Lightning/surge arrester type 1/2 - PWT 100-800AC-FM - 2800531

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Lightning/surge arrester, according to type 1/2 / class I/II, for 3-phase power supply networks with combined PE and N installed in one conductor (L1, L2, L3, PEN).

Product Features

- Use in harsh industrial environments
- Very high TOV resistance
- Universal solution for various network types
- Meets installation requirements according to CLC/TS 50539-22
- Meets Lightning Protection Level I
- Free of leakage current/no line follow current
- Encapsulated, non-extinguishing
- Local optical status indication
- Multi-stage status monitoring via remote indication contact
- Type 1/2 arrester based on a varistor

Key commercial data

Packing unit	1 pc
Custom tariff number	85363010
Country of origin	Germany

Technical data

Dimensions

Height	191 mm
Width	176 mm
Depth	280 mm

Ambient conditions

Degree of protection	IP20

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Technical data

Ambient conditions

Ambient temperature (operation)	-40 °C ... 80 °C
	-40 °C ... 55 °C (serial through wiring ≥ 35 mm²)
Ambient temperature (storage/transport)	-40 °C ... 80 °C
Altitude	≤ 4000 m (NN)
Permissible humidity (operation)	5 % ... 95 %
Shock (operation)	25g
Vibration (operation)	5g (10 ... 500 Hz)

General

IEC power supply system	TN-C
	IT
Housing material	Die-cast aluminum, salt water resistant
Inflammability class according to UL 94	V2
Standards for air and creepage distances	DIN EN 60664-1
	EN 61643-11
Mounting type	Screw mounting
Type	Mounting plate
Number of positions	3
Surge protection fault message	Optical, remote indicator contact
Direction of action	3L-PEN

Protective circuit

IEC test classification	I / II
	T1 / T2
EN type	T1 / T2
Lightning protection class	I
Nominal voltage U_N	690 V AC
Maximum continuous operating voltage U_C (L-PE)	800 V AC
U_T (TOV-proof)	1500 V AC (5 sec.)
	1960 V AC (200 ms)
Nominal frequency f_N	50 Hz
	60 Hz
Rated load current I_L	150 A (Serial through wiring with 50 mm²)
Residual current I_{PE}	≤ 20 µA
Standby power consumption P_C	≤ 16 mVA
Max. discharge current I_{max} (8/20) µs maximum (L-PE)	100 kA (per position)
Nominal discharge current I_n (8/20) µs (L-PE)	35 kA (per position)
Impulse discharge current (10/350) µs charge	17.5 As

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Protective circuit

Impulse discharge current (10/350)#µs, specific energy	305 kJ/Ω
Impulse discharge current (10/350)#µs, peak value I_{imp}	35 kA (per position)
Front of wave sparkover voltage at 6 kV (1.2/50) µs (L-PE)	≤ 4.5 kV
Voltage protection level U_p (L-PE)	≤ 4.5 kV
Residual voltage (L-PE)	≤ 2.7 kV
	≤ 2.5 kV (at 20 kA)
	≤ 2.3 kV (at 10 kA)
	≤ 2.2 kV (at 5 kA)
	≤ 2.1 kV (at 3 kA)
Response time (L-PE)	≤ 100 ns
Max. backup fuse with branch wiring	400 A (gG; 2 x 50 mm²)
	800 A (aR (only up to limp = 25 kA))
Max. backup fuse with V-type through wiring	125 A (gG; ≥ 35 mm²)
Short-circuit resistance I_P with max. backup fuse (effective)	50 kA
Follow current quenching capacity If (L-PEN)	50 kA

Connection, protective circuit

Connection name	Double terminal point
Connection method	Screw connection
Screw thread	M6
Tightening torque	8.5 Nm
	75 lb_f-in. (UL)
Stripping length	24 mm
Conductor cross section stranded min.	16 mm²
Conductor cross section stranded max.	50 mm²
Conductor cross section solid min.	16 mm²
Conductor cross section solid max.	50 mm²
AWG conductor cross section	6 ... 1/0
	6 ... 1/0 (UL)
Connection name	PE conductor connection
Connection method	Ring cable lug
	M10 hexagonal head screw (ISO 4017/DIN 933)
Screw thread	M10
Tightening torque	20 Nm
	175 lb_f-in. (UL)
Conductor cross section stranded min.	16 mm²
Conductor cross section stranded max.	95 mm²

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Technical data

Connection, protective circuit

Conductor cross section solid min.	16 mm²
Conductor cross section solid max.	95 mm²
AWG conductor cross section	6 ... 3/0
	3/0 (UL)

Remote indicator contact

Connection name	Remote indicator contact
Switching function	N/C contact, 1-pos.
Screw thread	M3
Tightening torque	0.55 Nm
	7 lb_f-in. ... 5 lb_f-in. (UL)
Stripping length	7 mm
Conductor cross section stranded min.	0.2 mm²
Conductor cross section stranded max.	2.5 mm²
Conductor cross section solid min.	0.2 mm²
Conductor cross section solid max.	2.5 mm²
AWG conductor cross section	24 ... 12
	24 ... 12 (UL)
Maximum operating voltage $U_{max.}$ AC	30 V AC
Maximum operating voltage U_{max} DC	30 V DC
Max. operating current I_{max}	1.5 A AC
	1.5 A DC

Standards and Regulations

Standards/regulations	IEC 61643-11 2011
	EN 61643-11 2012

Classifications

eCl@ss

eCl@ss 4.0	27140201
eCl@ss 4.1	27140201
eCl@ss 5.0	27140201
eCl@ss 5.1	27140201
eCl@ss 6.0	27140201
eCl@ss 7.0	27140201
eCl@ss 8.0	27140201

Lightning/surge arrester type 1/2 - PWT 100-800AC-FM - 2800531

Classifications

ETIM

ETIM 2.0	EC000381
ETIM 3.0	EC000381
ETIM 4.0	EC000381
ETIM 5.0	EC000381

UNSPSC

UNSPSC 6.01	30212010
UNSPSC 7.0901	39121610
UNSPSC 11	39121610
UNSPSC 12.01	39121610
UNSPSC 13.2	39121620

Approvals

Approvals

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IECEE CB Scheme / UL Recognized / KEMA-KEUR / ÖVE / cUL Recognized / CCA / cULus Recognized

Ex Approvals

Approvals submitted

Approval details

IECEE CB Scheme

UL Recognized

KEMA-KEUR

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Approvals

ÖVE

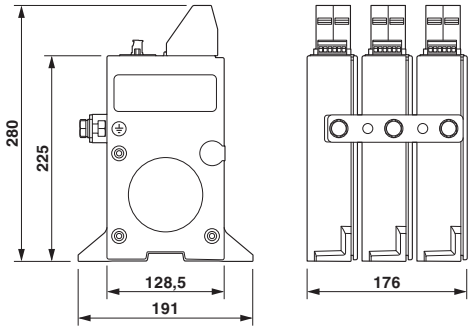
cUL Recognized

CCA

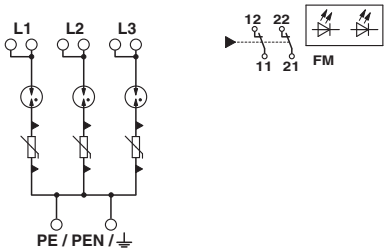
cULus Recognized

Drawings

Dimensioned drawing



Circuit diagram



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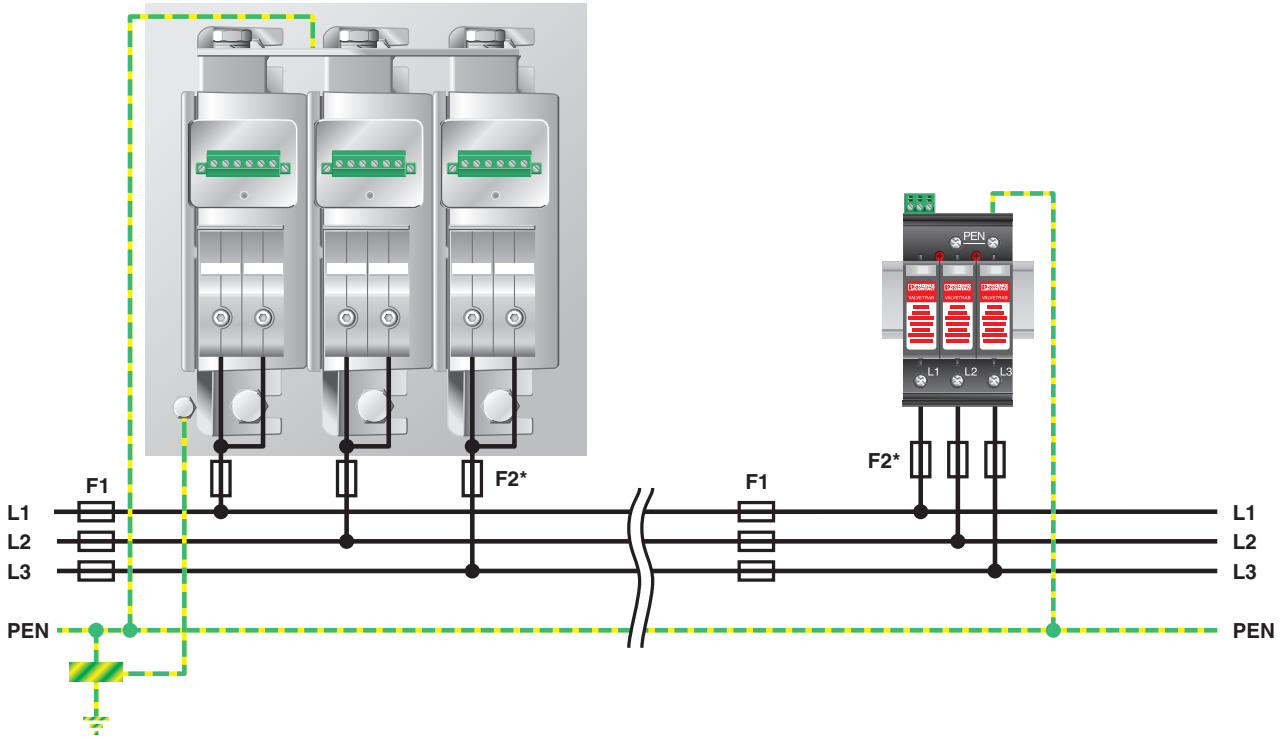
Application drawing



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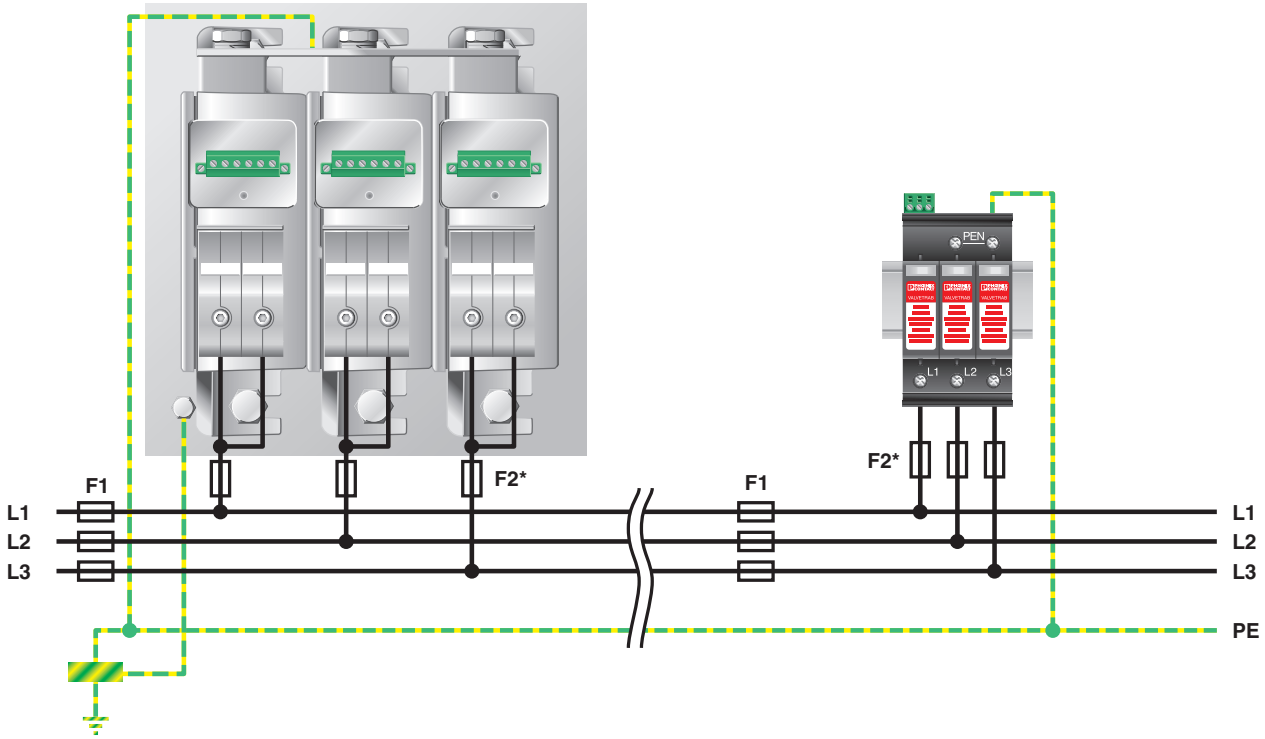

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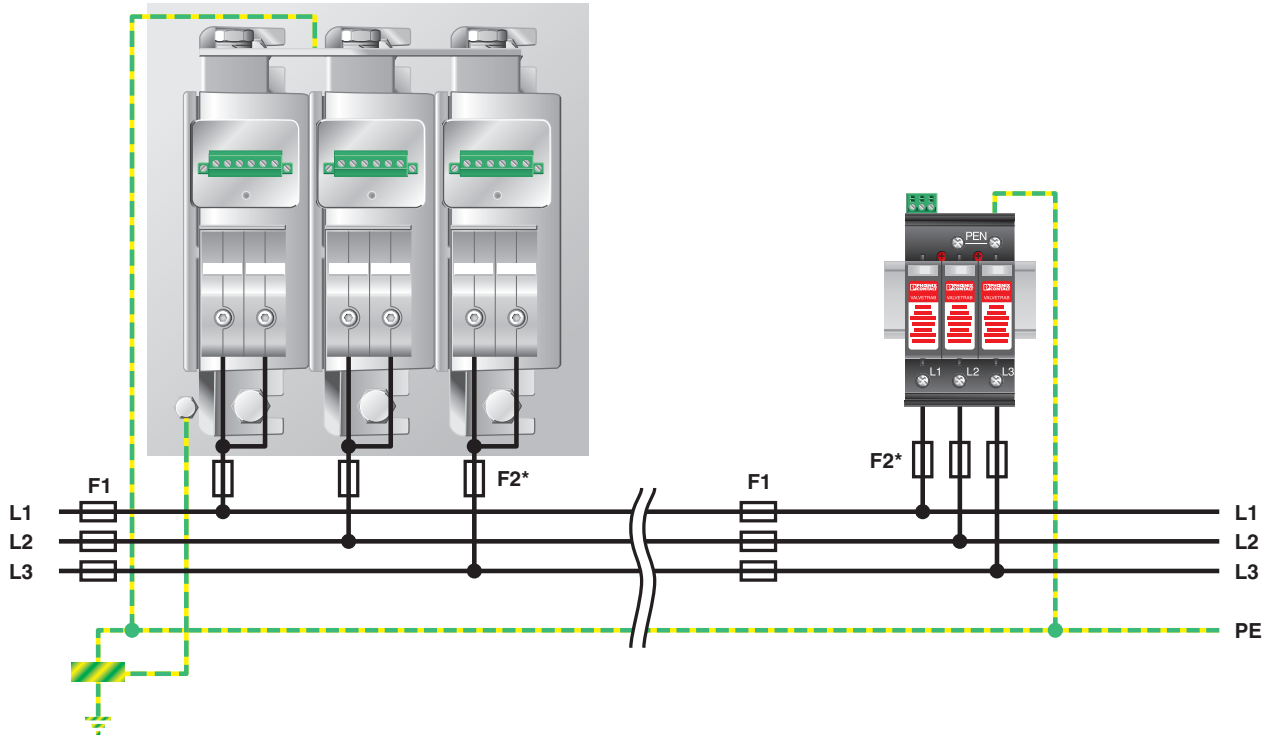

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