

## PIIM PV 400 Vseries

- Surge arresters type T2 intended for photovoltaic systems (PV).
- Products are designed in a Y-type connection, which is resistant to earth faults of working conductors.
- Particular varistor sectors, connected between the terminals L+, L- and PE are equipped with internal disconnectors, which are activated when the varistors fail (overheat) and they are able to interrupt the DC current.
- Special construction of the internal disconnector allows installation without a back-up fuse.
- They are installed in PV applications without an external LPS or with an external LPS, where the sufficient distance "s" is observed.
- Suitable for all LPL levels.
- Ensure the equipotential bonding of positive and negative busbars of PV systems and the elimination of transient overvoltage that originates during the atmospheric discharges or switching processes.
- **M** indication specifies a type of construction with removable module.
- **DS** indication specifies a version with remote monitoring.

Type		PIIM PV 400 Vseries
Test class according to EN 61643-11:2012 and EN 61643-31:2019		T2
System		DC
PV system type		Ungrounded
SPD connection type		Y
Maximum continuous operating voltage (+/-)	$U_{CPV}$	420 V DC
Maximum continuous operating voltage ( $\pm$ /PE)	$U_{CPV}$	420 V DC
Max. voltage of PV generator $U_{OCSTC} \leq U_{CPV} / 1.2$	$U_{OCSTC}$	350 V
Short-circuit current rating	$I_{SCPV}$	10 kA
Maximum discharge current (8/20)	$I_{max}$	40 kA
Nominal discharge current for class II test (8/20)	$I_n$	15 kA
Voltage protection level at $I_n$	$U_p$	< 1.6 kV
Response time	$t_A$	< 25 ns
Housing material		Polyamid PA6, UL94 V-0
Degree of protection		IP20
Operating temperature	$\vartheta$	-40 ÷ 70 °C
Humidity range	RH	5 ÷ 95 %
Minimum cross-section of connected Cu conductors according to IEC 61643-32:2017 (doesn't apply to „V“ connection) for T2	S	2.5 mm <sup>2</sup> (L+, L-) 6 mm <sup>2</sup> (PE)
Clamp fastening range (solid conductor)		2.5 ÷ 35 mm <sup>2</sup>
Clamp fastening range (stranded conductor)		2.5 ÷ 25 mm <sup>2</sup>
Tightening moment		4 Nm
Installation		On DIN rail 35 mm
Modular width		3 TE
Operating position		Any
Product placement environment		Internal
SPD failure mode		OCFM

Type	PIIIM PV 400 Vseries	
Signalling at the device	Optic	
Importance of local signalling	OK – green target FAULT – red target	
Remote signalling	No	
Modular design	Yes	
Article number of spare module	27 057	
Lifetime	> 100 000 h	
<b>Designed according to standards</b>		
Requirements and test methods for SPDs for photovoltaic installations	IEC 61643-31:2018	
Safety of Flammability of Plastic Materials	UL 94	
<b>Application standards</b>		
Protection against lightning	IEC 62305:2010	
Selection and application principles for SPDs connected to photovoltaic installations	CLC/TS 50539-12:2010	
Low-voltage electrical installations – Photovoltaic (PV) systems	HD 60364-7-712:2016	
<b>Ordering, packaging and additional data</b>		
Mass	m	270 g
Mass (including the packaging)	m	289 g
Packaging dimensions (H x W x D)	60 x 111 x 87 mm	
Packaging value	V	0.58 dm <sup>3</sup>
ETIM group	EG000021	
ETIM class	EC000941	
Customs tariff no.	85363010	
EAN code	8590681122969	
<b>Art. number</b>	<b>27 066</b>	

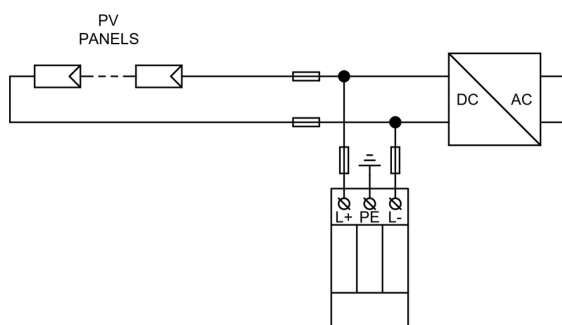


The link in the QR code leads to the online presentation of the PIIIM PV 400 Vseries. There, in addition to the always up-to-date data sheet, you will also find all diagrams and drawings, declarations of conformity, or 2D or 3D models and other necessary materials. For more information, visit [www.hakel.com](http://www.hakel.com)



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**Application wiring diagram (installation)**



**Internal diagram**

