

Modulostar®

Helio



Advantages

- Modulostar® fuse holder, with or without blown fuse indicator
- Specially designed for photovoltaics and D.C., applications in general
- Built to UL 512 and 60947-3 standards
- For fuses up to 32A 10x38
- Blown fuses indication from 350VDC to 1000VDC
- Plastic port are UL94 V0 to V2 (yellow card)
- In accordance with RoHS directive

Nb of pole	Cat. Number	Ref. Number	Nb of Mode (17.5mm)	Pack	Indicator
1	US101HEL	D1009979K	1	12	Without Ind.
1	US101HEL	Q1009461K	1	12	With Ind.

Characteristics

- **Wiring:** rigid wire = 1 - 16mm² (18-6AWG), flexible wire = 0.75 - 10mm² (18-8AWG) use 75°C wire CO only
- **Screw driver heads:** Ferraz Shawmut recommends use of PZ 2 or flat 5.5x1mm heads (maximum diameter 6mm)
- **Maximum tightening torque:** 2.2Nm
- DC20B-IP2X

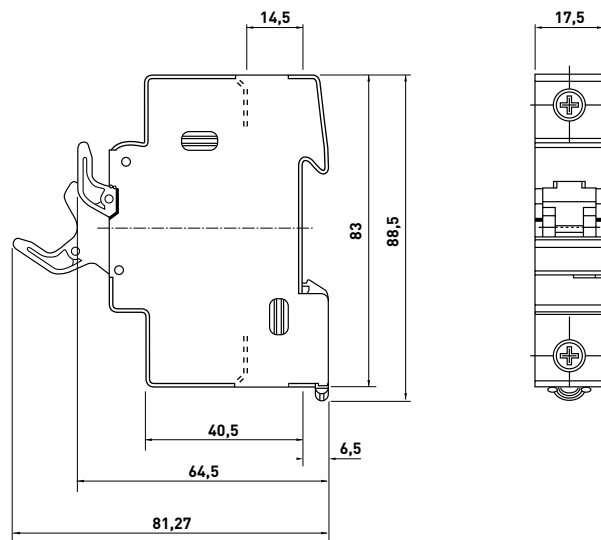
Nominal Voltage U _i DC	Voltage Isolation U _{imp}	Nominal Current	Max. power losses in the fuse links	Fuse links rating	Cable wire section (mm ²) recommended
1000VDC Pollution Degree 2	6kV	32A	3W	≤12	2.5
	6kV	32A	3W	16	2.5
	6kV	32A	3W	20	2.5
	6kV	32A	3W	25	4
	6kV	32A	3W	30	6

Recommendations

- Do not operate under load
- **The PV source** must be connected to the upstream terminal
- **Non insulated conductive parts:** preferably the equipment should be laid out keeping the + and - polarities separate
- **Mounting with surge suppressors:** check that the surge suppressors' Up is compatible with the US10's IU imp=6kV (see UTE C15-712)

Accessories

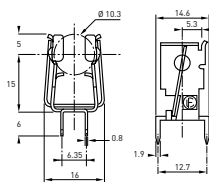
Same as the entire Modulostar® range



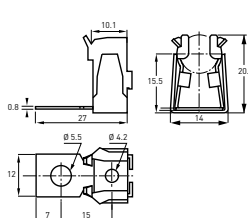
Fuse clips

Cat. Number	Designation	Weight	Pack
MR10RESSORTCI	MR10 CI	4.5	200
MR10RESSORT	MR10	7.0	20
MR10RESSORTSP	MR10 without connecting lug	5.7	20

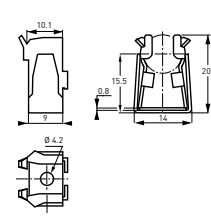
MR10 CI



MR10



MR10 without connecting lug



HP10M

1000V DC Midget (10x38mm) Photovoltaic Fuses

SPECIAL PURPOSE

FOR STRING PROTECTION



Mersen’s HP10M photovoltaic (PV) fuse series was developed specifically for the protection of PV string wiring for 1000VDC industrial rooftop and utility scale photovoltaic systems. Its robust construction makes it ideal for continuous temperature and current cycling withstand adding to system longevity. The 1000VDC rated HP10M, designed for low minimum breaking capacity capabilities of 1.35 times the fuse rated current value, allows for safe circuit interruption under typical low fault current conditions produced by PV arrays. In addition to the standard ferrule terminal, parts are available with CrimpCap terminals for in-line fuse applications. The unique wire crimp terminal (CC option) permits solderless wire-to-fuse connection for overmold encapsulations of fuse and wiring. Protect your off-grid or grid-tied PV system from unexpected ground faults and string faults using Mersen’s HelioProtection® fuse line.

CATALOG NUMBERS - FUSE HOLDER

	UltraSafe™ Non-Indicating	UltraSafe™ Indicating
Screw Type	USM1HEL	USM1IHEL
Spring Type	USGM1HEL	USGM1IHEL

For additional information, view catalog page for USCC & USM UltraSafe™ Fuse holders.

RATINGS:

- **Volts:** 1000VDC
- **Amps:** 1 to 32A
- **IR:** 50kA I.R. DC
- **MBC:** 1.35 x In
- Photovoltaic Fuse, gPV

FEATURES/BENEFITS:

- Low fault current interrupting capability
- Durable construction for enhanced system longevity
- Temperature cycle withstand capability
- Guaranteed operation at temperature extremes
- Industry’s first UL Listed Solution
- Globally accepted

APPLICATIONS:

- All photovoltaic applications
- PV string/array level protection
- Combiner box applications
- In-line PV module protection
- Inverters
- Battery charge controllers

APPROVALS:

- UL Listed to Standard UL2579 File E333668
- CSA Component Certified C22.2
- IEC 60269-6 Approved (CB Tested)



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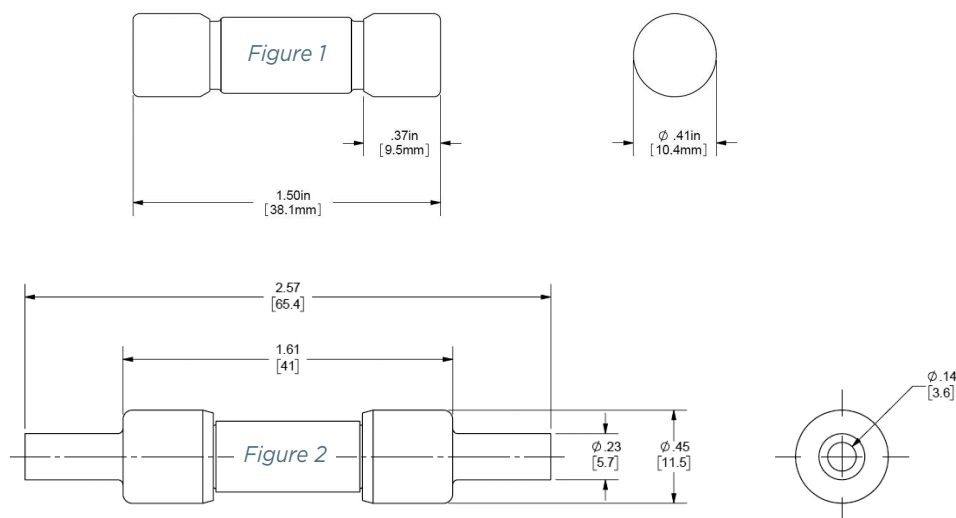
CATALOG NUMBERS AND ELECTRICAL CHARACTERISTICS

Voltage (VDC)	Amperage (A)	Catalog Number	Reference Number	Watts Loss @ 70% $\times I_n$ (W)	Watts Loss @ 80% $\times I_n$ (W)	Watts Loss @ 100% $\times I_n$ (W)	Interrupting Rating (kA)	Size (mm)
1000	1	HP10M1*	B1018579	0.13	0.18	0.25	50	10x38 (Figure 1)
	2	HP10M2*	C1018580	0.16	0.25	0.32		
	3	HP10M3*	D1018581	0.66	0.87	1.36		
	3.5	HP10M3-1/2*	H1043977	0.67	0.84	1.31		
	4	HP10M4*	E1018582	0.69	0.80	1.25		
	5	HP10M5*	F1018583	0.59	0.73	1.12		
	6	HP10M6*	G1018584	0.42	0.67	1.05		
	8	HP10M8*	J1018586	0.77	0.88	1.48		
	10	HP10M10*	L1018588	0.67	0.9	1.5		
	12	HP10M12*	M1018589	0.72	1.0	1.8		
	15	HP10M15*	N1018590	0.9	1.3	2.2		
	20	HP10M20*	P1018591	1.1	1.5	2.8		
	25	HP10M25*	D1023825	1.3	1.8	3.0		
	30	HP10M30*	E1023826	1.5	1.9	3.7		
	32	HP10M32*	H1062170	1.6	1.9	3.8		
	1	HP10M1CC**	F1061616	0.14	0.19	0.27	50	10 x 65 (Figure 2)
	2	HP10M2CC**	G1061617	0.17	0.27	0.35		
	3	HP10M3CC**	H1061618	0.72	0.95	1.49		
	3.5	HP10M3-1/2CC**	J1061619	0.74	0.92	1.43		
	4	HP10M4CC**	K1061620	0.76	0.88	1.38		
	5	HP10M5CC**	L1061621	0.65	0.80	1.23		
	6	HP10M6CC**	J1061527	0.46	0.74	1.15		
	8	HP10M8CC**	L1061529	0.85	0.97	1.63		
	10	HP10M10CC**	M1061530	0.74	0.99	1.65		
	12	HP10M12CC**	N1061531	0.79	1.1	1.98		
	15	HP10M15CC**	P1061532	0.99	1.43	2.42		
	20	HP10M20CC**	Q1061533	1.21	1.65	3.08		
	25	HP10M25CC**	R1061534	1.43	1.98	3.3		
	30	HP10M30CC**	S1061535	1.65	2.09	4.07		
	32	HP10M32CC**	T1061536	1.70	2.30	4.20		

* Available in 176-piece bulk pack (add -B suffix to catalog number). Order quantity of one (1) -B suffix catalog number yields 176 fuses.

** Available in 70-piece bulk pack (add -B suffix to catalog number). Order quantity of one (1) -B suffix catalog number yields 70 fuses.

DIMENSIONS



CC terminal (Fig. 2): Recommended crimping tool: T & B Sta-Kon ERG4002 #10 -12 AWG (6-4 mm²)