Extract from the online catalog

VAL-MS 230/3+1 FM

Order No.: 2838199

http://eshop.phoenixcontact.ae/phoenix/treeViewClick.do?UID=2838199

Surge voltage arrester consisting of base element with remote indicator contact and ground connectors, for mounting on NS 35/7.5, nominal voltage: 230 V AC, 3 + 1 circuit

Commercial data	
EAN	4017918172800
Pack	1 pcs.
Customs tariff	85363030
Weight/Piece	405.50 g
Catalog page information	Page 30 (TT-2009)

Product notes

WEEE/RoHS-compliant since: 2006-06-27

Please note that the data given here has been taken from the online catalog. For comprehensive information and data, please refer to the user documentation at http://www.download.phoenixcontact.com. The General Terms and Conditions of Use apply to Internet downloads.

Technical data

Standards

Housing material	PBT / PA
Inflammability class acc. to UL 94	V0
Color	black
Standards for air and creepage distances	DIN EN 60664-1
Degree of protection	IP20

Mounting type	DIN rail 35 mm
Design	DIN rail module, two-section, divisible
Number of positions	4
Ambient temperature (operation)	-40 °C ... 80 °C
Message surge protection faulty	Optical, remote indicator contact
Direction of action	3L-N & N-PE
Width	70.80 mm
Height	65.50 mm
Length	96.80 mm
Pitch unit	4 Div.

Protective circuit

IEC category	II
	T2
EN type	T2
Nominal voltage U_N	230 V AC (Max. 240/415 V AC)
	400 V AC
	230 V AC ... 415 V AC
Arrester rated voltage U_C	275 V AC
Arrester rated voltage U_C (L-N)	275 V AC
Arrester rated voltage U_C (N-PE)	260 V AC
U_T (TOV-proof)	335 V AC (5 s / L-N)
	1200 V AC (200 ms / N-PE)
Nominal frequency f_N	50 Hz (60 Hz)
Discharge current to PE at U_C	≤ 1 µA
Standby power consumption P_C	≤ 360 mVA
Max. discharge surge current Imax (8/20) µs	40 kA
Max. discharge surge current Imax (8/20) µs maximum (L-N)	40 kA
Max. discharge surge current Imax (8/20) µs maximum (L-PE)	40 kA
Max. discharge surge current Imax (8/20) µs maximum (N-PE)	40 kA
Nominal discharge surge current I_n (8/20) µs (L-N)	20 kA
Nominal discharge surge current In (8/20) µs (L-PE)	20 kA
Nominal discharge surge current I_n (8/20) µs (N-PE)	20 kA

Lightning test current (10/350) µs, peak value I_{imp}	12 kA (N-PE)
Impulse operate voltage at 6 kV (1.2/50)µs (N-PE)	≤ 1.5 kV
Protection level U_P (L-N)	≤ 1.35 kV
Protection level U_P (L-PE)	≤ 1.6 kV
Protection level UP (N-PE)	≤ 1.5 kV
Residual voltage (L-N)	≤ 1.35 kV (at In)
	≤ 1.2 kV (at 10 kA)
	≤ 1.1 kV (at 5 kA)
	≤ 0.95 kV (at 3 kA)
Residual voltage (L-PE)	≤ 1.6 kV (at In)
	≤ 1.35 kV (at 10 kA)
	≤ 1.2 kV (at 5 kA)
	≤ 1 kV (at 3 kA)
Residual voltage (N-PE)	≤ 0.4 kV (at In)
	≤ 0.25 kV (at 10 kA)
	≤ 0.15 kV (at 5 kA)
	≤ 0.1 kV (at 3 kA)
Clamping voltage SVR (L-N)	≤ 0.9 kV (6kV - 500 A)
Clamping voltage SVR (L-PE)	≤ 1.2 kV (6kV - 500 A)
Clamping voltage SVR (N-PE)	≤ 1 kV (6kV - 500 A)
Response time (L-N)	≤ 25 ns
Response time (L-PE)	≤ 100 ns
Response time (N-PE)	≤ 100 ns
Max. required backup fuse with branch wiring	125 A (gL)
Short-circuit resistance I_{CC} with max. backup fuse (effective)	25 kA
Follow current quenching capacity If (N-PE)	100 A (260 V)

Remote indicator contact

Connection name	Remote fault indicator contact
Switching function	PDT contact
Type of connection	Screw connection
Screw thread	M2
Tightening torque	0.25 Nm
Stripping length	7 mm
Conductor cross section stranded min.	0.14 mm²

Conductor cross section stranded max.	1.5 mm²
Conductor cross section solid min.	0.14 mm²
Conductor cross section solid max.	1.5 mm²
Conductor cross section AWG/kcmil min.	28
Conductor cross section AWG/kcmil max	16
Maximum operating voltage $U_{max.}$ AC	250 V AC
Maximum operating voltage U_{max} DC	30 V DC
Max. operating current I_{max}	0.75 A (250 V AC)
	3 A (125 V AC)
	2 A (30 V DC)
Min. permissible switching capacity	0.12 VA (12 V, 10 mA)

Environmental conditions

Standards/regulations	IEC 61643-1
	DIN EN 61643-11/A11

Certificates

Certification	CB, CCA, CUL, GOST, KEMA, OEVE, UL

CUL

Nominal voltage U_N	230 V

UL

Nominal voltage U_N	230 V

Accessories

Item	Designation	Description
Bridges		
2809209	MPB 18/1- 2	Wiring bridge for modules with connecting pitch 17.5 mm, 1-phase, 2-pos.
2809212	MPB 18/1- 3	Wiring bridge for modules with connecting pitch 17.5 mm, 1-phase, 3-pos.
2809225	MPB 18/1- 4	Wiring bridge for modules with connecting pitch 17.5 mm, 1-phase, 4-pos.

2748564	MPB 18/1- 6	Wiring bridge for modules with connecting pitch 17.5 mm, 1-phase, 6-pos.
2748577	MPB 18/1- 8	Wiring bridge for modules with connecting pitch 17.5 mm, 1-phase, 8-pos.
2748580	MPB 18/1- 9	Wiring bridge for modules with connecting pitch 17.5 mm, 1-phase, 9-pos.
2748593	MPB 18/1-12	Wiring bridge for modules with connecting pitch 17.5 mm, 1-phase, 12-pos.
2809238	MPB 18/1-57	Wiring bridge for modules with connecting pitch 17.5 mm, 1-phase, 57-pos.
2809283	MPB 18/4- 8	Wiring bridge for modules with connecting pitch 17.5 mm, 4-phase, 8-pos.
2809283	MPB 18/4- 8	Wiring bridge for modules with connecting pitch 17.5 mm, 4-phase, 8-pos.
2809296	MPB 18/4-12	Wiring bridge for modules with connecting pitch 17.5 mm, 4-phase, 12-pos.
2809296	MPB 18/4-12	Wiring bridge for modules with connecting pitch 17.5 mm, 4-phase, 12-pos.
2818339	MPB F200X16/ 1GS	Wiring bridge flexible, diameter 16 mm², with a fork-type cable lug on one side, length: 200 mm
2818339	MPB F200X16/ 1GS	Wiring bridge flexible, diameter 16 mm², with a fork-type cable lug on one side, length: 200 mm
2818342	MPB F400X16/ 1GS	Wiring bridge flexible, diameter 16 mm², with a fork-type cable lug on one side, length: 400 mm
2818342	MPB F400X16/ 1GS	Wiring bridge flexible, diameter 16 mm², with a fork-type cable lug on one side, length: 400 mm
2818355	MPB F600X16/ 1GS	Wiring bridge flexible, diameter: 16 mm², with a fork-type cable lug on one side, length: 600 mm
2818355	MPB F600X16/ 1GS	Wiring bridge flexible, diameter: 16 mm², with a fork-type cable lug on one side, length: 600 mm

General

2749880	DK-BIC-35	Feed-through terminal block for VAL and FLT applications

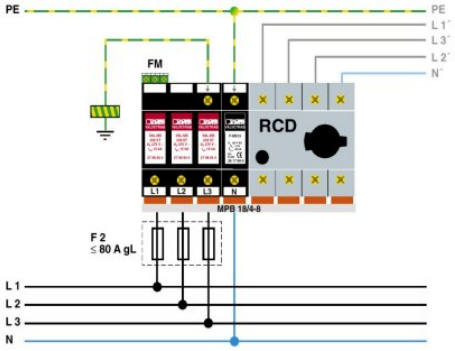
Marking

1051993	B-STIFT	Marker pen, for manual labeling of unprinted Zack strips, smear-proof and waterproof, line thickness 0.5 mm
2749589	ZBN 18,LGS:ERDE	Marking labels, printed horizontally, strips with 5 labels, GND (grounding symbol), color: White
2749576	ZBN 18,LGS:L1-N,ERDE	Marker labels, printed horizontally, strips with 5 labels, L1, L2, L3, N, GND, color: white
0800763	ZBN 18:SO/CMS	Marker labels, 5-section, special printing, labeled according to customer requirements (Please specify the required marking with order), for terminal width: 17.5 mm, color: White

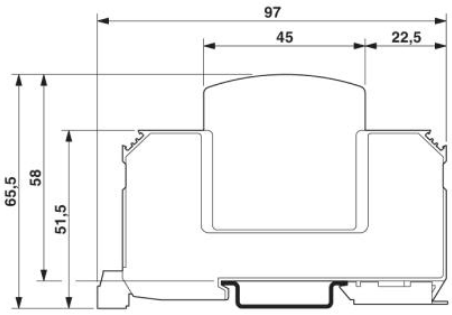
2809128	ZBN 18:UNBEDRUCKT	Unprinted marker labels, strips with 5 labels for individual labeling with M-PEN or CMS system, for terminal block width: 17.5 mm, color: White

Drawings

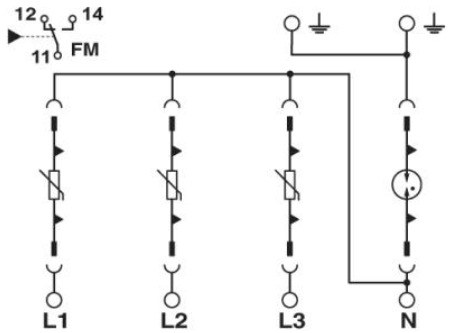
Application drawing



Dimensioned drawing



Circuit diagram



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