

**Semiconductor & Special Protection**  
**PROTISTOR®**  
**Cylindrical fuse links**  
**10x38 gR 690VAC from 1 to 32A**



The 10x38 gR cylindrical is a fast acting, full range fuse used in the protection of inverters, UPS, variable speed drives and other discrete semiconductor devices.

**Approvals**

UL Recognized Component  
 RoHS Compliant

AC: UL Guide No. E764991  
 IEC 60269-4 Compliance

**Application**

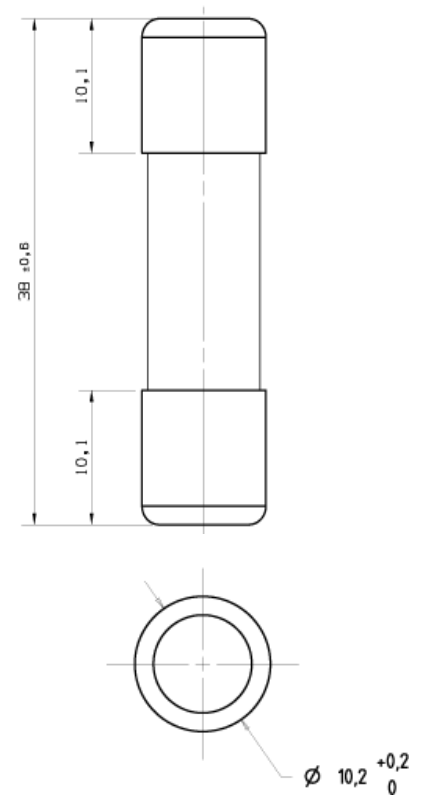
Protection of small inverters, UPS systems, motor drives and similar 700V or less equipment.

**Features & Benefits**

International 10 x 38 mm (1-1/2" x 13/32")  
 for worldwide acceptance  
 gR Class according to VDE 636-23 and IEC 69269-4  
 690VAC: 1 to 32A  
 550VDC: 1 to 30A & 500VDC: 32A, L/R = 10ms

Extremely fast acting  
 Eliminate all overloads  
 Current limiting  
 Low I<sup>2</sup>t for improved semiconductor protection  
 Excellent cycling capability

Rated Voltage (V)	Nominal Current (A)	Class	Catalog Number	Reference Number
690	1	gR	FR10GR69V1	L1014563
690	1.25	gR	FR10GR69V1.25	N1014565
690	1.5	gR	FR10GR69V1.5	P1014566
690	2	gR	FR10GR69V2	Q1014567
690	2.5	gR	FR10GR69V2.5	T1014570
690	3	gR	FR10GR69V3	V1014571
690	4	gR	FR10GR69V4	W1014572
690	5	gR	FR10GR69V5	X1014573
690	6	gR	FR10GR69V6	Y1014574
690	8	gR	FR10GR69V8	Z1014575
690	10	gR	FR10GR69V10	A1014576
690	12.5	gR	FR10GR69V12	C1014578
690	16	gR	FR10GR69V16	D1014579
690	20	gR	FR10GR69V20	E1014580
690	25	gR	FR10GR69V25	F1014581
690	30	gR	FR10GR69V30	G1014582
690	32	gR	FR10GR69V32	H1014583



**Related products: Fuse holders**  
**Modulostar CMS 10**

Length (mm): 38 ± 0.6 (1-1/2")  
 Cap Length (mm): 10.5 max.  
 Diameter (mm): 10.2 ± 0.2 (13/32")

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Rated Voltage (V)	Nominal Current (A)	Breaking capacity	Peak Arc Voltage (V)	Pre-arcing I²t at Rated Voltage (A²s)	Clearing I²t at Rated Voltage (A²s)	Watts Loss at 100% In (W)	Watts Loss at 80% In (W)	Catalog Number	Reference Number
690	1	160kA	2500	0.17	0.48	0.8	0.4	FR10GR69V1	L1014563
690	1.25	160kA	2500	0.17	0.55	1.5	0.8	FR10GR69V1.25	N1014565
690	1.5	160kA	2500	0.31	0.80	1.5	0.6	FR10GR69V1.5	P1014566
690	2	160kA	2500	0.94	2.5	1.3	0.7	FR10GR69V2	Q1014567
690	2.5	160kA	2500	1.65	4.5	1.4	0.8	FR10GR69V2.5	T1014570
690	3	160kA	2500	2.83	7.8	1.5	0.9	FR10GR69V3	V1014571
690	4	160kA	2500	6.7	12	1.7	1	FR10GR69V4	W1014572
690	5	160kA	1400	7.5	30	0.9	0.6	FR10GR69V5	X1014573
690	6	160kA	1400	8.5	40	1.4	0.8	FR10GR69V6	Y1014574
690	8	160kA	1400	5.4	35	1.9	1.1	FR10GR69V8	Z1014575
690	10	160kA	1400	8.7	55	2.1	1.2	FR10GR69V10	A1014576
690	12.5	160kA	1400	11	90	2.8	1.3	FR10GR69V12	C1014578
690	16	160kA	1400	19	140	3	1.7	FR10GR69V16	D1014579
690	20	160kA	1400	39	245	3.7	2.1	FR10GR69V20	E1014580
690	25	160kA	1400	69	425	4.3	2.4	FR10GR69V25	F1014581
690	30	160kA	1400	107	675	4.8	2.7	FR10GR69V30	G1014582
690	32	160kA	1400	154	945	5.1	2.8	FR10GR69V32	H1014583

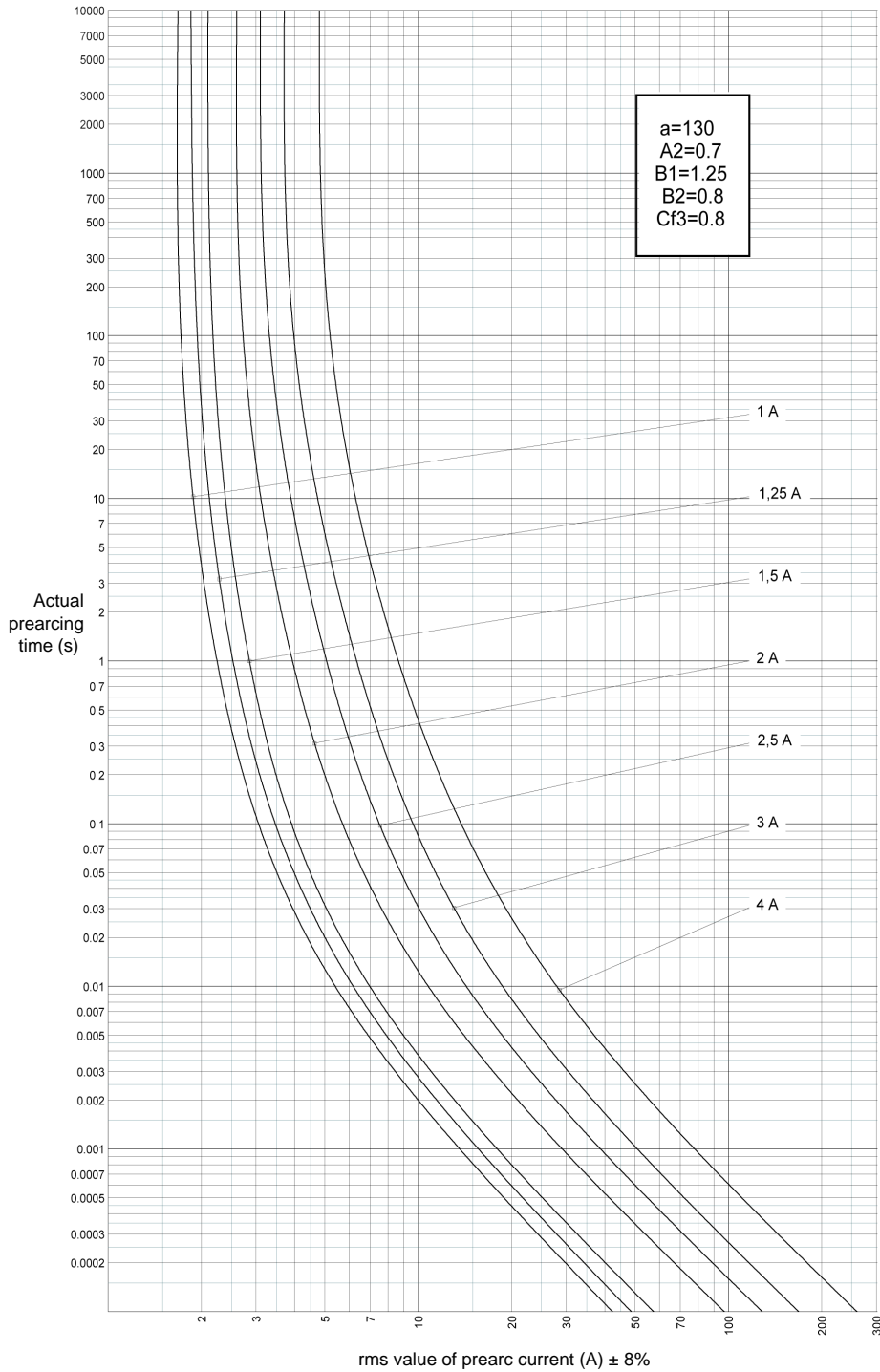
Product weight: 10g max.

Packaging: 10 pieces

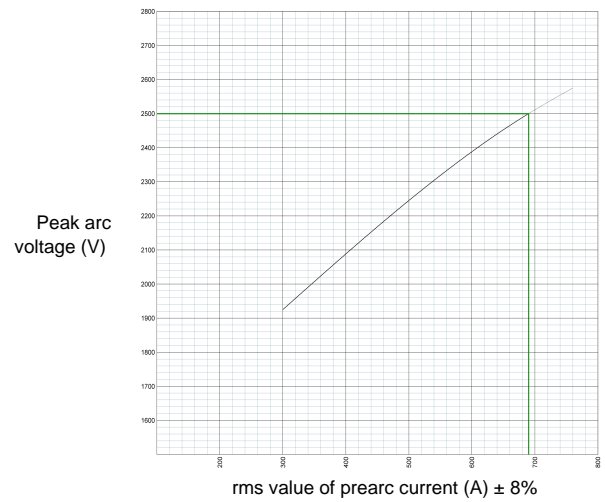
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Time current characteristics 1 to 4A



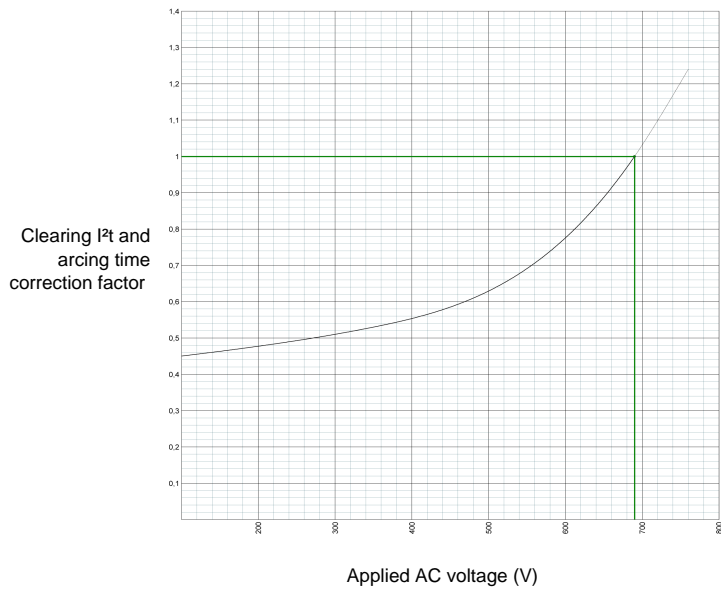
Peak arc voltage 1 to 4A



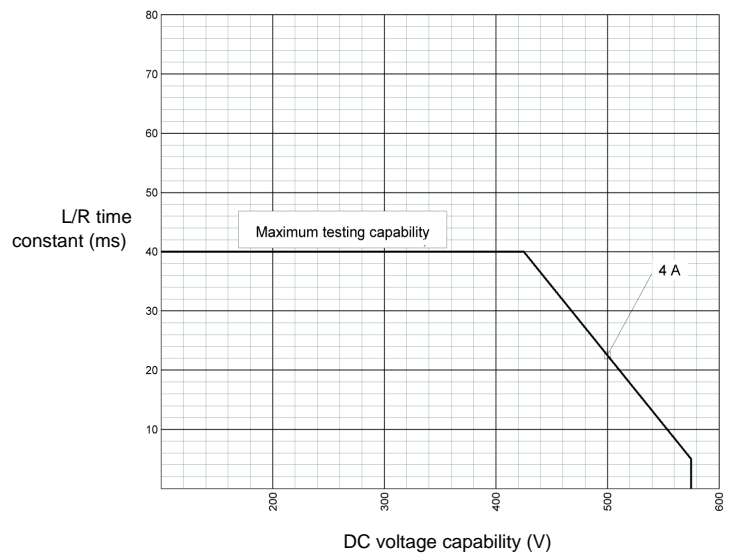
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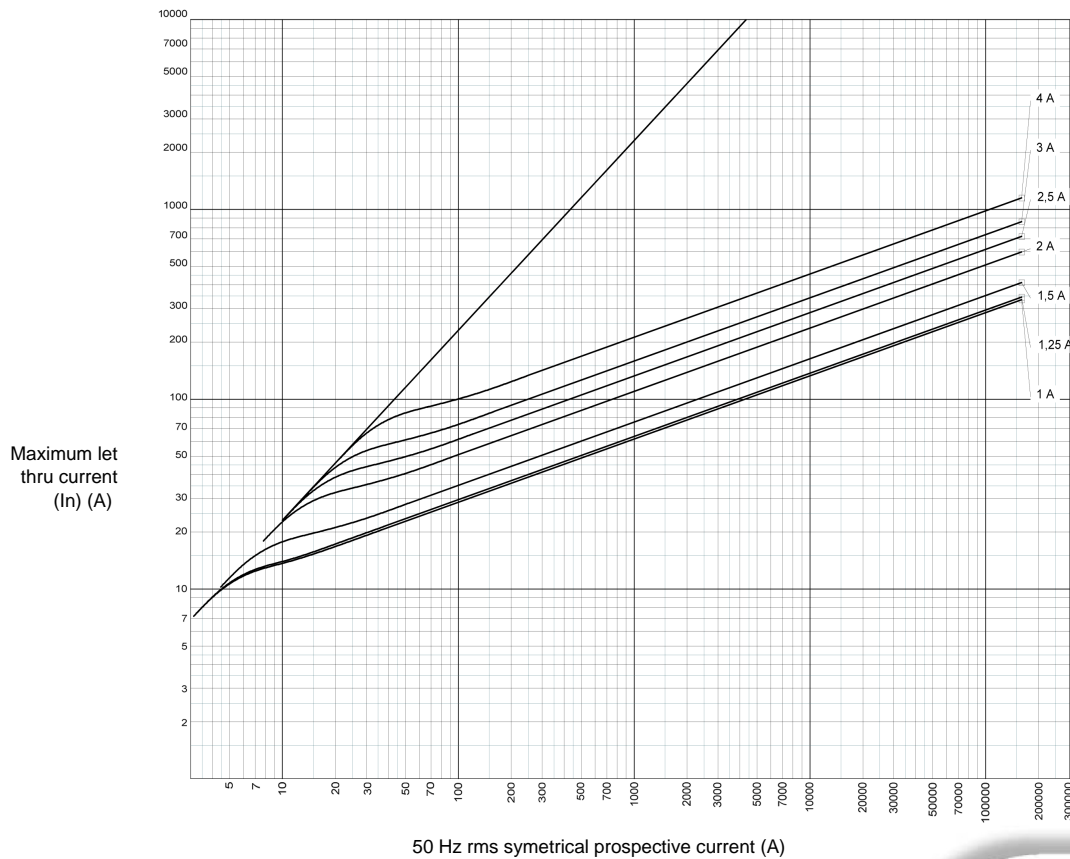
**$I^2t$  multiplier coefficient 1 to 4A**



**L/R time constant vs DC voltage capability 1 to 4A**



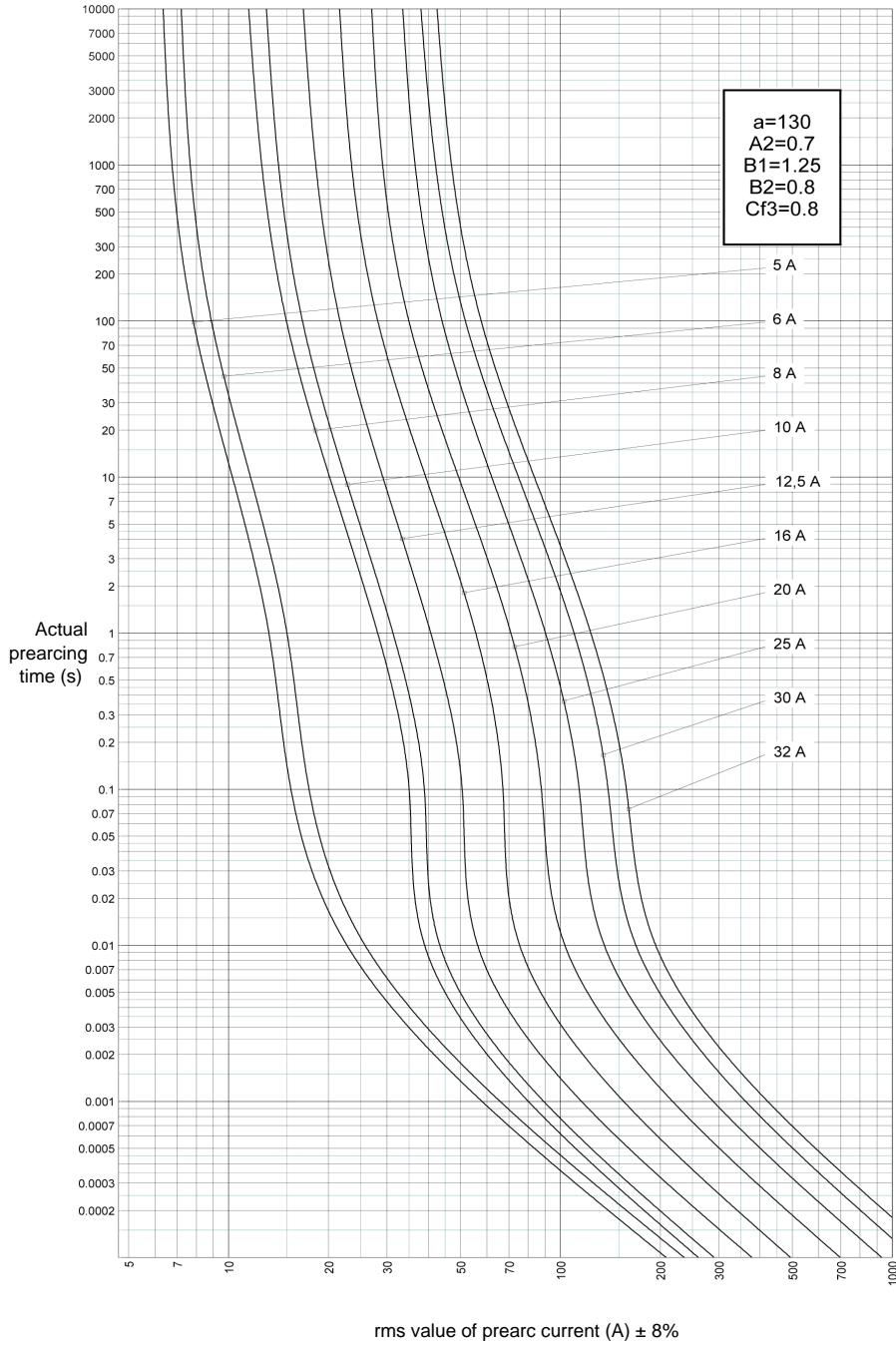
**Peak let thru characteristics 1 to 4A**



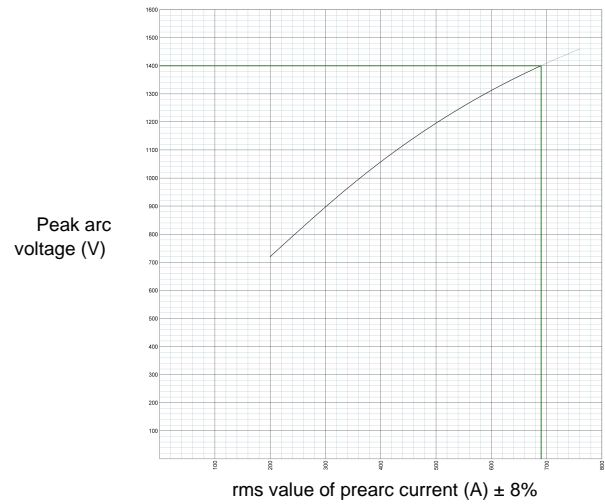
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**Time current characteristics 5 to 32A**



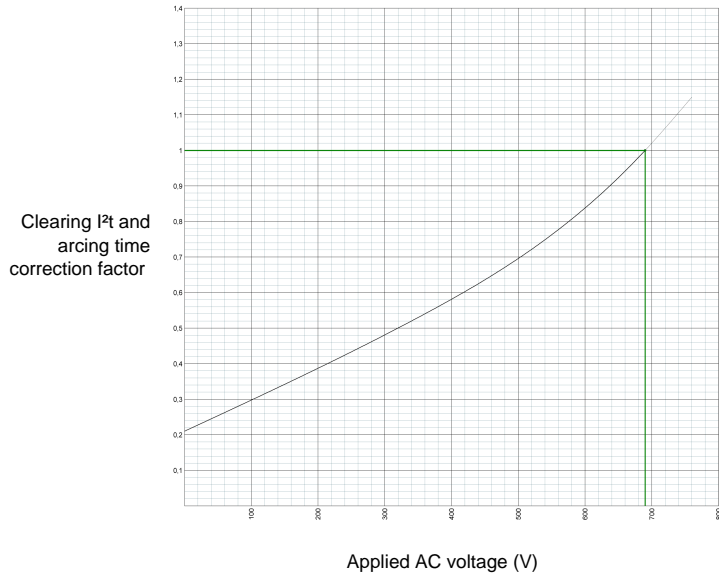
**Peak arc voltage 5 to 32A**



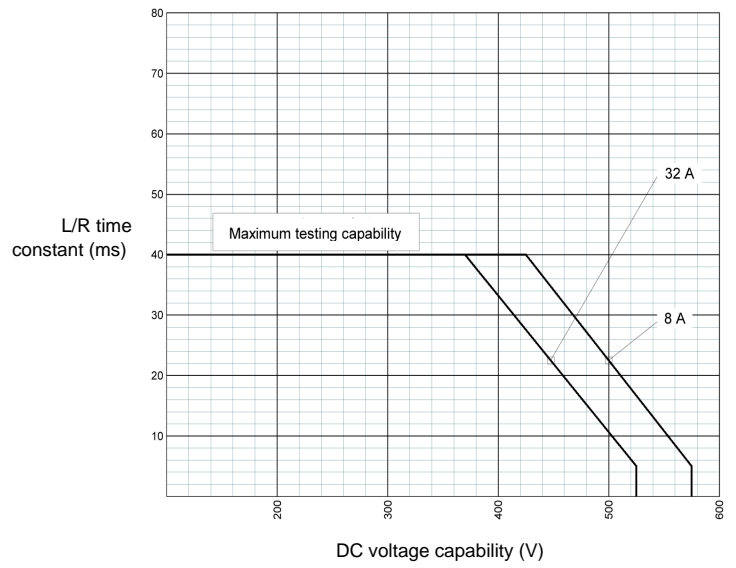
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**I<sup>2</sup>t multiplier coefficient 5 to 32A**



**L/R time constant vs DC voltage capability 5 to 32A**



**Peak let thru characteristics 5 to 32A**

