

BT-1S-230AC/O - Type 3 surge protection device



2800625

<https://www.phoenixcontact.com/us/products/2800625>

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Type 3 arresters for universal installation in installation boxes, sill-type trunking, underfloor installations or direct installation in the termination device. Circuit with thermal monitoring and visual fault warning. Installation in branch or through wiring. Version: 230 V AC

Your advantages

- Optimal additional protection of the building installation for longer service life and increased availability of the end devices
- Can be used universally, thanks to its compact design
- Concealed surge protection, thanks to installation in the device socket
- Excellent level of information provided, thanks to visual or audible fault indication

Commercial data

Item number	2800625
Packing unit	1 pc
Minimum order quantity	1 pc
Product key	CL1441
GTIN	4046356620437
Weight per piece (including packing)	45.4 g
Weight per piece (excluding packing)	42.4 g
Country of origin	DE

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Technical data

Product properties

Product type	Device protection
Product family	BLOCKTRAB
IEC power supply system	TN-S
	TT
	IT with N conductor
Type	Installation module
Distance between live and grounded parts	3 mm
Number of positions	2
Surge protection fault message	optical

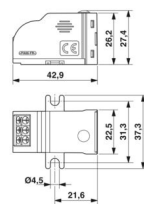
Insulation characteristics

Overvoltage category	III
Pollution degree	2
IEC test classification	III
	T3
EN type	T3
Number of ports	One
Distance between live and grounded parts	3 mm

Connection data

Connection method	Spring-cage connection
Conductor cross-section flexible	0.2 mm ² ... 2.5 mm ²
Conductor cross-section rigid	0.2 mm ² ... 2.5 mm ²
Conductor cross-section AWG	24 ... 14

Dimensions

Dimensional drawing	
Width	22.5 mm
Height	43 mm
Depth	27.4 mm

Material specifications

Color	black (RAL 9005)
	black (RAL 9005)
Flammability rating according to UL 94	V-0

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CTI value of material	600
Insulating material	PA 6.6
Housing material	PA 6.6

Protective circuit

Mode of protection	L-N
	L-PE
	N-PE
Direction of action	L(N)-PE
Nominal voltage U_N	230/400 V AC (TN-S)
	230/400 V AC (TT - only in use with RCD)
Nominal frequency f_N	50 Hz (60 Hz)
Maximum continuous operating voltage U_C (L-N)	275 V AC
Maximum continuous operating voltage U_C (L-PE)	440 V AC
Maximum continuous operating voltage U_C (N-PE)	440 V AC
Rated load current I_L	16 A (30 °C)
Protective conductor current I_{PE}	$\leq 3 \mu\text{A}$
Standby power consumption P_C	$\leq 400 \text{ mVA}$
Reference test voltage U_{REF}	255 V AC
Nominal discharge current I_n (8/20) μs	3 kA
Maximum discharge current I_{max} (8/20) μs	8 kA
Combination wave U_{OC}	6 kV
Voltage protection level U_p (L-N)	$\leq 1.3 \text{ kV}$
Voltage protection level U_p (L-PE)	$\leq 1.5 \text{ kV}$
Voltage protection level U_p (N-PE)	$\leq 1.5 \text{ kV}$
Residual voltage at I_{max} , (L-N)	$\leq 1.3 \text{ kV}$ (at U_{OC})
Residual voltage at I_{max} , (L-PE)	$\leq 1.5 \text{ kV}$ (at U_{OC})
Residual voltage at I_{max} , (PE)	$\leq 1.5 \text{ kV}$ (at U_{OC})
TOV behavior at U_T (L-N)	335 V AC (5 s / withstand mode)
	440 V AC (120 min / safe failure mode)
	440 V AC (5 s / withstand mode)
TOV behavior at U_T (L-PE)	440 V AC (120 min / withstand mode)
	1455 V AC (200 ms / safe failure mode)
	1200 V AC (200 ms / safe failure 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)	$\leq 100 \text{ ns}$
Short-circuit current rating I_{SCCR}	1 kA AC
Maximum backup fuse for through wiring	16 A (MCB B)
Max. backup fuse with branch wiring	16 A (MCB B)

Environmental and real-life conditions

Ambient conditions

Degree of protection	IP20
Ambient temperature (operation)	-30 °C ... 75 °C

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Ambient temperature (storage/transport)	-30 °C ... 75 °C
Altitude	≤ 2000 m (amsl)
Permissible humidity (operation)	5 % ... 95 %

Standards and regulations

Air clearances and creepage distances

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

Mounting

Mounting type	Screw mounting
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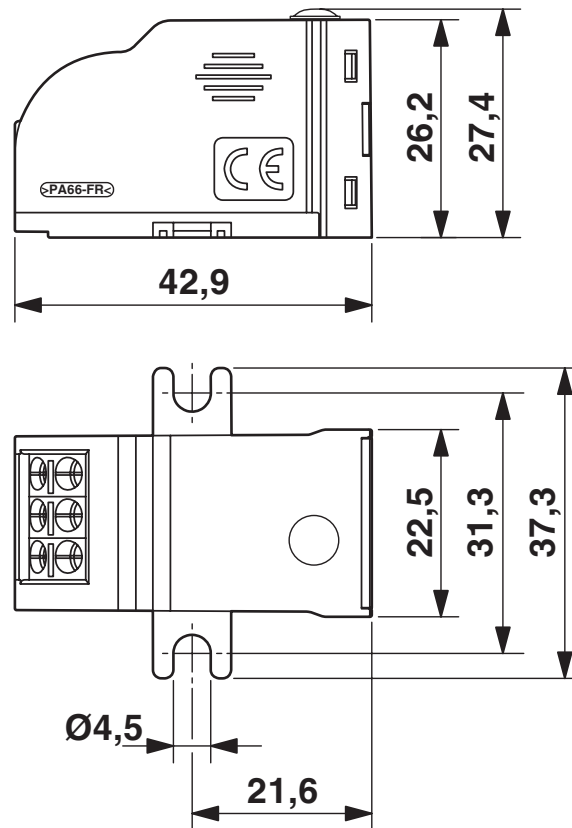
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Drawings

Dimensional drawing

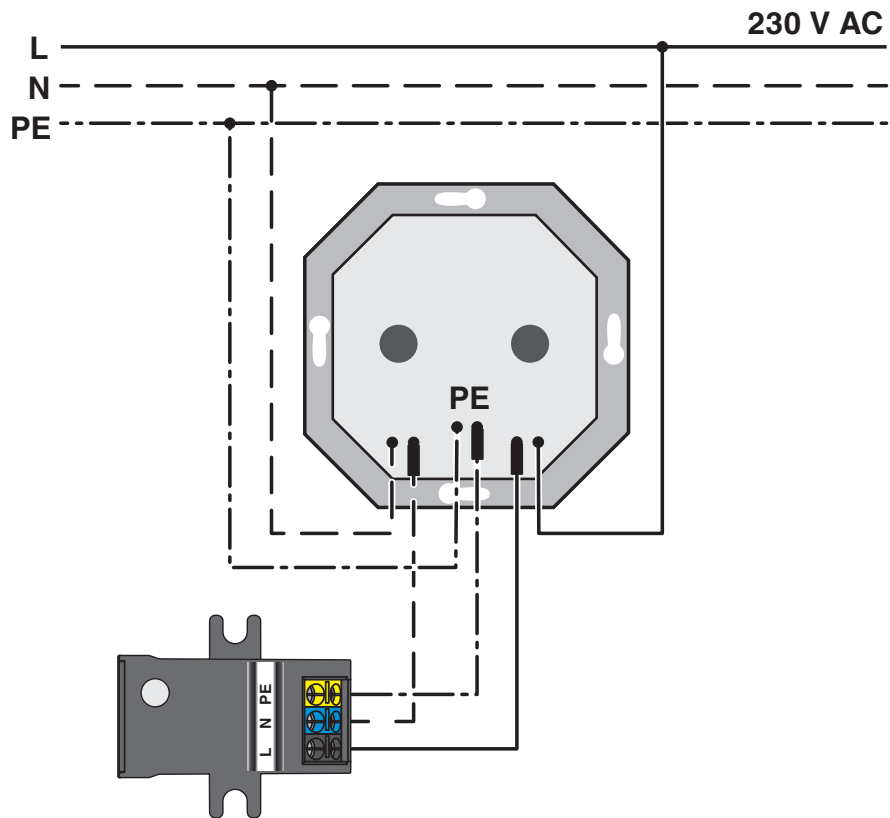


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Application drawing



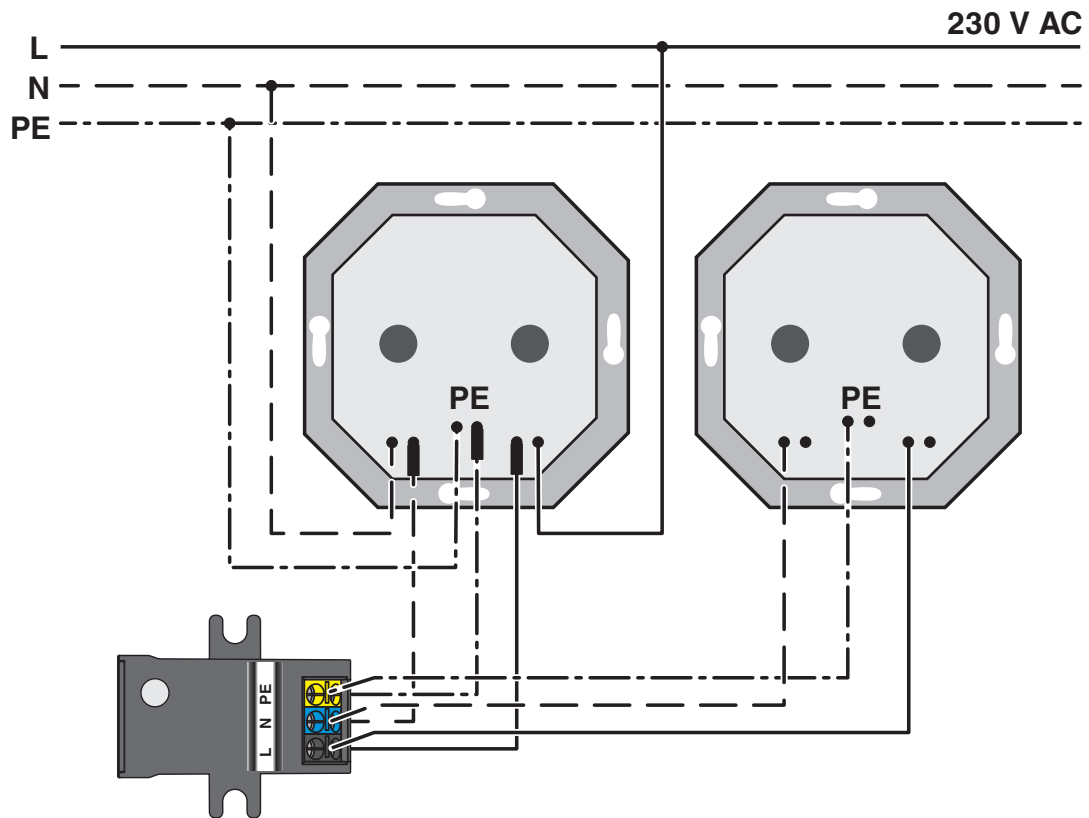
Installation in deep installation box - branch wiring

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Application drawing



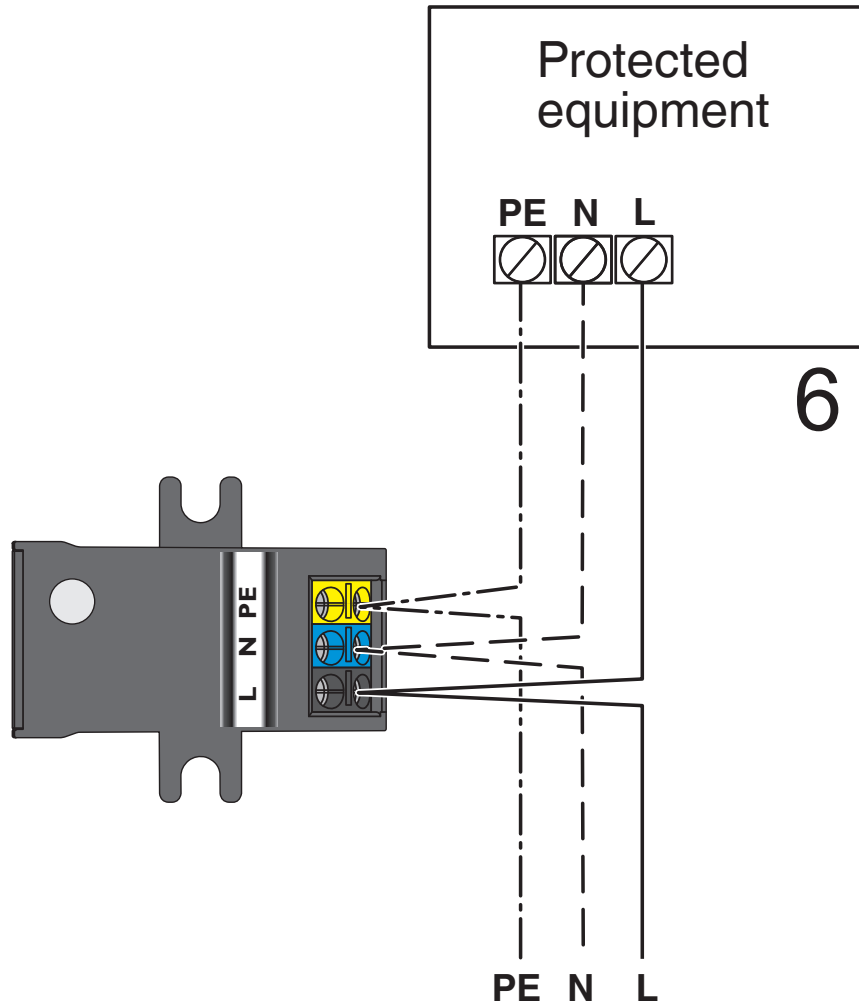
Installation in deep installation box - through wiring

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Application drawing



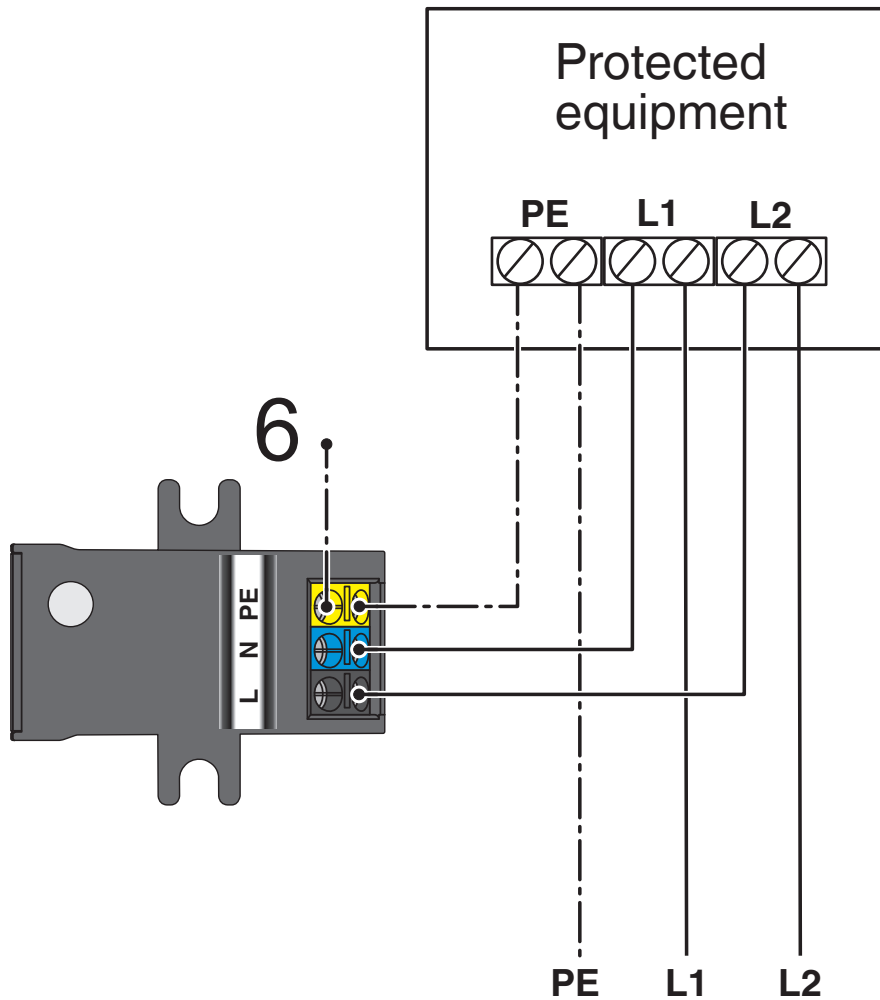
Installation directly in the device to be protected, 230 V TN-S/TT system - through wiring

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Application drawing



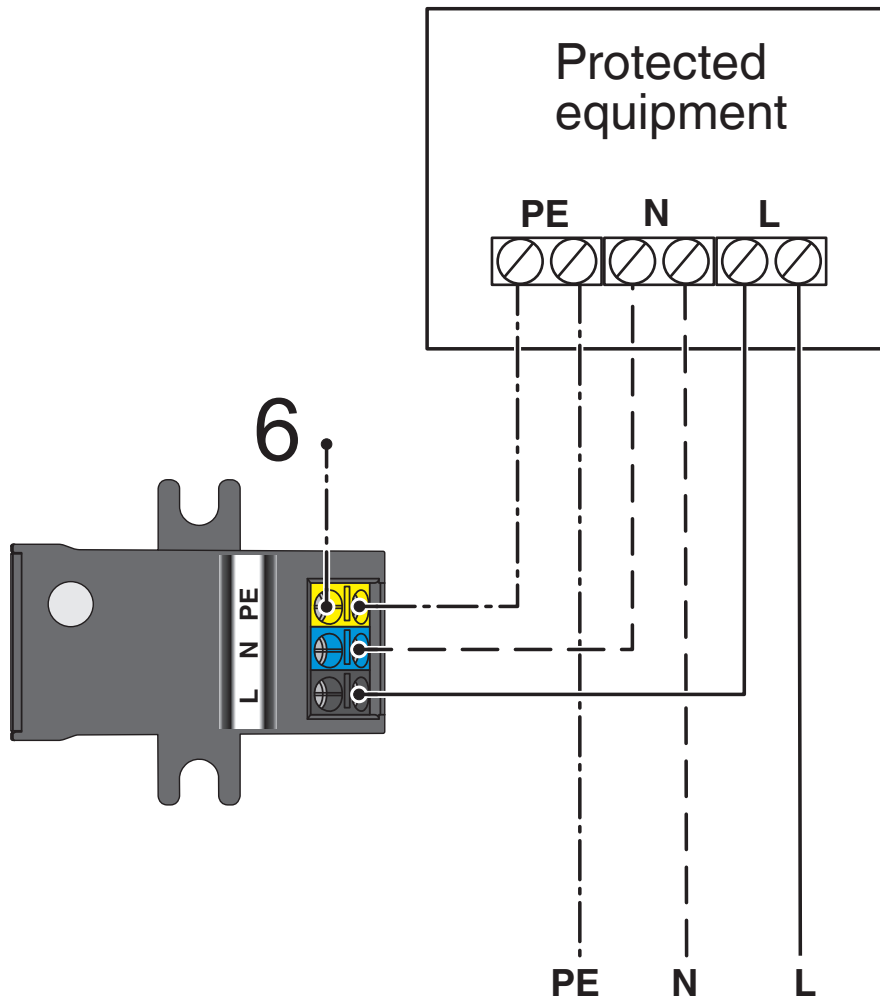
Installation directly in the device to be protected, 230 V IT system - branch wiring

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Application drawing



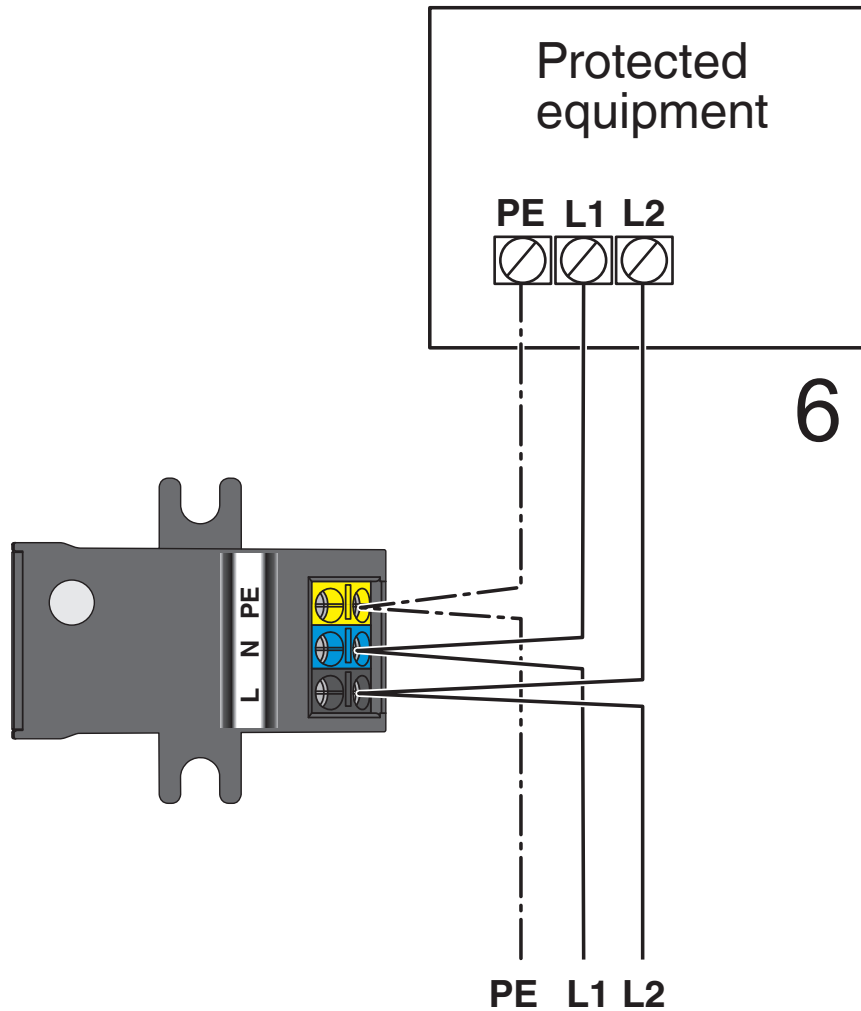
Installation directly in the device to be protected, 230 V TN-S/TT system - branch wiring

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Application drawing



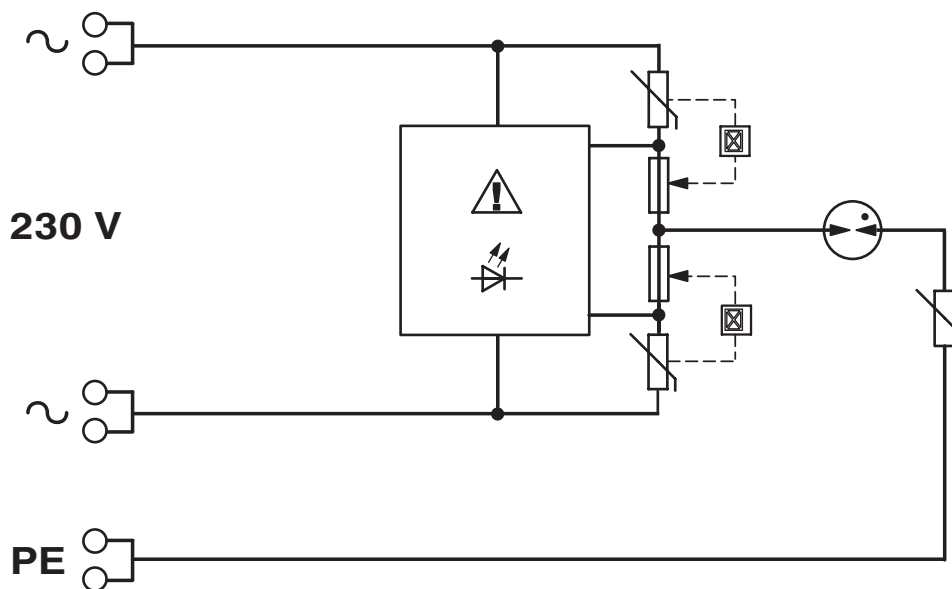
Installation directly in the device to be protected, 230 V IT system - through wiring

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Circuit diagram



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Classifications

ECLASS

ECLASS-13.0	27171203
ECLASS-15.0	27171203

ETIM

ETIM 10.0	EC000942
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UNSPSC

UNSPSC 21.0	39121600
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Environmental product compliance

EU RoHS

Fulfills EU RoHS substance requirements	Yes
Exemption	7(c)-I

China RoHS

Environment friendly use period (EFUP)	EFUP-50
	An article-related China RoHS declaration table can be found in the download area for the respective article under "Manufacturer declaration". For all articles with EFUP-E, no China RoHS declaration table issued and required.

EU REACH SVHC

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