

**POWER SUPPLY SYSTEMS****SURGE ARRESTERS – TYPE 2**

SPD Type 2 according to EN 61643-11  
SPD Class II according to IEC 61643-1



For protection of low-voltage consumer's installations against surges.  
For use in the lightning protection zones concept at boundaries  $O_B - 1$   
and higher.

DEHNgard S ...: Pluggable surge arrester, consisting of a base part and plug-in protection module

DEHNgard S ... FM: With remote signalling contact for monitoring device (floating changeover contact)

The universal features characterise the single-pole devices of the DEHNgard S product family. Whether as a single device or in combination with other devices – the DEHNgard S surge arresters always ensure a proper protective circuit. The modern Red/Line family design and its universal features ensure safety and easy application for the user. The module releasing button also characterises the devices of the DEHNgard S series, like the approved Thermo Dynamic Control SPD monitoring device with dual tripping performance.

Experience of decades with the application of surge arresters worldwide has further improved the latest DEHNgard generation compared to the previous types.

The module locking system, which is unique for surge protective devices, fixes the protection modules to the base part. Neither vibrations during transport nor the enormous forces of currents during discharges can loosen the protection modules. And still, the modules can be easily exchanged without tools, if necessary. This is ensured by the user-friendly releasing button of the protection modules.

In order to avoid a wrong supplying by the installer or user when exchanging the protection modules, every base part and protection module has a mechanical coding set by the manufacturer.

**DEHNgard® S / DEHNgard® S FM****Single-pole pluggable Surge Arrester**

- Surge arrester for universal use, consisting of a base part and plug-in protective component
- High discharge capacity due to powerful zinc oxide varistor
- High reliability due to "Thermo Dynamic Control" SPD monitoring device
- Energy-coordinated within the Red/Line product family
- Operating state/fault indication by mark in the inspection window
- Small (modular) design according to DIN 43880
- Multifunctional terminals for connection of conductors and busbars
- Easy exchange of protection modules with module releasing button

Like with all DEHNgard surge arresters, the users of DEHNgard S can rely on the dual monitoring device Thermo Dynamic Control. This provides maximum safety of the devices, even under unfavourable environmental conditions. Readiness for operation of DEHNgard S is indicated by the visual indicator with green and red marks. Apart from the standard visual indicator, DEHNgard S ... FM has a 3-pole terminal for remote signalling. With the remote signalling contact, being a floating changeover contact, the remote signal can be used as a break or make contact, according to circuit concept. The DEHNgard S surge arresters are supplied with multifunctional terminals for connection of conductors and busbars. This allows for easy wiring in connection with other DINrail mountable devices. A series connection according to IEC 60364-5-53, which is optimal for protection, can therefore be performed in many applications.

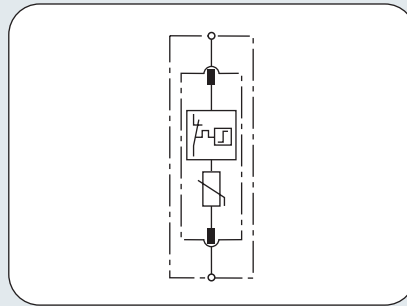


# DEHNgard® S / DEHNgard® S FM

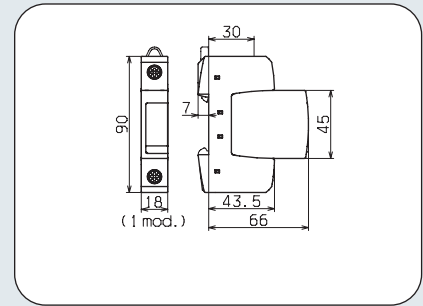
## POWER SUPPLY SYSTEMS SURGE ARRESTERS – TYPE 2

### DEHNgard S ...

**NEW**



Basic circuit diagram DG S ...



Dimension drawing DG S ...

DG S ...: Single-pole pluggable surge arrester consisting of a base part and plug-in protection module

	DG S 75	DG S 150	DG S 275	DG S 320	DG S 385	DG S 440	DG S 600
SPD according to EN 61643-11	Type 2	Type 2	Type 2	Type 2	Type 2	Type 2	Type 2
SPD according to IEC 61643-1	Class II	Class II	Class II	Class II	Class II	Class II	Class II
Max. continuous ac voltage $U_C$	75 V	150 V	275 V	320 V	385 V	440 V	600 V
Max. continuous dc voltage $U_C$	100 V	200 V	350 V	420 V	500 V	585 V	600 V
Nominal discharge current (8/20 $\mu$ s) $I_n$	10 kA	15 kA	20 kA	20 kA	20 kA	20 kA	15 kA
Max. discharge current (8/20 $\mu$ s) $I_{max}$	40 kA	40 kA	40 kA	40 kA	40 kA	40 kA	30 kA
Voltage protection level $U_p$	$\leq 0.4$ kV	$\leq 0.7$ kV	$\leq 1.25$ kV	$\leq 1.5$ kV	$\leq 1.75$ kV	$\leq 2$ kV	$\leq 2.5$ kV
Voltage protection level at 5 kA $U_p$	$\leq 0.35$ kV	$\leq 0.55$ kV	$\leq 1$ kV	$\leq 1.2$ kV	$\leq 1.35$ kV	$\leq 1.7$ kV	$\leq 2$ kV
Response time $t_A$	$\leq 25$ ns	$\leq 25$ ns	$\leq 25$ ns	$\leq 25$ ns	$\leq 25$ ns	$\leq 25$ ns	$\leq 25$ ns
Max. mains-side overcurrent protection	125 A gL/gG	125 A gL/gG	125 A gL/gG	125 A gL/gG	125 A gL/gG	125 A gL/gG	100 A gL/gG
Short circuit withstand capability at max. mains-side overcurrent protection	50 kA <sub>rms</sub>	50 kA <sub>rms</sub>	50 kA <sub>rms</sub>	25 kA <sub>rms</sub>	25 kA <sub>rms</sub>	25 kA <sub>rms</sub>	25 kA <sub>rms</sub>
TOV voltage $U_T$	—	—	335 V / 5 sec.	335 V / 5 sec.	—	580 V / 5 sec.	—
Operating temperature range $T_U$	-40°C...+80°C	-40°C...+80°C	-40°C...+80°C	-40°C...+80°C	-40°C...+80°C	-40°C...+80°C	-40°C...+80°C
Cross-sectional area (min.)	1.5 mm <sup>2</sup> solid/flexible						
Cross-sectional area (max.)	35 mm <sup>2</sup> stranded/25 mm <sup>2</sup> flexible						
Mounting on	35 mm DIN rail acc. to EN 60715						
Enclosure material	red thermoplastic, UL 94 V-0						
Degree of protection	IP 20	IP 20	IP 20	IP 20	IP 20	IP 20	IP 20
Dimension	1 mod., DIN 43880	1 mod., DIN 43880	1 mod., DIN 43880	1 mod., DIN 43880	1 mod., DIN 43880	1 mod., DIN 43880	1 mod., DIN 43880
<b>Ordering information</b>							
Type	DG S 75	DG S 150	DG S 275	DG S 320	DG S 385	DG S 440	DG S 600
Part No.	952 071	952 072	952 070	952 073	952 074	952 075	952 076
Packing unit	1 pc(s)	1 pc(s)	1 pc(s)	1 pc(s)	1 pc(s)	1 pc(s)	1 pc(s)

### Accessory Part for DEHNgard® S / DEHNgard® S FM

#### Varistor-Based Protection Module

DG MOD ...: Varistor-based protection module for DEHNgard M ... and DEHNgard S ... surge arresters

Type DG MOD ...	75	150	275	320	385	440	600
Nominal discharge current (8/20 $\mu$ s) $I_n$	10 kA	15 kA	20 kA	20 kA	20 kA	20 kA	15 kA
Max. continuous ac voltage $U_C$	75 V	150 V	275 V	320 V	385 V	440 V	600 V
Max. continuous dc voltage $U_C$	100 V	200 V	350 V	420 V	500 V	585 V	600 V

Type	PU pc(s)	Part No.
DG MOD 75	1	952 011
DG MOD 150	1	952 012
DG MOD 275	1	952 010
DG MOD 320	1	952 013
DG MOD 385	1	952 014
DG MOD 440	1	952 015
DG MOD 600	1	952 016

**NEW**

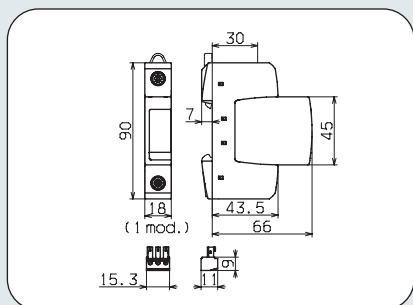


## POWER SUPPLY SYSTEMS

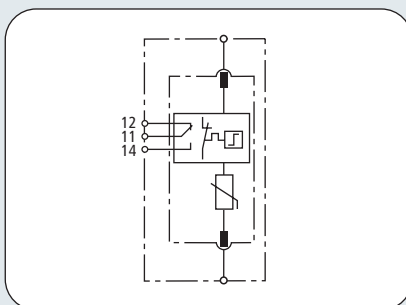
### SURGE ARRESTERS – TYPE 2

## DEHNguard® S / DEHNguard® S FM

### DEHNguard S ... FM



Dimension drawing DG S ... FM



Basic circuit diagram DG S ... FM



DG S ... FM: Single-pole pluggable surge arrester consisting of a base part and plug-in protection module; with floating remote signalling contact

	DG S 75 FM	DG S 150 FM	DG S 275 FM	DG S 320 FM	DG S 385 FM	DG S 440 FM	DG S 600 FM
SPD according to EN 61643-11	Type 2	Type 2	Type 2	Type 2	Type 2	Type 2	Type 2
SPD according to IEC 61643-1	Class II	Class II	Class II	Class II	Class II	Class II	Class II
Max. continuous ac voltage $U_C$	75 V	150 V	275 V	320 V	385 V	440 V	600 V
Max. continuous dc voltage $U_C$	100 V	200 V	350 V	420 V	500 V	585 V	600 V
Nominal discharge current (8/20 $\mu$ s) $I_n$	10 kA	15 kA	20 kA	20 kA	20 kA	20 kA	15 kA
Max. discharge current (8/20 $\mu$ s) $I_{max}$	40 kA	40 kA	40 kA	40 kA	40 kA	40 kA	30 kA
Voltage protection level $U_p$	$\leq 0.4$ kV	$\leq 0.7$ kV	$\leq 1.25$ kV	$\leq 1.5$ kV	$\leq 1.75$ kV	$\leq 2$ kV	$\leq 2.5$ kV
Voltage protection level at 5 kA $U_p$	$\leq 0.35$ kV	$\leq 0.55$ kV	$\leq 1$ kV	$\leq 1.2$ kV	$\leq 1.35$ kV	$\leq 1.7$ kV	$\leq 2$ kV
Response time $t_A$	$\leq 25$ ns	$\leq 25$ ns	$\leq 25$ ns	$\leq 25$ ns	$\leq 25$ ns	$\leq 25$ ns	$\leq 25$ ns
Max. mains-side overcurrent protection	125 A gL/gG	125 A gL/gG	125 A gL/gG	125 A gL/gG	125 A gL/gG	125 A gL/gG	100 A gL/gG
Short circuit withstand capability at max. mains-side overcurrent protection	50 kA <sub>rms</sub>	50 kA <sub>rms</sub>	50 kA <sub>rms</sub>	25 kA <sub>rms</sub>	25 kA <sub>rms</sub>	25 kA <sub>rms</sub>	25 kA <sub>rms</sub>
TOV voltage $U_T$	—	—	335 V / 5 sec.	335 V / 5 sec.	—	580 V / 5 sec.	—
Operating temperature range $T_U$	-40°C...+80°C	-40°C...+80°C	-40°C...+80°C	-40°C...+80°C	-40°C...+80°C	-40°C...+80°C	-40°C...+80°C
Cross-sectional area (min.)	1.5 mm <sup>2</sup> solid/flexible						
Cross-sectional area (max.)	35 mm <sup>2</sup> stranded/25 mm <sup>2</sup> flexible						
Mounting on	35 mm DIN rail acc. to EN 60715						
Enclosure material	red thermoplastic, UL 94 V-0						
Degree of protection	IP 20	IP 20	IP 20	IP 20	IP 20	IP 20	IP 20
Dimension	1 mod., DIN 43880	1 mod., DIN 43880	1 mod., DIN 43880	1 mod., DIN 43880	1 mod., DIN 43880	1 mod., DIN 43880	1 mod., DIN 43880
Type of remote signalling contact	changeover contact						
Switching capacity ac	250 V/0.5 A	250 V/0.5 A	250 V/0.5 A	250 V/0.5 A	250 V/0.5 A	250 V/0.5 A	250 V/0.5 A
Switching capacity dc	250 V/0.1 A; 125 V/0.2 A; 75 V/0.5 A						
Cross-sectional area for remote signalling terminals	max. 1.5 mm <sup>2</sup> solid/flexible						

Ordering information							
Type	DG S 75 FM	DG S 150 FM	DG S 275 FM	DG S 320 FM	DG S 385 FM	DG S 440 FM	DG S 600 FM
Part No.	952 091	952 092	952 090	952 093	952 094	952 095	952 096
Packing unit	1 pc(s)	1 pc(s)	1 pc(s)	1 pc(s)	1 pc(s)	1 pc(s)	1 pc(s)

#### Varistor-Based Protection Module

DG MOD ...: Varistor-based protection module for DEHNguard M ... and DEHNguard S ... surge arresters

Type DG MOD ...	75	150	275	320	385	440	600
Nominal discharge current (8/20 $\mu$ s) $I_n$	10 kA	15 kA	20 kA	20 kA	20 kA	20 kA	15 kA
Max. continuous ac voltage $U_C$	75 V	150 V	275 V	320 V	385 V	440 V	600 V
Max. continuous dc voltage $U_C$	100 V	200 V	350 V	420 V	500 V	585 V	600 V
Type	PU pc(s)						Part No.
DG MOD 75	1						952 011
DG MOD 150	1						952 012
DG MOD 275	1						952 010
DG MOD 320	1						952 013
DG MOD 385	1						952 014
DG MOD 440	1						952 015
DG MOD 600	1						952 016

