

VAL-MS 320/3+1/FM

Order No.: 2859181

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Surge voltage arrester combination 4-channel, for mounting on NS 35/7.5, with remote indicator contact as PDT, voltage 230 V AC



Commercial data	
EAN	4017918911218
Pack	1 pcs.
Customs tariff	85363030
Weight/Piece	0.4111 KG
Product key	07022
Catalog page information	Page 30 (TT-2009)

Product notes

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



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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
Surge voltage category	III
Pollution degree	2
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	335 V AC
Arrester rated voltage U_C (L-N)	335 V AC
Arrester rated voltage U_C (N-PE)	260 V AC
U_T (TOV-proof)	415 V AC (5 s / L-N)
	1200 V AC (200 ms / N-PE)
Nominal frequency f_N	50 Hz (60 Hz)
Ground conductor current I_{PE}	$\leq 1 \mu A$
Standby power consumption P_C	$\leq 360 \text{ mVA}$
Max. discharge surge current I_{max} (8/20) μs	40 kA
Max. discharge surge current I_{max} (8/20) μs maximum (L-N)	40 kA
Max. discharge surge current I_{max} (8/20) μs maximum (L-PE)	40 kA
Max. discharge surge current I_{max} (8/20) μs maximum (N-PE)	40 kA

Nominal discharge surge current I_n (8/20) μ s (L-N)	20 kA
Nominal discharge surge current I_n (8/20) μ s (L-PE)	20 kA
Nominal discharge surge current I_n (8/20) μ s (N-PE)	20 kA
Lightning test current (10/350) μ s, peak value I_{imp}	12 kA (N-PE)
Impulse operate voltage at 6 kV (1.2/50) μ s (N-PE)	≤ 1.5 kV
Protection level U_p (L-N)	≤ 1.6 kV
Protection level U_p (L-PE)	≤ 1.75 kV
Protection level U_p (N-PE)	≤ 1.5 kV
Residual voltage (L-N)	≤ 1.6 kV (at I_n) ≤ 1.35 kV (at 10 kA) ≤ 1.25 kV (at 5 kA) ≤ 1.2 kV (at 3 kA)
Residual voltage (L-PE)	≤ 1.75 kV (at I_n) ≤ 1.45 kV (at 10 kA) ≤ 1.35 kV (at 5 kA) ≤ 1.25 kV (at 3 kA)
Residual voltage (N-PE)	≤ 0.4 kV (at I_n) ≤ 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_p with max. backup fuse (effective)	25 kA
Follow current quenching capacity I_f (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 mm ²
Conductor cross section stranded max.	1.5 mm ²
Conductor cross section solid min.	0.14 mm ²
Conductor cross section solid max.	1.5 mm ²
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 / Approvals



Certification

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

Accessories

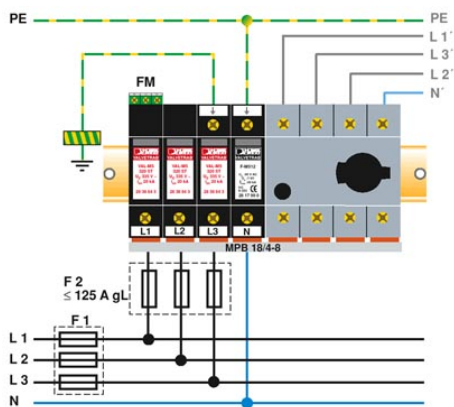
Item	Designation	Description
Bridges		
2809283	MPB 18/4- 8	Wiring bridge for modules with connecting pitch 17.5 mm, 4-phase, 8-pos.
2809296	MPB 18/4-12	Wiring bridge for modules with connecting pitch 17.5 mm, 4-phase, 12-pos.
General		
2749880	DK-BIC-35	Feed-through terminal block for VAL and FLT applications

Marking

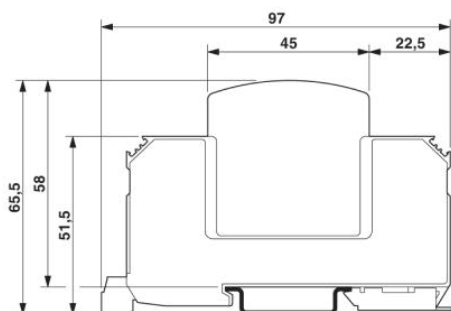
1051993	B-STIFT	Marker pen, for manual labeling of unprinted Zack strips, smear-proof and waterproof, line thickness 0.5 mm
2749589	ZBN 18,LGS:ERDE	Marking labels, printed horizontally, strips with 5 labels, GND (grounding symbol), color: White
2749576	ZBN 18,LGS:L1-N,ERDE	Marker labels, printed horizontally, 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

Diagrams/Drawings

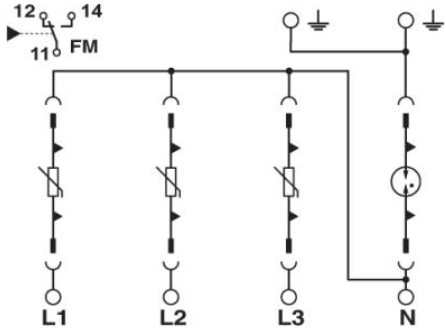
Application drawing



Dimensioned drawing



Circuit diagram



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