2.3)
	1			40221G	F215975	2	
	2			40222G	E216480	3	
	3			40223G	R216997	4	
	ADDER	COPPER BOX	Cu #6-14	40250G	D217514	1	35 (4)
	1			40251G	L218027	2	
	2			40252G	R218538	3	
	3			40253G	M219063	4	
30 GFPC INSULATOR	ADDER	SCREW W/DOUBLE QUICK CONNECTS AT BOTH ENDS	Cu #10-14	40310G	C219583	1	20 (2.3)
	1			40311G	W222038	2	
	2			40312G	F222783	3	
	3			40313G	S223300	4	
	ADDER	PRESSURE PLATE (SEMS) W/DOUBLE QUICK CONNECTS AT BOTH ENDS	Cu #10-14	40320G	V201636	1	20 (2.3)
	1			40321G	A204884	2	
	2			40322G	B211371	3	
	3			40323G	H211883	4	
	ADDER	COPPER BOX	Cu #6-14	40350G	W212401	1	35 (4)
	1			40351G	D212914	2	
	2			40352G	R213432	3	
	3			40353G	L213933	4	
60 GFPC INSULATOR	ADDER	ALUMINUM BOX	Al/Cu #2-14	40605G	Z214451	5	45 (5)
	1			40606G	D215467	6	
	2			40607G	G215976	7	
	3			40608G	F216481	8	
	ADDER	COPPER BOX	Cu #4-14	40655G	R230521	5	45 (5)
	1			40656G	S216998	6	
	2			40657G	M218028	7	
	3			40658G	S218539	8	



Gears & Fuse Gears

American General Purpose Fuses Cylindrical & Blade Fuse Blocks Midget & Class CC Fuse Block



600 VOLT MIDGET AND CLASS CC FUSE BLOCKS

Ferraz Shawmut Midget Fuse Blocks accommodate all 30 ampere 1-1/2" x 13/32" midget fuses. Class CC Fuse Blocks accommodate all 30 ampere Class CC fuses. A choice of box, screw, or pressure-plate connectors fit a wide range of stranded or solid copper wire. Insulators are glass-filled polycarbonate (GFPC) with verified dielectric strength in excess of 2500V. Fuse blocks feature a unique adder block which can be snapped onto 1-, 2- or 3-pole blocks to form multi-pole segmented blocks of as many poles as desired. All fuse clips are made of high conductivity tin-plated copper alloy.

Ratings

- 600VAC: 30A
- Withstand rating: 200kA using screw, pressure plate or box connections, 10kA using quick connects
- Temperature/flammability: GFPC insulators rated 125°C, 94V-0 flammability.

Approvals

- All fuse blocks meet the requirements of UL Std. 512
- Midget Block UL Recognized Component Guide IZLT2, File E52283
- CSA Certified Class 6225, File 32169
- Class CC Block UL Listed, Guide IZLT, File E52283
- CSA Certified Class 6225, File 32169



Recommendes fuse usage

Midget Fuse Block use with ATQ, ATM, A6Y-2B, A25Z-2, TRM, OTM, A13X-2, GFN, GGU, A60Q-2
Class CC Fuse Block use with ATDR, ATMR, ATQR

Clip & Connector Types

30A MIDGET/CC

COPPER BOX
CONNECTOR



SCREW WITH
DOUBLE QUICK-
CONNECTS



PRESSURE PLATE
WITH DOUBLE
QUICK-CONNECTS



PRESSURE PLATE WITH
DOUBLE QUICK- CON-
NECTS (CLASS CC
REJECTION END)

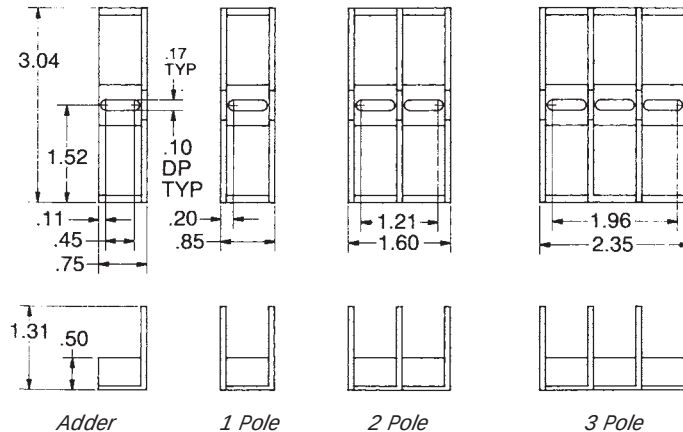


Gears & Fuse Gears



American General Purpose Fuses Cylindrical & Blade Fuse Blocks Midget & Class CC Fuse Block

600 VOLT MIDGET AND CLASS CC FUSE BLOCKS



Recommended mounting screws for all Midget and Class CC fuse blocks: #8 (.164" dia.)

600 Volt, 30A Midget and Class CC Fuse Blocks

Connector		Poles*	Type of Fuse						Connector Torque In-lb (N.m)
Type	Wire Range		Cat. Number	Midget Ref. Number	Listing	Cat. Number	Class CC Ref. Number	Listing	
Screw w/double quick connects at both ends	Cu #10-14	ADDER	30310	N211888		30310R	W204857		20 (2.3)
		1	30311	A212405		30311R	R212397		
		2	30312	E214456		30312R	Z212910		
		3	30313	F214963		30313R	M213428		
		4	30314	J215472		30314R	F213928		
Pressure plate (sems) w/double quick connects at both ends	Cu #10-14	ADDER	30320	S218033		30320R	Z217510		20 (2.3)
		1	30321	Y218544		30321R	M218534		
		2	30322	K222787		30322R	Y219579		
		3	30323	B201642		30323R	B222779		
		4	30324	H211377		30324R	Q201632		
Copper box	Cu #6-14	ADDER	30350	F214457		30350R	N213429		35 (4)
		1	30351	G214964		30351R	G213929		
		2	30352	L216486		30352R	V214447		
		3	30353	Z217004		30353R	X214955		
		4	30354	J217519		30354R	Z215463		

Note: To convert Midget or Class CC adder pole to single pole, use end barrier #U09301.

* Available in any number of poles. Replace last digit in Catalog Number with number of poles needed. Example: 303112 is a 12-pole screw/double QC connector Midget Fuse Block.

Total width of N poles = (N x .76) + .08 inches. 12 poles = (12 x .76") + .08" = 9.20".

Note: See fuse block accessories: DFC3M, DFC3LP, DRM



Gears & Fuse Gears

American General Purpose Fuses Cylindrical & Blade Fuse Blocks In-Line FEB/FEC/FEX/FEY



600 VOLTS

Ferraz Shawmut's complete line of single and dual pole in-line fuse holders accommodate either 1-1/2" x 13/32" (10x38mm) midget or Class CC fuses. The fuse holders are designed for quick installation. Securing nuts or screws are captive thus speeding installation by reducing the need to locate and assemble loose components in the field. Three internal O-rings per pole seal the fuse holder providing a water-resistant compartment for the fuse. The captive O-rings are colored (blue for single pole and red for dual pole) for quick detection. Optional cone shaped insulator boots can be slipped on to provide a watertight seal (breakaway versions come with boots standard). Both single and dual pole versions have an optional breakaway feature which safely disconnects the load in case of a pole knockdown. Fuses remain safely encapsulated within the watertight fuse holder on the load side. Once the pole has been reinstalled the fuse holder can be easily reconnected.

Ratings

- 600 VAC, 30A
- Withstand Rating: Midget Fuse 100kA I.R., Class CC 200kA I.R.
- Temperature Rating 155°C

Highlights

- Breakaway version quickly disconnects line side during pole knockdown in compliance with state and federal highway commission standards
- 3 O-rings per pole for water tight applications
- Colored O-rings for quick detection
- Single and dual poles
- Accepts midget or Class CC fuses
- Wide assortment of terminal variations
- High heat, impact resistant insulator
- Captive nut or screw for quick installations
- Polarized dual pole provides simultaneous disconnection
- Permanently installed neutral versions quickly identified by white nuts
- Tulip fuse clip for improved contact and low losses
- Environmentally friendly-no lead solder used
- Highly visible catalog number even with insulation boots installed
- Wire gage size identified on insulation boots for quick, accurate trimming

Approvals

- UL Listed Class CC, Guide IZLT, File E52283
- UL Recognized Component Midget, Guide IZLT2, File E52283
- CSA Certified Class CC and Midget, Class 6225, File 32169



Applications:

- Street lighting
- Parking lot lighting
- Traffic signaling
- Sports lighting
- Boats and marinas
- Humid/corrosive environments

Recommended Fuse Usage

- FEB and FEX holders will accommodate these Ferraz Shawmut Fuses: Midget (1-1/2" x 13/32", 10 x 38mm): ATQ, ATM, TRM, OTM, GGU, GFN, A13X2, A25Z-2, A60Q-2, A6Y-2B
- FEC and FEY holders will accommodate these Ferraz Shawmut Fuses:
Class CC: ATDR, ATMR, ATQR



American General Purpose Fuses Cylindrical & Blade Fuse Blocks In-Line FEB/FEC/FEX/FEY



600 VOLTS

Catalog Numbering System

Family	Load Terminal		Line Terminal		Option
	Type	Material	Type	Material	
FEB-	1	-	1	1	-BA

Nomenclature Legend

Family		Load or Line Terminal Type						Option	
Family	Description	Terminal End View	Terminal	Type	Conductor Size	No. Per Terminal	Solid	Stranded	Description
FEB	Single pole midget		11	Cu Crimp	#8-#12	1	Yes	Yes	BA (breakaway version equipped with breakaway stud, breakaway boot, and insulating boots for both line and load sides)
FEC	Single pole Class CC		21	Cu Crimp	#12-#14	2	Yes	Yes	
					#6	1	Yes	Yes	
					#4	1	Yes	No	
FEX	Dual Pole midget		31	Cu Crimp	#10	2	Yes	Yes	
					#4	1	No	Yes	
FEY	Dual pole Class CC		41	Cu Crimp	#6	2	Yes	Yes	
					#2	1	No	Yes	
FEBN	Single pole neutral		81	Cu Single Set Screw	#2-#12	1	Yes	Yes	
			91	Cu Double Set Screw	#2-#12	1 each	Yes	Yes	
			82	Al Single Set Screw	#2-#12	1	Yes	Yes	
			92	Al Double Set Screw	#2-#12	1 each	Yes	Yes	

Notes:

1. Non-breakaway units do not include insulator boots. These optional cone shaped boots are available to provide a watertight installation. The insulator boots are designed to form a watertight seal over conductors, but due to varying wire insulation sizes it is suggested that tape wrap be utilized for best results.

FSB1 = Single conductor boot (used to cover all crimp type & single set screw terminals)

FSB2 = Double conductor boot (used to cover all double set screw (Y-type) terminals)

Insulator boot trimming instructions: Locate wire gage size to be utilized marking on the boot and cut just beneath it.

2. Tightening torque for single and double set screw terminations: 35 lbs.-in.

3. Tightening torque for dual pole fastening screw: 10-15 lbs.-in.

4. FEBN versions have a permanently mounted dummy fuse for neutral applications.



Gears & Fuse Gears

American General Purpose Fuses Cylindrical & Blade Fuse Blocks In-Line FEB/FEC/FEX/FEY



600 VOLTS

Ferraz Shawmut In-Line Fuse Holder Family - Typical Combination Chart

Midget (10x38mm)		Midget (10x38mm) Breakaway		Class CC		Class CC Breakaway	
Cat. Number	Ref. Number	Cat. Number	Ref. Number	Cat. Number	Ref. Number	Cat. Number	Ref. Number
FEB-11-11	S230522	FEB-11-11-BA	T230523	FEC-11-11	M230563	FEC-11-11-BA	N230564
FEB-11-21	V230524	FEB-11-21-BA	W230525	FEC-11-21	P230565	FEC-11-21-BA	Q230566
FEB-11-31	X230526						
FEB-11-41	Y230527	FEB-11-41-BA	Z230528				
		FEB-11-81-BA	A230529				
FEB-11-82	B230530	FEB-11-82-BA	C230531				
FEB-11-91	D230532	FEB-11-91-BA	E230533	FEC-11-91	R230567	FEC-11-91-BA	S230568
FEB-11-92	F230534	FEB-11-92-BA	G230535				
FEB-11-S	H230536						
FEB-21-11	J230537						
FEB-21-21	K230538	FEB-21-21-BA	L230539	FEC-21-21	T230569	FEC-21-21-BA	V230570
FEB-21-91	M230540	FEB-21-91-BA	N230541				
FEB-31-31	P230542	FEB-31-31-BA	Q230543				
FEB-41-41	R230544	FEB-41-41-BA	S230545				
FEB-81-81	T230546	FEB-81-81-BA	V230547	FEC-81-81	W230571	FEC-81-81-BA	X230572
FEB-81-91	W230548	FEB-81-91-BA	X230549				
FEB-81-S	Y230550						
FEB-82-82	Z230551	FEB-82-82-BA	A230552				
FEB-82-92	B230553	FEB-82-92-BA	C230554				
		FEB-91-91-BA	D230555				
FEBN-11-11	E230556	FEBN-11-11-BA	F230557				
FEBN-11-91	G230558	FEBN-11-91-BA	H230559				
FEBN-81-81	J230560	FEBN-81-81-BA	K230561				
FEB-SS	L230562						

Note: Consult factory for other configurations.

Midget (10x38mm) Dual Pole		Midget (10x38mm) Dual Pole Breakaway		Class CC Dual Pole		Class CC Dual Pole Breakaway	
Cat. Number	Ref. Number	Cat. Number	Ref. Number	Cat. Number	Ref. Number	Cat. Number	Ref. Number
FEX-11-11	Y230573	FEX-11-11-BA	G230512	FEY-11-11	F230580	FEY-11-11-BA	L230516
FEX-11-21	Z230574	FEX-11-21-BA	H230513	FEY-11-21	G230581	FEY-11-21-BA	M230517
FEX-11-31	A230575			FEY-11-31	H230582		
FEX-11-41	B230576			FEY-11-41	J230583		
						FEY-11-91-BA	N230518
FEX-21-21	C230577	FEX-21-21-BA	J230514	FEY-21-21	K230584	FEY-21-21-BA	P230519
FEX-81-81	D230578						
FEX-81-91	E230579	FEX-81-91-BA	K230515				

Note: Consult factory for other configurations.

Crimping Tools Reference Chart, The following crimping tools (or equivalent) are recommended:

Terminal Type	FCI-Burndy	T&B
1	Y8MRB-1	WT-111M
2	Y2MR	TBM2/TBM5 BLUE DIE, WT-115-A DIE O
3	Y2MR	TBM2/TBM5 GREY DIE, WT-115-A DIE E
4	Y2MR	TBM2/TBM5 BROWN DIE, WT-115-A DIE F

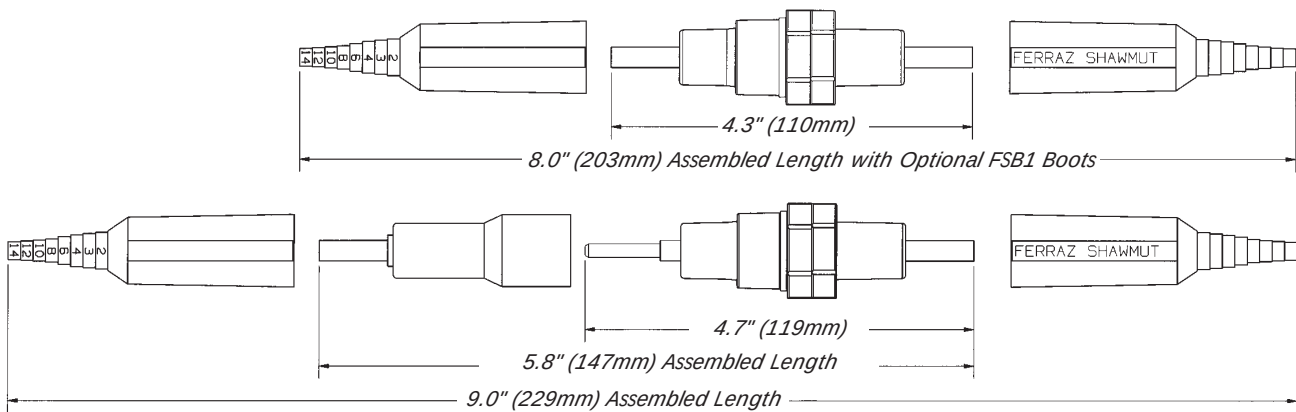
Note: Not supply by Ferraz Shawmut.



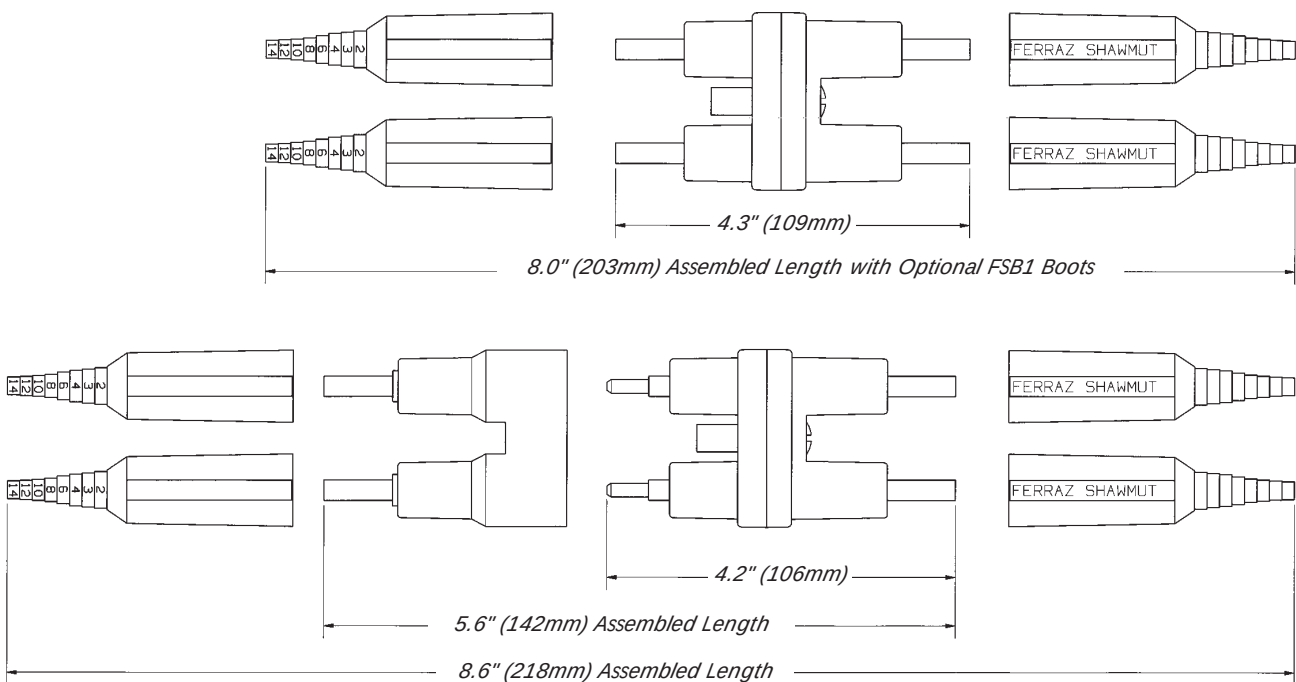
American General Purpose Fuses Cylindrical & Blade Fuse Blocks In-Line FEB/FEC/FEX/FEY

600 VOLTS

FEB and FEC, Non-Breakaway and Breakaway Assembly Drawings



FEX and FEY, Non-Breakaway and Breakaway Assembly Drawings





Gears & Fuse Gears

Miniature Fuses Panel Mount Fuseholders GPM Series



GPM PANEL MOUNT FUSE HOLDERS

Ferraz Shawmut GPM Panel Mount Fuse Holders are in sizes to accommodate 5mm x 20mm, 1/4" x 1-1/4", Class CC and Midget (1-1/2" x 13/32") fuses. All 30A holders have glass-filled polyester insulators for extra dependability and trouble-free installation. Patented design allows same body to accept screw or bayonet knob. Flange design allows front or rear mounting. The 10A and 15A holders are for front mounting only.

Approvals



- GPM-A, GPM-G: UL Recognized, Guide IZLT2, File E118864
CSA Certified, Class 908501, File AP82191
- All others: UL Recognized, Guide IZLT2, File E52283
CSA Certified, Class 6225, File 32169

Recommended Fuse Usage

GPM Fuse Holders will accommodate these Ferraz Shawmut fuses:

GPM-A: GGM, GGA, GSC

GPM-G: GSA, GDL, GGC, GSB, GDG, GAB

GPM-SRR, GPM-BRR, GPM-WTR: ATQR, ATDR, ATMR

GPM-SRR90, GPM-BRR90, GPM-WTR90: ATQR, ATDR, ATMR

GPM-S, GPM-B, GPM-WT:

GPM-S90, GPM-B90, GPM-WT90 } ATQ, ATM, TRM, OTM, GGU, A13X-2, A25Z-2, A60Q-2, A6Y-2B

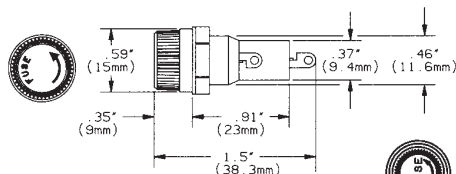


Figure 1

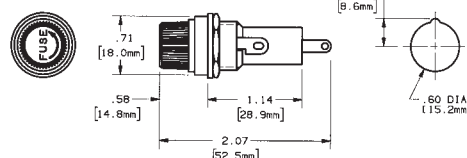


Figure 2

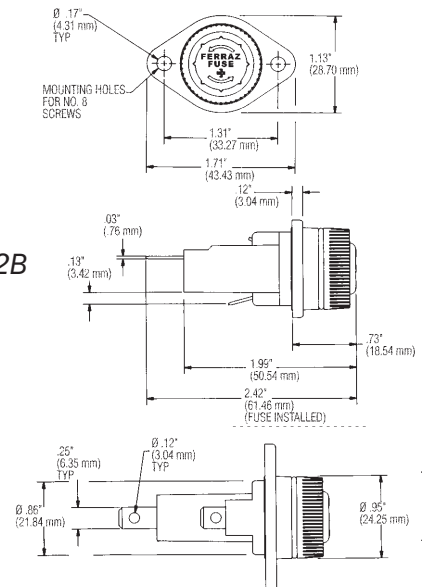


Figure 3

Catalog Numbers & Descriptions

Cat No.	Ref. No.	Fig.	Cap Type	Amps	Volts	Fuse Type	Terminal Type
GPM-A	M213451	1	Screw Knob	10	250	5mm x 20mm	Solder
GPM-G	G213952	2	Screw Knob	15	250	1/4" x 1-1/4"	Solder
GPM-S	M216487	3	Screw Knob	30	600	1-1/2" x 13/32"	1/4" Quick-connect/Solder
GPM-S90		4	Screw Knob	30	600	1-1/2" x 13/32"	1/4" Quick-connect/Solder, Right Angle
GPM-SRR	A217005	3	Screw Knob	30	600	Class CC	1/4" Quick-connect/Solder
GPM-SRR90		4	Screw Knob	30	600	Class CC	1/4" Quick-connect/Solder, Right Angle
GPM-B	L215474	3	1/4 Turn Bayonet Knob	30	600	1-1/2" x 13/32"	1/4" Quick-connect/Solder
GPM-B90		4	1/4 Turn Bayonet Knob	30	600	1-1/2" x 13/32"	1/4" Quick-connect/Solder, Right Angle
GPM-BRR	P215983	3	1/4 Turn Bayonet Knob	30	600	Class CC	1/4" Quick-connect/Solder
GPM-BRR90		4	1/4 Turn Bayonet Knob	30	600	Class CC	1/4" Quick-connect/Solder, Right Angle
GPM-WT	K217520	3	Water-tight Screw Knob	30	600	1-1/2" x 13/32"	1/4" Quick-connect/Solder
GPM-WT90		4	Water-tight Screw Knob	30	600	1-1/2" x 13/32"	1/4" Quick-connect/Solder, Right Angle
GPM-WTR	V218035	3	Water-tight Screw Knob	30	600	Class CC	1/4" Quick-connect/Solder
GPM-WTR90		4	Water-tight Screw Knob	30	600	Class CC	1/4" Quick-connect/Solder, Right Angle

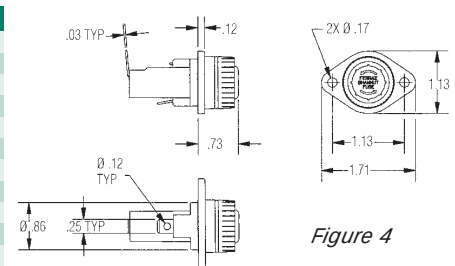


Figure 4

Gears & Fuse Gears



American General Purpose Fuses Cylindrical & Blade Fuse Blocks Clips

for Ferrule fuses / pc board
30A & 60A ferrule - fuse clips

Fuse Clips for 30 & 60 Ampere Ferrule-type Fuses

Cat. Num.	Ref. Num.	Fig.	For Fuse Rating/Size:		Mounting Details	
			Amps (max.)	Ferrule Dia.	Hole Size	Screw Size
CO8915P	R215479	1	30	13/32"	.172" dia.	#8
CO8919P	P217524	2	30	13/32"	.196" dia.	#10
CO8916P	V215988	3	30	9/16"	.172" dia.	#8
CO8917P	R216491	4	30 or 60	13/16"	.22" x .30"	#10
CO8918P	F217010	5	60	1-1/16"	.22" x .30"	#10

All clips are UL Recognized: Guide IZLT2, File E52283
All clips are tin-plated copper alloy, non-spring reinforced.

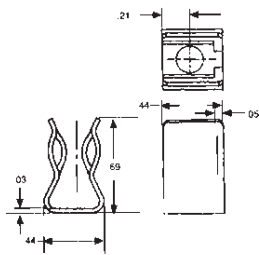


Figure 1

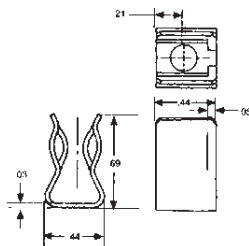


Figure 2

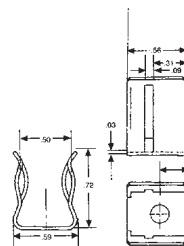


Figure 3

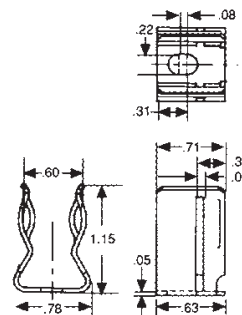


Figure 4

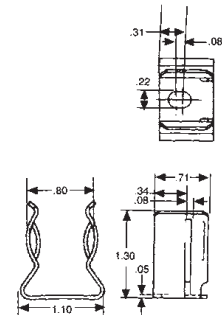
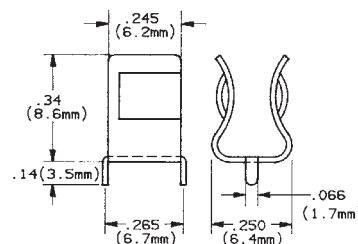


Figure 5

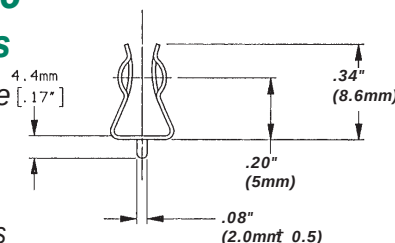
SDC6 - K222051 PC BOARD clips

- PC board mount fuse clip
- For 1/4" diameter fuses
- Tin plated hard brass
- 15A max



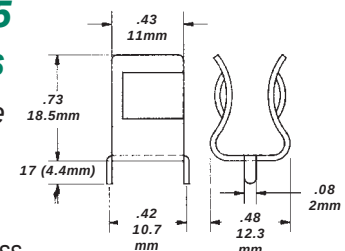
SDC5 - R219596 PC BOARD clips

- PC board mount fuse clip
- For 5mm diameter fuses
- Tin plated hard brass
- 10A max



SDC7 - T222795 PC BOARD clips

- PC board mount fuse clip
- For 13/32" (10mm) diameter fuses
- Tin plated spring brass
- 30A max





Gears & Fuse Gears

American General Purpose Fuses Power Distribution Blocks FSPDB



FSPDB IP20 Finger Safe Power Distribution Block

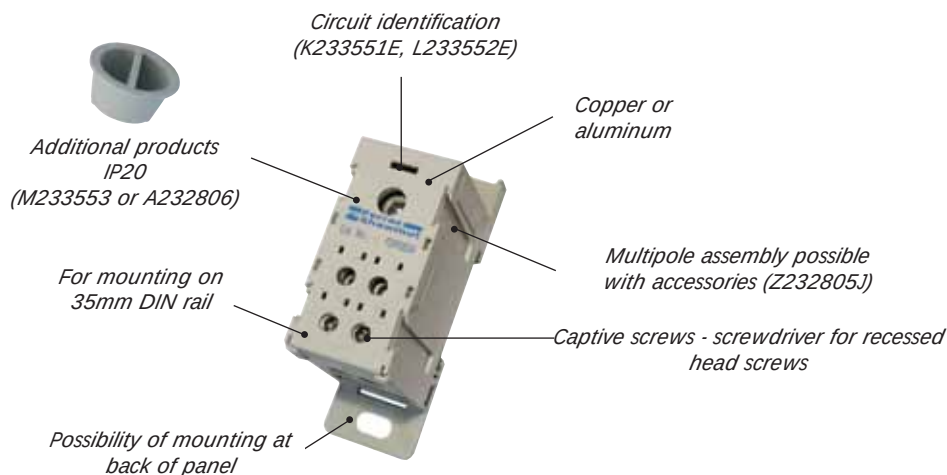
Ferraz Shawmut is launching a whole new concept of safety and easy installation with its new power distribution blocks. Protection to IP20 standards guarantees safety and eliminates the need for plastic protections. FSPDBs can be snapped onto a 35mm DIN rail or mounted at the back of a panel, and their modular design makes multipole assemblies easy. These power distribution blocks offer you a simple way of distributing electricity in cubicles through a wide variety of secondary circuits.

Reference	Designation	Nb. wire inlets	Nb. wire outlets	Materials	Pckg
X232803C	FSPDB4A 335A 1/1 16 to 185mm ²	1x 185mm ² to 16mm ²	1x 185mm ² to 16mm ²	Aluminum	3
R232798C	FSPDB4C 335A 1/1 16 to 185mm ²	1x 185mm ² to 16mm ²	1x 185mm ² to 16mm ²	Copper	3
D233545C	FSPDB1A 175A 1/1 2,5 to 70mm ²	1x 70mm ² to 2,5mm ²	1x 70mm ² to 2,5mm ²	Aluminum	3
N232795C	FSPDB1C 175A 1/1 2,5 to 70mm ²	1x 70mm ² to 2,5mm ²	1x 70mm ² to 2,5mm ²	Copper	3
Y232804C	FSPDB5A 840A 2/2 25 to 300mm ²	2x 300mm ² to 25mm ²	2x 300mm ² to 25mm ²	Aluminum	3
S232799C	FSPDB5C 840A 2/2 25 to 300mm ²	2x 300mm ² to 25mm ²	2x 300mm ² to 25mm ²	Copper	3
V232801C	FSPDB2A 175A 1/4 2,5 to 70mm ²	1x 70mm ² to 2,5mm ²	4x 35mm ² to 2,5mm ²	Aluminum	3
P232796C	FSPDB2C 175A 1/4 2,5 to 70mm ²	1x 70mm ² to 2,5mm ²	4x 35mm ² to 2,5mm ²	Copper	3
VV232802C	FSPDB3A 310A 2/8 2,5 to 35mm ²	1x 185mm ² to 16mm ² to 1x 70mm ² to 2,5mm ²	8x 35mm ² to 2,5mm ²	Aluminum	3
Q232797C	FSPDB3C 310A 2/8 2,5 to 35mm ²	1x 185mm ² to 16mm ² to 1x 70mm ² to 2,5mm ²	8x 35mm ² to 2,5mm ²	Copper	3

Accessories

Reference	Catalog Number	Accessories	Pckg
K233551E	FSCIM1 KITCARD 100 LAB.FSPDB1&2	Labeling accessories for blocks for sizes1&2	5
L233552E	FSCIM2 KITCARD 100 LAB.FSPDB3&5	Labeling accessories for blocks for sizes3&5	5
Z232805J	FSPIN1 PIN MULTIPOLE FSPDB	Multipole assembly accessory	10 (1)
M233553J	FSCAP2 CAP PLUG 35mm ² FSPDB	Sealing accessories for sizes 70mm ²	10 (1)
A232806J	FSCAP1 CAP PLUG 35mm ² FSPDB	Sealing accessories for sizes > 70mm ²	10 (1)
N233554A	FSEA END ANCHOR FOR FSPDB	Top	1

(1) bag of 10





Gears & Fuse Gears

American General Purpose Fuses Power Distribution Blocks 62000 - 69000 Series

Versatile Power distribution blocks for cable terminations

Ferraz Shawmut Power Distribution Blocks afford a safe, convenient way of splicing cables, splitting primary power into a variety of secondary circuits or providing a fixed junction tap-off point. Power block options include single or dual primary connections with up to 30 secondary connections.



Features/Benefits

- **Adder Poles:** All series have optional adder poles which snap onto the 1, 2 or 3- pole blocks and lock together to form as many total poles as required. Adder poles with a variety of terminations can be combined to match special wire size combinations.
- **Wire Connectors:** Standard aluminum box connectors accommodate aluminum and copper wire, 1 conductor per opening. Standard copper box connections are for copper wire only, 1 conductor per opening. Connector bars are all 1 piece and tin plated.
- **Insulators:** Insulators are virtually unbreakable, glass-filled polycarbonate on all series. "See-Through" Safety Covers are available which give greater safety and provide Service Entrance ratings for large and intermediate series blocks.

Ratings

- Ampere ratings from 90 to 1520
- 600V rated

Approvals



- Most sizes are UL Recognized Component - Guide XCFR2, File E73571
- Most sizes are CSA Certified: Series 62, 63, 66, 68 - Class 6228, File 69363 - Series 67, 69 - Class 3211, File 15469

Highlights

- Large - 68000 and 69000 Series
- Intermediate - 66000 and 67000 Series
- Mini - 62000 and 63000 Series

Applications:

- Box, stud and quick-connect terminations for copper and/or aluminum cables.

ALUMINUM (90° C Cu/Al wire)



Polycarbonate end barriers snap on to PDB Adder blocks to form 1-pole blocks. Use one barrier per block.



Gears & Fuse Gears

American General Purpose Fuses Power Distribution Blocks 62000 - 69000 Series

Intermediate: 66000 - 67000 Series

Sizes, Ratings – Intermediate Series 66000 and 67000

Ampere rating based on NEC Table 310-16 for 75° copper wire.



Primary		Secondary		AMP Rating	Aluminum (90°C Cu/Ai wire)							
Wire range AWG/kcmiL or stud size*	Openings or studs per pole	Wire range AWG/kcmil or stud size*	Openings or studs per pole		Catalog Number				Reference Number			
					Adder	1 pole	2 pole	3 pole	Adder	1 pole	2 pole	3 pole
Box to Box												
2/0-#14	1	2/0-#14	1	175	67050	67051	67052	67053	Z222731	P223251	E201070	P201585
		#2-14	4		67570	67571	67572	67573	Q216950	C217467	J217979	Q218491
		#2-14	6		67560	67561	67562	67563	W214402	X214909	B215419	D215927
		#2-14	8		67580	67581	67582	67583	H219013	B219536	W221992	E222736
		#6-14	10		67590	67591	67592	67593	K201075	V201590	C203851	D211327
350-#6	1	#10-14*	12	310	67110	67111	67112	67113	R221988	A222732	Q223252	F201071
		350-#6	1		67000	67001	67002	67003	V219530	P221986	Y222730	D201069
		2/0-#14	2		67010	67011	67012	67013	N201584	X211321	V212354	E212869
		#2-14	4		67670	67671	67672	67673	W201591	M203860	L211840	A212359
		#2-14	6		67660	67661	67662	67663	X221993	F222737	W223257	L201076
		#2-14	8		67630	67631	67632	67633	E215928	H216437	R216951	D217468
500-#4	1	#6-14	10	380	67650	67651	67652	67653	K217980	R218492	J219014	C219537
		#10-14*	15		67620	67621	67622	67623	M213888	X214403	Y214910	C215420
		500-#4	1		67400	67401	67402	67403	M216947	Z217464	F217976	M218488
		4/0-#6	2		67420	67421	67422	67423	R223253	G201072	R201587	A211324
		4/0-#10	2		-	-	-	-	-	-	-	-
		2/0-#14	4		67410	67411	67412	67413	E219010	Y219533	S221989	B222733
		#2-14	6		67460	67461	67462	67463	G217977	N218489	F219011	Z219534
		#2-14	8		67430	67431	67432	67433	G211836	K213886	V214907	Z215417
		#6-14	10		67480	67481	67482	67483	S201588	A203849	B211325	H211837
		#10-14*	18		67490	67491	67492	67493	X212356	G212871	Q213385	L213887
2/0-#14	2	350-#6	1	350								
		& #2-14	3		67450	67451	67452	67453	B215925	E216434	N216948	A217465
		2/0-#14	2		67020	67021	67022	67023	R214398	R214904	W215414	Y215922
		#2-14	6		67510	67511	67512	67513	V214401	W214908	A215418	C215926
		#2-14	8		67610	67611	67612	67613	K211839	Z212358	H212872	R213386
4/0-#10	2	#6-14	10	460	67530	67531	67532	67533	P218490	G219012	A219535	V221991
		#10-14*	15		67550	67551	67552	67553	B203850	C211326	J211838	Y212357
		4/0-#10	2		4/10-#10	2	-	-	-	-	-	-
4/0-#6	2	4/0-#6	2	460	67520	67521	67522	67523	F216435	P216949	B217466	H217978
		#2-14	6	460	67540	67541	67542	67543	D222735	T223255	J201074	T201589
Box to Stud												
350-#6	1	3/8-16 x 1	1	310	67250	67251	67252	67253	T214906	Y215416	A215924	D216433
500-#4	1	3/8-16 x 1-1/16	1	380	67220	67221	67222	67223	Q201586	Z203848	Z211323	F211835
		1/4-20 x 1-1/16	2	380	67240	67241	67242	67243	W212355	P213384	J213885	T214400
Stud to Stud												
1/4-20 x 1-5/16	1	1/4-20 x 1-5/16	1	155	-	-	-	-	-	-	-	-
3/8-16 x 1-5/16	1	1/4-20 x 1-5/16	1	155	-	-	-	-	-	-	-	-
		3/8-16 x 1-5/16	1	155	-	-	-	-	-	-	-	-
3/8-16 x 1-1/8	1	3/8-16 x 1-1/8	1	400	-	-	-	-	-	-	-	-
		1/4-20 x 1-1/8	2	400	-	-	-	-	-	-	-	-

*Copper wire only

Stud-type connectors are furnished with nuts and washers. Recommended stud torque: (1/4-20) - 72 in. lbs; (3/8-16) - 228 in. lbs.

Gears & Fuse Gears



American General Purpose Fuses Power Distribution Blocks 62000 - 69000 Series

Intermediate: 66000 - 67000 Series

Sizes, Ratings – Intermediate Series 66000 and 67000



Ampere rating based on NEC Table 310-16 for 75° copper wire.

Primary		Secondary		AMP Rating	Copper (75°C Cu wire only)							
Wire range AWG/kcmil or stud size*	Openings or studs per pole	Wire range AWG/kcmil or stud size*	Openings or studs per pole		Catalog Number				Reference Number			
					Adder	1 pole	2 pole	3 pole	Adder	1 pole	2 pole	3 pole
Box to Box												
2/0-#14	1	2/0-#14	1	175	66050	66051	66052	66053	T216424	B216937	N217454	X217968
		#2-14	4		66570	66571	66572	66573	W203845	V211319	D211833	T212353
		#2-14	6		66560	66561	66562	66563	W222728	M223249	B201067	L201582
		#2-14	8		66580	66581	66582	66583	D212868	M213382	F213882	P214396
		#6-14	10		66590	66591	66592	66593	P214902	T215412	W215920	Z216429
350-#6	1	#10-14*	12	310	66110	66111	66112	66113	D218480	V219001	N219524	H221980
		350-#6	1		66000	66001	66002	66003	A216936	M217453	W217967	C218479
		2/0-#14	2		66010	66011	66012	66013	M219523	F221978	F223243	W201062
		#2-14	4		66670	66671	66672	66673	W217461	C217973	J218485	B219007
		#2-14	6		66660	66661	66662	66663	V215413	X215921	A216430	J216944
		#2-14	8		66630	66631	66632	66633	C201068	M201583	X203846	W211320
500-#4	1	#6-14	10	380	66650	66651	66652	66653	E211834	G213883	Q214397	Q214903
		#10-14*	15		66620	66621	66622	66623	T219529	N221985	X222729	N223250
		500-#4	1		66400	66401	66402	66403	C213879	L214393	L214899	Q215409
		4/0-#6	2		-	-	-	-	-	-	-	-
		4/0-#10	2		66420	66421	66422	66423	A217971	F218482	X219003	Q219526
		2/0-#14	4		66410	66411	66412	66413	S215917	X216427	E216940	R217457
		#2-14	6		66460	66461	66462	66463	R212351	B212866	K213380	D213880
		#2-14	8		66430	66431	66432	66433	K221982	T222726	K223247	Z201065
		#6-14	10		66480	66481	66482	66483	Y216428	F216941	S217458	B217972
		#10-14*	18		66490	66491	66492	66493	G218483	Y219004	R219527	L221983
2/0-#14	2	350-#6	1	350								
		& #2-14	3		66450	66451	66452	66453	J201580	H203833	S211317	B211831
		2/0-#14	2		66020	66021	66022	66023	F201577	R203818	N211313	X211827
		#2-14	6		66510	66511	66512	66513	V222727	L223248	A201066	K201581
		#2-14	8		66610	66611	66612	66613	H216943	V217460	H218484	A219006
4/0-#10	2	#6-14	10	460	66530	66531	66532	66533	C212867	L213381	E213881	N214395
		#10-14*	15		66550	66551	66552	66553	T217459	Z219005	S219528	M221984
		4/10-#10	2		66520	66521	66522	66523	J203834	T211318	C211832	S212352
4/0-#6	2	4/0-#6	2	460	-	-	-	-	-	-	-	-
		#2-14	6		66540	66541	66542	66543	N214901	S215411	V215919	G216942
Box to Stud												
350-#6	1	3/8-16 x 1	1	310	66250	66251	66252	66253	Z217970	E218481	W219002	P219525
500-#4	1	3/8-16 x 1-1/16	1	380	66220	66221	66222	66223	Z212864	H213378	B213878	K214392
		1/4-20 x 1-1/16	2	380	66240	66241	66242	66243	D216939	Q217456	-	-
Stud to Stud												
1/4-20 x 1-5/16	1	1/4-20 x 1-5/16	1	155	66270	66271	66272	66273	R211316	A211830	Q212350	A212865
3/8-16 x 1-5/16	1	1/4-20 x 1-5/16	1	155	66210	66211	66212	66213	-	Q211315	Z211829	P212349
		3/8-16 x 1-5/16	1	155	66200	66201	66202	66203	R222724	H223245	X201063	H201579
3/8-16 x 1-1/8	1	3/8-16 x 1-1/8	1	400	66260	66261	66262	66263	J221981	S222725	J223246	Y201064
		1/4-20 x 1-1/8	2	400	66230	66231	66232	66233	K214898	P215408	R215916	W216426

*Copper wire only

Stud-type connectors are furnished with nuts and washers. Recommended stud torque: (1/4-20) - 72 in. lbs; (3/8-16) - 228 in. lbs.

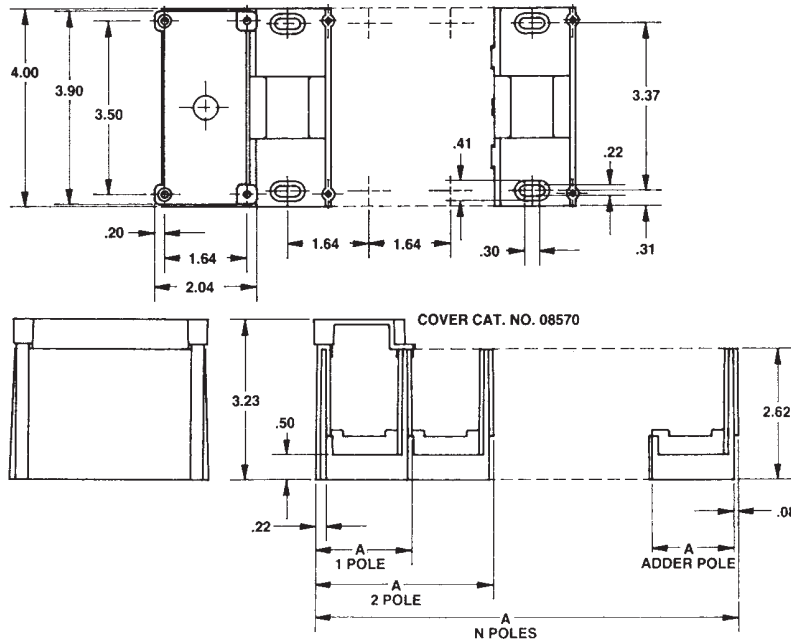


Gears & Fuse Gears

American General Purpose Fuses Power Distribution Blocks 62000 - 69000 Series

Intermediate: 66000 - 67000 Series

Dimensions – 66000 and 67000 Series Power Distribution Blocks



NUMBER OF POLES	DIMENSION A (Inches)
ADDER	1.64
1	1.94
2	3.57
3	5.20
N	$(1.635 \times N) + .30$

Example for 10 poles:
 $A = (1.635 \times 10) + .30 = 16.65$ inches

Properties of Materials Used in Power Distribution Blocks

PROPERTY	UNITS	ASTM TEST	POLYCARBONATE
Specific Gravity		D792	1.21
IZOD	ft-lb/in	D256	4-6
Flexural Strength	psi	D790	13,200
Flexural Modulus	psi	D790	325,000
Tensile Strength	psi	D638	9,000
Compressive Strength	psi	D695	12,500
Water Absorption	24 hrs-%	D570	.15
Hardness	Rockwell DuroD	D785 D676 D149	M-85
Dielectric Strength			
60 hertz, 25°C, s/t	vpm		425
60 hertz, 25°C, s/s	vpm		425
Dielectric Constant		D150	
60Hz-dry			3.01
1 Mhz-dry			2.96
Volume Resistivity	ohm-cm	D257	$>10^{16}$
Heat Deflecting (°F@264 psi)	°F	D648	270
Flammability (UL 94)			94 V-O

Note: Above data represents approximate values and are for reference only.

SAFETY COVER - Catalog number 08570

Polycarbonate safety cover provides dead-front protection to 66000 and 67000 series power distribution blocks. One cover is needed for each pole (1-pole block requires 1 cover, 3-pole requires 3 covers, etc.) Each cover has a test prod hole in the center for circuit checking and each is marked with the reminder "REPLACE AFTER SERVICING EQUIPMENT".

Mounting screws are supplied with cover. To order, simply determine the total number of poles to be protected and specify the same number of 08570 safety covers. Recommended mounting screws for all 66000-67000 series: #10 (.190 diameter).

END BARRIER - Catalog number U09705

Polycarbonate end barriers snap on to PDB Adder blocks to form 1-pole blocks. Use one barrier per block.

Gears & Fuse Gears



American General Purpose Fuses Power Distribution Blocks 62000 - 69000 Series

Large: 68000 - 69000 Series

Sizes, Ratings – Large Series 68000 and 69000



Ampere rating based on NEC Table 310-16 for 75° copper wire.

Primary		Secondary		AMP Rating	Aluminum (90°C Cu/Ai wire)							
Wire range AWG/kcmil or stud size*	Openings or studs per pole	Wire range AWG/kcmil or stud size*	Openings or studs per pole		Catalog Number				Reference Number			
					Adder	1 pole	2 pole	3 pole	Adder	1 pole	2 pole	3 pole
Box to Box												
350-#6	1	2/0-#14	6	310	69170	69171	69172	69173	T222749	X201086	H201602	G203970
		#4-14	12		69150	69151	69152	69153	T216447	D216962	Q217479	X217991
		#10-14*	20		69630**	69631**	69632**	69633**	Y216451**	H216966**	V217483**	B217995**
500-#4	1	500-#4	1	380	69050	69051	69052	69053	B216960	N217477	V217989	V219024
		350-#6	2		69060	69061	69062	69063	R222747	G223267	V201084	F201600
		4/0-#6	4		69510**	69511**	69512**	69513**	S215434**	W215943**	X216450**	G216965**
		4/0-#10	4		-	-	-	-	-	-	-	-
		2/0-#14	6		69070	69071	69072	69073	P203931	P211337	V211848	J212367
		#4-14	12		69080	69081	69082	69083	T212882	B213395	Z213899	J214414
		600-#2	1		600-#2	1	420	69640	69641	69642	69643	H218507
1000-250	1	1000-250	1	545	69000	69001	69002	69003	A216959	M217476	T217988	B218501
		500-#4	2		69010	69011	69012	69013	T219023	M219546	E222000	Q222746
		350-#6	2		69020	69021	69022	69023	F223266	T201083	E201599	N203930
		4/0-#6	4		69300**	69301**	69302**	69303**	S217481**	Z217993**	F218505**	Z219028**
		4/0-#10	4		-	-	-	-	-	-	-	-
		2/0-#14	6		69030	69031	69032	69033	N211336	T211847	S212881	Y213898
		#2-14	10		69530**	69531**	69532**	69533**	A217994**	G218506**	A219029**	S219551**
#4-14	12	69040	69041	69042	69043	H214413	J214920	M215429	Q215938			
#4-14	2	#4-14	12	170	69180	69181	69182	69183	R211339	X211850	W212884	D213397
2/0-#14	2	#4-14	12	350	69160	69161	69162	69163	D218503	X219026	P219548	G222002
		#10-14*	20		69600	69601	69602	69603	Z212887	Q214926	T215435	X215944
350-#6	2	350-#6	2	620	69120	69121	69122	69123	W201085	G201601	D203944	Q211338
		4/0-#6	4		69320**	69321**	69322**	69323**	Z201088**	K201604**	G203993**	S211340**
		4/0-#10	4		-	-	-	-	-	-	-	-
		2/0-#14	6		69130	69131	69132	69133	W211849	K212368	V212883	C213396
		#4-14	12		69140	69141	69142	69143	K214415	L214922	P215431	S215940
500-#4	2	500-#4	2	760	69090	69091	69092	69093	K214921	N215430	R215939	C216961
		4/0-#6	4		69310	69311	69312	69313	R219550	J222004	W222751	K223270
		4/0-#10	4		-	-	-	-	-	-	-	-
		2/0-#14	6		69100	69101	69102	69103	P217478	W217990	C218502	W219025
		#4-14	12		69110	69111	69112	69113	N219547	F222001	S222748	H223268
600-#2	2	600-#2	2	840	69650	69651	69652	69653	M223272	B201090	M201606	G204614
#14-4 & 3/0-#10	4	69540	69541		69542	69543	K222005	X222752	L223271	A201089		
1000-250	2	500-#4	4	1090	-	69561**†	-	-	-	A211853**†	-	-
500-#4	4	#6-14	30	1520	-	69191**†	-	-	-	A213900**†	-	-
		#6-14 & 2/0-#14	22									
		2/0-#14	4		-	69521**†	-	-	-	-	T217482**†	-

*Copper wire only

**Not UL Recognized or CSA Certified

†These 1 pole blocks are double width (5.31")



Gears & Fuse Gears

American General Purpose Fuses Power Distribution Blocks 62000 - 69000 Series

Large: 68000 - 69000 Series

Sizes, Ratings – Large Series 68000 and 69000

Ampere rating based on NEC Table 310-16 for 75° copper wire.



Primary		Secondary		AMP Rating	Copper (75°C Cu wire only)							
Wire range AWG/kcmil or stud size*	Openings or studs per pole	Wire range AWG/kcmil or stud size*	Openings or studs per pole		Catalog Number				Reference Number			
					Adder	1 pole	2 pole	3 pole	Adder	1 pole	2 pole	3 pole
Box to Box												
350-#6	1	2/0-#14	6	310	68170	68171	68172	68173	N212877	X213391	S213893	C214408
		#4-14	12		68150	68151	68152	68153	G219541	B221997	K222741	A223261
		#10-14*	20		68630**	68631**	68632**	68633**	-	M211335**	X213897**	G214412**
500-#4	1	500-#4	1	380	68050	68051	68052	68053	V203867	F211329	N211842	C212361
		350-#6	2		68060	68061	68062	68063	L212875	V213389	Q213891	A214406
		4/0-#6	4		-	-	-	-	-	-	-	-
		4/0-#10	4		68510**	68511**	68512**	68513**	A213394**	W213896**	F214411**	G214918**
		2/0-#14	6		68080	68071	68072	68073	V216954	F215423	H215931	L216440
		#4-14	12		68640	68081	68082	68083	H214919	G217471	N217983	V218495
600-#2	1	600-#2	1	420	68640	68641	68642	68643	H214919	L215428	P215937	S216446
1000-250	1			545								
		1000-250	1		68000	68001	68002	68003	B212360	K212874	T213388	P213890
		500-#4	2		68010	68011	68012	68013	Z214405	A214912	E215422	G215930
		350-#6	2		68020	68021	68022	68023	K216439	T216953	F217470	M217982
		4/0-#6	4		-	-	-	-	-	-	-	-
		4/0-#10	4		68300**	68301**	68302**	68303**	Z213393**	V213895**	E214410**	F214917**
		2/0-#14	6		68030	68031	68032	68033	T218494	L219016	E219539	Z221995
		#2-14	10		68530**	68531**	68532**	68533**	-	N215936**	R216445**	Z216958**
#4-14	2	#4-14	12	170	68040	68041	68042	68043	H222739	Y223259	N201078	Y201593
2/0-#14	2	#4-14	12	350	68180	68181	68182	68183	D214915	H215425	K215933	N216442
		#10-14*	20		68600	68601	68602	68603	E223265	S201082	D201598	Q203909
350-#6	2	350-#6	2	620	68120	68121	68122	68123	W213390	R213892	B214407	C214914
		4/0-#6	4		-	-	-	-	-	-	-	-
		4/0-#10	4		68320**	68321**	68322**	68323**	R219021**	K219544**	C221998**	N222744**
		2/0-#14	6		68130	68131	68132	68133	G215424	J215932	M216441	W216955
		#4-14	12		68140	68141	68142	68143	H217472	P217984	W218496	N219018
500-#4	2	500-#4	2	760	68090	68091	68092	68093	M219017	F219540	A221996	J222740
		4/0-#6	4		-	-	-	-	-	-	-	-
		4/0-#10	4		68310	68311	68312	68313	M215935	Q216444	Z201594	K217474
		2/0-#14	6		68100	68101	68102	68103	Z223260	P201079	Z201594	Y203870
		#4-14	12		68110	68111	68112	68113	G211330	P211843	D212362	M212876
600-#2	2	600-#2	2	840	-	-	-	-	-	-	-	
1000-250	2	#14-4 & 3/0-#10	4	1090	68540**	68541**	68542**	68543**	-	L217475**	S217987**	A218500**
		500-#4	4		-	68561**†	-	-	-	S219022**†	-	-
		#6-14	30		-	68191**†	-	-	-	X218497**†	-	-
500-#4	4	#6-14 &	22	1520								
		2/0-#14	4		-	68521**†	-	-	-	K215427**†	-	-

*Copper wire only

**Not UL Recognized or CSA Certified

†These 1 pole blocks are double width (5.31")

Gears & Fuse Gears



American General Purpose Fuses Power Distribution Blocks 62000 - 69000 Series

Large: 68000 - 69000 Series

Sizes, Ratings – Large Series 68000 and 69000 (continued)
Ampere rating based on NEC Table 310-16 for 75° copper wire
ALUMINUM (90° C Cu/Al wire)



Primary		Secondary		AMP Rating	Copper (75°C Cu wire only)							
Wire range AWG/kcmil or stud size*	Openings or studs per pole	Wire range AWG/kcmil or stud size*	Openings or studs per pole		Catalog Number				Reference Number			
					Adder	1 pole	2 pole	3 pole	Adder	1 pole	2 pole	3 pole
Box to Stud												
500-#4	1	3/8-16 x 1	2	Cu 380	69210	69211	69212	69213	L214416	M214923	Q215432	T215941
1000-250	1	1/2-13 x 1-3/16	1	Al 310	69270	69271	69272	69273	J201603	Q203978	Y211851	L212369
		3/8-16 x 1	2	Al 445	69280	69281	69282	69283	X212885	E213398	B213901	N214924
		2/0-#14	4	545	69240	69241	69242	69243	Y217992	E218504	Y219027	Q219549
		#4-14	12	545	69260	69261	69262	69263	H222003	V222750	J223269	Y201087
1/2-13 x 1	1	2/0-#14	4	1000	69290	69291	69292	69293	R215433	V215942	W216449	F216964
		#4-14	12	1000	-	-	-	-	-	-	-	-

Stud to Stud

1/2-13 x 1-3/8	1	1/2-13 x 1-3/8	1	400	-	-	-	-	-	-	-	-
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COPPER (75° C Cu wire only)

Box to Stud

500-#4	1	3/8-16 x 1	2	Cu 380	68210	68211	68212	68213	W203891	J211332	Q211844	F212364
1000-250	1	1/2-13 x 1-3/16	1	Al 310	68270	68271	68272	68273	Y218498	Q219020	J219543	M222743
		3/8-16 x 1	2	Cu 545	68280	68281	68282	68283	C223263	Q201080	B201596	N203907
		2/0-#14	4	Al 445	68240	68241	68242	68243	P212878	Y213392	T213894	D214409
		#4-14	12	545	-	-	-	-	-	-	-	-
		#4-14	12	545	-	-	-	-	-	-	-	-
1/2-13 x 1	1	2/0-#14	4	1000	68260	68261	68262	68263	P216443	X216956	J217473	Q217985
		#4-14	12	1000	68290	68291	68292	68293	K211333	R211845	G212365	Q212879

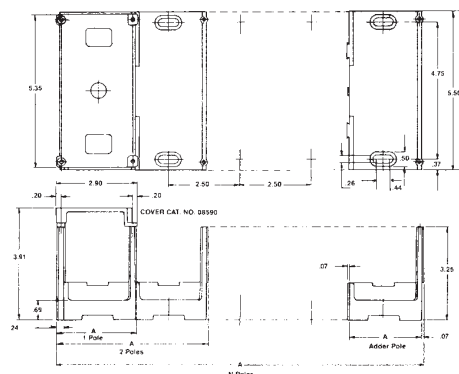
Stud to Stud

1/2-13 x 1-3/8	1	1/2-13 x 1-3/8	1	400	68200**	68201**	68202**	68203**	P219019**	H219542**	L222742**	B223262**
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*Stud type connectors are furnished with nuts and washers. Recommended stud torque: (3/8-16) - 228 in. lbs; (1/2-13) - 496 in. lbs.

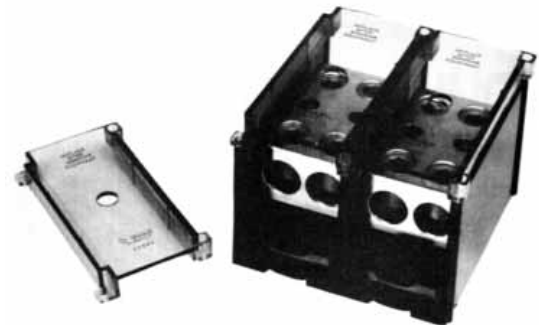
**Not UL Recognized or CSA Certified

Dimensions 68000 and 69000 Series PDB



NUMBER OF POLES	DIMENSION A (Inches)
ADDER	2.50
1	2.81
2	5.31
3	7.81
N	(2.50 x N) + .31

Example for 10 poles:
A = (2.50 x 10) + .31 = 25.31



08590 cover and 69092 PDB
with 2-08590 covers installed

SAFETY COVER - Catalog number 08590

Polycarbonate safety cover provides dead-front protection to 68000 and 69000 series power distribution blocks. One cover is needed for each pole (1-pole block requires 1 cover, 3-pole requires 3 covers, etc.) Each cover has a test prod hole in the center for circuit checking and each is marked with the reminder "REPLACE AFTER SERVICING EQUIPMENT". Mounting screws are supplied with cover.

To order, simply determine the total number of poles to be protected and specify the same number of 08590 safety covers.

Recommended mounting screws for all 68000-69000 series: 1/4" (.250 dia.).

END BARRIER - Catalog number U09911

Polycarbonate end barriers snap on to PDB Adder blocks to form 1-pole blocks. Use one barrier per block.