

Surge protection device - PT-IQ-3-HF+F-12DC-UT - 2800995


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Surge protection, consisting of protective plug and base element, with integrated multi-stage status indicator on the module for three signal wires with common reference potential. For HF applications and telecommunications interfaces without supply voltage (up to 90 Mbps).



Key Commercial Data

Packing unit	1 pc
GTIN	 4 046356 667418
GTIN	4046356667418

Technical data

Dimensions

Height	91.1 mm
Width	17.7 mm
Depth	77.5 mm (incl. DIN rail 7.5 mm)
Horizontal pitch	1 Div.

Ambient conditions

Ambient temperature (operation)	-40 °C ... 70 °C
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Altitude	≤ 4000 m (amsl (above mean sea level))
Degree of protection	IP20

General

Housing material	PA 6.6
Flammability rating according to UL 94	V-0
Color	jet black RAL 9005
Standards for clearances and creepage distances	IEC 60664-1
Mounting type	DIN rail: 35 mm

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Technical data

General

Type	DIN rail module, two-section, divisible
Direction of action	Line-Line & Line-Signal Ground/Shield & optional Signal Ground/Shield-Earth Ground

Protective circuit

IEC test classification	C1
	C2
	C3
	D1
Nominal voltage U_N	12 V DC
Maximum continuous voltage U_C	15 V DC
	10 V AC
Rated current	600 mA (40 °C)
Operating effective current I_C at U_C	$\leq 100 \mu\text{A}$ (per path)
Residual current I_{PE}	$\leq 10 \mu\text{A}$
Nominal discharge current I_n (8/20) μs (line-line)	10 kA
Nominal discharge current I_n (8/20) μs (line-earth)	10 kA
Pulse discharge current I_{imp} (10/350) μs (line-earth)	2.5 kA
Pulse discharge current I_{imp} (10/350) μs (line-signalground)	2.5 kA
Total discharge current I_{total} (8/20) μs	20 kA
Voltage protection level U_p (line-line)	$\leq 40 \text{ V}$ (C3 - 25 A)
	$\leq 90 \text{ V}$ (C1 - 1 kV/500 A)
	$\leq 145 \text{ V}$ (C2 - 10 kV / 5 kA)
	$\leq 40 \text{ V}$ (C3 - 50 A)
Voltage protection level U_p (line-earth)	$\leq 900 \text{ V}$ (C3 - 25 A)
	$\leq 730 \text{ V}$ (C1 - 1 kV/500 A)
	$\leq 900 \text{ V}$ (C2 - 10 kV / 5 kA)
	$\leq 900 \text{ V}$ (C3 - 50 A)
Voltage protection level U_p (line-signalground)	$\leq 90 \text{ V}$ (C1 - 1 kV/500 A)
	$\leq 145 \text{ V}$ (C2 - 10 kV / 5 kA)
	$\leq 40 \text{ V}$ (C3 - 25 A)
	$\leq 40 \text{ V}$ (C3 - 50 A)
Voltage protection level U_p static (line-line)	$\leq 55 \text{ V}$ (C1 - 1 kV/500 A)
Voltage protection level U_p static (line-signalground)	$\leq 55 \text{ V}$ (C1 - 1 kV/500 A)
Response time t_A (line-line)	$\leq 1 \text{ ns}$
Response time t_A (line-signalground)	$\leq 1 \text{ ns}$
Response time t_A (line-earth)	$\leq 100 \text{ ns}$
Input attenuation aE, sym.	typ. 0.3 dB ($\leq 10 \text{ MHz}/150 \Omega$)
Input attenuation aE, asym.	typ. 0.3 dB ($\leq 10 \text{ MHz}/150 \Omega$)
Cut-off frequency f_g (3 dB), sym. in 150 Ohm system	typ. 60 MHz
Cut-off frequency f_g (3 dB), asym. (GND) in 150 Ohm system	typ. 60 MHz

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Protective circuit

Capacity (line-line)	typ. 30 pF
Capacity (line-signalground)	typ. 30 pF
Resistance in series	1.2 Ω ±5 %
Surge protection fault message	Optical, multi-stage
Max. required back-up fuse	600 mA (FF)
Impulse durability (line-line)	C1 - 1 kV/500 A C2 - 10 kV/5 kA C3 - 50 A
Impulse durability (line-earth)	C1 - 1 kV/500 A C2 - 10 kV/5 kA C3 - 50 A D1 - 2.5 kA
Impulse durability (line-signalground)	C1 - 1 kV/500 A C2 - 10 kV/5 kA C3 - 50 A D1 - 2,5 kA
Pulse reset time (line-line)	≤ 15 ms
Pulse reset time (line-earth)	≤ 15 ms
Pulse reset time (line-signalground)	≤ 15 ms

Connection data

Connection method	Screw connection
Screw thread	M3
Tightening torque	0.5 Nm
Stripping length	8 mm
Conductor cross section flexible	0.2 mm ² ... 2.5 mm ²
Conductor cross section solid	0.2 mm ² ... 4 mm ²
Conductor cross section AWG	24 ... 12

Connection, equipotential bonding

Connection method	DIN rail NS35
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Standards and Regulations

Standards/specifications	IEC 61643-21 2000 + A1:2008 + A2:2012
	EN 61643-21 2001 + A1:2009
	EN 61000-6-2 2007 + A1:2011
	EN 61000-6-3 2005

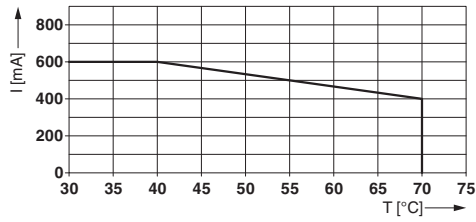
Environmental Product Compliance

REACH SVHC	Lead 7439-92-1
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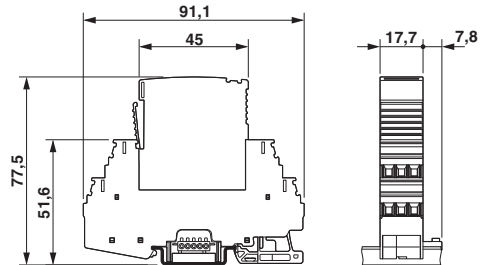
Drawings

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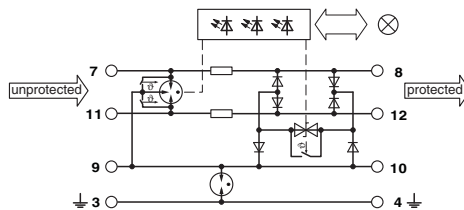
Diagram



Dimensional drawing



Circuit diagram



Approvals

Approvals

Approvals

UL Listed

Ex Approvals

Approval details

UL Listed



<http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm>

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