

- Discharge capacity up to 100 kA (10/350 μ s)
- Total current arrester specifically designed for installation in "3+1" and "1+1" circuits of TT systems according to IEC 60364-5-53 between neutral conductor N and protective conductor PE
- Creepage discharge spark gap technology
- DEHNgap M model available with operating state/fault indication in the inspection window



For protecting low-voltage consumer's installations against surges and even direct lightning strikes. For installation in conformity with the lightning protection zones concept at the boundaries from $0_A - 1$ (3+1 circuit).

DEHNgap M 255 (FM):	Coordinated modular single-pole N-PE lightning current arrester
DEHNgap Maxi 1 255 S:	Coordinated single-pole N-PE lightning current arrester for busbars
DEHNgap Maxi 440 (FM):	Coordinated single-pole N-PE lightning current arrester for $U_c = 440$ V a.c.
DEHNgap H 255:	Modular single-pole N-PE lightning current arrester

Being total current arresters between the neutral and protective conductor in TT systems, the single-pole N-PE lightning current arresters of type DEHNgap M, DEHNgap Maxi, DEHNgap Maxi S, and DEHNgap H M help to ensure fulfilling the requirements for protection of personnel and equipment in "1+1" or "3+1" circuits. The creepage discharge spark gaps were specifically developed to meet this challenge. With a discharge capacity up to 100 kA (10/350 μ s), they fulfil the most stringent requirements of national and international lightning protection standards. Their leakage-current-free spark gap design allows the devices to be used upstream of the meter panel according to national regulations (German VDN guideline).

The DEHNgap M, DEHNgap Maxi S and DEHNgap Maxi coordinated N-PE lightning current arresters hold a special position among total current arresters. Due to their low voltage protection level, they can be directly coordinated with N-PE surge arresters of the DEHNguard M family and DEHNgap C S surge arresters without additional decoupling coil. If lightning current arresters are to be installed along with surge arresters at the same location, no additional DEHNgap C S is required thanks to the low voltage protection level of DEHNgap M and DEHNgap Maxi.

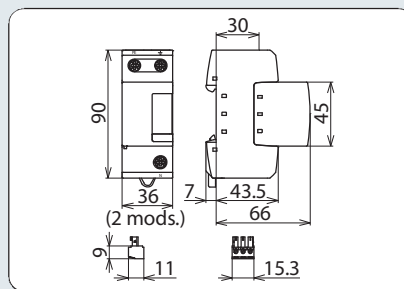
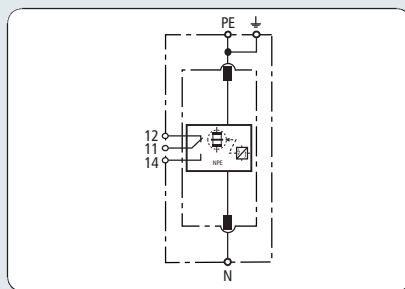
The design and installation of DEHNgap Maxi S arresters are adapted to the unique nature of low-voltage switchgear installations and entirely complement the use of DEHnbloc Maxi S arresters.

The multifunctional terminals of the DIN rail mounted DEHNgap M and DEHNgap H M devices are suitable for connecting conductors and busbars, allowing comfortable wiring with other DIN rail mounted terminals. With its functional Red/Line design, DEHNgap M combines safety and user-friendliness in a single device. The mechanical operating state and fault indication as well as the unique module locking system stand for fulfilling high safety requirements. The module locking system fixes the protection modules to the base part. Neither vibration nor shock during transport nor the enormous electromagnetic forces of discharge can loosen the protection modules. Nevertheless, they can be easily replaced without tools by simply pressing the user-friendly module release button of the protection module. Each protection module is mechanically coded to ensure against installing an incorrect module. Apart from the standard visual indication of DEHNgap M, DEHNgap M ... FM features a three-pole remote signalling terminal. With its floating changeover contact, the remote signal can be used as a break or make contact according to the particular circuit concept.



DEHNgap M 255 (FM)

N-PE Lightning Current Arresters



- Discharge capacity up to 100 kA (10/350 μ s)
- Total current arrester specifically designed for installation in "3+1" and "1+1" circuits of TT systems according to IEC 60364-5-53 between neutral conductor N and protective conductor PE
- Creepage discharge spark gap technology

Basic circuit diagram DGP M 255 FM

Dimension drawing DGP M 255 FM

Coordinated modular single-pole N-PE lightning current arrester for $U_c = 255$ V; optionally available with remote signalling contact for monitoring system (floating changeover contact)

N-PE Arresters Type 1

Type	DGP M 255	DGP M 255 FM
Part No.	961 101	961 105
SPD according to EN 61643-11	Type 1	Type 1
SPD according to IEC 61643-1/-11	Class I	Class I
Max. continuous operating a.c. voltage (U_c)	255 V	255 V
Lightning impulse current (10/350 μ s) (I_{imp})	100 kA	100 kA
Specific energy (W/R)	2.50 MJ/ohms	2.50 MJ/ohms
Nominal discharge current (8/20 μ s) (I_n)	100 kA	100 kA
Voltage protection level (U_p)	≤ 1.5 kV	≤ 1.5 kV
Follow current extinguishing capability a.c. (I_n)	100 A _{rms}	100 A _{rms}
Response time (t_d)	≤ 100 ns	≤ 100 ns
Temporary overvoltage (TOV)	1200 V / 200 ms	1200 V / 200 ms
TOV characteristics	withstand	withstand
Operating temperature range (parallel connection) (T_{UP})	-40°C...+80°C	-40°C...+80°C
Operating temperature range (series connection) (T_{US})	-40°C...+60°C	-40°C...+60°C
Operating state/fault indication	green / red	green / red
Number of ports	1	1
Cross-sectional area (N, PE, \pm) (min.)	10 mm ² solid/flexible	10 mm ² solid/flexible
Cross-sectional area (N, PE) (max.)	50 mm ² stranded/35 mm ² flexible	50 mm ² stranded/35 mm ² flexible
Cross-sectional area (\pm) (max.)	35 mm ² stranded/25 mm ² flexible	35 mm ² stranded/25 mm ² flexible
For mounting on	35 mm DIN rail acc. to EN 60715	35 mm DIN rail acc. to EN 60715
Enclosure material	thermoplastic, red, UL 94 V-0	thermoplastic, red, UL 94 V-0
Place of installation	indoor installation	indoor installation
Degree of protection	IP 20	IP 20
Capacity	2 modules, DIN 43880	2 modules, DIN 43880
Approvals	VDE, KEMA, UL	VDE, KEMA, UL
Type of remote signalling contact	—	changeover contact
a.c. switching capacity	—	250 V/0.5 A
d.c. switching capacity	—	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 ² solid/flexible

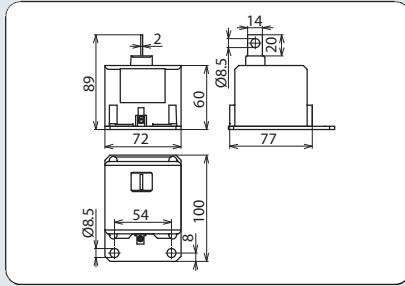
Accessory for DEHNgap

DGP M – 100 kA N-PE Spark-Gap-Based Protection Module

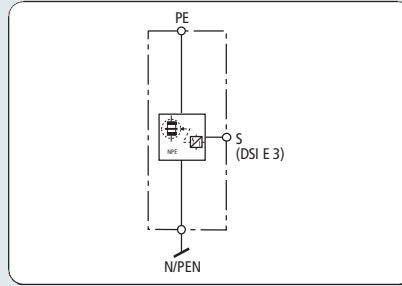
100 kA N-PE spark-gap-based protection module for use with all modular DEHNgap M arresters



Type	DGP M MOD 255
Part No.	961 010
Max. continuous operating a.c. voltage (U_c)	255 V



Dimension drawing DGPM 1 255 S



Basic circuit diagram DGPM 1 255 S



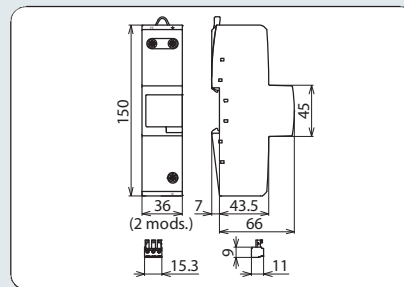
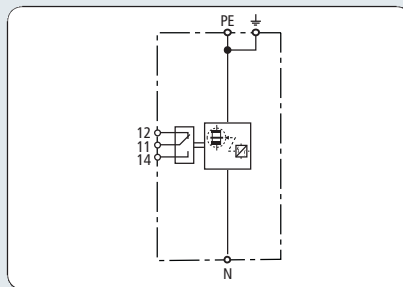
Coordinated single-pole N-PE lightning current arrester for busbars

- Discharge capacity up to 100 kA (10/350 μ s)
- Total current arrester specifically designed for installation in "3+1" and "1+1" circuits of TT systems according to IEC 60364-5-53 between neutral conductor N and protective conductor PE
- Creepage discharge spark gap technology

Type	DGPM 1 255 S
Part No.	900 050
SPD according to EN 61643-11	Type 1
SPD according to IEC 61643-1/-11	Class I
Max. continuous operating a.c. voltage (U_C)	255 V
Lightning impulse current (10/350 μ s) (I_{imp})	100 kA
Specific energy (W/R)	2.50 MJ/ohms
Nominal discharge current (8/20 μ s) (I_n)	100 kA
Voltage protection level (U_P)	≤ 2.5 kV (including 80 cm connecting cable)
Follow current extinguishing capability a.c. (I_R)	100 A _{rms}
Response time (t_A)	≤ 100 ns
Temporary overvoltage (TOV)	1200 V / 200 ms
TOV characteristics	withstand
Operating temperature range (T_U)	-40°C...+80°C
Number of ports	1
For mounting on	N busbars min. 35 mm ²
Connection	via cable lug min. 35 mm ² /max. 50 mm ²
Operating state monitoring	via DEHNsignal DSI E 3
Connection for DSI E 3 (S) min.	1 mm ² solid/flexible
Connection for DSI E 3 (S) max.	2.5 mm ² solid/flexible
Enclosure material	thermoplastic, red, UL 94 V-0
Place of installation	indoor installation
Dimensions (W x H x D)	72 x 89 x 100 mm

DEHNgap Maxi 440 (FM)

N-PE Lightning Current Arresters



Basic circuit diagram DGPM 440 FM

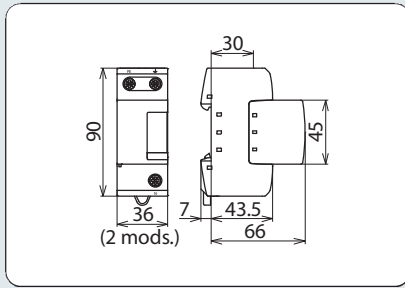
Dimension drawing DGPM 440

- Discharge capacity up to 100 kA (10/350 μ s)
- Total current arrester specifically designed for installation in "3+1" and "1+1" circuits of TT systems according to IEC 60364-5-53 between neutral conductor N and protective conductor PE
- Creepage discharge spark gap technology

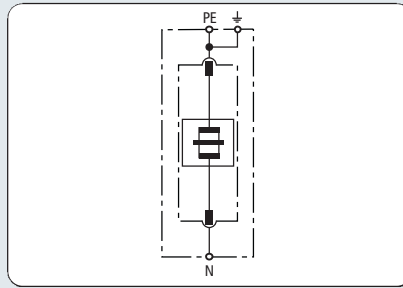
Coordinated single-pole N-PE lightning current arrester for $U_C = 440$ V; optionally available with remote signalling contact for monitoring device (floating changeover contact)

N-PE Arresters Type 1

Type	DGPM 440	DGPM 440 FM
Part No.	961 160	961 165
SPD according to EN 61643-11	Type 1	Type 1
SPD according to IEC 61643-1/-11	Class I	Class I
Max. continuous operating a.c. voltage (U_C)	440 V	440 V
Lightning impulse current (10/350 μ s) (I_{imp})	100 kA	100 kA
Specific energy (W/R)	2.50 MJ/ohms	2.50 MJ/ohms
Nominal discharge current (8/20 μ s) (I_n)	100 kA	100 kA
Voltage protection level (U_p)	≤ 2.5 kV	≤ 2.5 kV
Follow current extinguishing capability a.c. (I_n)	100 A _{rms}	100 A _{rms}
Response time (t_d)	≤ 100 ns	≤ 100 ns
Temporary overvoltage (TOV)	1200 V / 200 ms	1200 V / 200 ms
TOV characteristics	withstand	withstand
Operating temperature range (parallel connection) (T_{UP})	-40°C...+80°C	-40°C...+80°C
Operating temperature range (series connection) (T_{US})	-40°C...+60°C	-40°C...+60°C
Operating state/fault indication	green / red	green / red
Number of ports	1	1
Cross-sectional area (N, PE, \pm) (min.)	10 mm ² solid/flexible	10 mm ² solid/flexible
Cross-sectional area (N, PE) (max.)	50 mm ² stranded/35 mm ² flexible	50 mm ² stranded/35 mm ² flexible
Cross-sectional area (\pm) (max.)	35 mm ² stranded/25 mm ² flexible	35 mm ² stranded/25 mm ² flexible
For mounting on	35 mm DIN rail acc. to EN 60715	35 mm DIN rail acc. to EN 60715
Enclosure material	thermoplastic, red, UL 94 V-0	thermoplastic, red, UL 94 V-0
Place of installation	indoor installation	indoor installation
Degree of protection	IP 20	IP 20
Capacity	2 modules, DIN 43880	2 modules, DIN 43880
Approvals	UL	UL
Type of remote signalling contact	—	changeover contact
a.c. switching capacity	—	250 V/0.5 A
d.c. switching capacity	—	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 ² solid/flexible



Dimension drawing DGP M 255



Basic circuit diagram DGP M 255



NEW

Modular single-pole N-PE lightning current arrester for $U_C = 255 V$

- Discharge capacity up to 100 kA (10/350 μs)
- Total current arrester specifically designed for installation in "3+1" and "1+1" circuits of TT systems according to IEC 60364-5-53 between neutral conductor N and protective conductor PE
- Creepage discharge spark gap technology

Type	DGP M 255
Part No.	961 102
SPD according to EN 61643-11	Type 1
SPD according to IEC 61643-1-11	Class I
Max. continuous operating a.c. voltage (U_C)	255 V
Lightning impulse current (10/350 μs) (I_{imp})	100 kA
Specific energy (W/R)	2.50 MJ/ohms
Nominal discharge current (8/20 μs) (I_n)	100 kA
Voltage protection level (U_P)	≤ 4 kV
Follow current extinguishing capability a.c. (I_R)	100 A _{rms}
Response time (t_d)	≤ 100 ns
Temporary overvoltage (TOV)	1200 V / 200 ms
TOV characteristics	withstand
Operating temperature range (parallel connection) (T_{UP})	-40°C...+80°C
Operating temperature range (series connection) (T_{US})	-40°C...+60°C
Number of ports	1
Cross-sectional area (min.)	10 mm ² solid/flexible
Cross-sectional area (max.)	50 mm ² stranded/35 mm ² flexible
For mounting on	35 mm DIN rail acc. to EN 60715
Enclosure material	red thermoplastic, UL 94 V-0
Place of installation	indoor installation
Degree of protection	IP 20
Capacity	2 modules, DIN 43880

N-PE Arresters Type 1

Accessory for DEHNgap

DGP M – 100 kA N-PE Spark-Gap-Based Protection Module

100 kA N-PE spark-gap-based protection module for use with all modular DEHNgap H M arresters

Type	DGP MOD 255
Part No.	961 020
Max. continuous operating a.c. voltage (U_C)	255 V





For protecting low-voltage consumer's installations against surges and even direct lightning strikes. For installation in conformity with the lightning protection zones concept at the boundaries from $0_A - 1$ (3+1 circuits).

- High discharge capacity due to powerful creepage discharge spark gap
- With module release button for replacing protection modules without tools
- Operating state / fault indication by green / red indicator flag in the inspection window
- The plug-in protection module can be replaced without the need to de-energise and without removing the distribution board cover



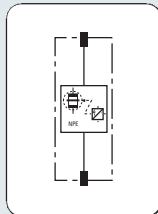
N-PE Arresters Type 1

DGP M MOD 255: 100 kA N-PE spark-gap-based protection module for use with all modular DEHNgap M arresters
DGPH MOD 255: 100 kA N-PE spark-gap-based protection module for use with all modular DEHNgap H M arresters

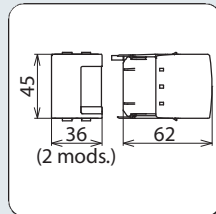
The N-PE spark-gap-based protection modules of the modular DEHNgap M family combine safety and innovation in a single device. Apart from the powerful encapsulated creepage discharge spark gap technology, the compact protection modules incorporate a monitoring device and an operating state/fault indicator. The mechanical coding of the protection

module prevents that the N-PE protection modules are confused with the spark-gap-based protection module for the phase conductors. The module locking system safely fixes the protection modules to the base part. The protection modules can be easily removed without tools by simply pressing the release button.

DGP M – Spark-Gap-Based Protection Module



Basic circuit diagram
DGP M MOD 255

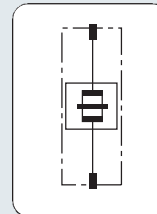


Dimension drawing
DGP M MOD 255

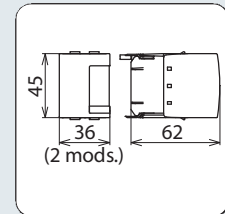
100 kA N-PE spark-gap-based protection module for use with all modular DEHNgap M arresters

Type	DGP M MOD 255
Part No.	961 010
Max. continuous operating a.c. voltage (U_c)	255 V
Lightning impulse current (10/350 μ s) (I_{imp})	100 kA
Specific energy (W/R)	2.50 MJ/ohms
Follow current extinguishing capability [N-PE] a.c. (I_{fi})	100 A _{rms}

DGPH M – Spark-Gap-Based Protection Module



Basic circuit diagram
DGP H MOD 255



Dimension drawing
DGP H MOD 255

100 kA N-PE spark-gap-based protection module for use with all modular DEHNgap H M arresters

Type	DGPH MOD 255
Part No.	961 020
Max. continuous operating a.c. voltage (U_c)	255 V
Lightning impulse current (10/350 μ s) (I_{imp})	100 kA
Specific energy (W/R)	2.50 MJ/ohms
Follow current extinguishing capability [N-PE] a.c. (I_{fi})	100 A _{rms}