

## Type 2 surge protection device - VAL-US-240/40/2+0-FM - 2910364

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Surge protective device, two channel with remote indicator contact for 240/480 V split phase AC, 3-wire.

### Your advantages

- ✓ With floating remote indication contact
- ✓ Optical, mechanical status indication for the individual arresters
- ✓ Mechanical coding of all slots
- ✓ Multi-channel type 2 arresters



### Key Commercial Data

Packing unit	1 pc
GTIN	 4 055626 445038
GTIN	4055626445038

### Technical data

#### Dimensions

Height	96.8 mm
Width	35.6 mm
Depth	65.5 mm
Horizontal pitch	2 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
Altitude	≤ 2000 m (amsl (above mean sea level))
Permissible humidity (operation)	5 % ... 95 %
Shock (operation)	25g (Half-sine / 11 ms / 3x ±X, ±Y, ±Z)

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## Technical data

### Ambient conditions

Vibration (operation)	5g (10 ... 500 Hz / 2.5 h / X, Y, Z)
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### General

IEC test classification	II
	T2
EN type	T2
IEC power supply system	TN-C
Mode of protection	L-PEN
Mounting type	DIN rail: 35 mm
Color	jet black RAL 9005
Housing material	PA 6.6
	PBT
Degree of pollution	2
Flammability rating according to UL 94	V-0
Type	DIN rail module, two-section, divisible
Number of positions	2
Surge protection fault message	Optical, remote indicator contact

### Protective circuit

Nominal voltage $U_N$	240/480 V AC (TN-C)
Nominal frequency $f_N$	50 Hz (60 Hz)
Maximum continuous voltage $U_C$	385 V AC
Nominal discharge current $I_n$ (8/20) $\mu$ s	20 kA
Maximum discharge current $I_{max}$ (8/20) $\mu$ s	40 kA
Short-circuit current rating $I_{SCCR}$	25 kA
Voltage protection level $U_p$	$\leq 2$ kV
Residual voltage $U_{res}$	$\leq 2$ kV (at $I_n$ )
	$\leq 1.7$ kV (at 10 kA)
	$\leq 1.5$ kV (at 5 kA)
	$\leq 1.3$ kV (at 3 kA)
Residual voltage $U_{res}$ (L-PEN)	$\leq 1.8$ kV (at $I_n$ )
	$\leq 1.6$ kV (at 10 kA)
	$\leq 1.4$ kV (at 5 kA)
	$\leq 1.3$ kV (at 3 kA)
TOV behavior at $U_T$	415 V AC (5 s / withstand mode)
	440 V AC (120 min / withstand mode)
Response time $t_A$	$\leq 25$ ns
Max. backup fuse with branch wiring	125 A (gG)

### Indicator/remote signaling

Switching function	PDT contact
Operating voltage	5 V AC ... 250 V AC

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## Technical data

### Indicator/remote signaling

	30 V DC
Operating current	5 mA AC ... 750 mA AC
	1 A DC
Connection method	Plug-in/screw connection via COMBICON
Screw thread	M2
Tightening torque	0.25 Nm
Stripping length	7 mm
Conductor cross section flexible	0.14 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
Conductor cross section solid	0.14 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
Conductor cross section AWG	28 ... 16

### Connection data

Connection method	Screw connection
Screw thread	M5
Tightening torque	3 Nm (1,5 mm <sup>2</sup> ... 16 mm <sup>2</sup> )
	4.5 Nm (25 mm <sup>2</sup> ... 35 mm <sup>2</sup> )
Stripping length	16 mm
Conductor cross section flexible	1.5 mm <sup>2</sup> ... 25 mm <sup>2</sup>
Conductor cross section solid	1.5 mm <sup>2</sup> ... 35 mm <sup>2</sup>
Conductor cross section AWG	15 ... 2
Connection method	Fork-type cable lug
Conductor cross section flexible	1.5 mm <sup>2</sup> ... 16 mm <sup>2</sup>

### UL specifications

SPD Type	1
Maximum continuous operating voltage MCOV (L-L)	750 V AC
Maximum continuous operating voltage MCOV (L-G)	385 V AC
Nom. voltage	240/480 V AC (Split phase)
Mode of protection	L-L
	L-N
	L-G
Power distribution system	1S
Nominal frequency	50/60 Hz
Voltage protection rating VPR (L-L)	2500 V
Voltage protection rating VPR (L-G)	1500 V
Nominal discharge current I <sub>n</sub>	20 kA
Maximum Surge Current per Phase	40 kA
Short-circuit current rating (SCCR)	200 kA

### UL indicator/remote signaling

Operating voltage	125 V AC
Operating current	1 A AC

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## Technical data

### UL indicator/remote signaling

Tightening torque	2 lb <sub>F</sub> -in. ... 4 lb <sub>F</sub> -in.
Conductor cross section AWG	30 ... 14

### UL connection data

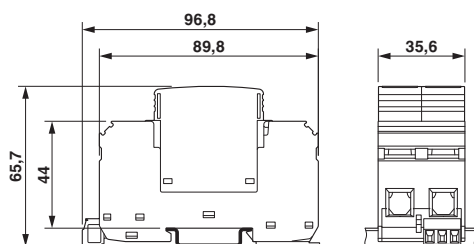
Conductor cross section AWG	10 ... 2
Tightening torque	30 lb <sub>F</sub> -in.

### Standards and Regulations

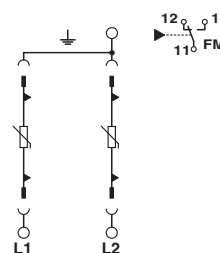
Standards/regulations	IEC 61643-11 2011
	EN 61643-11 2012

## Drawings

Dimensional drawing



Circuit diagram



## Approvals

### Approvals

#### Approvals

UL Listed / cUL Listed / cULus Listed

#### Ex Approvals

### Approval details

UL Listed		<a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a>	FILE E 330181
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cUL Listed		<a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a>	FILE E 330181
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### Approvals

cULus Listed



<http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm>

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