



Gears & Fuse Gears

IEC General Purpose Fuses Ferrule Fuses Modulostar® Highlights



MODULOSTAR®

MODULOSTAR® Series

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 - IEC industrial Cylindrical (gG, aM, gD) - UL class CC, Midget - Special protection class (UR, gR, gD) in 5 sizes : 8x32, 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°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



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Fuse Overview



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