

# F-EV-T1/T2 50-P - Type 1/2 surge protection plug



1180147

<https://www.phoenixcontact.com/us/products/1180147>

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CHARX protect advanced: Replacement plug for surge protective devices from the VALVETRAB EV-T1/T2 product range for the N-PE path.

## Your advantages

- Uninterrupted continuation of the charging process with a protected power supply
- Additional protection for the connected electric vehicle
- High system availability, thanks to a high-performance protective circuit
- Easy insulation measurement and simple replacement during servicing with consistently pluggable protective devices
- No mismatching of plugs, thanks to mechanical coding

## Commercial data

Item number	1180147
Packing unit	10 pc
Minimum order quantity	1 pc
Note	Made to order (non-returnable)
Product key	CL1151
GTIN	4063151215477
Weight per piece (including packing)	83.775 g
Weight per piece (excluding packing)	77.9 g
Country of origin	DE

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## Technical data

### Product properties

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

### Insulation characteristics

Overvoltage category	III
Pollution degree	2

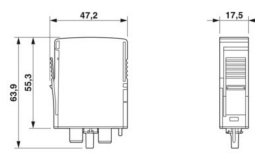
### Electrical properties

Nominal frequency $f_N$	50 Hz (60 Hz)
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### Connection data

Connection method	pluggable
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### Dimensions

Dimensional drawing	
Width	17.5 mm
Height	47.2 mm
Depth	63.9 mm
Horizontal pitch	1 Div.

### Material specifications

Color	light grey (RAL 7035)
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

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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 voltage $U_C$	264 V AC
Residual current $I_{PE}$	$\leq 5 \mu\text{A}$
Standby power consumption $P_C$	$\leq 1.30 \text{ mVA}$
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)

## Standards and regulations

Standards/specifications	IEC 61643-11
Note	2011
Standards/specifications	EN 61643-11
Note	2012

## Mounting

Mounting type	on base element
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## Classifications

### ECLASS

ECLASS-11.0	27130890
ECLASS-13.0	27171292

### ETIM

ETIM 9.0	EC002496
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### UNSPSC

UNSPSC 21.0	39121600
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## Environmental product compliance

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