

Type 2 surge protection device - VAL-MS 60/FM - 2868033

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Surge arrester consisting of base element with remote indicator contact and protective connector with high-capacity varistor, for mounting on NS 35/7.5, 1-channel

Product Features

- Single-channel, DIN-rail mountable protective devices
- Disconnect device on each individual plug
- Base element with/without floating remote indication contact
- Consists of base element and plug
- Mechanical coding of all slots
- Optical, mechanical status indication for the individual arresters



Key commercial data

package_quantity	1
GTIN	4017918930059

Technical data

Dimensions

Height	96.8 mm
Width	17.7 mm
Depth	65.5 mm
Pitch unit	1 Div.

Ambient conditions

Degree of protection	IP20
Ambient temperature (operation)	-40 °C ... 80 °C
Permissible humidity (operation)	5 % ... 95 %

General

Housing material	PA
Inflammability class according to UL 94	V0
Color	black
Standards for air and creepage distances	DIN EN 60664-1
Standards for air and creepage distances	EN 61643-11

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Technical data

General

Mounting type	DIN rail: 35 mm
Design	DIN rail module, two-section, divisible
Number of positions	1
Message: Surge protection fault	Optical, remote indicator contact
Direction of action	1L-N/PE

Protective circuit

IEC test classification	II
IEC test classification	T2
EN type	T2
Nominal voltage U_N	60 V AC/DC
Nominal voltage U_N	- 48 V DC (RRH)
Nominal voltage U_N	30 V DC (L/R: 20-60 ms)
Nominal voltage U_N	60 V DC (L/R: 10-20 ms)
Maximum continuous operating voltage U_C	75 V AC
Maximum continuous operating voltage U_C	100 V DC
Maximum continuous operating voltage U_C (L-N)	75 V AC
Maximum continuous operating voltage U_C (L-PEN)	75 V AC
U_T (TOV-proof)	100 V AC (5 s)
Nominal frequency f_N	50 Hz
Nominal frequency f_N	60 Hz
Residual current I_{PE}	≤ 0.45 mA
Standby power consumption P_C	≤ 35 mVA
Max. discharge current I_{max} (8/20) μs	40 kA
Max. discharge current I_{max} (8/20) μs maximum (L-N)	40 kA
Max. discharge current I_{max} (8/20) μs maximum (L-PEN)	40 kA
Nominal discharge current I_n (8/20) μs	15 kA
Nominal discharge current I_n (8/20) μs (L-N)	15 kA
Nominal discharge current I_n (8/20) μs (L-PEN)	15 kA
Impulse discharge current (10/350) μs, charge	2 As
Impulse discharge current (10/350) μs, peak value I_{imp}	4 kA
Max. energy absorption (2 ms)	190 J
Voltage protection level U_p	≤ 500 V
Voltage protection level U_p (L-N)	≤ 500 V
Voltage protection level U_p (L-PEN)	≤ 500 V
Residual voltage	≤ 500 V
Residual voltage	≤ 325 V (at 5 kA)
Residual voltage	≤ 275 V (at 3 kA)
Residual voltage (L-N)	≤ 325 V (at 5 kA)
Residual voltage (L-PEN)	≤ 325 V (at 5 kA)
Response time	≤ 25 ns

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Protective circuit

Response time (L-N)	≤ 25 ns
Response time (L-PEN)	≤ 25 ns
Max. required backup fuse with branch wiring	125 A (gG / AC)
Max. required backup fuse with branch wiring	50 A DC (gL/gG)
Short-circuit resistance I _p with max. backup fuse (effective)	25 kA (AC)
Capacity	11 nF ±30 %

Connection, protective circuit

Connection method	Screw connection
Connection type IN	Biconnect screw terminal block
Connection type OUT	Biconnect screw terminal block
Screw thread	M5
Tightening torque	4.5 Nm
Tightening torque	30 lb in (UL)
Stripping length	14.5 mm
Conductor cross section stranded min.	1.5 mm ²
Conductor cross section stranded max.	25 mm ²
Conductor cross section solid min.	1.5 mm ²
Conductor cross section solid max.	35 mm ²
Conductor cross section AWG/kcmil min.	15
Conductor cross section AWG/kcmil max	2
AWG conductor cross section	10 ... 2 (UL)

Remote indicator contact

Connection name	Remote fault indicator contact
Switching function	PDT, 1-pos.
Connection method	Screw connection
Screw thread	M2
Tightening torque	0.25 Nm
Tightening torque	4 lb in (UL)
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
AWG conductor cross section	30 ... 14 (UL)
Maximum operating voltage U _{max} AC	250 V AC
Maximum operating voltage U _{max} DC	30 V DC
Max. operating current I _{max}	1 A AC (250 V AC)
Max. operating current I _{max}	1 A DC (30 V DC)

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Remote indicator contact

Min. permissible switching capacity	0.12 VA (12 V, 10 mA)
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Standards and Regulations

Standards/regulations	IEC 61643-1 2005
Standards/regulations	EN 61643-11/A11 2007

classifications

eCl@ss

eCl@ss 4.0	27140201
eCl@ss 4.1	27130801
eCl@ss 5.0	27130801
eCl@ss 5.1	27130801
eCl@ss 6.0	27130805
eCl@ss 7.0	27130805
eCl@ss 8.0	27130805

ETIM

ETIM 2.0	EC000941
ETIM 3.0	EC000941
ETIM 4.0	EC000941
ETIM 5.0	EC000941

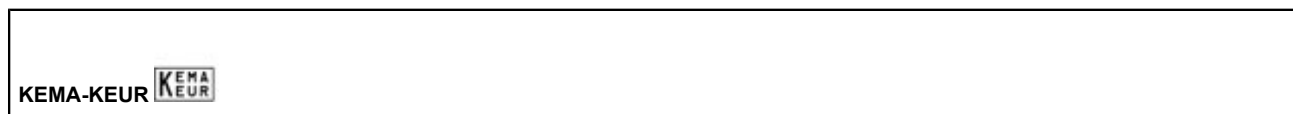
UNSPSC

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

approvals

UL Recognized / KEMA-KEUR / cUL Recognized / GOST / cULus Recognized /

Approval details




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approvals

cUL Recognized 

GOST 

cULus Recognized 

accessories

Labeled device marker

ZBN 18,LGS:ERDE - 2749589



ZBN 18,LGS:L1-N,ERDE - 2749576



Device marking

ZBN 18:UNBEDRUCKT - 2809128



Marker pen

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accessories

B-STIFT - 1051993



Feed-through terminal block

DK-BIC-35 - 2749880



Bridge

MPB 18/1- 2 - 2809209



MPB 18/1- 3 - 2809212



MPB 18/1- 4 - 2809225



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accessories

MPB 18/1- 6 - 2748564



MPB 18/1- 7 BU - 2856278



MPB 18/1- 8 BU - 2858470



MPB 18/1- 8 - 2748577



MPB 18/1- 9 - 2748580



MPB 18/1-12 - 2748593



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accessories

MPB 18/1-57 - 2809238



MPB 18/3- 6 - 2809241



MPB 18/3- 9 - 2809254



MPB 18/4- 8 - 2809283



MPB 18/4-12 - 2809296



Type 2 surge protection device - VAL-MS 60/FM - 2868033

accessories

MPB F200X16/ 1GS - 2818339



MPB F400X16/ 1GS - 2818342



MPB F600X16/ 1GS - 2818355



MPB F600X16/ 1GS - 2818355



MPB F400X16/ 1GS - 2818342



MPB F200X16/ 1GS - 2818339



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accessories

MPB 18/1-10/1.0.0 - 2830443



MPB 18/1-20/1.2.5 - 2830168



MPB 18/4-12 - 2809296



MPB 18/4- 8 - 2809283



MPB 18/3- 6 - 2809241



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accessories

MPB 18/1-57 - 2809238



MPB 18/1-12 - 2748593



MPB 18/1- 9 - 2748580



MPB 18/1- 8 - 2748577



MPB 18/1- 6 - 2748564



MPB 18/1- 4 - 2809225



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accessories

MPB 18/1- 3 - 2809212



MPB 18/1- 2 - 2809209



accessories

ZBN 18:SO/CMS - 0800763



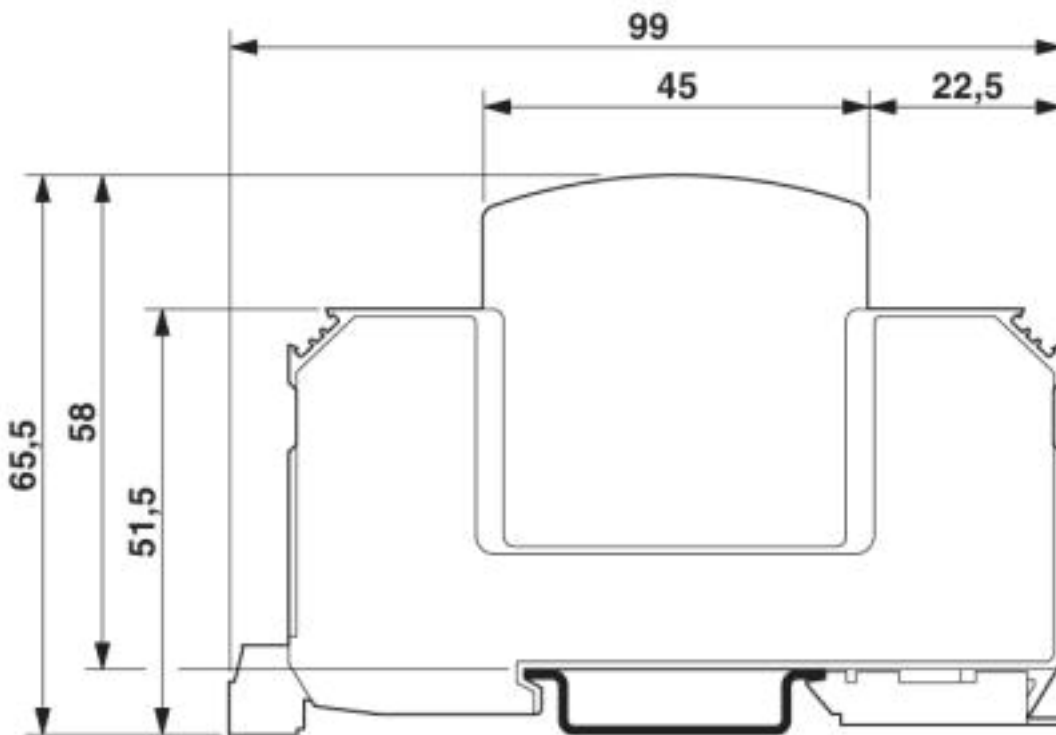
ZBN 18,LGS:L1-N,ERDE - 2830469



Drawings

Type 2 surge protection device - VAL-MS 60/FM - 2868033

Dimensioned drawing



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Circuit diagram

