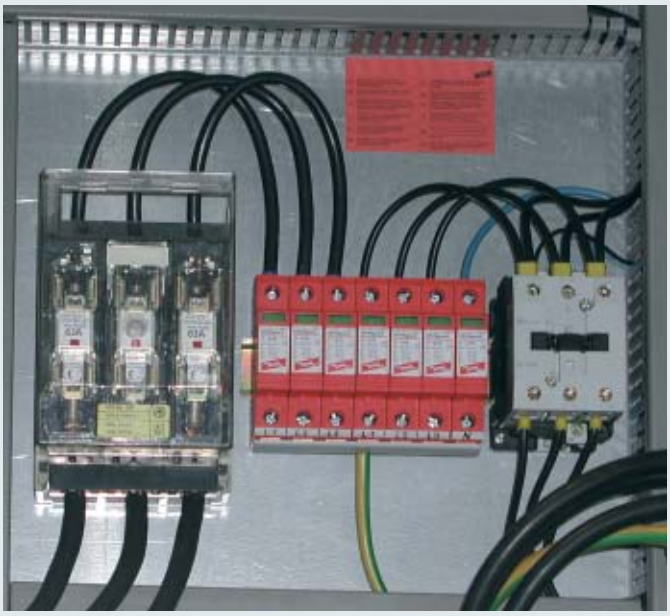
DEHNguard® T / DEHNguard® T ... FM

Single-pole, pluggable Surge Arrester

SPD Type 2 according to EN 61643-11;
Classification C according to E DIN VDE 0675-6;
SPD Class II according to IEC 61643-1;

- High discharge capacity thanks to high-capacity zinc oxide varistor
- Quick response
- Two-part unit, consisting of a base part and plug-in protection component
- Reliable control thanks to Thermo Dynamic Control disconnector with dual monitoring
- Energy coordination possible with upstream lightning current arrester, e.g. DEHNbloc Maxi
- Fault indication via red mark in the inspection window
- Slim design (modular construction) according to DIN 43880
- Multifunctional terminals for connection of conductors and busbars



For protection of low voltage consumer´s installations against surges. For use in the lightning protection zones concept at boundaries 0_B – 1 and higher.

DEHNguard T: Two-part unit, consisting of base part and plug-in protection module

DEHNguard T FM: Two-part unit, consisting of base part and plug-in protection module; with remote signalling contact for control device (floating changeover contact)

The pluggable DEHNguard T surge arresters are real all-rounders.

Whether in single-phase systems, in dc power supplies or at high system voltages – there is always the right arrester for every kind of application. The multifunctional terminals provide the devices with an almost unlimited flexibility for connection with each other, but also with other DIN rail mounted devices in the same distribution board. Not only flexibility characterises the DEHNguard T family. Moreover, it is the striking performance parameters setting trends all over the world.

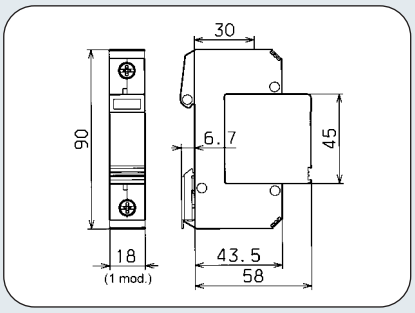
A high discharge capacity, low voltage protection level and the dual safety Thermo Dynamic Control disconnector define the high reliability of the devices.

Especially the DEHN-specific Thermo Dynamic Control disconnector ensures the arresters to change to a safe isolated state even at extreme overloads. In parallel to the surface temperature of the high-capacity varistor, the intensity of the discharge current is also evaluated. Apart from the standard visual indication with green and red coloured marks, the variants of DEHNguard T ... FM provide a 3-pole terminal for remote signalling. As the remote signalling contact works also as a floating changeover contact, the remote signal can be used as a break or make contact according to circuit concept.

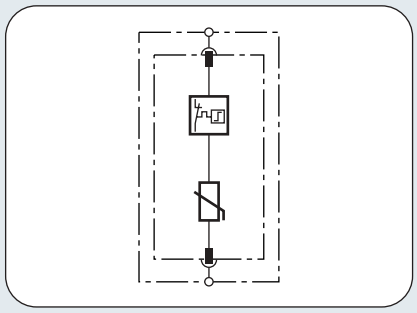
Should, nevertheless, the varistor unit be overloaded despite the high discharge capacity of the DEHNguard T devices, its two-part structure allows an easy exchange of the protection module without tools.

DEHNguard® T / DEHNguard® T ... FM

DEHNguard T



Dimension drawing DG T ...



Basic circuit diagram DG T...

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

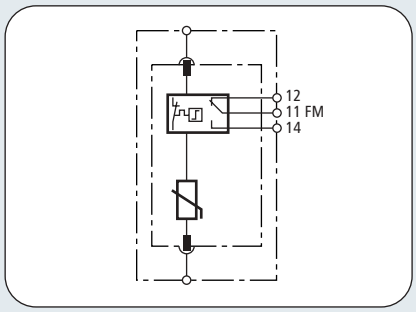
	DG T 75	DG T 150	DG T 275	DG T 320	DG T 385	DG T 440	DG T 600
SPD according to EN 61643-11	Type 2	Type 2	Type 2	Type 2	Type 2	Type 2	Type 2
SPD according to IEC 61643-1	Class II	Class II	Class II	Class II	Class II	Class II	Class II
Classification according to E DIN VDE 0675-6	C	C	C	C	C	C	C
Max. continuous 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) I_n	10 kA	15 kA	20 kA	20 kA	20 kA	20 kA	15 kA
Max. discharge current (8/20) I_{max}	40 kA	40 kA	40 kA	40 kA	40 kA	40 kA	30 kA
Voltage protection level U_P	≤ 0.4 kV	≤ 0.7 kV	≤ 1.25 kV	≤ 1.5 kV	≤ 1.75 kV	≤ 2 kV	≤ 2.5 kV
Voltage protection level at 5 kA U_P	≤ 0.35 kV	≤ 0.55 kV	≤ 1 kV	≤ 1.2 kV	≤ 1.35 kV	≤ 1.7 kV	≤ 2 kV
Response time t_A	≤ 25 ns	≤ 25 ns	≤ 25 ns	≤ 25 ns	≤ 25 ns	≤ 25 ns	≤ 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_{rms}	50 kA_{rms}	50 kA_{rms}	25 kA_{rms}	25 kA_{rms}	25 kA_{rms}	25 kA_{rms}
TOV voltage U_T	—	—	335 V / 5 sec.	335 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 mm² solid / flexible						
Cross-sectional area (max.)	35 mm² stranded / 25 mm² flexible						
Mounting on	35 mm DIN rail 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
Approvals, Certifications	KEMA, VDE, UL	KEMA, VDE, UL	KEMA, VDE, UL	KEMA, VDE UL	KEMA, VDE, UL	KEMA, VDE, UL	KEMA, VDE, UL
Ordering information							
Type	DG T 75	DG T 150	DG T 275	DG T 320	DG T 385	DG T 440	DG T 600
Part No.	900 654	900 653	900 650	900 652	900 641	900 655	900 651
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 DEHNguard® T / DEHNguard® T ... FM

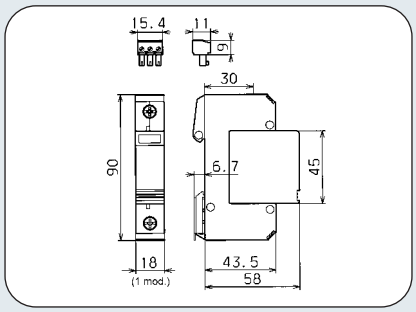
Varistor-based Protection Module

Type	T 75	T 150	T 275	T 320	T 385	T 440	T 600
Nominal discharge current (8/20)	10 kA	15 kA	20 kA	20 kA	20 kA	20 kA	15 kA
Max. continuous ac voltage	75 V	150 V	275 V	320 V	385 V	440 V	600 V
Max. continuous dc voltage	100 V	200 V	350 V	420 V	500 V	585 V	600 V

Type	PU pc(s)	Part No.
T 75	1	900 674
T 150	1	900 673
T 275	1	900 670
T 320	1	900 672
T 385	1	900 679
T 440	1	900 675
T 600	1	900 671



Basic circuit diagram DG T ... FM



Dimension drawing DG T ... FM

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

	DG T 75 FM	DG T 150 FM	DG T 275 FM	DG T 320 FM	DG T 385 FM	DG T 440 FM	DG T 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
Classification according to E DIN VDE 0675-6	C	C	C	C	C	C	C
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) I_n	10 kA	15 kA	20 kA	20 kA	20 kA	20 kA	15 kA
Max. discharge current (8/20) I_{max}	40 kA	40 kA	40 kA	40 kA	40 kA	40 kA	30 kA
Voltage protection level U_P	≤ 0.4 kV	≤ 0.7 kV	≤ 1.25 kV	≤ 1.5 kV	≤ 1.75 kV	≤ 2 kV	≤ 2.5 kV
Voltage protection level at 5 kA U_P	≤ 0.35 kV	≤ 0.55 kV	≤ 1 kV	≤ 1.2 kV	≤ 1.35 kV	≤ 1.7 kV	≤ 2 kV
Response time t_A	≤ 25 ns	≤ 25 ns	≤ 25 ns	≤ 25 ns	≤ 25 ns	≤ 25 ns	≤ 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_{rms}	50 kA_{rms}	50 kA_{rms}	25 kA_{rms}	25 kA_{rms}	25 kA_{rms}	25 kA_{rms}
TOV voltage U_T	—	—	335 V / 5 sec.	335 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 mm² solid / flexible						
Cross-sectional area (max.)	35 mm² stranded / 25 mm² 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
Approvals, Certifications	KEMA, VDE, UL	KEMA, VDE, UL	KEMA, VDE, UL	KEMA, VDE, UL	KEMA, VDE, UL	KEMA, VDE, UL	KEMA, VDE, UL
Type of remote signalling contact	changeover contact	changeover contact	changeover contact	changeover contact	changeover contact	changeover 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 mm² solid / flexible						

Ordering information							
Type	DG T 75 FM	DG T 150 FM	DG T 275 FM	DG T 320 FM	DG T 385 FM	DG T 440 FM	DG T 600 FM
Part No.	900 684	900 683	900 680	900 682	900 691	900 685	900 681
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

Type	T 75	T 150	T 275	T 320	T 385	T 440	T 600
Nominal discharge current (8/20)	10 kA	15 kA	20 kA	20 kA	20 kA	20 kA	15 kA
Max. continuous ac voltage	75 V	150 V	275 V	320 V	385 V	440 V	600 V
Max. continuous dc voltage	100 V	200 V	350 V	420 V	500 V	585 V	600 V

Type	PU pc(s)	Part No.
T 75	1	900 674
T 150	1	900 673
T 275	1	900 670
T 320	1	900 672
T 385	1	900 679
T 440	1	900 675
T 600	1	900 671