

# VAL-US-347/30/3+1V-FM - Type 1 surge protection device



1079099

<https://www.phoenixcontact.com/us/products/1079099>

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 documentation. Our general terms of use for downloads are valid.



Surge protective device, four channel with remote indicator contact for 347/600 and 400/690 V AC Wye, 4-wire plus ground.

## Your advantages

- With floating remote indication contact
- UL open terminal listed SPD
- Optical, mechanical status indication for the individual arresters
- Multi-channel type 2 protective devices
- Plugs can be checked with CHECKMASTER
- Disconnect device on each individual plug

## Commercial data

Item number	1079099
Packing unit	1 pc
Sales key	CL17
Product key	CL132U
Catalog page	Page 97 (C-4-2019)
GTIN	4055626796789
Weight per piece (including packing)	485.5 g
Weight per piece (excluding packing)	455.54 g
Customs tariff number	85363030
Country of origin	DE

# VAL-US-347/30/3+1V-FM - Type 1 surge protection device



1079099

<https://www.phoenixcontact.com/us/products/1079099>

## Technical data

### Product properties

IEC test classification	II
	T2
EN type	T2
IEC power supply system	TN-S
	TN-C
Type	DIN rail module, two-section, divisible
Distance between live and grounded parts	5 mm
Product type	Surge protection for NEMA power supply units
Product family	VALVETRAB US
Number of positions	4
Surge protection fault message	Optical, remote indicator contact

### Insulation characteristics

Overvoltage category	III
Pollution degree	2

### Electrical properties

Nominal frequency $f_N$	50 Hz (60 Hz)
-------------------------	---------------

### Indicator/remote signaling

Connection name	Remote fault indicator contact
Switching function	Changeover contact
Operating voltage	5 V AC ... 250 V AC
	30 V DC
Operating current	5 mA AC ... 1.5 A AC
	1 A DC

### 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 rigid	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>

### Remote fault indicator contact

Connection method	Plug-in/screw connection via COMBICON
Screw thread	M2

# VAL-US-347/30/3+1V-FM - Type 1 surge protection device

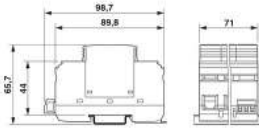


1079099

<https://www.phoenixcontact.com/us/products/1079099>

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 rigid	0.14 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
Conductor cross section AWG	28 ... 16

## Dimensions

Dimensional drawing	
Width	71 mm
Height	98.7 mm
Depth	65.7 mm (incl. DIN rail 7.5 mm)
Horizontal pitch	4 Div.

## Material specifications

Flammability rating according to UL 94	V-0
CTI value of material	600
Insulating material	PA 6.6/PBT
Material group	I
Housing material	PA 6.6 PBT

## Protective circuit

Mode of protection	L-N
	N-PE
Direction of action	3L-N & N-GND
Nominal voltage $U_N$	400/690 V AC (TN-S)
	347/600 V AC
Nominal frequency $f_N$	50 Hz (60 Hz)
Maximum continuous voltage $U_C$	580 V AC
Rated load current $I_L$	80 A
	80 A
Standby power consumption $P_C$	≤ 150 mVA
Nominal discharge current $I_n$ (8/20) μs	15 kA
Maximum discharge current $I_{max}$ (8/20) μs	30 kA
Short-circuit current rating $I_{SCCR}$	25 kA
Voltage protection level $U_p$	≤ 2.5 kV
Residual voltage $U_{res}$ (L-N)	≤ 2.5 kV (at $I_n$ )
	≤ 2.3 kV (at 10 kA)
	≤ 2.1 kV (at 5 kA)
	≤ 1.9 kV (at 3 kA)

# VAL-US-347/30/3+1V-FM - Type 1 surge protection device



1079099

<https://www.phoenixcontact.com/us/products/1079099>

Residual voltage $U_{res}$ (N-PE)	$\leq 2.5$ kV (at $I_n$ )
	$\leq 2.3$ kV (at 10 kA)
	$\leq 2.1$ kV (at 5 kA)
	$\leq 1.9$ kV (at 3 kA)
TOV behavior at $U_T$	690 V AC (5 s / withstand mode)
	762 V AC (120 min / withstand mode)
Max. backup fuse with branch wiring	125 A (gG)

## Environmental and real-life conditions

### 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	$\leq 2000$ m (amsl)
Permissible humidity (operation)	5 % ... 95 %
Shock (operation)	25g (Half-sine / 11 ms / 3x $\pm X$ , $\pm Y$ , $\pm Z$ )
Vibration (operation)	5g (10 ... 500 Hz / 2.5 h / X, Y, Z)

## Approvals

### UL specifications

Maximum continuous operating voltage MCOV (L-L)	750 V AC
Maximum continuous operating voltage MCOV (L-N)	580 V AC
Maximum continuous operating voltage MCOV (L-G)	750 V AC
Maximum continuous operating voltage MCOV (N-G)	580 V AC
Short-circuit current rating (SCCR)	200 kA
Voltage protection rating VPR (L-L)	4000 V
Voltage protection rating VPR (L-N)	2000 V
Voltage protection rating VPR (L-G)	4000 V
Voltage protection rating VPR (N-G)	2000 V
UL type	type 1
Nominal discharge current $I_n$	20 kA
Maximum Surge Current per Phase	30 kA
Mode of protection	L-N
	N-G
	L-G
Nominal voltage	347/600 V AC (Wye)
	400/690 V AC (Wye)
Power distribution system	Wye
Nominal frequency	50/60 Hz
SPD Type	1

### UL indicator/remote signaling

Operating voltage	125 V AC
AC operating current	1 A AC

# VAL-US-347/30/3+1V-FM - Type 1 surge protection device



1079099

<https://www.phoenixcontact.com/us/products/1079099>

## UL connection data

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

## Standards and regulations

### Air clearances and creepage distances

Standards/regulations	EN 60664-1 / EN 61643-11
Standards/specifications	IEC 61643-11
Note	2011
Standards/specifications	EN 61643-11
Note	2012

## Mounting

Mounting type	DIN rail: 35 mm
---------------	-----------------

# VAL-US-347/30/3+1V-FM - Type 1 surge protection device

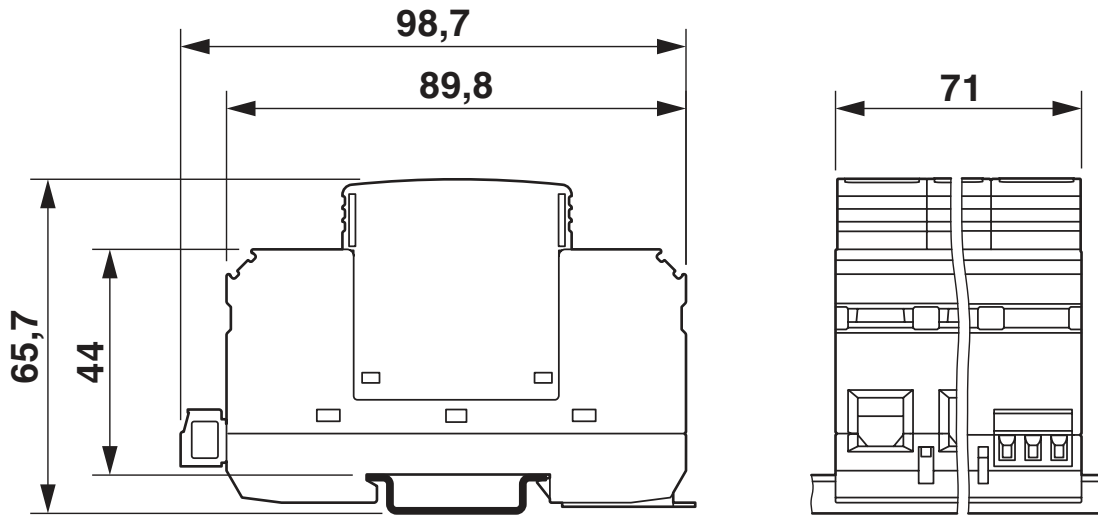


1079099

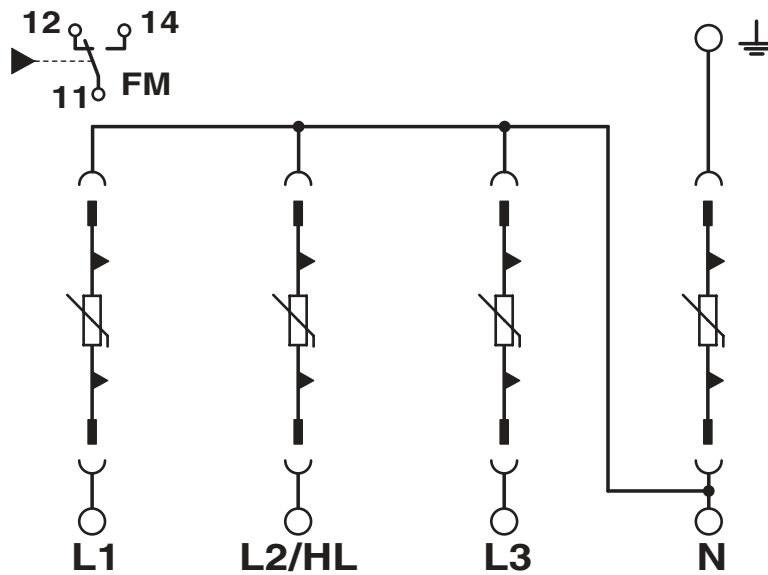
<https://www.phoenixcontact.com/us/products/1079099>

## Drawings

Dimensional drawing



Circuit diagram



# VAL-US-347/30/3+1V-FM - Type 1 surge protection device



1079099

<https://www.phoenixcontact.com/us/products/1079099>

## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1079099>



**UL Listed**

Approval ID: FILE E 330181



**cUL Listed**

Approval ID: FILE E 330181

**cULus Listed**

# VAL-US-347/30/3+1V-FM - Type 1 surge protection device



1079099

<https://www.phoenixcontact.com/us/products/1079099>

## Classifications

### ECLASS

ECLASS-11.0	27130805
ECLASS-13.0	27171202

### ETIM

ETIM 8.0	EC000941
----------	----------

### UNSPSC

UNSPSC 21.0	39121600
-------------	----------



# VAL-US-347/30/3+1V-FM - Type 1 surge protection device



1079099

<https://www.phoenixcontact.com/us/products/1079099>

## Environmental product compliance

China RoHS	Environmentally friendly use period: unlimited = EFUP-e
	No hazardous substances above threshold values

# VAL-US-347/30/3+1V-FM - Type 1 surge protection device



1079099

<https://www.phoenixcontact.com/us/products/1079099>

## Accessories

### MPB F600X16/ 1GS - Wiring bridge

2818355

<https://www.phoenixcontact.com/us/products/2818355>



Wiring bridge flexible, diameter: 16 mm<sup>2</sup>, with a fork-type cable lug on one side, length: 600 mm

---

### MPB F200X16/ 1GS - Wiring bridge

2818339

<https://www.phoenixcontact.com/us/products/2818339>



Wiring bridge flexible, diameter 16 mm<sup>2</sup>, with a fork-type cable lug on one side, length: 200 mm

# VAL-US-347/30/3+1V-FM - Type 1 surge protection device



1079099

<https://www.phoenixcontact.com/us/products/1079099>

## MPB 18/1-10/1.0.0 - Wiring bridge

2830443

<https://www.phoenixcontact.com/us/products/2830443>



Wiring bridge for modules with connecting pitch 17.5 mm, 1-phase, 10 pitches with contact sequence 1-0-0

---

## MPB 18/4-12 - Wiring bridge

2809296

<https://www.phoenixcontact.com/us/products/2809296>



Wiring bridge for modules with connecting pitch 17.5 mm, 4-phase, 12-pos.

# VAL-US-347/30/3+1V-FM - Type 1 surge protection device



1079099

<https://www.phoenixcontact.com/us/products/1079099>

## MPB 18/4- 8 - Wiring bridge

2809283

<https://www.phoenixcontact.com/us/products/2809283>

Wiring bridge for modules with connecting pitch 17.5 mm, 4-phase, 8-pos.



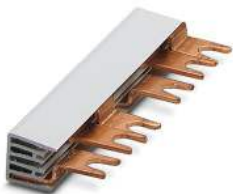
---

## MPB 18/3- 6 - Wiring bridge

2809241

<https://www.phoenixcontact.com/us/products/2809241>

Wiring bridge for modules with connecting pitch 17.5 mm, 3-phase, 6-pos.



# VAL-US-347/30/3+1V-FM - Type 1 surge protection device



1079099

<https://www.phoenixcontact.com/us/products/1079099>

## MPB 18/1-57 - Wiring bridge

2809238

<https://www.phoenixcontact.com/us/products/2809238>



Wiring bridge for modules with connecting pitch 17.5 mm, 1-phase, 57-pos.

---

## MPB 18/1-12 - Wiring bridge

2748593

<https://www.phoenixcontact.com/us/products/2748593>



Wiring bridge for modules with connecting pitch 17.5 mm, 1-phase, 12-pos.

# VAL-US-347/30/3+1V-FM - Type 1 surge protection device

1079099

<https://www.phoenixcontact.com/us/products/1079099>

## MPB 18/1- 9 - Wiring bridge

2748580

<https://www.phoenixcontact.com/us/products/2748580>



Wiring bridge for modules with connecting pitch 17.5 mm, 1-phase, 9-pos.

---

## MPB 18/1- 8 - Wiring bridge

2748577

<https://www.phoenixcontact.com/us/products/2748577>



Wiring bridge for modules with connecting pitch 17.5 mm, 1-phase, 8-pos.

# VAL-US-347/30/3+1V-FM - Type 1 surge protection device

1079099

<https://www.phoenixcontact.com/us/products/1079099>

## MPB 18/1- 6 - Wiring bridge

2748564

<https://www.phoenixcontact.com/us/products/2748564>



Wiring bridge for modules with connecting pitch 17.5 mm, 1-phase, 6-pos.

---

## MPB 18/1- 4 - Wiring bridge

2809225

<https://www.phoenixcontact.com/us/products/2809225>



Wiring bridge for modules with connecting pitch 17.5 mm, 1-phase, 4-pos.

# VAL-US-347/30/3+1V-FM - Type 1 surge protection device

1079099

<https://www.phoenixcontact.com/us/products/1079099>

## MPB 18/1- 3 - Wiring bridge

2809212

<https://www.phoenixcontact.com/us/products/2809212>

Wiring bridge for modules with connecting pitch 17.5 mm, 1-phase, 3-pos.



---

## MPB 18/1- 2 - Wiring bridge

2809209

<https://www.phoenixcontact.com/us/products/2809209>

Wiring bridge for modules with connecting pitch 17.5 mm, 1-phase, 2-pos.





# VAL-US-347/30/3+1V-FM - Type 1 surge protection device

1079099

<https://www.phoenixcontact.com/us/products/1079099>

## ZBN 18,LGS:ERDE - Marker for terminal blocks

2749589

<https://www.phoenixcontact.com/us/products/2749589>



Marker for terminal blocks, Strip, white, labeled, horizontal: Grounding symbol, mounting type: snapped, for terminal block width: 18 mm, lettering field size: 18 x 5 mm, Number of individual labels: 5

---

## ZBN 18,LGS:L1-N,ERDE - Marker for terminal blocks

2749576

<https://www.phoenixcontact.com/us/products/2749576>



Marker for terminal blocks, Strip, white, labeled, horizontal: L1, L2, L3, N, GND, mounting type: snapped, for terminal block width: 18 mm, lettering field size: 18 x 5 mm, Number of individual labels: 5

# VAL-US-347/30/3+1V-FM - Type 1 surge protection device



1079099

<https://www.phoenixcontact.com/us/products/1079099>

## ZBN 18:UNBEDRUCKT - Zack marker strip

2809128

<https://www.phoenixcontact.com/us/products/2809128>



Zack marker strip, Strip, white, unlabeled, can be labeled with: CMS-P1-PLOTTER, PLOTMARK, mounting type: snapped, for terminal block width: 18 mm, lettering field size: 18 x 5 mm, Number of individual labels: 5

---

## B-STIFT - Marker pen

1051993

<https://www.phoenixcontact.com/us/products/1051993>



Marker pen, for manual labeling of unprinted Zack strips, smear-proof and waterproof, line thickness 0.5 mm

# VAL-US-347/30/3+1V-FM - Type 1 surge protection device



1079099

<https://www.phoenixcontact.com/us/products/1079099>

## DK-BIC-35 - Feed-through terminal block

2749880

<https://www.phoenixcontact.com/us/products/2749880>

Feed-through terminal block for VAL and FLT applications



---

## VAL-US-347/30-P - Type 1 surge protection plug

2910339

<https://www.phoenixcontact.com/us/products/2910339>

UL Recognized type 1 SPD and IEC type 2 surge protection plug with a varistor and thermal disconnect for use with VAL-US base elements, mechanical and visual fault warning



---

Phoenix Contact 2023 © - all rights reserved  
<https://www.phoenixcontact.com>

Phoenix Contact USA  
586 Fulling Mill Road  
Middletown, PA 17057, United States  
(+717) 944-1300  
[info@phoenixcon.com](mailto:info@phoenixcon.com)