

FUSE 10,3X38 ... PV...

Fuse inserts for the protection of photovoltaic lines



Data sheet
104124_en_02

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1 Description

The FUSE 10,3X38... fuse inserts are designed to protect photovoltaic lines up to a nominal voltage of 1000 V DC.

They meet the gPV characteristic according to IEC 60269-6. They enable safe shutdown even in the case of short-circuit currents that are just above the nominal current.

1.1 Explanations

The technical data specified in this document is based on tests that were performed in accordance with the appropriate national or international standards in accredited test laboratories or in the company laboratory.

Unless otherwise indicated, the data was collected at an ambient temperature of 20°C ... 25°C in calm air. The tests were performed on new fuses, without preloading and from the cold state.

1.2 Suitable fuse terminal blocks

The listed fuses are suitable for these terminal blocks.

- Fuse terminal block, for 10.3 x 38 mm cartridge fuse insert
UK 10,3-HESI 1000V, Order No. 3211236
- Fuse terminal block, for 10.3 x 38 mm cartridge fuse insert with LED for 220 V ... 1000 V AC/DC
UK 10,3-HESILED 1000V, Order No. 3211249.



WARNING: The fuses described in this document were developed to perform safety-related functions as part of a machine or overall system. A safety-related system usually contains signaling devices, sensors, evaluation units, and concepts for safe disconnection. It is the system or machine manufacturer's responsibility to ensure the correct overall function. Test the product in all intended applications.



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This data sheet is valid for all products listed on the following page:

2 Ordering data

Fuse inserts

Description	Type	Order No.	Pcs. / Pkt.
Fuse insert, 10.3 mm x 38 mm, gPV characteristic, IEC standard			
Nominal current: 2 A	FUSE 10,3X38 2A PV	3061295	10
Nominal current: 4 A	FUSE 10,3X38 4A PV	3061305	10
Nominal current: 6 A	FUSE 10,3X38 6A PV	3061318	10
Nominal current: 8 A	FUSE 10,3X38 8A PV	3061321	10
Nominal current: 10 A	FUSE 10,3X38 10A PV	3061334	10
Nominal current: 12 A	FUSE 10,3X38 12A PV	3061347	10
Nominal current: 15 A	FUSE 10,3X38 15A PV	3061348	10
Nominal current: 16 A	FUSE 10,3X38 16A PV	3061350	10
Nominal current: 20 A	FUSE 10,3X38 20A PV	3061363	10
Fuse insert, 10.3 mm x 38 mm, gPV characteristic, UL standard			
Nominal current: 6 A	FUSE 10,3X38 6A PV A	3062778	10
Nominal current: 8 A	FUSE 10,3X38 8A PV A	3062779	10
Nominal current: 10 A	FUSE 10,3X38 10A PV A	3062780	10
Nominal current: 12 A	FUSE 10,3X38 12A PV A	3062781	10
Nominal current: 15 A	FUSE 10,3X38 15A PV A	3062784	10
Nominal current: 16 A	FUSE 10,3X38 16A PV A	3062782	10

3 Technical data

General data	
Design	10 mm x 38 mm, gPV
Nominal voltage	1000 V DC, L/R = 2 ms
Breaking capacity	30 kA DC
Standards	
FUSE 10,3X38 ...A PV	IEC 60269-6
FUSE 10,3X38 ...A PV A	UL 2579
Application	For protecting photovoltaic lines

FUSE 10,3X38 ...A PV

Designation	Order No.	Nominal current I_N	Nominal voltage	I^2t value	Operating integral	Power dissipation	Power dissipation
				L/R = 2 ms	L/R = 2 ms	$0.7 \times I_N$	I_N
$I_f = 1.45 \times I_N$ (IEC standard)							
FUSE 10,3X38 2A PV	3061295	2 A	1000 V DC	1.37 A ² s	4 A ² s	0.47 W	1.07 W
FUSE 10,3X38 4A PV	3061305	4 A		4.50 A ² s	15 A ² s	0.55 W	1.27 W
FUSE 10,3X38 6A PV	3061318	6 A		11 A ² s	51 A ² s	0.72 W	1.60 W
FUSE 10,3X38 8A PV	3061321	8 A		18 A ² s	71 A ² s	0.70 W	1.75 W
FUSE 10,3X38 10A PV	3061334	10 A		22 A ² s	101 A ² s	0.85 W	2.10 W
FUSE 10,3X38 12A PV	3061347	12 A		30 A ² s	126 A ² s	0.86 W	2.10 W
FUSE 10,3X38 15A PV	3061348	15 A		49 A ² s	145 A ² s	1.00 W	2.20W
FUSE 10,3X38 16A PV	3061350	16 A		35 A ² s	310 A ² s	0.90 W	2.40 W
FUSE 10,3X38 20A PV	3061363	20 A		52 A ² s	500 A ² s	1.00 W	2.90 W

FUSE 10,3X38 ...A PV A

Designation	Order No.	Nominal current I_N	Nominal voltage	I^2t value	Operating integral	Power dissipation	Power dissipation
				L/R = 2 ms	L/R = 2 ms	$0.7 \times I_N$	I_N
$I_f = 1.35 \times I_N$ (UL standard)							
FUSE 10,3X38 6A PV A	3062778	6 A	1000 V DC	10 A ² s	45 A ² s	0.73 W	1.65 W
FUSE 10,3X38 8A PV A	3062779	8 A		17 A ² s	62 A ² s	0.84 W	2.00 W
FUSE 10,3X38 10A PV A	3062780	10 A		21 A ² s	88 A ² s	0.97 W	2.30 W
FUSE 10,3X38 12A PV A	3062781	12 A		28 A ² s	110 A ² s	0.95 W	2.20 W
FUSE 10,3X38 15A PV A	3062784	15 A		33 A ² s	260 A ² s	1.00 W	2.40 W
FUSE 10,3X38 16A PV A	3062782	16 A		35 A ² s	270 A ² s	1.10 W	2.60 W

3.1 Dimensions

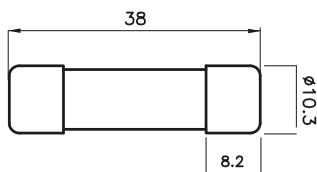


Figure 1 Dimensions (in mm)

3.2 Derating

Higher ambient temperatures are an additional strain on fuses. The shift of the nominal current by the derating factor should therefore be taken into consideration.

Temperature	Derating factor
-25°C	1.10
-5°C	1.06
15°C	1.02
25°C	1.00
40°C	0.97
60°C	0.92
80°C	0.90

3.3 Time-current characteristics

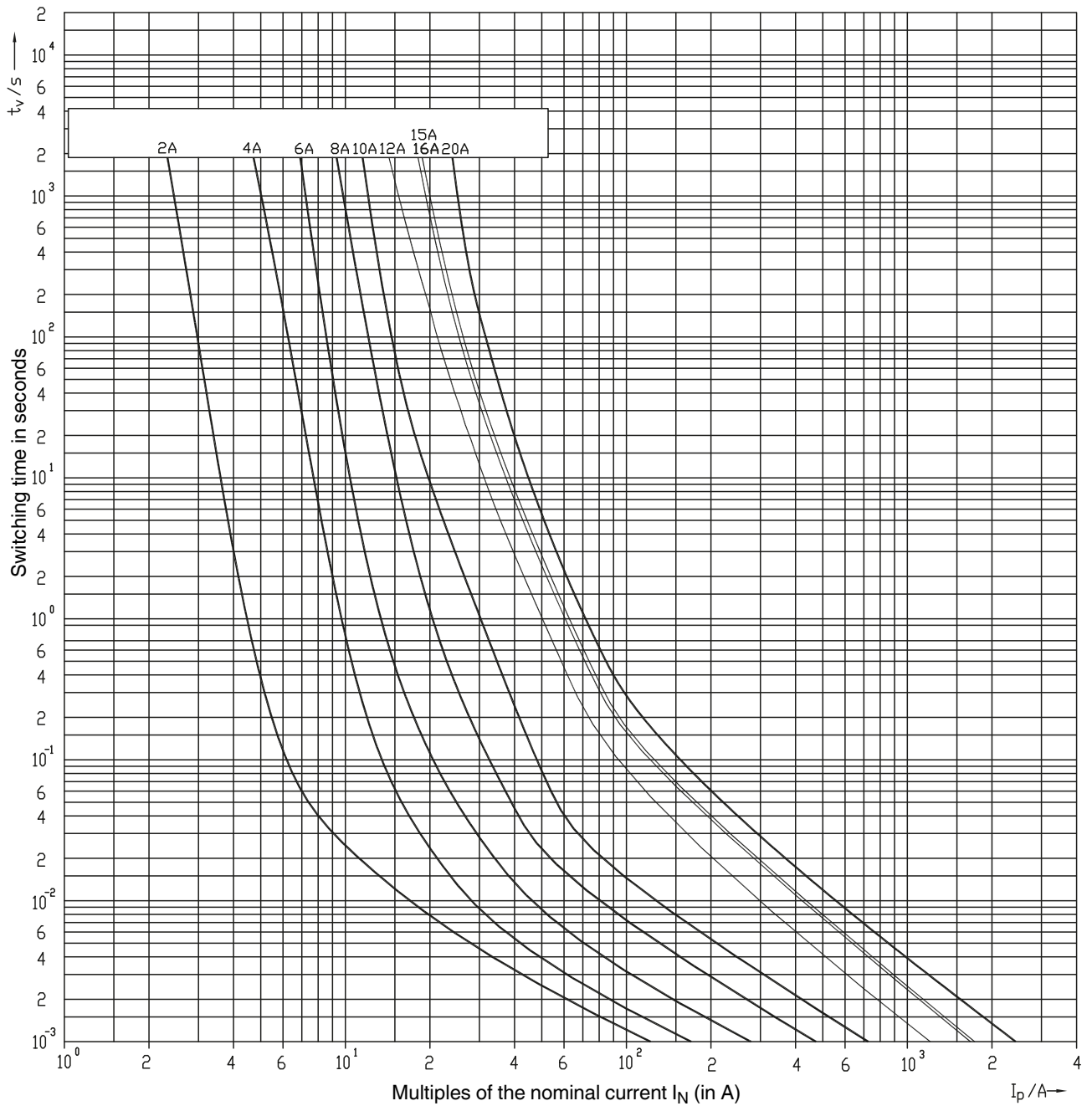


Figure 2 Time-current characteristic (switching time in seconds/multiples of the nominal current I_N)