

Surge Voltage Arrester for the Power Supply

VALVETRAB VAL-MS .../3+1...

VALVETRAB VAL-MS .../3+1... are arrester class C combinations.

The protection modules simplify the choice and installation of surge voltage arresters for TT and TN power supply systems. The protective modules consist of a four-channel VALVETRAB base element and three VAL-MS .. ST plugs to provide protection between the phases and N, and with the pluggable N-PE spark gap, F-MS 12 ST.

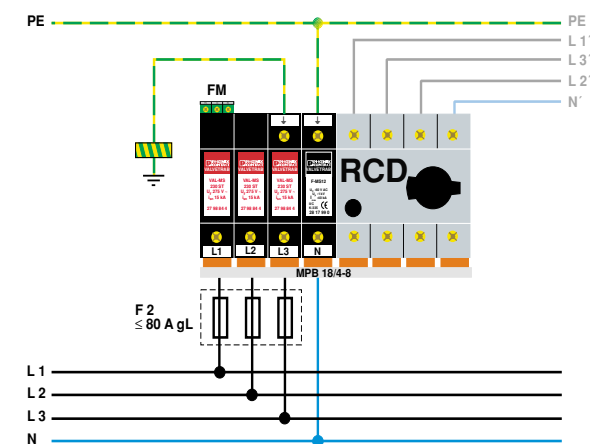
VALVETRAB VAL-MS .../3+1...-UD facilitates mounting with feed lines from the top. See also the application below. Two installation blocks with mounted components and VAL-MS 120-UD ST or VAL-MS 320-UD ST connectors are available.

The VAL-MS/3+1... base elements can be fitted with protective plugs of other nominal voltages to suit individual requirements.

The VAL-MS .../.. FM version also has a PDT contact as signal generator for the fault warning.

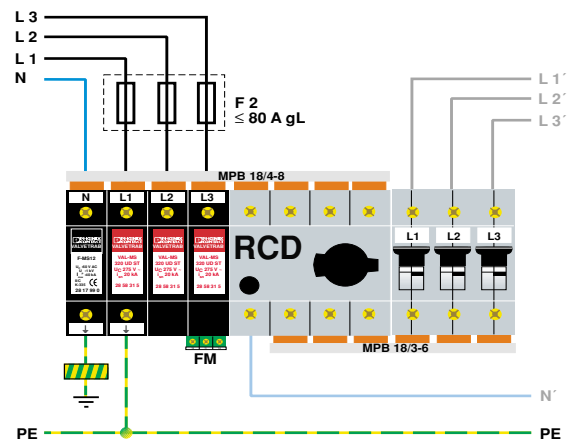


Feed from below



Installation VAL-MS .../3+1-FM

Feed from above



Installation VAL-MS .../3+1-FM-UD

VALVETRAB, VAL-MS .../3+1

4-channel surge voltage arrester
combination in 3+1 circuit



Description

VALVETRAB, surge voltage arrester combination,
4-channel for mounting on ,
with remote indicator contact as PDT 230 V AC
230 V AC

VALVETRAB, base element, for mounting on ,
without remote indicator contact,
with remote indicator contact

VALVETRAB, replacement plug,
can be plugged into the base element

Wiring bridge, (see TRABTECH catalog)

Marker labels, (see TRABTECH catalog)

Technical data

IEC category:/ VDE requirement class/EN type:

Nominal voltage U_N :

Arrester rated voltage U_C :

Nominal discharge surge current I_n (8/20) μ s:

Max. discharge surge current I_{max} (8/20) μ s

Protection level U_p at I_n :

Residual voltage at 5 kA:

Quenching short circuit voltage without back-up fuse:

Back-up fuse:

Response time t_a :

Discharge current / Operating current:

Temperature range:

Degree of protection in acc. with IEC 60 529/EN 60 529:

Insulation housing:

Inflammability class in acc. with UL 94:

Remote indicator contact: PDT

Screw thread:

Torque:

AEC compatible with lightning arresters (I / B)

Approvals:

Test standards:

Type

Order No.

Pcs.
Pkt.

VAL-MS 230/3+1
VAL-MS 230/3+1-FM

28 38 20 9
28 38 19 9

1
1

VAL-MS/3+1-BE
VAL-MS/3+1-BE/FM

28 38 88 5
28 38 89 8

1
1

VAL-MS 230 ST¹⁾
F-MS 12 ST²⁾

27 98 84 4
28 17 99 0

10
10

MPB ...

ZBN 18, ...

II / C / **T2**

AC 230 V/400 V

AC 275 V (L-N)/ 260 V (N-PE)

20 kA

40 kA

L-N/L- $\frac{1}{2}$ /N- $\frac{1}{2}$ ≤ 1.4 kV/ ≤ 1.6 kV/ ≤ 1 kV

L-N/L- $\frac{1}{2}$ /N- $\frac{1}{2}$ ≤ 1.1 kV/ ≤ 1.2 kV/ ≤ 150 V

200 A_{rms} (N-PE)

125 A gL

≤ 100 ns

≤ 1 μ A

VAL... // VAL.../FM - 40 °C to + 80 °C // - 25 °C to + 65 °C

IP 20

PA/PC

V0

I_{max} DC 0.75 A (250 V)/3 A (125 V)

I_{max} AC 2 A (30 V)

M 5/M 2

3.5 Nm/0.25 Nm

 0.9

1)          

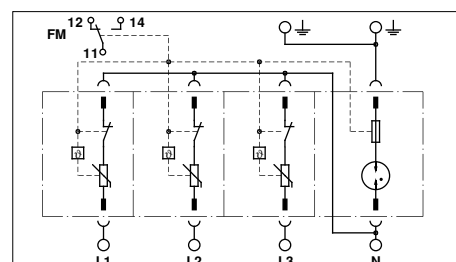
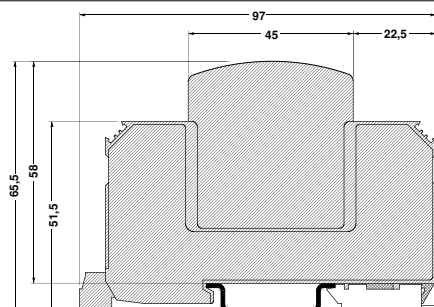
IEC 61643-1:1998-02, pr EN 61 643-1

E DIN VDE 0675 part 6:1989-11/A1:1996-03/A2:1996-10

UL 1449 ed.2

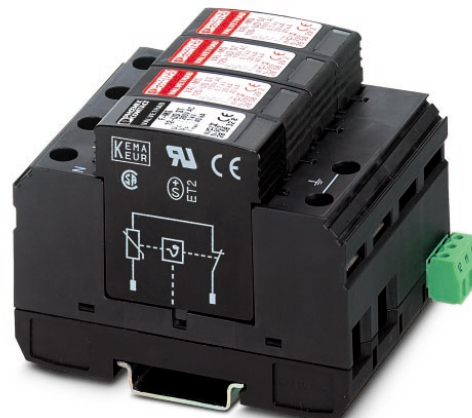
0.5-35 mm²/ 0.5-25 mm²/ 20-2 // 0.14-1.5 mm²/0.14-1.5 mm²/28-16

Connection data: arrester // remote ind. contact rigid / flexible / AWG



VALVETRAB, VAL-MS .../3+1...-UD

4-channel surge voltage arrester
combination in 3+1 circuit



Description

VALVETRAB, surge voltage arrester combination,
4-channel for mounting on , with
remote indicator contact as PDT (N/C-N/O)

120 V AC
320 V AC

VALVETRAB, replacement plug,
can be plugged into the base element

Wiring bridge, (see TRABTECH catalog)

Marker labels, (see TRABTECH catalog)

Technical data

IEC category:/ VDE requirement class/EN type:

Nominal voltage U_N : AC

Arrester rated voltage U_C : AC

Nominal discharge surge current I_n (8/20) μ s:

Max. discharge surge current I_{max} (8/20) μ s

Protection level U_p at I_n : L-N/L- $\frac{1}{2}$ -N- $\frac{1}{2}$

Residual voltage at 5 kA: L-N/L- $\frac{1}{2}$ -N- $\frac{1}{2}$

Quenching short circuit voltage without back-up fuse:

Back-up fuse:

Response time t_a :

Discharge current / Operating current:

Temperature range:

Degree of protection in acc. with IEC 60 529/EN 60 529:

Insulation housing:

Inflammability class in acc. with UL 94:

Remote indicator contact: PDT

I_{max} DC

I_{max} AC

Screw thread:

Torque:

AEC compatible with lightning arresters (I / B)

Approvals:

Test standards:

Connection data: arrester // remote ind. contact rigid / flexible / AWG

Type

Order No.

Pcs.
Pkt.

VAL-MS 120/3+1/FM-UD

VAL-MS 320/3+1/FM-UD

28 56 69 2

28 56 68 9

1

1

VAL-MS 120-UD ST

VAL-MS 320-UD ST

F-MS 12 ST

28 58 29 2

28 58 31 5

28 17 99 0

10

10

10

MPB ...

ZBN 18, ...

VAL-MS 120/3+1/FM-UD

VAL-MS 320/3+1/FM-UD

II / C / T_2

120/208 V

150 V (L-N)/ 260 V (N-PE)

20 kA

40 kA

≤ 0.85 kV/ ≤ 1.05 kV/ ≤ 1 kV

≤ 0.7 kV/ ≤ 0.8 kV/ ≤ 0.15 kV

200 A_{rms} (N-PE)

125 A gL

≤ 100 ns

≤ 1 μ A

- 25 °C to + 65 °C

IP 20

PBT/PA

V0

0.75 A (250 V)/3 A (125 V)

2 A (30 V)

M 5/M 2

3.5 Nm/0.25 Nm

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0.5-35 mm²/ 0.5-25 mm²/ 20-2 // 0.14-1.5 mm²/0.14-1.5 mm²/28-16

