



Automatización Eléctrica
Especialistas en Automatización

At the end of this document you will find links to products related to this catalog. You can go directly to our shop by clicking [HERE](#). [HERE](#)

Type 2 surge arrester - VAL-MS 600DC-PV/2+V-FM - 2800641

Please be informed that the data shown in this PDF Document is generated from our Online Catalog. Please find the complete data in the user's documentation. Our General Terms of Use for Downloads are valid (<http://phoenixcontact.com/download>)



Surge arrester for 2-pos. isolated 600 V DC voltage systems, for DIN rail mounting, 3-pos. base element with remote indication contact, three plug-in temperature-monitored protective elements, status message on each plug.

Why buy this product

- Increased safety, thanks to compliance with standard EN 50539-11
- Reliable contact, thanks to integrated rotating latch
- Easy replacement, thanks to plug-in arresters
- Optimum inverter protection, thanks to low protection level
- Efficient replacement of defective plugs, thanks to visual status indicator
- Optimized maintenance planning, thanks to remote signaling
- Protection against mismatching, thanks to keyed plugs and base elements
- Always the right arrester, thanks to universal type 1/type 2 protective components



Key Commercial Data

Packing unit	1 STK
GTIN	 4 046356 612562

Technical data

Dimensions

Height	99 mm
Width	53.4 mm
Depth	65.5 mm
Horizontal pitch	3 Div.

Ambient conditions

Degree of protection	IP20 (only when all terminal points are used)
Ambient temperature (operation)	-40 °C ... 80 °C
Ambient temperature (storage/transport)	-40 °C ... 80 °C

Type 2 surge arrester - VAL-MS 600DC-PV/2+V-FM - 2800641

Technical data

Ambient conditions

Altitude	≤ 2000 m (amsl (above mean sea level))
Permissible humidity (operation)	5 % ... 95 %
Shock (operation)	60g (Half sine/11 ms/3x #X#Y#Z)
Vibration (operation)	7.5g (5-500 Hz/2.5 h/XYZ)

General

Standards/specifications	EN 50539-11 2013
IEC test classification	PV T2
	PV T2
Number of ports	One
SPD failure behavior	OCM (Open-circuit mode)
Connection configuration	Y configuration
SPD design	Voltage-limiting type
Installation location	Inside
Accessibility	Accessible
Installation location of the disconnect device	Internal
Mode of protection	(L+) - (L-)
	(L+) - PE
	(L-) - PE
Mounting type	DIN rail: 35 mm
Color	jet black RAL 9005
Housing material	PA 6.6-FR
	PBT-FR
Degree of pollution	2
Distance between live and grounded parts	8 mm
Flammability rating according to UL 94	V-0
Type	DIN rail module, two-section, divisible
Surge protection fault message	Optical, remote indicator contact

Additional descriptions

Note	The device is intended for touch proof installation in a housing. Ensure that there is a gap of at least 8 mm between the active and grounded parts in the connection area.
------	-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------

Protective circuit DC voltage side (DC)

Maximum continuous operating voltage U_{CPV}	800 V DC
Open circuit voltage U_{OCSTC}	≤ 670 V DC
Short-circuit current rating I_{SCPV}	1000 A
Continuous operating current I_{CPV}	20 μA
Rated load current I_L	80 A
Residual current I_{PE}	≤ 20 μA DC
	≤ 300 μA AC
Standby power consumption P_C	≤ 20 mVA

Type 2 surge arrester - VAL-MS 600DC-PV/2+V-FM - 2800641

Technical data

Protective circuit DC voltage side (DC)

Nominal discharge current (8/20) μs	15 kA
Maximum discharge current I_{max} (8/20) μs	40 kA
Total discharge current I_{Total} (8/20) μs	40 kA
Voltage protection level U_p	≤ 2.7 kV
Residual voltage U_{res}	≤ 2.7 kV (at I_n)
	≤ 2.2 kV (at 5 kA)
	≤ 2.5 kV (at 10 kA)
	≤ 2.9 kV (at 20 kA)
	≤ 3.4 kV (at 30 kA)
	≤ 3.8 kV (at 40 kA)
Response time t_A	≤ 25 ns
Insulation resistance R_{iso}	> 5 G Ω (at 500 V DC)

Indicator/remote signaling

Connection name	Remote fault indicator contact
Switching function	PDT contact
Operating voltage	5 V AC ... 250 V AC
	30 V DC
Operating current	5 mA AC ... 1.5 A
	1 A
Connection method	Screw connection
Screw thread	M2
Tightening torque	0.25 Nm
Stripping length	7 mm
Conductor cross section flexible	0.14 mm ² ... 1.5 mm ²
Conductor cross section solid	0.14 mm ² ... 1.5 mm ²
Conductor cross section AWG	28 ... 16

Connection data

Connection method	Screw connection
Conductor cross section flexible	1.5 mm ² ... 25 mm ²
Conductor cross section solid	1.5 mm ² ... 35 mm ²
Conductor cross section AWG	15 ... 2
Screw thread	M5
Tightening torque	4.5 Nm
Stripping length	16 mm
Connection method	Biconnect terminal blocks
Conductor cross section flexible	1.5 mm ² ... 16 mm ²
Screw thread	M5

UL specifications

SPD Type	4CA
----------	-----

Type 2 surge arrester - VAL-MS 600DC-PV/2+V-FM - 2800641

Technical data

UL specifications

Maximum continuous operating voltage MCOV (L+) - (L-)	800 V DC
Maximum continuous operating voltage MCOV (L+) - G	800 V DC
Maximum continuous operating voltage MCOV (L-) - G	800 V DC
Nominal voltage	670 V DC
Mode of protection	(L+) - (L-)
	(L+) - G
	(L-) - G
Power distribution system	1
Measured limiting voltage MLV (L+) - (L-)	3090 V
Measured limiting voltage MLV (L+) - G	3040 V
Measured limiting voltage MLV (L-) - G	3070 V
Nominal discharge current I _n (L+) - (L-)	20 kA
Nominal discharge current I _n (L+) - G	20 kA
Nominal discharge current I _n (L-) - G	20 kA

UL indicator/remote signaling

Operating voltage	125 V AC
Operating current	1 A
Tightening torque	4 lb _r -in.
Conductor cross section AWG	30 ... 14

UL connection data

Conductor cross section AWG	10 ... 2
Tightening torque	30 lb _r -in.

Classifications

eCl@ss

eCl@ss 4.0	27140201
eCl@ss 4.1	27130801
eCl@ss 5.0	27130801
eCl@ss 5.1	27130801
eCl@ss 6.0	27130805
eCl@ss 7.0	27130805
eCl@ss 8.0	27130806
eCl@ss 9.0	27130806

ETIM

ETIM 3.0	EC000941
ETIM 4.0	EC000941
ETIM 5.0	EC000941

Type 2 surge arrester - VAL-MS 600DC-PV/2+V-FM - 2800641

Classifications

UNSPSC

UNSPSC 6.01	30212010
UNSPSC 7.0901	39121610
UNSPSC 11	39121610
UNSPSC 12.01	39121610
UNSPSC 13.2	39121620

Approvals

Approvals

Approvals

UL Recognized / KEMA-KEUR / cUL Recognized / EAC / EAC / cULus Recognized

Ex Approvals

Approvals submitted

Approval details

UL Recognized

KEMA-KEUR

cUL Recognized

EAC

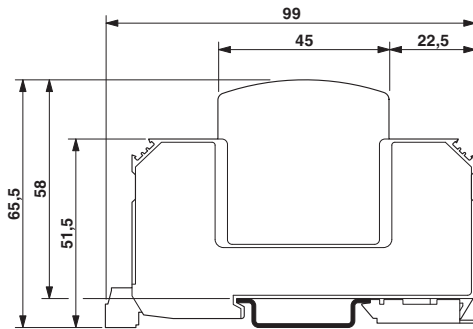
EAC

cULus Recognized

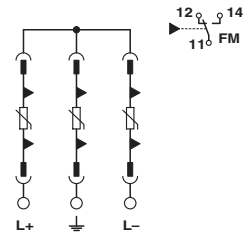
Type 2 surge arrester - VAL-MS 600DC-PV/2+V-FM - 2800641

Drawings

Dimensional drawing



Circuit diagram



Phoenix Contact 2016 © - all rights reserved
<http://www.phoenixcontact.com>

PHOENIX CONTACT GmbH & Co. KG
Flachsmarktstr. 8
32825 Blomberg
Germany
Tel. +49 5235 300
Fax +49 5235 3 41200
<http://www.phoenixcontact.com>

Below is a list of articles with direct links to our shop Electric Automation Network where you can see:

- Quote per purchase volume in real time.
- Online documentation and datasheets of all products.
- Estimated delivery time enquiry in real time.
- Logistics systems for the shipment of materials almost anywhere in the world.
- Purchasing management, order record and tracking of shipments.

To access the product, [click on the green button.](#)

Product	Code	Reference	Product link
Surge arrester for 2-pos. isolated 600 V DC voltage systems, for DIN rail mounting, 3-pos. base element with remote indication contact, three plug-in temperature-monitored protective elements, status message on each plug.	2800641	VAL-MS 600DC-PV/2 +V-FM	Buy on EAN