

# PRT-1S-350/20/R - Type 2 surge arrester



2905977

<https://www.phoenixcontact.com/us/products/2905977>

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Surge protective device for space-saving PCB installation, in accordance with Type 2 / CLASS II, for single-phase TN and TT power supply systems.

## Your advantages

- Small-scale onboard surge protector
- Reliable remote signaling alarm contact function
- Conformance with current standards

## Commercial data

Item number	2905977
Packing unit	20 pc
Minimum order quantity	20 pc
Product key	CL1471
Catalog page	Page 78 (C-4-2019)
GTIN	4055626287607
Weight per piece (including packing)	68.655 g
Weight per piece (excluding packing)	68.655 g
Country of origin	CN

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## Technical data

### Product properties

IEC test classification	II
	T2
EN type	T2
IEC power supply system	TN-S
	TT
Type	PCB onboard surge protector
Product type	Surge arrester
Product family	PRINTRAB
Surge protection fault message	Remote indication contact

### Insulation characteristics

Overvoltage category	III
Pollution degree	2

### Electrical properties

Nominal frequency $f_N$	50 Hz (60 Hz)
Dielectric strength	< 2.5 kV (1 min.)

### Indicator/remote signaling

Switching function	N/C contact
Operating voltage	5 V AC ... 250 V AC
	125 V AC (UL)
	30 V DC
Operating current	5 mA AC ... 1 A AC
	1 A AC (UL)
	1 A DC

### Dimensions

Dimensional drawing	
Width	38.4 mm
Height	41 mm
Depth	22.4 mm

### Material specifications

Color	light grey (RAL 7035)
	gray (RAL 7042)
Flammability rating according to UL 94	V-0

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CTI value of material	600
Material group	I
Housing material	PA 6.6

## Protective circuit

Mode of protection	L-N
	L-PE
	N-PE
Direction of action	L-N & L(N)-PE
Nominal voltage $U_N$	230 V AC (TN)
	230 V AC (TT)
Nominal frequency $f_N$	50 Hz (60 Hz)
Maximum continuous voltage $U_C$	350 V AC
Residual current $I_{PE}$	$\leq 50 \mu\text{A}$
Standby power consumption $P_C$	$\leq 20.00 \text{ mVA}$
Nominal discharge current $I_n$ (8/20) $\mu\text{s}$	20 kA
Short-circuit current rating $I_{SCCR}$	1 kA
Voltage protection level $U_p$ (L-N)	$\leq 2.5 \text{ kV}$
Voltage protection level $U_p$ (L-PE)	$\leq 1.8 \text{ kV}$
Voltage protection level $U_p$ (N-PE)	$\leq 1.8 \text{ kV}$
TOV behavior at $U_T$ (L-N)	336 V AC (5 s / withstand mode)
	440 V AC (120 min / withstand mode)
TOV behavior at $U_T$ (N-PE)	1200 V AC (200 ms / safe failure mode)
Response time $t_A$ (L-N)	$\leq 25 \text{ ns}$
Response time $t_A$ (L-PE)	$\leq 100 \text{ ns}$
Response time $t_A$ (N-PE)	$\leq 100 \text{ ns}$
Max. backup fuse with branch wiring	63 A (MCB C)

## Environmental and real-life conditions

### Ambient conditions

Ambient temperature (operation)	-40 °C ... 85 °C
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Altitude	$\leq 2000 \text{ m (amsl)}$
Permissible humidity (operation)	5 % ... 95 %
Shock (operation)	25g (Half-sine / 11 ms / 3x $\pm X$ , $\pm Y$ , $\pm Z$ )
Vibration (operation)	5g (5 ... 500 Hz / 2.5 h / X, Y, Z)

## Standards and regulations

Standards/specifications	IEC 61643-11
Note	2011

### EN 61643-11

Standards/specifications	EN 61643-11
Note	2012

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## Mounting

Mounting type	PCB mounting
Mounting position	Internal

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## Classifications

### ECLASS

ECLASS-11.0	27130805
ECLASS-13.0	27171202

### ETIM

ETIM 9.0	EC000941
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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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