



**wieTAP**  
Overvoltage Protection

**Tensions running high**



# Overvoltage protection

## The zone concept for lightning protection

Owners of technical manufacturing plants and information systems desire an **interference-free operation**, even in thunderstorms.

The disruption or destruction of these types of systems can have far-reaching consequences. The damage reports of insurance agencies clearly show that there is a lot of catching up to do both in private homes and in commercial plants. This goal can be reached with an extensive concept for protection.

The **zone concept for lightning protection** enables planners, builders and owners to plan, implement and monitor protective measures. All relevant devices, plants and systems can thus be protected reliably at economically justifiable costs.

**Direct or close-up lightning strikes** are lightning strikes into the lightning protection system of a building, in close proximity to it, or into the electrically conductive systems implemented in the building (e.g. low-voltage supply, telecommunications, control lines). (Fig. 1)

**Remote lightning strikes** are lightning strikes that occur far away from the object to be protected as well as lightning strikes into the medium voltage overhead system or in close proximity to it, or lightning discharge from cloud to cloud (Fig. 1: cases 2a, 2b and 2c).

In addition to a lightning protection system in the building, additional measures for an overvoltage protection of electrical and electronic systems are

required in order **to safeguard the continuous availability** of complex power engineering and IT systems even in the case of a direct lightning strike. It is important to consider all the causes for overvoltages.

The **zone concept for lightning protection** as described in IEC 62305-4 (DIN EN 62305-4, DIN 0185-305-4) applies accordingly (Fig. 3). It divides a building into different risk zones. The relevant protective measures can then be derived for each zone, especially the devices and components for lightning and overvoltage protection.

The zones for lightning protection are defined as described in Table 1.

### LEMP protection for buildings with electrical and electronic systems according to IEC 62305-4 (DIN EN 62305-4, DIN 0185-305-4)

#### Lightning protection zones

- |                    |  |
|--------------------|--|
| LPZ 0 <sub>A</sub> | At risk from direct lightning strikes, impulse currents up to the full lightning current and through the full lightning field.                       |
| LPZ 0 <sub>B</sub> | Protected against direct lightning strike. At risk from impulse currents up to partial lightning currents and through the full lightning field.      |
| LPZ 1              | Impulse currents further limited by current division and SPDs at the zone limits. In most cases, the lightning field is attenuated by shields.       |
| LPZ 2              | Impulse currents further limited by current division and SPDs at the zone limits. In most cases, the lightning field is attenuated by local shields. |

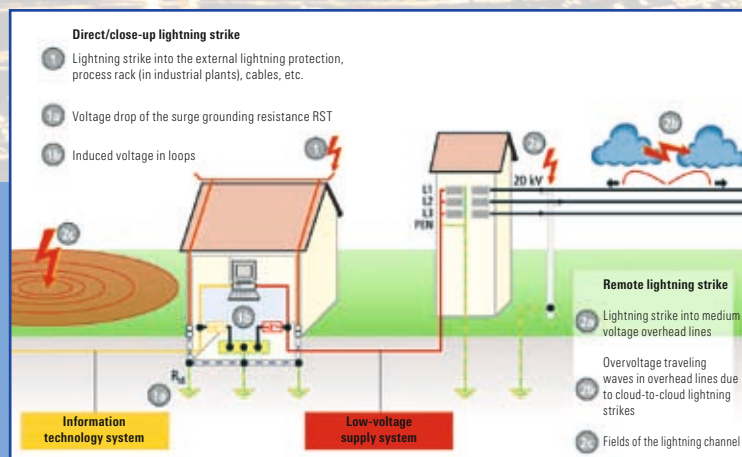


Figure 1



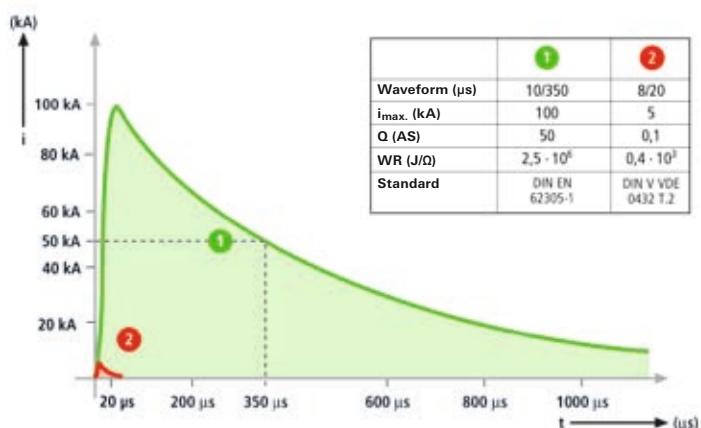
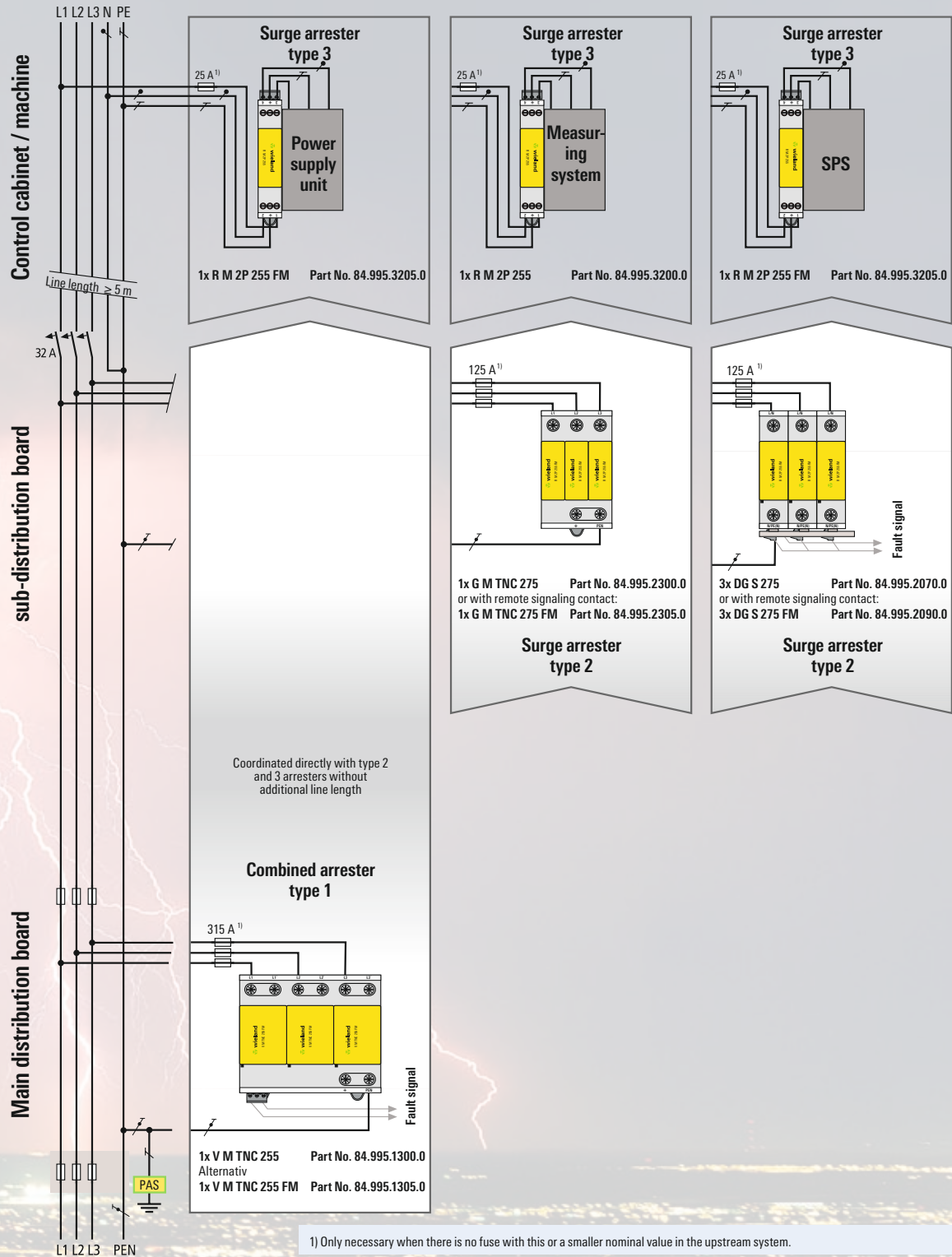


Fig 2: ① Peak current for testing of lightning arresters  
② Peak current for testing of surge arresters

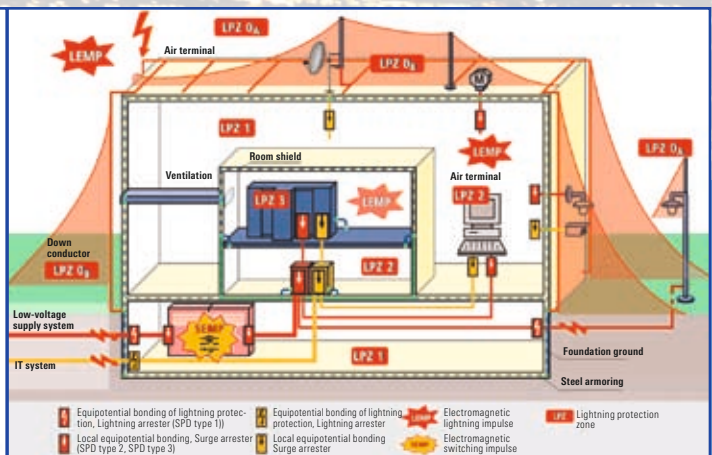


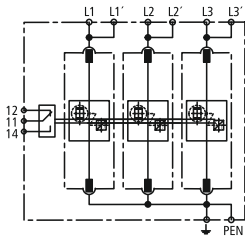
Fig 3: EMC-oriented zone concept for lightning protection

# Three-phase combined arrester, type 1

For protection of the building power infeed

## wieTAP V M TNC 255 (FM)

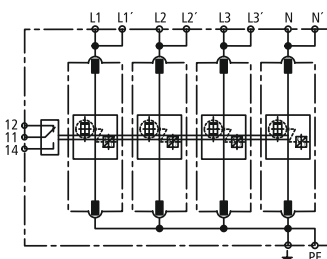
- Combined arrester, type 1
- For TN-C systems
- With pluggable protection modules
- Max. system availability due to follow current limitation
- Switch-off selective for 20 A gL/gG fuses up to 50 kA<sub>eff</sub> short-circuit current
- Discharge capacity up to 75 kA (10/350)
- Function/failure indication
- Optional with remote signaling contact for monitoring device
- Vibration and shock tested acc. to EN 60068-2



Type	Part No.
<b>wieTAP V M TNC 255</b>	84.995.1300.0
<b>wieTAP V M TNC 255 FM</b>	84.995.1305.0
Power network	TN-C
SPD accord. to EN 61643-11	type 1
SPD accord. to IEC 61643-1	class I
Nominal voltage AC [U <sub>N</sub> ]	230 / 400 V
Nominal frequency [f <sub>N</sub> ]	50 / 60 Hz
Maximum continuous voltage AC [U <sub>c</sub> ]	255 V
Lightning impulse current (10/350) [L1+L2+L3-PEN] [I <sub>total</sub> ]	75 kA
Lightning impulse current (10/350) [L-PEN] [I <sub>imp</sub> ]	25 kA
Nominal discharge current (8/20) [I <sub>n</sub> ]	25 / 75 kA
Protection level [U <sub>p</sub> ]	≤ 1.5 kV
Follow current extinction capability AC [I <sub>e</sub> ]	50 kA <sub>eff</sub>
Operating time [t <sub>a</sub> ]	≤ 100 ns
Max. pre-fusing (L) up to I <sub>k</sub> = 50 kA <sub>eff</sub>	315 A gL/gG
Max. pre-fusing (L) up to I <sub>k</sub> > 50 kA <sub>eff</sub>	200 A gL/gG
Max. pre-fusing (L-L')	125 A gL/gG
TOV-voltage [U <sub>T</sub> ]	440 V / 5 sec.
Temperature range (Parallel wiring) [T <sub>up</sub> ]	-40°C...+80°C
Temperature range (Through wiring) [T <sub>us</sub> ]	-40°C...+60°C
Function/failure indication	green / red
Wire range (L1, L1', L2, L2', L3, L3', PEN, ±) [min.]	10 mm <sup>2</sup> solid/fine-stranded
Wire range (L1, L2, L3, PEN) [max.]	50 mm <sup>2</sup> stranded/35 mm <sup>2</sup> fine-stranded
Wire range (L1', L2', L3', ±) [max.]	35 mm <sup>2</sup> stranded/25 mm <sup>2</sup> fine-stranded
Mounted on DIN rail acc. to EN 60715	35 mm
Degree of protection	IP 20
Dimensions	6 TE, DIN 43880 (108 mm)
Approvals	VDE, cURus
Remote signaling contacts = Contact type	changeover contact
Switching capacity AC (FM)	250 V/0.5 A
Switching capacity DC (FM)	250 V/0.1 A; 125 V/0.2 A; 75 V/0.5 A
Wire range remote signaling terminals	max. 1.5 mm <sup>2</sup> solid/fine-stranded

## wieTAP V M TNS 255 (FM)

- Combined arrester, type 1
- For TN-S systems
- With pluggable protection modules
- Max. system availability due to follow current limitation
- Switch-off selective for 20 A gL/gG fuses up to 50 kA<sub>eff</sub> short-circuit current
- Discharge capacity up to 100 kA (10/350)
- Function/failure indication
- Optional with remote signaling contact for monitoring device
- Vibration and shock tested acc. to EN 60068-2



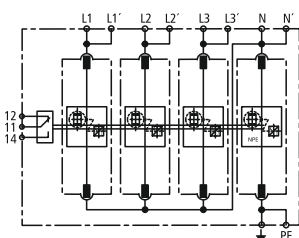
Type	Part No.
<b>wieTAP V M TNS 255</b>	84.995.1400.0
<b>wieTAP V M TNS 255 FM</b>	84.995.1405.0
Power network	TN-S
SPD accord. to EN 61643-11	type 1
SPD accord. to IEC 61643-1	class I
Nominal voltage AC [U <sub>N</sub> ]	230 / 400 V
Nominal frequency [f <sub>N</sub> ]	50 / 60 Hz
Maximum continuous voltage AC [U <sub>c</sub> ]	255 V
Lightn. impulse current (10/350) [L1+L2+L3+N-PE] [I <sub>total</sub> ]	100 kA
Lightning impulse current (10/350) [L, N-PE] [I <sub>imp</sub> ]	25 kA
Nominal discharge current (8/20) [I <sub>n</sub> ]	25 / 100 kA
Protection level [L, N-PE] [U <sub>p</sub> ]	≤ 1.5 kV
Follow current extinction capability AC [I <sub>e</sub> ]	50 kA <sub>eff</sub>
Operating time [t <sub>a</sub> ]	≤ 100 ns
Max. pre-fusing (L) up to I <sub>k</sub> = 50 kA <sub>eff</sub>	315 A gL/gG
Max. pre-fusing (L) up to I <sub>k</sub> > 50 kA <sub>eff</sub>	200 A gL/gG
Max. pre-fusing (L-L')	125 A gL/gG
TOV-voltage [L-N] [U <sub>T</sub> ]	440 V / 5 sec.
Temperature range (Parallel wiring) [T <sub>up</sub> ]	-40°C...+80°C
Temperature range (Through wiring) [T <sub>us</sub> ]	-40°C...+60°C
Function/failure indication	green / red
Wire range (L1, L1', L2, L2', L3, L3', N, N', PE, ±) [min.]	10 mm <sup>2</sup> solid/fine-stranded
Wire range (L1, L2, L3, PE, N) [max.]	50 mm <sup>2</sup> stranded/35 mm <sup>2</sup> fine-stranded
Wire range (L1', L2', L3', N', ±) [max.]	35 mm <sup>2</sup> stranded/25 mm <sup>2</sup> fine-stranded
Mounted on DIN rail acc. to EN 60715	35 mm
Degree of protection	IP 20
Dimensions	8 TE, DIN 43880 (144 mm)
Approvals	VDE, cURus
Remote signaling contacts = Contact type	changeover contact
Switching capacity AC (FM)	250 V/0.5 A
Switching capacity DC (FM)	250 V/0.1 A; 125 V/0.2 A; 75 V/0.5 A
Wire range remote signaling terminals	max. 1.5 mm <sup>2</sup> solid/fine-stranded

# Three-phase combined arrester, type 1

For protection of the building power infeed

## wieTAP V M TT 255 (FM)

- Combined arrester, type 1
- For TT and TN-S systems („3+1“ circuits)
- With pluggable protection modules
- Max. system availability due to follow current limitation
- Switch-off selective for 20 A gL/gG fuses up to 50 kA<sub>eff</sub> short-circuit current
- Discharge capacity up to 100 kA (10/350)
- Function/failure indication
- Optional with remote signaling contact for monitoring device
- Vibration and shock tested acc. to EN 60068-2



Type	Part No.
<b>wieTAP V M TT 255</b>	84.995.1310.0
<b>wieTAP V M TT 255 FM</b>	84.995.1315.0
Power network	TT and TN-S
SPD accord. to EN 61643-11	type 1
SPD accord. to IEC 61643-1	class I
Nominal voltage AC [U <sub>N</sub> ]	230 / 400 V
Nominal frequency [f <sub>N</sub> ]	50 / 60 Hz
Maximum continuous voltage AC [U <sub>c</sub> ]	255 V
Lightn. impulse current (10/350) [L1+L2+L3 +N-PE] [I <sub>total</sub> ]	100 kA
Lightning impulse current (10/350) [L-N] [I <sub>imp</sub> ]	25 kA
Lightning impulse current (10/350) [N-PE] [I <sub>imp</sub> ]	100 kA
Nominal discharge current (8/20) [I <sub>n</sub> ]	25 / 100 kA
Protection level [L-N, N-PE] [U <sub>p</sub> ]	≤ 1.5 kV
Follow current extinction capability [L-N] AC [I <sub>e</sub> ]	50 kA <sub>eff</sub>
Follow current extinction capability [N-PE] AC [I <sub>fi</sub> ]	100 A <sub>eff</sub>
Operating time [t <sub>a</sub> ]	≤ 100 ns
Max. pre-fusing (L) up to I <sub>k</sub> = 50 kA <sub>eff</sub>	315 A gL/gG
Max. pre-fusing (L) up to I <sub>k</sub> > 50 kA <sub>eff</sub>	200 A gL/gG
Max. pre-fusing (L-L')	125 A gL/gG
TOV-voltage [L-N] [U <sub>T</sub> ]	440 V / 5 sec.
TOV-voltage [N-PE] [U <sub>T</sub> ]	1200 V / 200 ms
Temperature range (Parallel wiring) [T <sub>UP</sub> ]	-40°C...+80°C
Temperature range (Through wiring) [T <sub>US</sub> ]	-40°C...+60°C
Function/failure indication	green / red
Wire range (L1, L1', L2, L2', L3, L3', N, N', PE, ⚡) [min.]	10 mm <sup>2</sup> solid/fine-stranded
Wire range (L1, L2, L3, N, PE) [max.]	50 mm <sup>2</sup> stranded/35 mm <sup>2</sup> fine-stranded
Wire range (L1', L2', L3', N, ⚡) [max.]	35 mm <sup>2</sup> stranded/25 mm <sup>2</sup> fine-stranded
Mounted on DIN rail acc. to EN 60715	35 mm
Degree of protection	IP 20
Dimensions	8 TE, DIN 43880 (144 mm)
Approvals	VDE, cURus
Remote signaling contacts = Contact type	changeover contact
Switching capacity AC (FM)	250 V/0.5 A
Switching capacity DC (FM)	250 V/0.1 A; 125 V/0.2 A; 75 V/0.5 A
Wire range remote signaling terminals	max. 1.5 mm <sup>2</sup> solid/fine-stranded

## wieTAP V MOD 255

## wieTAP V MOD NPE 100

- Replacement modules for all **wieTAP V M** devices
- V MOD 255: Network spark gap protection module
- V MOD NPE 100: N-PE spark gap protection module



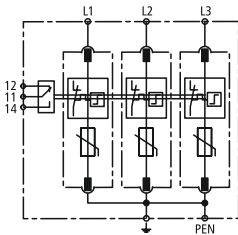
Type	Part No.
<b>wieTAP V MOD 255</b>	84.995.1001.0
<b>wieTAP V MOD NPE 100</b>	84.995.1100.0

# Three-phase surge arrester, type 2

For protection of sub-distributors or the control cabinet power infeed

## wieTAP G M TNC 275 (FM)

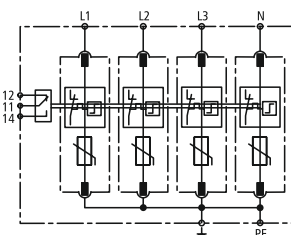
- Surge arrester, type 2
- For TN-C systems
- With pluggable protection modules
- Function/failure indication
- Optional with remote signaling contact for monitoring device
- Vibration and shock tested acc. to EN 60068-2



Type	Part No.
<b>wieTAP G M TNC 275</b>	84.995.2300.0
<b>wieTAP G M TNC 275 FM</b>	84.995.2305.0
Power network	TN-C
SPD accord. to EN 61643-11	type 2
SPD accord. to IEC 61643-1	class II
Nominal voltage AC [U <sub>N</sub> ]	230/400 V
Nominal frequency [f <sub>N</sub> ]	50 / 60 Hz
Maximum continuous voltage AC [U <sub>c</sub> ]	275 V
Nominal discharge current (8/20) [I <sub>n</sub> ]	20 kA
Max. discharge current (8/20) [I <sub>max</sub> ]	40 kA
Protection level [U <sub>p</sub> ]	≤ 1.25 kV
Protection level at 5 kA [U <sub>p</sub> ]	≤ 1 kV
Operating time [t <sub>a</sub> ]	≤ 25 ns
Maximum network overcurrent protection	125 A gL/gG
Short-circuit proof with max. network overcurrent protection	50 kA <sub>eff</sub>
TOV-voltage [U <sub>T</sub> ]	335 V / 5 sec.
Temperature range [T <sub>U</sub> ]	-40°C...+80°C
Function/failure indication	green / red
Wire range (min.)	1.5 mm <sup>2</sup> solid/fine-stranded
Wire range (max.)	35 mm <sup>2</sup> stranded/25 mm <sup>2</sup> fine-stranded
Mounted on DIN rail according to EN 60715	35 mm
Degree of protection	IP 20
Dimensions	3 TE, DIN 43880 (54 mm)
Approvals	VDE, cURus
Remote signaling contacts = Contact type	changeover contact
Switching capacity AC (FM)	250 V/0.5 A
Switching capacity DC (FM)	250 V/0.1 A; 125 V/0.2 A; 75 V/0.5 A
Wire range remote signaling terminals	max. 1.5 mm <sup>2</sup> solid/fine-stranded

## wieTAP G M TNS 275 (FM)

- Surge arrester, type 2
- For TN-S systems
- With pluggable protection modules
- Function/failure indication
- Optional with remote signaling contact for monitoring device
- Vibration and shock tested acc. to EN 60068-2



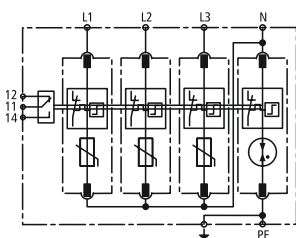
Type	Part No.
<b>wieTAP G M TNS 275</b>	84.995.2400.0
<b>wieTAP G M TNS 275 FM</b>	84.995.2405.0
Power network	TN-S
SPD accord. to EN 61643-11	type 2
SPD accord. to IEC 61643-1	class II
Nominal voltage AC [U <sub>N</sub> ]	230/400 V
Nominal frequency [f <sub>N</sub> ]	50 / 60 Hz
Maximum continuous voltage AC [U <sub>c</sub> ]	275 V
Nominal discharge current (8/20) [I <sub>n</sub> ]	20 kA
Ma. discharge current (8/20) [I <sub>max</sub> ]	40 kA
Protection level [U <sub>p</sub> ]	≤ 1.25 kV
Protection level at 5 kA [U <sub>p</sub> ]	≤ 1 kV
Operating time [t <sub>a</sub> ]	≤ 25 ns
Maximum network overcurrent protection	125 A gL/gG
Short-circuit proof with max. network overcurrent protection	50 kA <sub>eff</sub>
TOV-voltage [U <sub>T</sub> ]	335 V / 5 sec.
Temperature range [T <sub>U</sub> ]	-40°C...+80°C
Function/failure indication	green / red
Wire range (min.)	1.5 mm <sup>2</sup> solid/fine-stranded
Wire range (max.)	35 mm <sup>2</sup> stranded/25 mm <sup>2</sup> fine-stranded
Mounted on DIN rail acc. to EN 60715	35 mm
Degree of protection	IP 20
Dimensions	4 TE, DIN 43880 (72 mm)
Approvals	VDE, cURus
Remote signaling contacts = Contact type	changeover contact
Switching capacity AC (FM)	250 V/ 0.5 A
Switching capacity DC (FM)	250 V/0.1 A; 125 V/0.2 A; 75 V/0.5 A
Wire range remote signaling terminals	max. 1.5 mm <sup>2</sup> solid/fine-stranded

# Three-phase surge arrester, type 2

For protection of sub-distributors or the control cabinet power infeed

## wieTAP G M TT 275 (FM)

- Surge arrester, type 2
- For TT and TN-S systems („3+1“ circuits)
- With pluggable protection modules
- Function/failure indication
- Optional with remote signaling contact for monitoring device
- Vibration and shock tested acc. to EN 60068-2



Type	Part No.
<b>wieTAP G M TT 275</b>	84.995.2310.0
<b>wieTAP G M TT 275 FM</b>	84.995.2315.0
Power network	TT and TN-S (version „3+1“)
SPD accord. to EN 61643-11	type 2
SPD accord. to IEC 61643-1	class II
Nominal voltage AC [U <sub>N</sub> ]	230/400 V
Nominal frequency [f <sub>N</sub> ]	50 / 60 Hz
Maximum continuous voltage AC [L-N] [U <sub>c</sub> ]	275 V
Maximum continuous voltage AC [N-PE] [U <sub>c</sub> ]	255 V
Nominal discharge current (8/20) [I <sub>n</sub> ]	20 kA
Maximaler discharge current (8/20) [I <sub>max</sub> ]	40 kA
Lightning impulse current (10/350) [N-PE] [I <sub>imp</sub> ]	12 kA
Protection level [L-N] [U <sub>p</sub> ]	≤ 1.25 kV
Protection level [L-N] at 5 kA [U <sub>p</sub> ]	≤ 1 kV
Protection level [N-PE] [U <sub>p</sub> ]	≤ 1.5 kV
Follow current extinction capability [N-PE] [I <sub>e</sub> ]	100 A <sub>eff</sub>
Operating time [L-N] [t <sub>a</sub> ]	≤ 25 ns
Operating time [N-PE] [t <sub>a</sub> ]	≤ 100 ns
Maximum network overcurrent protection	125 A gL/gG
Short-circuit proof with max. network overcurrent protection	50 kA <sub>eff</sub>
TOV-voltage [L-N] [U <sub>T</sub> ]	335 V / 5 sec.
TOV-voltage [N-PE] [U <sub>T</sub> ]	1200 V / 200 ms
Temperature range [T <sub>U</sub> ]	-40°C...+80°C
Function/failure indication	green / red
Wire range (min.)	1.5 mm <sup>2</sup> solid/fine-stranded
Wire range (max.)	35 mm <sup>2</sup> stranded/25 mm <sup>2</sup> fine-stranded
Mounted on DIN rail acc. to EN 60715	35 mm
Degree of protection	IP 20
Dimensions	4 TE, DIN 43880 (72 mm)
Approvals	VDE, cURus
Remote signaling contacts = Contact type	changeover contact
Switching capacity AC (FM)	250 V/0.5 A
Switching capacity DC (FM)	250 V/0.1 A; 125 V/0.2 A; 75 V/0.5 A
Wire range remote signaling terminals	max. 1.5 mm <sup>2</sup> solid/fine-stranded

## wieTAP G MOD 275 wieTAP G MOD NPE

- Replacement modules for all **wieTAP G M** devices
- G MOD 275: Network spark gap protection module
- G MOD NPE: N-PE spark gap protection module



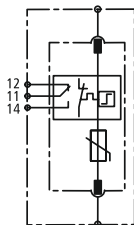
Type	Part No.
<b>wieTAP G MOD 275</b>	84.995.2010.0
<b>wieTAP G MOD NPE</b>	84.995.2050.0

# Single-phase surge arrester, type 2

For protection of sub-distributors or the control cabinet power infeed

## wieTAP G S 275 (FM)

- Surge arrester, type 2
- All-purpose surge arrester
- With pluggable protection modules
- High discharge capacity due to powerful zinc oxide varistor
- High reliability due to arrester monitoring
- Slim design (modular construction) acc. to DIN 43880
- Multi-function connection for conductors and comb rails
- Optional with remote signaling contact for monitoring device
- Vibration and shock tested acc. to EN 60068-2



Type	Part No.
<b>wieTAP G S 275</b>	84.995.2070.0
<b>wieTAP G S 275 FM</b>	84.995.2090.0
Power network	Universal
SPD accord. to EN 61643-11	type 2
SPD accord. to IEC 61643-1	class II
Maximum continuous voltage AC [U <sub>c</sub> ]	275 V
Nominal frequency [f <sub>n</sub> ]	50 / 60 Hz
Maximum continuous voltage DC [U <sub>c</sub> ]	350 V
Nominal discharge current (8/20) [I <sub>n</sub> ]	20 kA
Max. discharge current (8/20) [I <sub>max</sub> ]	40 kA
Protection level [U <sub>p</sub> ]	≤ 1.25 kV
Protection level bei 5 kA [U <sub>p</sub> ]	≤ 1 kV
Operating time [t <sub>a</sub> ]	≤ 25 ns
Maximum network overcurrent protection	125 A gL/gG
Short-circuit proof with max. network overcurrent protection	50 kA <sub>eff</sub>
TOV-voltage [U <sub>t</sub> ]	335 V / 5 sec.
Temperature range [T <sub>U</sub> ]	-40°C...+80°C
Function/failure indication	green / red
Wire range (min.)	1.5 mm <sup>2</sup> solid/fine-stranded
Wire range (max.)	35 mm <sup>2</sup> stranded/25 mm <sup>2</sup> fine-stranded
Mounted on DIN rail acc. to EN 60715	35 mm
Degree of protection	IP 20
Dimensions	1 TE, DIN 43880 (18 mm)
Approvals	VDE, cURus
Remote signaling contacts = Contact type	changeover contact
Switching capacity AC (FM)	250 V/0.5 A
Switching capacity DC (FM)	250 V/0.1 A; 125 V/0.2 A; 75 V/0.5 A
Wire range remote signaling terminals	max. 1.5 mm <sup>2</sup> solid/fine-stranded

## wieTAP G MOD 275

- Replacement module for **wieTAP G S 275 (FM)**



Type	Part No.
<b>wieTAP G MOD 275</b>	84.995.2010.0

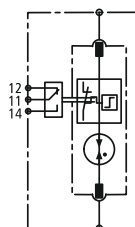


# Single-phase surge arrester, type 2

For protection of sub-distributors or the control cabinet power infeed

## wieTAP GP C S (FM)

- Surge arrester, type 2
- For use in TT systems in "3+1" and "1+1" circuits acc. to E DIN VDE 0100-534 between neutral conductor N and protective conductor PE
- High discharge capacity
- With pluggable protection modules
- Function/failure indication
- Optional with remote signaling contact for monitoring device
- Vibration and shock tested acc. to EN 60068-2



Type	Part No.
<b>wieTAP GP C S</b>	84.995.2030.0
<b>wieTAP GP C S FM</b>	84.995.2035.0
Power network	TT
SPD accord. to EN 61643-11	type 2
SPD accord. to IEC 61643-1	class II
Maximum continuous voltage AC [U <sub>c</sub> ]	255 V
Nominal frequency [f <sub>N</sub> ]	50 / 60 Hz
Nominal discharge current (8/20) [I <sub>n</sub> ]	20 kA
Max. discharge current (8/20) [I <sub>max</sub> ]	40 kA
Follow current extinction capability [I <sub>eff</sub> ]	100 A <sub>eff</sub>
Lightning impulse current (10/350) [I <sub>imp</sub> ]	12 kA
Protection level [U <sub>p</sub> ]	≤ 1.5 kV
Operating time [t <sub>a</sub> ]	≤ 100 ns
TOV-voltage [U <sub>T</sub> ]	1200 V / 200 ms
Temperature range [T <sub>U</sub> ]	-40°C...+80°C
Function/failure indication	green / red
Wire range (min.)	1.5 mm <sup>2</sup> solid/fine-stranded
Wire range (max.)	35 mm <sup>2</sup> stranded/25 mm <sup>2</sup> fine-stranded
Mounted on DIN rail acc. to EN 60715	35 mm
Degree of protection	IP 20
Dimensions	1 TE, DIN 43880 (18 mm)
Approvals	VDE, cURus
Remote signaling contacts = Contact type	changeover contact
Switching capacity AC(FM)	250 V/0.5 A
Switching capacity DC (FM)	250 V/0.1 A; 125 V/0.2 A; 75 V/0.5 A
Wire range remote signaling terminals	max. 1.5 mm <sup>2</sup> solid/fine-stranded

## wieTAP GP C MOD

- Replacement module for **wieTAP** G CS (FM)



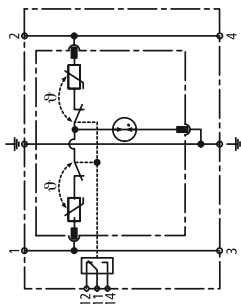
Type	Part No.
<b>wieTAP GP C MOD</b>	84.995.2060.0

# Surge arrester, type 3

For direct load protection in control cabinets or sub-distributors

## wieTAP R M 2P 255 (FM)

- Surge arrester, type 3
- Two-pole surge arrester
- High discharge capacity due to powerful zinc oxide varistor
- Slim design (modular construction) acc. to DIN 43880
- With pluggable protection modules
- Function/failure indication
- Optional with remote signaling contact for monitoring device
- Vibration and shock tested acc. to EN 60068-2



Type	Part No.
<b>wieTAP R M 2P 255</b>	84.995.3200.0
<b>wieTAP R M 2P 255 FM</b>	84.995.3205.0
SPD accord. to EN 61643-11	type 3
SPD accord. to IEC 61643-1	class III
Nominal voltage AC [U <sub>N</sub> ]	230 V
Nominal frequency [f <sub>N</sub> ]	50 / 60 Hz
Maximum continuous voltage AC [U <sub>c</sub> ]	255 V
Maximum continuous voltage DC [U <sub>c</sub> ]	255 V
Nominal load current AC [I <sub>L</sub> ]	25 A
Nominal discharge current (8/20) [I <sub>n</sub> ]	3 kA
Total discharge current (8/20) [L+N-PE] [I <sub>total</sub> ]	5 kA
Combined surge [U <sub>oc</sub> ]	6 kV
Combined surge [L+N-PE] [U <sub>oc total</sub> ]	10 kV
Protection level [L-N] [U <sub>p</sub> ]	≤ 1250 V
Protection level [L/N-PE] [U <sub>p</sub> ]	≤ 1500 V
Operating time [L-N] [t <sub>a</sub> ]	≤ 25 ns
Operating time [L/N-PE] [t <sub>a</sub> ]	≤ 100 ns
Maximum network overcurrent protection	25 A gL/gG oder B 25 A
Short-circuit proof with network overcurrent protection with 25 A gL/gG	6 kA <sub>eff</sub>
TOV-voltage [L-N] [U <sub>T</sub> ]	335 V / 5 sec.
TOV-voltage [L/N-PE] (I) [U <sub>T</sub> ]	400 V / 5 sec.
TOV-voltage [L+N-PE] (II) [U <sub>T</sub> ]	1200 V + U <sub>o</sub> / 200 ms
Temperature range [T <sub>o</sub> ]	-40°C...+80°C
Function/failure indication	green / red
Wire range min.	0.5 mm <sup>2</sup> solid/fine-stranded
Wire range max.	4 mm <sup>2</sup> ein-/2.5 mm <sup>2</sup> fine-stranded
Mounted on DIN rail acc. to EN 60715	35 mm
Degree of protection	IP 20
Dimensions	1 TE, DIN 43880 (18 mm)
Approvals	VDE, cURus
Remote signaling contacts = Contact type	changeover contact
Switching capacity AC (FM)	250 V/0.5 A
Switching capacity DC (FM)	250 V/0.1 A; 125 V/0.2 A; 75 V/0.5 A
Wire range remote signaling terminals	max. 1.5 mm <sup>2</sup> solid/fine-stranded

## wieTAP R MOD 255

- Replacement module for wieTAP R M 2P 255 (FM)



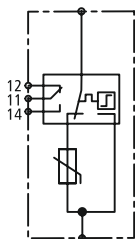
Type	Part No.
<b>wieTAP R MOD 255</b>	84.995.3010.0

# Surge protection for solar modules

To be used in photovoltaic DC circuits

## wieTAP G PV 500 SCP (FM)

- Single-pole photovoltaic arrester
- Type 2 classification acc. to EN 61643-11
- Can be used with all PV systems acc. to IEC 60364-7-712
- High discharge capacity due to powerful zinc oxide varistor
- No fire hazard during overload due to combined disconnection and short-circuit device
- Function/failure indication
- Optional with remote signaling contact for monitoring device



Type	Part No.
<b>wieTAP G PV 500 SCP</b>	84.995.0500.0
<b>wieTAP G PV 500 SCP FM</b>	84.995.0505.0
Power network	photovoltaic direct current circuit
SPD-classification accord. to EN 61643-11	type 2
SPD-classification accord. to IEC 61643-1	class II
PV voltage in ungrounded PV systems (2 x G PV ...) [U <sub>OC STC</sub> ]	≤ 1000 V
PV voltage in function-grounded PV systems (thin film) [U <sub>OC STC</sub> ]	≤ 500 V
Maximum continuous voltage DC [U <sub>c</sub> ]	500 V
Nominal discharge current (8/20) [I <sub>n</sub> ]	20 kA
Max. discharge current (8/20) [I <sub>max</sub> ]	30 kA
Protection level at I <sub>n</sub> [U <sub>p</sub> ]	≤ 2 kV
Protection level at 5 kA [U <sub>p</sub> ]	≤ 1.7 kV
Operating time [t <sub>a</sub> ]	≤ 25 ns
Sustained short-circuit proof DC [I <sub>k</sub> ]	80 A
Reverse current resistance [I <sub>grmax</sub> ]	50 kA / 5 ms
Max. protection of the DC main line at the inverter	315 A gR
Temperature range [T <sub>U</sub> ]	-40°C...+65°C
Function/failure indication	green / red
Wire range (min.)	1.5 mm <sup>2</sup> solid/fine-stranded
Wire range (max.)	35 mm <sup>2</sup> stranded/25 mm <sup>2</sup> fine-stranded
Mounted on DIN rail acc. to EN 60715	35 mm
Degree of protection	IP 20
Dimensions	2 TE, DIN 43880 (36 mm)
Remote signaling contacts = Contact type	changeover contact
Switching capacity AC (FM)	250 V/0.5 A
Switching capacity DC (FM)	250 V/0.1 A; 125 V/0.2 A; 75 V/0.5 A
Wire range remote signaling terminals	max. 1.5 mm <sup>2</sup> solid/fine-stranded



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## Industrial technology

Solutions for the control cabinet

- DIN rail terminal blocks
  - Screw, spring clamp or IDC connection technology
  - Wire cross sections up to 240 mm<sup>2</sup>
  - Numerous special functions
  - Software solutions interfacing to CAE systems
- Safety
  - Safety sensors
  - Safety relays
  - Modular safety systems with fieldbus link
- PLC and fieldbus components
  - Standard applications in IP20
  - Increased environmental conditions with railroad and ship approvals
- Interface
  - Coupling relays, semiconductor switches
  - Measuring and monitoring relays
  - Timer and switching relays
  - Analog modules
  - Passive interfaces
  - Power supply units
  - Overvoltage protection

Solutions for field applications

- Remote automation technology
  - Power distribution
  - Fieldbus interfaces and motor starters
- Connectors for industrial applications
  - Square and round connectors
  - Aluminum or plastic housings
  - Degree of protection up to IP68
  - Current-carrying capacity up to 100 A
  - Connectors for hazardous areas
  - Modular, application specific technology

PC board terminals and connectors

- Screw or spring clamp connection technology
- Spacings: 3.5 mm to 10.16 mm
- Reflow or wave soldering process

## Building and installation technology

- Building installation systems
  - Main power supply connectors IP20/IP65...IP68
  - Bus connectors
  - Combined connectors
  - Low-voltage connectors
  - Power distribution system with flat cables
  - Distribution systems
  - Bus systems in KNX, LON and radio technology
  - DIN rail terminal blocks for electrical installations
  - Overvoltage protection

**contacts  
are  
green.**

## Product Range