

# F-MS-T1/T2 50 ST - Type 1/2 surge protection plug



2800191

<https://www.phoenixcontact.com/us/products/2800191>

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.

N-PE replacement plug for VAL-MS-T1/T2 335/12.5 plug-in lighting/surge arrester.



## Your advantages

- Quality proven millions of times over in the widest range of applications
- Rapid installation with bridges, thanks to industry-standard overall width of 1 HP
- Easy testing and insulation measurement, thanks to pluggable protection modules

## Commercial data

Item number	2800191
Packing unit	10 pc
Minimum order quantity	1 pc
Sales key	CL18
Product key	CL1151
GTIN	4046356518628
Weight per piece (including packing)	77.9 g
Weight per piece (excluding packing)	77.9 g
Customs tariff number	85363030
Country of origin	DE

# F-MS-T1/T2 50 ST - Type 1/2 surge protection plug

2800191

<https://www.phoenixcontact.com/us/products/2800191>

## Technical data

### Product properties

Product type	Replacement plug
Product family	VALVETRAB MS
IEC test classification	I / II
	T1 / T2
	T1
EN type	T1 / T2
	T1
IEC power supply system	TN-S
	TT
Type	DIN rail module, two-section, divisible
Number of positions	1
Surge protection fault message	optical

### Insulation characteristics

Overvoltage category	III
Pollution degree	2

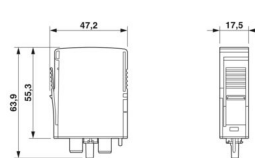
### Electrical properties

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

### Connection data

Connection method	pluggable
-------------------	-----------

### Dimensions

Dimensional drawing	
Width	17.7 mm
Height	47 mm
Depth	67.3 mm
Horizontal pitch	1 Div.

### Material specifications

Color	black (RAL 9005)
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

# F-MS-T1/T2 50 ST - Type 1/2 surge protection plug



2800191

<https://www.phoenixcontact.com/us/products/2800191>

	PBT
--	-----

## Protective circuit

Mode of protection	N-PE
Direction of action	N-PE
Nominal voltage $U_N$	240/415 V AC (TN-S) 240/415 V AC (TT)
Nominal frequency $f_N$	50 Hz (60 Hz)
Maximum continuous operating voltage $U_C$	264 V AC
Protective conductor current $I_{PE}$	$\leq 5 \mu\text{A}$
Standby power consumption $P_C$	$\leq 1.3 \text{ mVA}$
Nominal discharge current $I_n$ (8/20) $\mu\text{s}$	50 kA
Maximum discharge current $I_{max}$ (8/20) $\mu\text{s}$	50 kA
Impulse discharge current (10/350) $\mu\text{s}$ , charge	25 As
Impulse discharge current (10/350) $\mu\text{s}$ , specific energy	625 kJ/ $\Omega$
Impulse discharge current (10/350) $\mu\text{s}$ , peak value $I_{imp}$	50 kA
Follow current interrupt rating $I_{fi}$	100 A (264 V AC)
Voltage protection level $U_p$	$\leq 1.7 \text{ kV}$
Residual voltage $U_{res}$	$\leq 0.6 \text{ kV}$ (at $I_n$ ) $\leq 0.5 \text{ kV}$ (at 10 kA) $\leq 0.5 \text{ kV}$ (at 5 kA) $\leq 0.4 \text{ kV}$ (at 3 kA)
Front-of-wave sparkover voltage at 6 kV (1.2/50) $\mu\text{s}$	$\leq 1.7 \text{ kV}$
TOV behavior at $U_T$	1200 V AC (200 ms / withstand mode)
Response time $t_A$	$\leq 100 \text{ ns}$

## Environmental and real-life conditions

### Ambient conditions

Degree of protection	IP20
Ambient temperature (operation)	-40 °C ... 80 °C
Ambient temperature (storage/transport)	-40 °C ... 80 °C
Altitude	$\leq 2000 \text{ m}$ (amsl)
Permissible humidity (operation)	5 % ... 95 %
Shock (operation)	30g (Half-sine / 11 ms / 3x $\pm X$ , $\pm Y$ , $\pm Z$ )
Vibration (operation)	7.5g (10 ... 500 Hz / 2.5 h / X, Y, Z)

## Approvals

### UL specifications

Maximum continuous operating voltage MCOV (N-G)	264 V AC
Nominal discharge current $I_n$ (N-G)	20 kA
Mode of protection	N-G
Power distribution system	Single phase
Nominal frequency	50/60 Hz

# F-MS-T1/T2 50 ST - Type 1/2 surge protection plug



2800191

<https://www.phoenixcontact.com/us/products/2800191>

Measured limiting voltage MLV (N-G)	2600 V
SPD Type	4CA

## Standards and regulations

Standards/specifications	IEC 61643-11
Note	2011

### EN 61643-11

Standards/specifications	EN 61643-11
Note	2012

## Mounting

Mounting type	on base element
---------------	-----------------

# F-MS-T1/T2 50 ST - Type 1/2 surge protection plug

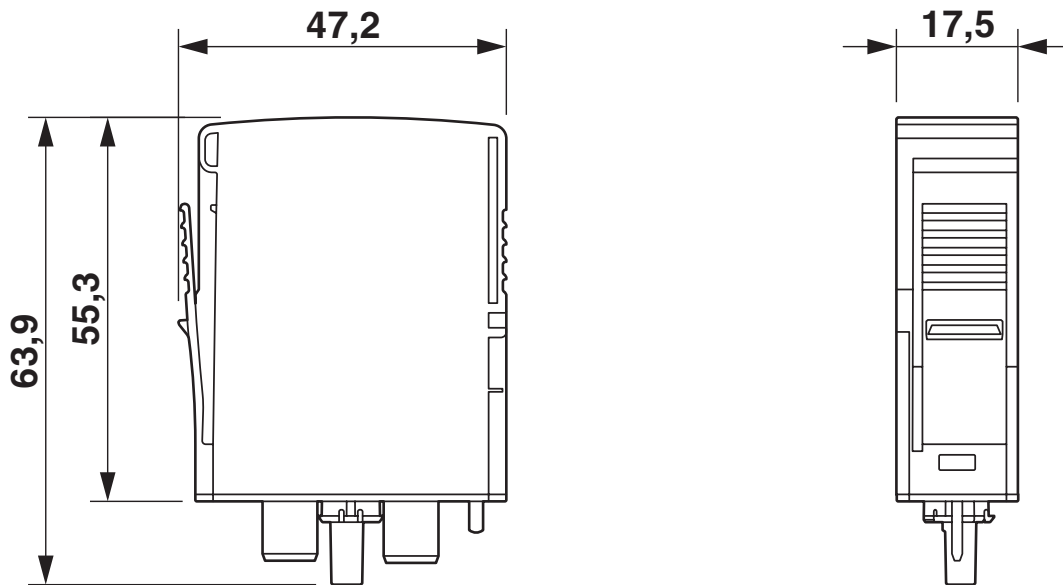


2800191

<https://www.phoenixcontact.com/us/products/2800191>

## Drawings

Dimensional drawing



Circuit diagram



# F-MS-T1/T2 50 ST - Type 1/2 surge protection plug



2800191

<https://www.phoenixcontact.com/us/products/2800191>

## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/2800191>



**cUL Recognized**

Approval ID: FILE E 330181



**UL Recognized**

Approval ID: FILE E 330181



**IECEE CB Scheme**

Approval ID: AT 2584

**CCA**

Approval ID: NTR-AT 1906



**KEMA-KEUR**

Approval ID: 2162496-01



**DNV GL**

Approval ID: TAE00001N9



**ÖVE**

Approval ID: 18583-009-09

# F-MS-T1/T2 50 ST - Type 1/2 surge protection plug



2800191

<https://www.phoenixcontact.com/us/products/2800191>

## Classifications

### ECLASS

ECLASS-13.0	27171292
ECLASS-15.0	27171292

### ETIM

ETIM 10.0	EC002496
-----------	----------

### UNSPSC

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

# F-MS-T1/T2 50 ST - Type 1/2 surge protection plug



2800191

<https://www.phoenixcontact.com/us/products/2800191>

## Environmental product compliance

### EU RoHS

Fulfills EU RoHS substance requirements	Yes, No exemptions
---	--------------------

### China RoHS

Environment friendly use period (EFUP)	EFUP-E
	No hazardous substances above the limits

### EU REACH SVHC

REACH candidate substance (CAS No.)	No substance above 0.1 wt%
-------------------------------------	----------------------------

Phoenix Contact 2026 © - 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)