



wietap
Overvoltage Protection

Tensions running high





wietap Overvoltage protection

Important information on overvoltage

The necessity of overvoltage protection on machines and systems as well as for building technology is ever increasing. The potential danger of damage and even complete destruction posed to valuable electronic components or even complete production systems, computer systems or communication systems by sudden overvoltage from the grid, or direct lightning strikes has mobilized not just insurance companies. Well-advised users also know the importance of protecting their electrical devices, plants and systems both sufficiently and reliably against this danger, and the overall advantage of increasing their system availability.



Overvoltage protection modules

Overvoltage protection modules come in three type categories which designate their capacity to absorb overvoltage energy. Type 1 arresters can divert the largest amount of energy to ground (PE). The ideal installation location for these devices is at the building's main supply. In this configuration the impulse energy is considerably weakened, if it moves downstream into the installation. In sub-panels and control cabinets, this surplus energy is reduced further by type 2 and 3 arresters, thus maintaining the survival of the protected devices.



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_A At risk from direct lightning strikes, impulse currents up to the full lightning current and through the full lightning field.
- LPZ 0_B 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.



Playing it safe with **overvoltage protection**

Very short response time and high discharge capacity

With its considerably expanded **wietap** product range, Wieland Electric offers comprehensive solutions for overvoltage protection in control cabinets and sub panels of machines and buildings, as well as for photovoltaic systems. The components, which are modular and DIN rail mountable, range from the ready-to-connect 3-phase combi-arrester **wietap V M** for the main distribution, to the overvoltage protection module **wietap G M** for sub panels, up to the overvoltage module **wietap R M** intended for the control cabinet or constructed into the equipment. All components are designed for

application temperatures from -40 to 80 °C and have a high discharge capacity. Devices are also available with a remote signaling contact.

Properties of **wietap**:

- Electrically coordinated product family
- Highest discharge capacity up to 100 kA
- No tripping of fuses thanks to follow current limitation
- Latching pluggable protection modules
- Vibration and shock tested acc. to EN 60068-2
- Visual function & defect display for every path
- Modules replaceable without tools
- Can also be used in front of vertical power meter



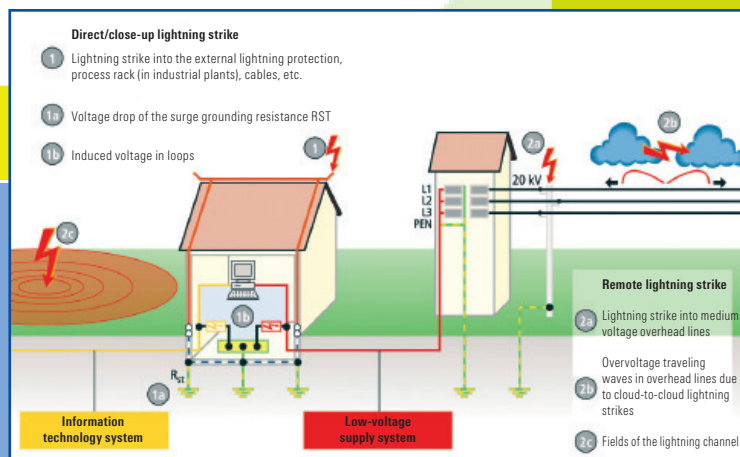
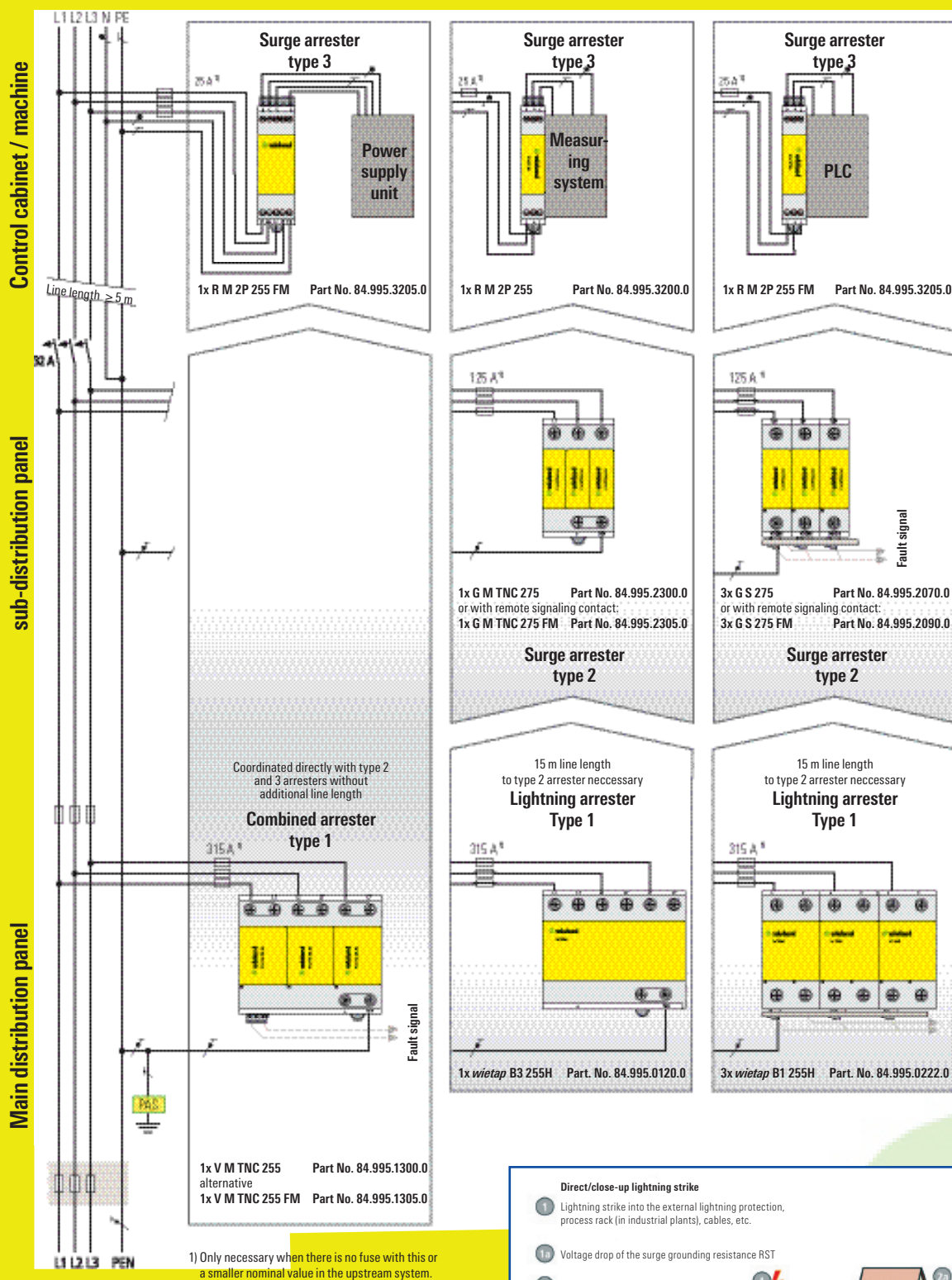


Figure 1

Overvoltage protection

The zone concept for lightning 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.

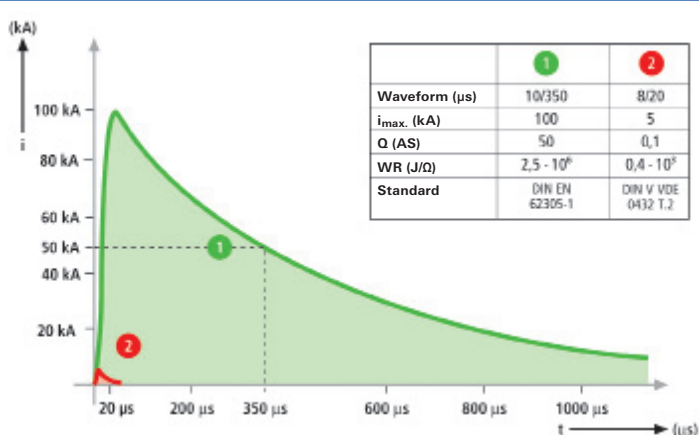


Figure 2: ① Peak current for testing of lightning arresters
② Peak current for testing of surge arresters

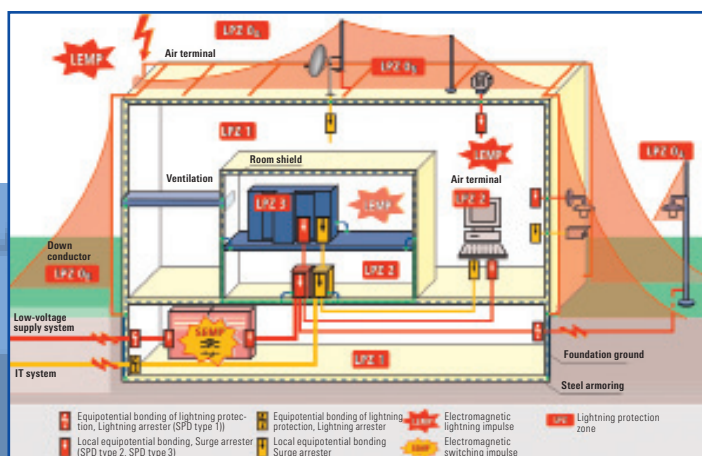


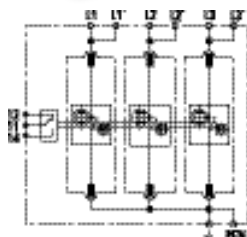
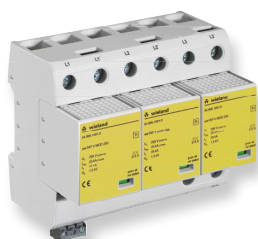
Figure 3: EMC-oriented zone concept for lightning protection

Three-phase combined arrester, type 1 (2, 3)

For protection of the building main supply

wietap V M TNC 255 (FM)

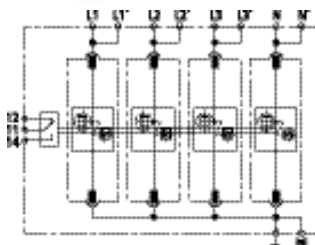
- Combined arrester, type 1
- For TN-C-systems
- With pluggable protection modules
- Max. system availability due to follow current limitation
- Switch-off selective for 20 A gL/gG fuses up to 50 kA_{eff} short-circuit current
- Discharge capacity up to 75 kA (10/350)
- Function/failure indication according to VDE 0100-534
- Optional with remote signaling contact (FM)
- Vibration and shock tested acc. to EN 60068-2



Type	Part No.
wietap V M TNC 255	84.995.1300.0
wietap V M TNC 255 FM	84.995.1305.0
Replacement module L1, L2, L3 against $\pm$	84.995.1001.0
Power network	TN-C
SPD accord. to EN 61643-11 / IEC 61643-1	Type 1 / Class I
Energy-coordinated protective function to the end device	Type 1 + Type 2
Energy-coordinated protective function to the end device $\leq 5m$	Type 1 + Type 2 + Type 3
Nominal voltage AC [U _N]	230 / 400 V
Nominal frequency [f _N]	50 / 60 Hz
Maximum continuous voltage AC [U _c]	255 V
Lightn. impulse current (10/350) [L1+L2+L3-PEN] [I _{total}]	75 kA
Lightn. impulse current (10/350) [L-PEN] [I _{imp}]	25 kA
Nominal discharge current (8/20) [I _n]	25 / 75 kA
Protection level [U _p]	≤ 1.5 kV
Follow current extinguishing capability AC [I _{cc}]	50 kA _{eff}
Operating time [t _a]	≤ 100 ns
Max. pre-fusing (L) up to I _k = 50 kA _{eff}	315 A gL/gG
Max. pre-fusing (L) up to I _k > 50 kA _{eff}	200 A gL/gG
Max. pre-fusing (L-L')	125 A gL/gG
TOV-voltage [U _T]	440 V / 5 sec.
Temperature range (Parallel wiring) [T _{UP}]	-40 ... +80 °C
Temperature range (Through wiring) [T _{US}]	-40 ... +60 °C
Function/failure indication	green / red
Wire range (L1, L1', L2, L2', L3, L3', PEN, $\pm$) [min.]	10 mm ² (AWG 8) solid/fine-stranded
Wire range (L1, L2, L3, PEN) [max.]	50 mm ² (AWG 1) stranded/35 mm ² (AWG 2) fine-stranded
Wire range (L1', L2', L3', $\pm$) [max.]	35 mm ² (AWG 2) stranded/25 mm ² (AWG 4) fine-stranded
Mounted on DIN rail acc. to EN 60715	35 mm
Housing material	Thermoplast, UL 94 V-0
Degree of protection	IP 20
Dimensions	6 TE, DIN 43880 (108 mm)
Remote signaling contacts = Contact Type	Change-over 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 for remote signaling terminals	max. 1.5 mm ² (AWG 16) solid/fine-stranded
Approvals	CE

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_{eff} short-circuit current
- Discharge capacity up to 100 kA (10/350)
- Function/failure indication according to VDE 0100-534 (valid since March 2009)
- Optional with remote signaling contact (FM)
- Vibration and shock tested acc. to EN 60068-2



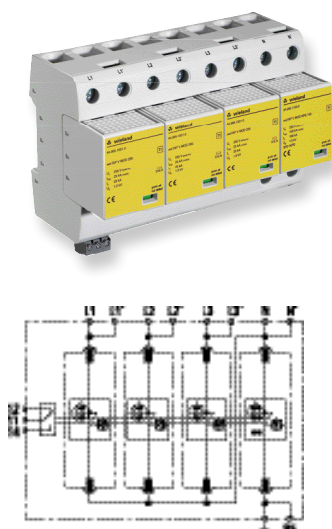
Type	Part No.
wietap V M TNS 255	84.995.1400.0
wietap V M TNS 255 FM	84.995.1405.0
Replacement module L1, L2, L3, N against $\pm$	84.995.1001.0
Power network	TN-S
SPD accord. to EN 61643-11 / IEC 61643-1	Type 1 / Class I
Energy-coordinated protective function to the end device	Type 1 + Type 2
Energy-coordinated protective function to the end device $\leq 5m$	Type 1 + Type 2 + Type 3
Nominal voltage AC [U _N]	230 / 400 V
Nominal frequency [f _N]	50 / 60 Hz
Maximum continuous voltage AC [U _c]	255 V
Lightn. impulse current (10/350) [L1+L2+L3-PEN] [I _{total}]	100 kA
Lightn. impulse current (10/350) [L, N-PE] [I _{imp}]	25 kA
Nominal discharge current (8/20) [I _n]	25 / 100 kA
Protection level [L, N-PE] [U _p]	≤ 1.5 kV
Follow current extinguishing capability AC [I _{cc}]	50 kA _{eff}
Operating time [t _a]	≤ 100 ns
Max. pre-fusing (L) up to I _k = 50 kA _{eff}	315 A gL/gG
Max. pre-fusing (L) up to I _k > 50 kA _{eff}	200 A gL/gG
Max. pre-fusing (L-L')	125 A gL/gG
TOV-voltage [L-N] [U _T]	440 V / 5 sec.
Temperature range (Parallel wiring) [T _{UP}]	-40 ... +80 °C
Temperature range (Through wiring) [T _{US}]	-40 ... +60 °C
Function/failure indication	green / red
Wire range (L1, L1', L2, L2', L3, L3', N, N', PE, $\pm$) [min.]	10 mm ² (AWG 8) solid/fine-stranded
Wire range (L1, L2, L3, PE, N) [max.]	50 mm ² (AWG 1) stranded/35 mm ² (AWG 2) fine-stranded
Wire range (L1', L2', L3', N', $\pm$) [max.]	35 mm ² (AWG 2) stranded/25 mm ² (AWG 4) fine-stranded
Mounted on DIN rail acc. to EN 60715	35 mm
Housing material	Thermoplast, UL 94 V-0
Degree of protection	IP 20
Dimensions	8 TE, DIN 43880 (144 mm)
Remote signaling contacts = Contact Type	Change-over 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 for remote signaling terminals	max. 1.5 mm ² (AWG 16) solid/fine-stranded
Approvals	CE

Three-phase combined arrester, type 1 (2, 3)

For protection of the building main supply

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_{eff} short-circuit current
- Discharge capacity up to 100 kA (10/350)
- Function/failure indication according to VDE 0100-534
- Optional with remote signaling contact (FM)
- Vibration and shock tested acc. to EN 60068-2



Type	Part No.
wietap V M TT 255	84.995.1310.0
wietap V M TT 255 FM	84.995.1315.0
Replacement module L1, L2, L3 against N	84.995.1001.0
Replacement module N against $\pm$	84.995.1100.0
Power network	TT and TN-S
SPD according to EN 61643-11 / IEC 61643-1	Type 1 / Class I
Energy-coordinated protective function to the end device	Type 1 + Type 2
Energy-coordinated protective function to the end device ≤ 5 m	Type 1 + Type 2 + Type 3
Nominal voltage AC [U _N]	230 / 400 V
Nominal frequency [f _N]	50 / 60 Hz
Maximum continuous voltage AC [U _c]	255 V
Lightn. impulse current (10/350) [L1+L2+L3 +N-PE] [I _{total}]	100 kA
Lightn. impulse current (10/350) [L-N] [I _{imp}]	25 kA
Lightn. impulse current (10/350) [N-PE] [I _{imp}]	100 kA
Nominal discharge current (8/20) [I _n]	25 / 100 kA
Protection level [L-N, N-PE] [U _p]	≤ 1.5 kV
Follow current extinguishing capability [L-N] AC [I _{eff}]	50 kA _{eff}
Follow current extinguishing capability [N-PE] AC [I _{eff}]	100 A _{eff}
Operating time [t _a]	≤ 100 ns
Max. pre-fusing (L) up to I _k = 50 kA _{eff}	315 A gL/gG
Max. pre-fusing (L) up to I _k > 50 kA _{eff}	200 A gL/gG
Max. pre-fusing (L-L')	125 A gL/gG
TOV-voltage [L-N] [U _r]	440 V / 5 sec.
TOV-voltage [N-PE] [U _r]	1200 V / 200 ms
Temperature range (Parallel wiring) [T _{up}]	-40 ... +80 °C
Temperature range (Through wiring) [T _{us}]	-40 ... +60 °C
Function/failure indication	green / red
Wire range (L1, L1', L2, L2', L3, L3', N, N', PE, $\pm$) [min.]	10 mm ² (AWG 8) solid/fine-stranded
Wire range (L1, L2, L3, N, PE) [max.]	50 mm ² (AWG 1) stranded/35 mm ² (AWG 2) fine-stranded
Wire range (L1', L2', L3', N, $\pm$) [max.]	35 mm ² (AWG 2) stranded/25 mm ² (AWG 4) fine-stranded
Mounted on DIN rail acc. to EN 60715	35 mm
Housing material	Thermoplast, UL 94 V-0
Degree of protection	IP 20
Dimensions	8 TE, DIN 43880 (144 mm)
Remote signaling contacts = Contact Type	Change-over 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 for remote signaling terminals	max. 1.5 mm ² (AWG 16) solid/fine-stranded
Approvals	CE

Replacement module for wietap VM devices

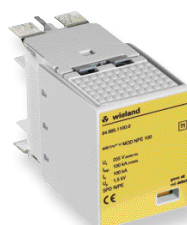
wietap V MOD 255

Network spark gap protection module for all L – $\pm$; L – N and for wietap V M TNS 255 (FM) N – $\pm$



wietap V MOD NPE 100

Network spark gap protection module for wietap V M TT 255 (FM) N – $\pm$



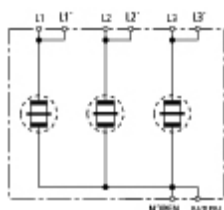
Type	Part No.
wietap V MOD 255	84.995.1001.0
wietap V MOD NPE 100	84.995.1100.0

3-phase lightning arrester, type 1

For protection of the building main supply

wietap B3 255H

- Lightning arrester, type 1
- For all systems (in connection with **wietap** GPM 255 if required)
- High limitation of follow current
- 50 kA discharge capacity per pole
- High insulation resistance; can therefore also be placed in front of the meter
- Double terminals for V connection



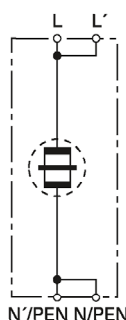
Type	Part No.
wietap B3 255H	84.995.0120.0
Technical Data	
SPD accord. to EN 61643-11	Type 1
SPD accord. to IEC 61643-1	Class I
Nominal voltage AC [U _N]	230/400 V
Maximum continuous voltage AC [U _c]	255 V
Lightn. impulse current (10/350) [I _{imp}]	50 kA
Lightn. impulse current (10/350) [L1+L2+L3-N/PEN] [I _{total}]	100 kA
Nominal discharge current (8/20) [I _n]	50 / 100 kA
Protection level [U _p]	≤ 4 kV
Follow current extinguishing capability AC [I _{in}]	50 kA _{eff}
Limitation of follow current / selectivity	Non-tripping of a 35 A gL/gG fuse up to 50 kA _{eff} (prosp.)
Operating time [t _a]	≤ 100 ns
Max. pre-fusing bis IK = 50 kA _{eff} (t _a ≤ 0,2 s)	500 A gL/gG
Max. pre-fusing bis IK = 50 kA _{eff} (t _a ≤ 5 s)	315 A gL/gG
Max. pre-fusing bei IK > 50 kA _{eff}	200 A gL/gG
Max. pre-fusing (L-L')	125 A gL/gG
TOV-voltage [U _T]	335 V / 5 sec.
Temperature range (Parallel wiring) [T _{UP}]	-40 ... +80 °C
Temperature range (Through wiring) [T _{US}]	-40 ... +60 °C
Wire range (L1, L1', L2, L2', L3, L3', N/PEN, N'/PEN)	10 mm ² (AWG 8) solid/fine-stranded
Wire range (L1, L2, L3, N/PEN)	50 mm ² (AWG 1) stranded / 35 mm ² (AWG 2) fine-stranded
Wire range (L1', L2', L3', N'/PEN)	35 mm ² (AWG 2) stranded / 25 mm ² (AWG 4) fine-stranded
Mounted on DIN rail acc. to EN 60715	35 mm
Housing material	Thermoplast, UL 94 V-0
Degree of protection	IP 20
Dimensions	6 TE, DIN 43880 (108 mm)
Approvals	CE

1-phase lightning arrester, type 1

For the protection of the building main supply

wietap B1 255H

- Lightning arrester, type 1
- For all systems (in connection with **wietap** GPM 255 if required)
- High limitation of follow current
- 50 kA discharge capacity per pole
- High insulation resistance; can therefore also be placed in front of the meter
- Double terminals for V connection



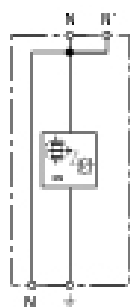
Type	Part No.
wietap B1 255H	84.995.0222.0
Technical Data	
SPD accord. to EN 61643-11	Type 1
SPD accord. to IEC 61643-1	Class I
Nominal voltage ac [U _N]	230 V
Maximum continuous voltage AC [U _c]	255 V
Lightn. impulse current (10/350) [I _{imp}]	50 kA
Nominal discharge current (8/20) [I _n]	50 kA
Protection level [U _p]	≤ 4 kV
Follow current extinguishing capability AC [I _{in}]	50 kA _{eff}
Limitation of follow current / selectivity	Non-tripping of a 35 A gL/gG fuse up to 50 kA _{eff} (prosp.)
Operating time [t _a]	≤ 100 ns
Max. pre-fusing bis IK = 50 kA _{eff} (t _a ≤ 0,2 s)	500 A gL/gG
Max. pre-fusing bis IK = 50 kA _{eff} (t _a ≤ 5 s)	315 A gL/gG
Max. pre-fusing bei IK > 50 kA _{eff}	200 A gL/gG
Max. pre-fusing (L-L')	125 A gL/gG
TOV-voltage [U _T]	335 V / 5 sec.
Temperature range (Parallel wiring) [T _{UP}]	-40 ... +80 °C
Temperature range (Through wiring) [T _{US}]	-40 ... +60 °C
Wire range (L, L', N/PEN, N'/PEN) [min.]	10 mm ² (AWG 8) solid/fine-stranded
Wire range (L, N/PEN) [max.]	50 mm ² (AWG 1) stranded / 35 mm ² (AWG 2) fine-stranded
Wire range (L', N'/PEN) [max.]	35 mm ² (AWG 2) stranded / 25 mm ² (AWG 4) fine-stranded
Mounted on DIN rail acc. to EN 60715	35 mm
Housing material	Thermoplast, UL 94 V-0
Degree of protection	IP 20
Dimensions	2 TE, DIN 43880 (36 mm)
Approvals	CE

N-PE lightning arrester, type 1

For protection of the building main supply

wietap GMP 255

- N-PE lightning arrester, type 1
- In combination with **wietap** B1 255H or **wietap** B3 255H
- 100 kA discharge capacity



Type	Part No.
wietap GPM 255	84.995.0055.0
Technical Data	
SPD accord. to EN 61643-11	Type 1
SPD accord. to IEC 61643-1	Class I
Maximum continuous voltage AC [U _c]	255 V
Lightn. impulse current (10/350) [I _{imp}]	100 kA
Nominal discharge current (8/20) [I _n]	100 kA
Protection level [U _p]	≤ 1.5 kV
Follow current extinguishing capability AC [I _n]	100 Aeff
Operating time [t _a]	≤ 100 ns
TOV-voltage	1200 V / 200 ms
Temperature range (Parallel wiring) [T _{up}]	-40 ... +80 °C
Temperature range (Through wiring) [T _{us}]	-40 ... +60 °C
Function/failure indication	green / red
Wire range (min.)	10 mm ² (AWG 8) solid/fine-stranded
Wire range (max.)	50 mm ² (AWG 1) stranded / 35 mm ² (AWG 2) fine-stranded
Mounted on DIN rail acc. to EN 60715	35 mm
Housing material	Thermoplast, UL 94 V-0
Degree of protection	IP 20
Dimensions	2 TE, DIN 43880 (36 mm)
Approvals	CE

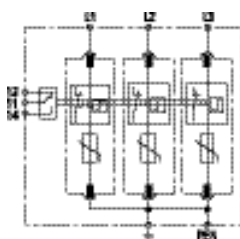
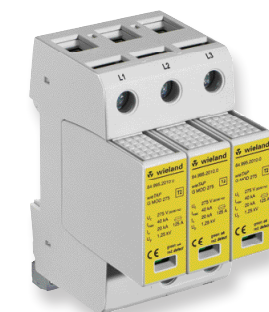


Three-phase combined arrester, type 2

For protection of sub-distributions or the control cabinet main supply

wietap G M TNC 275 (FM)

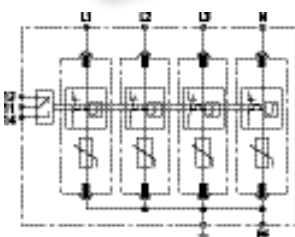
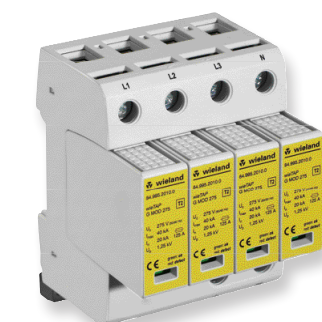
- Surge arrester, type 2
- For TN-C-systems
- With pluggable protection modules
- Function/failure indication according to VDE 0100-534
- Optional with remote signaling contact (FM)
- Vibration and shock tested acc. to EN 60068-2



Type	Part No.
wietap G M TNC 275	84.995.2300.0
wietap G M TNC 275 FM	84.995.2305.0
Replacement module L1, L2, L3 against $\pm$	84.995.2010.0
Power network	TN-C
SPD accord. to EN 61643-11	Type 2
SPD accord. to IEC 61643-1	Class II
Nominal voltage AC [U _N]	230/400 V
Nominal frequency [f _N]	50 / 60 Hz
Maximum continuous voltage AC [U _c]	275 V
Nominal discharge current (8/20) [I _n]	20 kA
Max. discharge current (8/20) [I _{max}]	40 kA
Protection level [U _p]	≤ 1.25 kV
Protection level at 5 kA [U _p]	≤ 1 kV
Operating time [t _A]	≤ 25 ns
Maximum network overcurrent protection	125 A gL/gG
Short-circuit proof with max. network overcurrent protection	50 kA _{eff}
TOV-voltage [U _T]	335 V / 5 sec.
Temperature range [T _U]	-40 ... +80 °C
Function/failure indication	green / red
Wire range (min.)	1.5 mm ² (AWG 14) solid/fine-stranded
Wire range (max.)	35 mm ² (AWG 2) stranded / 25 mm ² (AWG 4) fine-stranded
Mounted on DIN rail acc. to EN 60715	35 mm
Housing material	Thermoplast, UL 94 V-0
Degree of protection	IP 20
Dimensions	3 TE, DIN 43880 (54 mm)
Remote signaling contacts = Contact Type	Change-over 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 for remote signaling terminals	max. 1.5 mm ² (AWG 14) solid/fine-stranded
Approvals	CE

wietap G M TNS 275 (FM)

- Surge arrester, type 2
- For TN-S-systems
- With pluggable protection modules
- Function/failure indication according to VDE 0100-534
- Optional with remote signaling contact (FM)
- Vibration and shock tested acc. to EN 60068-2



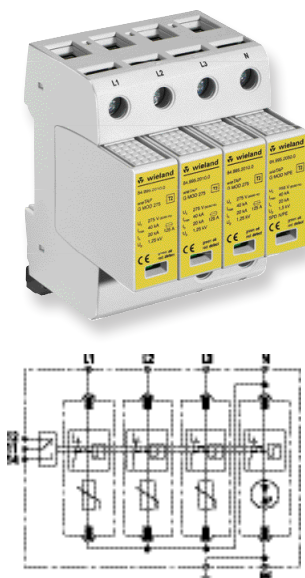
Type	Part No.
wietap G M TNS 275	84.995.2400.0
wietap G M TNS 275 FM	84.995.2405.0
Replacement module L1, L2, L3, N against $\pm$	84.995.2010.0
Power network	TN-S
SPD accord. to EN 61643-11	Type 2
SPD accord. to IEC 61643-1	Class II
Nominal voltage AC [U _N]	230/400 V
Nominal frequency [f _N]	50 / 60 Hz
Maximum continuous voltage AC [U _c]	275 V
Nominal discharge current (8/20) [I _n]	20 kA
Max. discharge current (8/20) [I _{max}]	40 kA
Protection level [U _p]	≤ 1.25 kV
Protection level at 5 kA [U _p]	≤ 1 kV
Operating time [t _A]	≤ 25 ns
Maximum network overcurrent protection	125 A gL/gG
Short-circuit proof with max. network overcurrent protection	50 kA _{eff}
TOV-voltage [U _T]	335 V / 5 sec.
Temperature range [T _U]	-40 ... +80 °C
Function/failure indication	green / red
Wire range (min.)	1.5 mm ² (AWG 14) solid/fine-stranded
Wire range (max.)	35 mm ² (AWG 2) stranded / 25 mm ² (AWG 4) fine-stranded
Mounted on DIN rail acc. to EN 60715	35 mm
Housing material	Thermoplast, UL 94 V-0
Degree of protection	IP 20
Dimensions	4 TE, DIN 43880 (72 mm)
Remote signaling contacts = Contact Type	Change-over 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 for remote signaling terminals	max. 1.5 mm ² (AWG 14) solid/fine-stranded
Approvals	CE

Three-phase combined arrester, type 2

For protection of sub-distributions or the control cabinet main supply

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 according to VDE 0100-534
- Optional with remote signaling contact (FM)
- Vibration and shock tested acc. to EN 60068-2



Type	Part No.
wietap G M TT 275	84.995.2310.0
wietap G M TT 275 FM	84.995.2315.0
Replacement module L1, L2, L3 against N	84.995.2010.0
Replacement module N against $\pm$	84.995.2050.0
Power network	TT and TN-S (Variante „3+1“)
SPD accord. to EN 61643-11	Type 2
SPD accord. to IEC 61643-1	Class II
Nominal voltage AC [U _N]	230/400 V
Nominal frequency [f _N]	50 / 60 Hz
Maximum continuous voltage AC [L-N] [U _c]	275 V
Maximum continuous voltage AC [N-PE] [U _c]	255 V
Nominal discharge current (8/20) [I _n]	20 kA
Max. discharge current (8/20) [I _{max}]	40 kA
Lightn. impulse current (10/350) [N-PE] [I _{imp}]	12 kA
Protection level [L-N] [U _p]	≤ 1.25 kV
Protection level [L-N] at 5 kA [U _p]	≤ 1 kV
Protection level [N-PE] [U _p]	≤ 1.5 kV
Follow current extinguishing capability [N-PE] [I _{eff}]	100 A _{eff}
Operating time [L-N] [t _a]	≤ 25 ns
Operating time [N-PE] [t _a]	≤ 100 ns
Maximum network overcurrent protection	125 A gL/gG
Short-circuit proof with network overcurrent protection with 25 A gL/gG	50 kA _{eff}
TOV-voltage [L-N] [U _T]	335 V / 5 sec.
TOV-voltage [N-PE] [U _T]	1200 V / 200 ms
Temperature range [T _U]	-40 ... +80 °C
Function/failure indication	green / red
Wire range (min.)	1.5 mm ² (AWG 14) solid/fine-stranded
Wire range (max.)	35 mm ² (AWG 2) stranded / 25 mm ² (AWG 4) fine-stranded
Mounted on DIN rail acc. to EN 60715	35 mm
Housing material	Thermoplast, UL 94 V-0
Degree of protection	IP 20
Dimensions	4 TE, DIN 43880 (72 mm)
Remote signaling contacts = Contact Type	Change-over 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 for remote signaling terminals	max. 1.5 mm ² (AWG 14) solid/fine-stranded
Approvals	CE

Replacement module for wietap G M devices

wietap G MOD 275

Varistor protection module
for all L – $\pm$; L – N
and for
wietap G M TNS 275 (FM)
N – $\pm$



wietap G MOD NPE

Spark gap protection module
for N – $\pm$
and for
wietap G M TT 275 (FM)
N – $\pm$



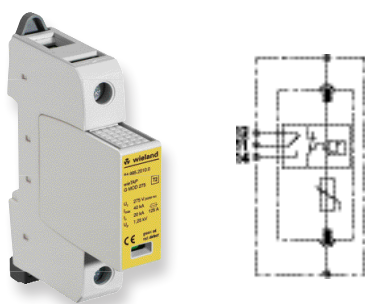
Type	Part No.
wietap G MOD 275	84.995.2010.0
wietap G MOD NPE	84.995.2050.0

Single-phase surge arrester, type 2

For protection of sub-distributions or the control cabinet main supply

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
- Function/failure indication according to VDE 0100-534
- Optional with remote signaling contact (FM)
- Vibration and shock tested acc. to EN 60068-2



Type	Part No.
wietap G S 275	84.995.2070.0
wietap G S 275 FM	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 _c]	275 V
Nominal frequency [f _N]	50 / 60 Hz
Maximum continuous voltage DC [U _c]	350 V
Nominal discharge current (8/20) [I _n]	20 kA
Max. discharge current (8/20) [I _{max}]	40 kA
Protection level [U _p]	≤ 1.25 kV
Protection level at 5 kA [U _p]	≤ 1 kV
Operating time [t _A]	≤ 25 ns
Maximum network overcurrent protection	125 A gL/gG
Short-circuit proof with max. network overcurrent protection	50 kA _{eff}
TOV-voltage [U _T]	335 V / 5 sec.
Temperature range [T _U]	-40 ... +80 °C
Function/failure indication	green / red
Wire range (min.)	1.5 mm ² (AWG 14) solid/fine-stranded
Wire range (max.)	35 mm ² (AWG 2) stranded / 25 mm ² (AWG 4) fine-stranded
Mounted on DIN rail acc. to EN 60715	35 mm
Housing material	Thermoplast, UL 94 V-0
Degree of protection	IP 20
Dimensions	1 TE, DIN 43880 (18 mm)
Remote signaling contacts = Contact Type	Change-over 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 for remote signaling terminals	max. 1.5 mm ² (AWG 14) solid/fine-stranded
Approvals	CE

wietap G MOD 275

- Replacement module for wietap G S 275 (FM)



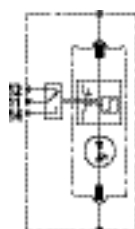
Type	Part No.
wietap G MOD 275	84.995.2010.0

Single-phase surge arrester, type 2

For protection of sub-distributions or the control cabinet main supply

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 according to VDE 0100-534
- Optional with remote signaling contact (FM)
- Vibration and shock tested acc. to EN 60068-2



Type	Part No.
wietap GP C S	84.995.2030.0
wietap GP C S FM	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 _c]	255 V
Nominal frequency [f _N]	50 / 60 Hz
Nominal discharge current (8/20) [I _n]	20 kA
Max. discharge current (8/20) [I _{max}]	40 kA
Follow current extinguishing capability [I _{eff}]	100 A _{eff}
Lightn. impulse current (10/350) [I _{imp}]	12 kA
Protection level [U _p]	≤ 1.5 kV
Operating time [t _a]	≤ 100 ns
TOV-voltage [U _T]	1200 V / 200 ms
Temperature range [T _U]	-40 ... +80 °C
Function/failure indication	green / red
Wire range (min.)	1.5 mm ² (AWG 14) solid/fine-stranded
Wire range (max.)	35 mm ² (AWG 2) stranded / 25 mm ² (AWG 4) fine-stranded
Mounted on DIN rail acc. to EN 60715	35 mm
Housing material	Thermoplast, UL 94 V-0
Degree of protection	IP 20
Dimensions	1 TE, DIN 43880 (18 mm)
Remote signaling contacts = Contact Type	Change-over 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 for remote signaling terminals	max. 1.5 mm ² (AWG 14) solid/fine-stranded
Approvals	CE

wietap GP C MOD

- Replacement module for wietap G CS (FM)



Type	Part No.
wietap GP C MOD	84.995.2060.0

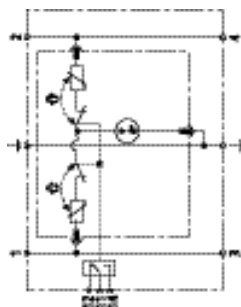


Surge arrester, type 3

For direct load protection in control cabinets or sub-distributions

wietap R M 2P 30 FM 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 according to VDE 0100-534
- Optional with remote signaling contact (FM)
- Vibration and shock tested acc. to EN 60068-2



Type	Part No.	Part No.
wietap R M 2P 30 FM		84.995.3206.0
wietap R M 2P 255	84.995.3200.0	
wietap R M 2P 255 FM	84.995.3205.0	
SPD accord. to EN 61643-11	Type 3	Type 3
SPD accord. to IEC 61643-1	Class III	Category A / Class III
Nominal voltage AC [U _N]	230 V	24 V
Maximum continuous voltage AC [U _C]	255 V	30 V
Maximum continuous voltage DC [U _C]	255 V	30 V
Nominal load current AC [I _N]	25 A	25 A
Nominal discharge current (8/20) [I _N]	3 kA	1 kA
Total discharge current (8/20) [L+N-PE] [I _{total}]	5 kA	2 kA
Combined surge [U _{OC}]	6 kV	2 kV
Combined surge [L+N-PE] [U _{OC total}]	10 kV	4 kV
Protection level [L-N] [U _P]	≤ 1250 V	≤ 180 V
Protection level [L/N-PE] [U _P]	≤ 1500 V	≤ 630 V
Operating time [L-N] [t _A]	≤ 25 ns	≤ 25 ns
Operating time [L/N-PE] [t _A]	≤ 100 ns	≤ 100 ns
Maximum network overcurrent protection	25 A gL/gG oder B 25 A	25 A gL/gG or B 25 A
Short-circuit proof with network overcurrent protection with 25 A gL/gG	6 kA _{rms}	6 kA _{rms}
TOV-voltage [L-N] [U _T]	335 V / 5 sec.	--
TOV-voltage [L/N-PE] (I) [U _T]	400 V / 5 sec.	--
TOV-voltage [L+N-PE] (II) [U _T]	1200 V + U _o / 200 ms	--
Temperature range [T _U]	-40 ... +80 °C	--
Function/failure indication	green / red	--
Wire range min.	0.5 mm ² (AWG 20) solid/fine-stranded	--
Wire range max.	4 mm ² (AWG 12) solid / 2.5 mm ² (AWG 14) fine-stranded	--
Mounted on DIN rail acc. to EN 60715	35 mm	--
Housing material	Thermoplast, UL 94 V-0	--
Degree of protection	IP 20	--
Dimensions	1 TE, DIN 43880 (18 mm)	--
Remote signaling contacts = Contact Type	Change-over 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 for Remote signaling terminals	max. 1.5 mm ² (AWG 16) solid/fine-stranded	--
Approvals	CE   	

wietap R MOD 255

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



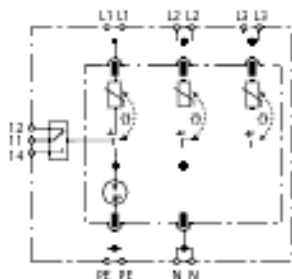
Type	Part No.
wietap R MOD 255	84.995.3010.0

Surge arrester, type 3

For direct load protection in control cabinets or sub-distributions

wietap R M 4P 255 (FM)

- Surge arrester, type 3
- Four-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 according to VDE 0100-534
- Optional with remote signaling contact (FM)
- Vibration and shock tested acc. to EN 60068-2



Type	Part No.
wietap R M 4P 255	84.995.3400.0
wietap R M 4P 255 FM	84.995.3405.0
Technical Data	
SPD accord. to EN 61643-11	Type 3
SPD accord. to IEC 61643-1	Class III
Nominal voltage AC [U _N]	230/400 V
Maximum continuous voltage AC [U _c]	255/440 V
Nominal load current AC [I _n]	25 A
Nominal discharge current (8/20) [I _n]	3 kA
Total discharge current (8/20) [L+N-PE] [I _{total}]	8 kA
Combined surge [U _{oc}]	6 kV
Combined surge [L+N-PE] [U _{oc total}]	16 kV
Protection level [L-N] [U _p]	≤ 1000 V
Protection level [L/N-PE] [U _p]	≤ 1500 V
Operating time [L-N] [t _Δ]	≤ 25 ns
Operating time [L/N-PE] [t _Δ]	≤ 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 _{eff}
TOV-voltage [L-N] [U _T]	335 V / 5 sec.
TOV-voltage [L/N-PE] (I) [U _T]	400 V / 5 sec.
TOV-voltage [L+N-PE] (II) [U _T]	1200 V + U ₀ / 200 ms
Temperature range [T _u]	-40 ... +80 °C
Function/failure indication	green / red
Wire range (min.)	0.5 mm ² (AWG 20) solid/fine-stranded
Wire range (max.)	4 mm ² (AWG 12) solid / 2.5 mm ² (AWG 14) fine-stranded
Mounted on DIN rail acc. to EN 60715	35 mm
Housingwerkstoff	Thermoplast, UL 94 V-0
Degree of protection	IP 20
Dimensions	2 TE, DIN 43880 (36 mm)
Remote signaling contacts = Contact Type	Change-over 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 for remote signaling terminals	max. 1.5 mm ² (AWG 16) solid/fine-stranded
Approvals	CE

wietap R M MOD 4P 255

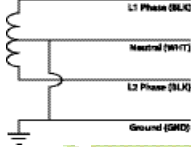
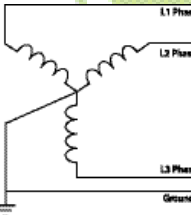
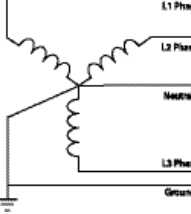
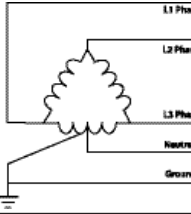
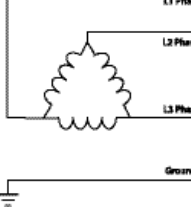
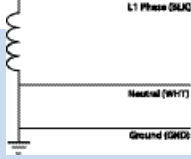
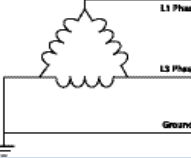
- Replacement module for wietap R M 4P 255



Type	Part No.
wietap R M MOD 4P 255	84.995.3020.0



Solutions for Category B for the different mains systems: Selection Matrix

Circuit	Circuit Voltage Configuration	Used Types	Connected between
	120/240V Split Phase 1Ø 3W + Grnd	wietap G S 150 FM UL wietap G S 150 FM UL	L1 Phase-Grnd L2 Phase-Grnd
	240/480V Split Phase 1Ø 3W + Grnd	wietap G S 320 FM UL wietap G S 320 FM UL	L1 Phase-Grnd L2 Phase-Grnd
	127/254V Split Phase 1Ø 3W + Grnd	wietap G S 150 FM UL wietap G S 150 FM UL	L1 Phase-Grnd L2 Phase-Grnd
	120/208V Wye 3Ø 3W + Grnd	wietap G S 150 FM UL wietap G S 150 FM UL wietap G S 150 FM UL	L1 Phase-Grnd L2 Phase-Grnd L3 Phase-Grnd
	277/480V Wye 3Ø 3W + Grnd	wietap G S 320 FM UL wietap G S 320 FM UL wietap G S 320 FM UL	L1 Phase-Grnd L2 Phase-Grnd L3 Phase-Grnd
	347/600V Wye 3Ø 3W + Grnd	wietap G S 440 FM UL wietap G S 440 FM UL wietap G S 440 FM UL	L1 Phase-Grnd L2 Phase-Grnd L3 Phase-Grnd
	120/208V Wye 3Ø 4W + Grnd	wietap G S 150 FM UL wietap G S 150 FM UL wietap G S 150 FM UL wietap G S 150 FM UL	L1 Phase-Grnd L2 Phase-Grnd L3 Phase-Grnd Neutral-Grnd
	277/480V Wye 3Ø 4W + Grnd	wietap G S 320 FM UL wietap G S 320 FM UL wietap G S 320 FM UL wietap G S 320 FM UL	L1 Phase-Grnd L2 Phase-Grnd L3 Phase-Grnd Neutral-Grnd
	347/600V Wye 3Ø 4W + Grnd	wietap G S 440 FM UL wietap G S 440 FM UL wietap G S 440 FM UL wietap G S 440 FM UL	L1 Phase-Grnd L2 Phase-Grnd L3 Phase-Grnd Neutral-Grnd
	127/220V Wye 3Ø 4W + Grnd	wietap G S 150 FM UL wietap G S 150 FM UL wietap G S 150 FM UL wietap G S 150 FM UL	L1 Phase-Grnd L2 Phase-Grnd L3 Phase-Grnd Neutral-Grnd
	120/240V High Leg Delta - B High	wietap G S 150 FM UL wietap G S 150 FM UL wietap G S 150 FM UL wietap G S 275 FM UL	L1 Phase-Neutral L3 Phase-Neutral Neutral-Grnd L2 Phase-Neutral
	240/480V High Leg Delta - B High	wietap G S 320 FM UL wietap G S 320 FM UL wietap G S 320 FM UL wietap G S 600 FM UL	L1 Phase-Neutral L3 Phase-Neutral Neutral-Grnd L2 Phase-Neutral
	480V Delta 3Ø 3W + Grnd & HRG Wye	wietap G S 600 FM UL wietap G S 600 FM UL wietap G S 600 FM UL	L1 Phase-Grnd L2 Phase-Grnd L3 Phase-Grnd
	240V Delta 3Ø 3W + Grnd	wietap G S 320 FM UL wietap G S 320 FM UL wietap G S 320 FM UL	L1 Phase-Grnd L2 Phase-Grnd L3 Phase-Grnd
	600V Delta 3Ø 3W + Grnd & HRG	wietap G S WE 600 FM UL wietap G S WE 600 FM UL wietap G S WE 600 FM UL	L1 Phase-Grnd L2 Phase-Grnd L3 Phase-Grnd
	120V Single Phase	wietap G S 150 FM UL	L1 Phase-Neutral
	240V Single Phase	wietap G S 320 FM UL	L1 Phase-Neutral
	127V Single Phase	wietap G S 150 FM UL	L1 Phase-Neutral
	254V Single Phase	wietap G S 320 FM UL	L1 Phase-Neutral
	347V Single Phase	wietap G S 440 FM UL	L1 Phase-Neutral
	277V Single Phase	wietap G S 320 FM UL	L1 Phase-Neutral
	480V Single Phase	wietap G S 600 FM UL	L1 Phase-Neutral
	600V Single Phase	wietap G S WE 600 FM UL	L1 Phase-Neutral
	480V B Corner Grnd Delta 3Ø 3W + Grnd	wietap G S 600 FM UL wietap G S 600 FM UL	L1 Phase-Grnd L3 Phase-Grnd
	240V B Corner Grnd Delta 3Ø 3W + Grnd	wietap G S 320 FM UL wietap G S 320 FM UL	L1 Phase-Grnd L3 Phase-Grnd
	600V B Corner Grnd Delta 3Ø 3W + Grnd	wietap G S WE 600 FM UL wietap G S WE 600 FM UL	L1 Phase-Grnd L3 Phase-Grnd

Overvoltage Protection for **North and Central America**

For the North and Central American region OVP modules have to be used with UL or CSA approval. At the same time the voltage levels are different compared to Europe or the Asian region.

For this reason Wieland offers specialized OVP modules. The green marked countries have energy network systems according UL and CSA mains systems and voltage levels.

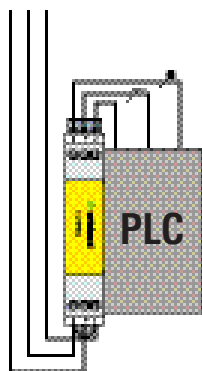
The overvoltage protection according IEEE is defined into 3 different areas:

- **Category C (Class I according IEC):** is mainly used at the feed in point of a building or production site. Mainly at outside termination
- **Category B (Class II according IEC):** this category is often used inside of buildings in main distribution panels or in switch board cabinets of machines
- **Category A (Class III according IEC):** is mainly used for the protection of single devices inside a switch board cabinet

Wieland is offering solutions for inside the building. This means for Category B and Category A.

At Category A applications the arrester is connected up front in series to the device.

The rated voltage of the OVP is selected according the nominal voltage of the device which is connected.



Category A

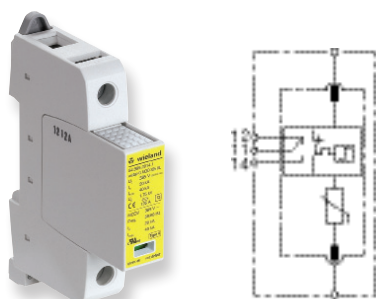


Single-phase surge arrester, category B & A

For protection of sub-distributions or the control cabinet main supply

wietap G S 150 FM UL wietap G S 275 FM UL

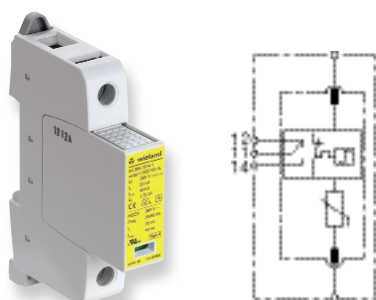
- Surge arrester, type 2, category B
- Multi-purpose surge arrester
- With plug-in protection module
- Thermo Dynamic Control SPD monitoring device
- Small housing
- Operating state/fault indication by indicator flag in window
- With signaling contact (FM)
- Vibration and shock tested according EN 60068-2



Type	Part No.	Part No.
wietap G S 150 FM UL	84.995.2092.1	
wietap G S 275 FM UL		84.995.2090.1
SPD accord. to EN 61643-11	Type 2	Type 2
SPD accord. to IEC 61643-1	Category B / Class II	Category B / Class II
Maximum continuous voltage AC [U _c]	150 V	275 V
Maximum continuous voltage DC [U _c]	200 V	350 V
Rated varistor voltage AC [U _{mov}]	200 V	350 V
Rated voltage (50/60 Hz) [V]	150 V	275 V
Max. continuous operating voltage [MCOV]	150 V	275 V
Voltage protection rating [VPR]	700 V	1000 V
Rated discharge current [I _n]	20 kA	20 kA
Max. discharge current (8/20) [I _{max}]	40 kA	40 kA
Protection level [U _p]	≤ 0.7 kV	≤ 1.25 kV
Protection level at 5 kA [U _p]	≤ 0.55 kV	≤ 1 kV
Operating time [t _a]	≤ 25 ns	≤ 25 ns
Maximum network overcurrent protection	125 A gL/gG	125 A gL/gG
Short-circuit proof with max. network overcurrent protection	50 kA _{rms}	50 kA _{rms}
TOV-voltage [U _T]	175 V / 5 sec.	335 V / 5 sec.
Temperature range [T _U]	acc. to UL 1449 3rd edition acc. to EN 61643-11	
	0... +85 °C -40... +85 °C	
Function/failure indication	green / red	
Wire range (min.)	1.5 mm ² (AWG 14) solid/fine-stranded	
Wire range (max.)	35 mm ² (AWG 2) stranded / 25 mm ² (AWG 4) fine-stranded	
Mounted on DIN rail acc. to EN 60715	35 mm	
Housing material	thermoplastic, UL 94 V-0	
Degree of protection	IP 20	
Dimensions	1 mod., DIN 43880	
Remote signaling contacts (FM)	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 for remote signaling terminals	max. 1.5 mm ² (AWG 14) solid/fine-stranded	
Approvals	CE cULus	

wietap G S 320 FM UL wietap G S 385 FM UL

- Surge arrester, type 2, category B
- Multi-purpose surge arrester
- With plug-in protection module
- Thermo Dynamic Control SPD monitoring device
- Small housing
- Operating state/fault indication by indicator flag in window
- With signaling contact (FM)
- Vibration and shock tested according EN 60068-2



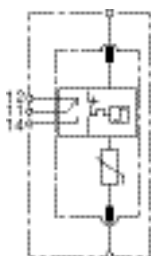
Type	Part No.	Part No.
wietap G S 320 FM UL	84.995.2093.1	
wietap G S 385 FM UL		84.995.2094.1
SPD accord. to EN 61643-11	Type 2	Type 2
SPD accord. to IEC 61643-1	Category B / Class II	Category B / Class II
Maximum continuous voltage AC [U _c]	320 V	385 V
Maximum continuous voltage DC [U _c]	420 V	500 V
Rated varistor voltage AC [U _{mov}]	420 V	500 V
Rated voltage (50/60 Hz) [V]	320 V	385 V
Max. continuous operating voltage [MCOV]	320 V	385 V
Voltage protection rating [VPR]	1200 V	1500 V
Rated discharge current [I _n]	20 kA	20 kA
Max. discharge current (8/20) [I _{max}]	40 kA	40 kA
Protection level [U _p]	≤ 1.5 kV	≤ 1.75 kV
Protection level at 5 kA [U _p]	≤ 1.2 kV	≤ 1.35 kV
Operating time [t _a]	≤ 25 ns	≤ 25 ns
Maximum network overcurrent protection	125 A gL/gG	125 A gL/gG
Short-circuit proof with max. network overcurrent protection	25 kA _{rms}	25 kA _{rms}
TOV-voltage [U _T]	335 V / 5 sec.	385 V / 5 sec.
Temperature range [T _U]	acc. to UL 1449 3rd edition acc. to EN 61643-11	
	0... +85 °C -40... +85 °C	
Function/failure indication	green / red	
Wire range (min.)	1.5 mm ² (AWG 14) solid/fine-stranded	
Wire range (max.)	35 mm ² (AWG 2) stranded / 25 mm ² (AWG 4) fine-stranded	
Mounted on DIN rail acc. to EN 60715	35 mm	
Housing material	thermoplastic, UL 94 V-0	
Degree of protection	IP 20	
Dimensions	1 mod., DIN 43880	
Remote signaling contacts (FM)	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 for remote signaling terminals	max. 1.5 mm ² (AWG 14) solid/fine-stranded	
Approvals	CE UL cULus	

Single-phase surge arrester, category B & A

For protection of sub-distributions or the control cabinet main supply

wietap G S 440 FM UL wietap G S 600 FM UL

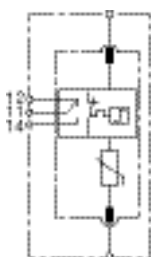
- Surge arrester, type 2, category B
- Multi-purpose surge arrester
- With plug-in protection module
- Thermo Dynamic Control SPD monitoring device
- Small housing
- Operating state/fault indication by indicator flag in window
- With signaling contact (FM)
- Vibration and shock tested according EN 60068-2



Type	Part No.	Part No.
wietap G S 440 FM UL	84.995.2095.1	
wietap G S 600 FM UL		84.995.2096.1
SPD accord. to EN 61643-11	Type 2	Type 2
SPD accord. to IEC 61643-1	Category B / Class II	Category B / Class II
Maximum continuous voltage AC [U _c]	440 V	600 V
Maximum continuous voltage DC [U _c]	585 V	600 V
Rated varistor voltage AC [U _{mov}]	585 V	600 V
Rated voltage (50/60 Hz) [V]	440 V	600 V
Max. continuous operating voltage [MCOV]	440 V	600 V
Voltage protection rating [VPR]	1500 V	2000 V
Rated discharge current [I _n]	20 kA	20 kA
Max. discharge current (8/20) [I _{max}]	40 kA	30 kA
Protection level [U _p]	≤ 2 kV	≤ 2.5 kV
Protection level at 5 kA [U _p]	≤ 1.7 kV	≤ 2 kV
Operating time [t _a]	≤ 25 ns	≤ 25 ns
Maximum network overcurrent protection	125 A gL/gG	100 A gL/gG
Short-circuit proof with max. network overcurrent protection	25 kA _{rms}	25 kA _{rms}
TOV-voltage [U _i]	580 V / 5 sec.	600 V / 5 sec.
Temperature range [T _u]	acc. to UL 1449 3rd edition acc. to EN 61643-11	
	0... +85 °C -40... +85 °C	
Function/failure indication	green / red	
Wire range (min.)	1.5 mm ² (AWG 14) solid/fine-stranded	
Wire range (max.)	35 mm ² (AWG 2) stranded / 25 mm ² (AWG 4) fine-stranded	
Mounted on DIN rail acc. to EN 60715	35 mm	
Housing material	thermoplastic, UL 94 V-0	
Degree of protection	IP 20	
Dimensions	1 mod., DIN 43880	
Remote signaling contacts (FM)	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 for remote signaling terminals	max. 1.5 mm ² (AWG 14) solid/fine-stranded	
Approvals	CE cULus	

wietap G S WE 600 FM UL

- Surge arrester, type 2, category B
- Multi-purpose surge arrester
- With plug-in protection module
- Thermo Dynamic Control SPD monitoring device
- Small housing
- Operating state/fault indication by indicator flag in window
- With signaling contact (FM)
- Vibration and shock tested according EN 60068-2



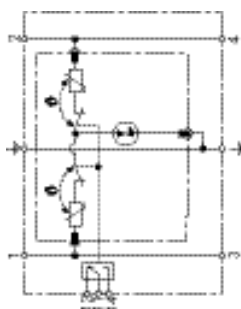
Type	Part No.	Part No.
wietap G S WE 600 FM UL	84.995.2097.1	
SPD accord. to EN 61643-11	Type 2	
SPD accord. to IEC 61643-1	Category B / Class II	
Maximum continuous voltage AC [U _c]	600 V	
Maximum continuous voltage DC [U _c]	600 V	
Rated varistor voltage AC [U _{mov}]	750V	
Rated voltage (50/60 Hz) [V]	600 V	
Max. continuous operating voltage [MCOV]	750 V	
Voltage protection rating [VPR]	2500V	
Rated discharge current [I _n]	10 kA	
Max. discharge current (8/20) [I _{max}]	25 kA	
Protection level [U _p]	≤ 3 kV	
Protection level at 5 kA [U _p]	≤ 2.5 kV	
Operating time [t _a]	≤ 25 ns	
Maximum network overcurrent protection	100 A gL/gG	
Short-circuit proof with max. network overcurrent protection	25 kA _{rms}	
TOV-voltage [U _i]	900 V / 5 sec.	
Temperature range [T _u]	acc. to UL 1449 3rd edition acc. to EN 61643-11	
	0... +85 °C -40... +85 °C	
Function/failure indication	green / red	
Wire range (min.)	1.5 mm ² (AWG 14) solid/fine-stranded	
Wire range (max.)	35 mm ² (AWG 2) stranded / 25 mm ² (AWG 4) fine-stranded	
Mounted on DIN rail acc. to EN 60715	35 mm	
Housing material	thermoplastic, UL 94 V-0	
Degree of protection	IP 20	
Dimensions	1 mod., DIN 43880	
Remote signaling contacts (FM)	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 for remote signaling terminals	max. 1.5 mm ² (AWG 14) solid/fine-stranded	
Approvals	CE cULus	

Surge arrester, category A

For direct load protection in control cabinets or sub-distributions

wietap R M 2P 30 FM

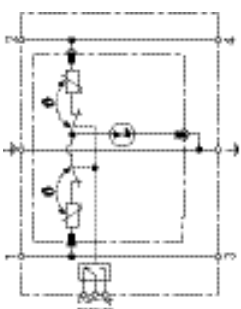
- Surge arrester, type 3
- Two-pole surge arrester
- High discharge capacity due to powerful zinc oxide varistor
- Slim design (modular construction) acc. to DIN 43880
- With pluggable protection modules
- Function/failure indication according to VDE 0100-534
- With remote signaling contact (FM)
- Vibration and shock tested acc. to EN 60068-2



Type	Part No.
wietap R M 2P 30 FM	84.995.3206.0
Technical Data	
SPD accord. to EN 61643-11	Type 3
SPD accord. to IEC 61643-1	Category A / Class III
Rated voltage (50/60 Hz) [V]	24 V
Maximum continuous voltage AC [U _c]	30 V
Maximum continuous voltage DC [U _c]	30 V
Max. continuous operating voltage [MCOV]	30 V
Voltage protection rating [VPR]	330 V
Rated current AC acc. UL 1449 3rd edition EN 61643-11	20 A 25 A
Rated discharge current (8/20) [I _n]	1 kA
Total discharge current (8/20) [L+N-PE] [I _{total}]	2 kA
Combined surge [U _{oc}]	2 kV
Combined surge [L+N-PE] [U _{oc total}]	4 kV
Protection level [L-N] [U _p]	≤ 180 V
Protection level [L/N-PE] [U _p]	≤ 630 V
Operating time [L-N] [t _α]	≤ 25 ns
Operating time [L/N-PE] [t _α]	≤ 100 ns
Maximum network overcurrent protection	25 A gL/gG or B 25 A
Short-circuit proof with network overcurrent protection with 25 A gL/gG	6 kA _{rms}
Temperature range [T _U]	0... +85 °C -40... +85 °C
Function/failure indication	green / red
Wire range (min.)	0.5 mm ² (AWG 20) solid/fine-stranded
Wire range (max.)	4 mm ² (AWG 12) solid / 2.5 mm ² (AWG 14) fine-stranded
Mounted on DIN rail acc. to EN 60715	35 mm
Housing material	thermoplastic, UL 94 V-0
Degree of protection	IP 20
Dimensions	1 mod., DIN 43880
Remote signaling contacts (FM)	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 for remote signaling terminals	max. 1.5 mm ² (AWG 16) solid/fine-stranded
Approvals	CE

wietap R M 2P 150 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 according to VDE 0100-534
- With remote signaling contact (FM)
- Vibration and shock tested acc. to EN 60068-2



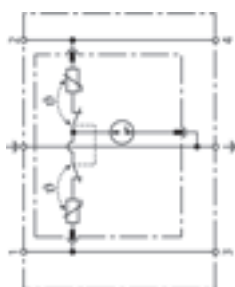
Type	Part No.
wietap R M 2P 150 FM	84.995.3209.0
Technical Data	
SPD accord. to EN 61643-11	Type 3
SPD accord. to IEC 61643-1	Category A / Class III
Rated voltage (50/60 Hz)	120 V
Maximum continuous voltage AC [U _c]	150 V
Maximum continuous voltage DC [U _c]	150 V
Max. continuous operating voltage [MCOV]	150 V
Voltage protection rating [VPR]	700 V
Rated current AC acc. UL 1449 3rd edition EN 61643-11	20 A 25 A
Rated discharge current (8/20) [I _n]	2 kA
Total discharge current (8/20) [L+N-PE] [I _{total}]	4 kA
Combined surge [U _{oc}]	4 kV
Combined surge [L+N-PE] [U _{oc total}]	8 kV
Protection level [L-N] [U _p]	≤ 640 V
Protection level [L/N-PE] [U _p]	≤ 800 V
Operating time [L-N] [t _α]	≤ 25 ns
Operating time [L/N-PE] [t _α]	≤ 100 ns
Maximum network overcurrent protection	25 A gL/gG or B 25 A
Short-circuit proof with network overcurrent protection with 25 A gL/gG	6 kA _{rms}
Temperature range [T _U]	0... +85 °C -40... +85 °C
Function/failure indication	green / red
Wire range (min.)	0.5 mm ² (AWG 20) solid/fine-stranded
Wire range (max.)	4 mm ² (AWG 12) solid / 2.5 mm ² (AWG 14) fine-stranded
Mounted on DIN rail acc. to EN 60715	35 mm
Housing material	thermoplastic, UL 94 V-0
Degree of protection	IP 20
Dimensions	1 mod., DIN 43880
Remote signaling contacts (FM)	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 for remote signaling terminals	max. 1.5 mm ² (AWG 14) solid/fine-stranded
Approvals	CE

Surge arrester, category A

For direct load protection in control cabinets or sub-distributions

wietap R M 2P 255

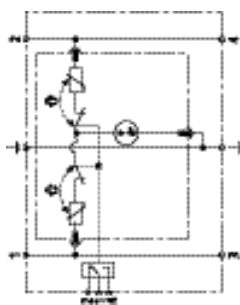
- Surge arrester, type 3
- Two-pole surge arrester
- High discharge capacity due to powerful zinc oxide varistor
- Slim design (modular construction) acc. to DIN 43880
- With pluggable protection modules
- Function/failure indication according to VDE 0100-534
- Vibration and shock tested acc. to EN 60068-2



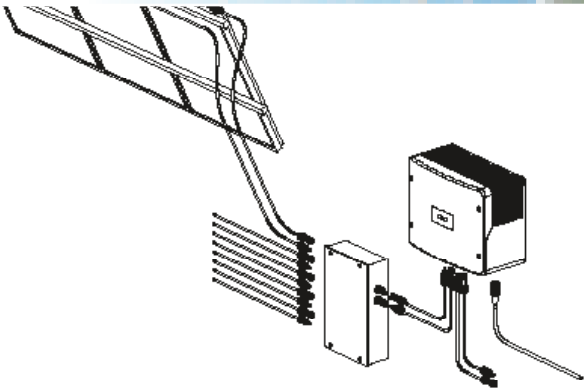
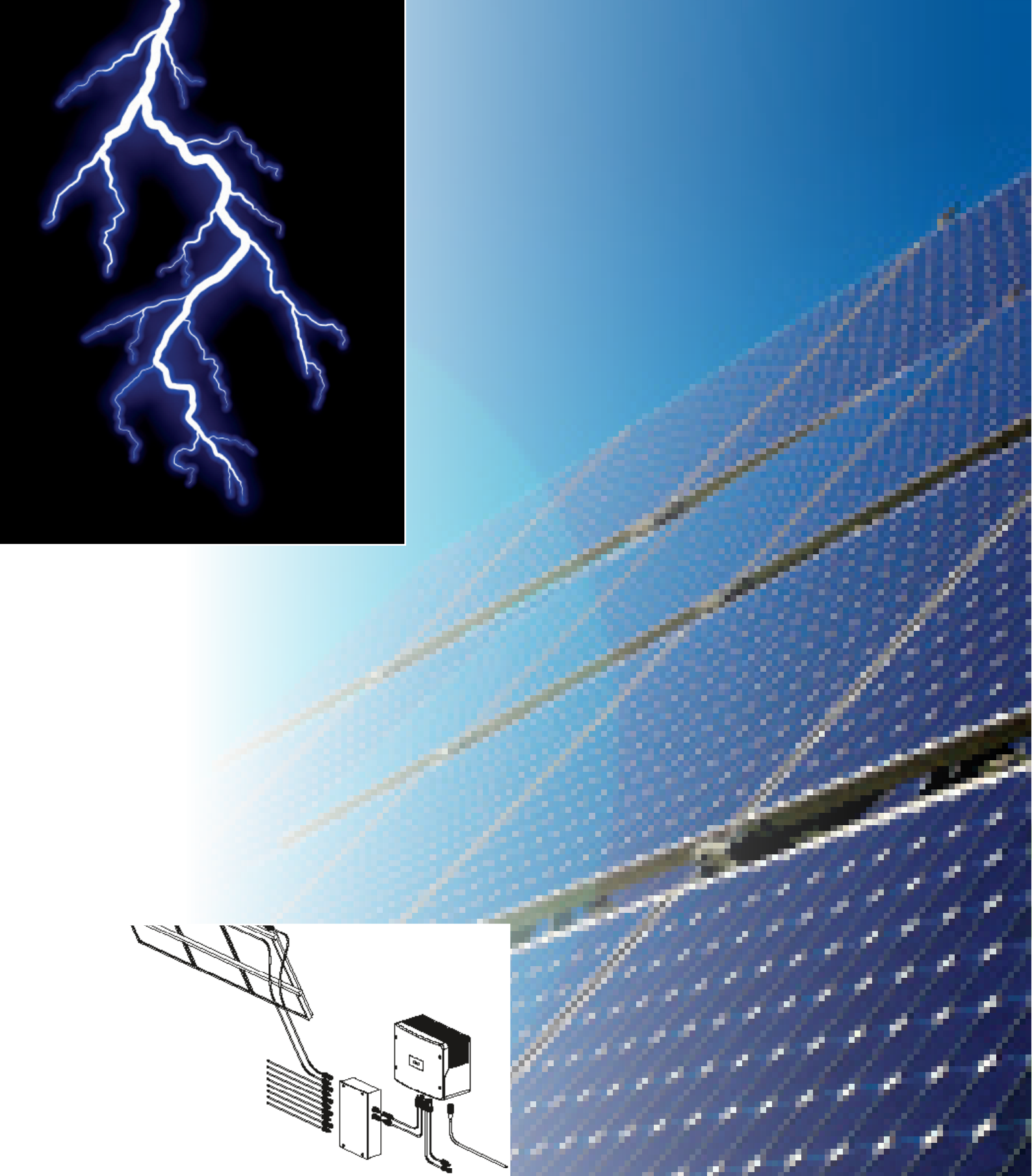
Type	Part No.
wietap R M 2P 255	84.995.3200.0
Technical Data	
SPD accord. to EN 61643-11	Type 3
SPD accord. to IEC 61643-1	Category A / Class III
Rated voltage (50/60 Hz) [V]	240 V
Maximum continuous voltage AC [U _c]	255 V
Maximum continuous voltage DC [U _c]	255 V
Max. continuous operating voltage [MCOV]	255 V
Voltage protection rating [VPR]	1200 V
Rated current AC	20 A
Rated discharge current (8/20) [I _n]	3 kA
Total discharge current (8/20) [L+N-PE] [I _{total}]	5 kA
Combined surge [U _{oc}]	6 kV
Combined surge [L+N-PE] [U _{oc total}]	10 kV
Protection level [L-N] [U _p]	≤ 1250 V
Protection level [L/N-PE] [U _p]	≤ 1500 V
Operating time [L-N] [t _Δ]	≤ 25 ns
Operating time [L/N-PE] [t _Δ]	≤ 100 ns
Maximum network overcurrent protection	25 A gL/gG or B 25 A
Short-circuit proof with network overcurrent protection with 25 A gL/gG	6 kA _{rms}
TOV-voltage [L-N] [U _T]	335 V / 5 sec.
TOV-voltage [L/N-PE] (I) [U _T]	400 V / 5 sec.
TOV-voltage [L+N-PE] (II) [U _T]	1200 V + UCS / 200 ms
Temperature range [T _u]	0... +85 °C
acc. to UL 1449 3rd edition	-40... +85 °C
acc. to EN 61643-11	
Function/failure indication	green / red
Wire range (min.)	0.5 mm ² (AWG 20) solid/fine-stranded
Wire range (max.)	4 mm ² (AWG 12) solid / 2.5 mm ² (AWG 14) fine-stranded
Mounted on DIN rail acc. to EN 60715	35 mm
Housing material	thermoplastic, UL 94 V-0
Degree of protection	IP 20
Dimensions	1 mod., DIN 43880
Approvals	CE

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 according to VDE 0100-534
- With remote signaling contact (FM)
- Vibration and shock tested acc. to EN 60068-2



Type	Part No.
wietap R M 2P 255 FM	84.995.3205.0
Technical Data	
SPD accord. to EN 61643-11	Type 3
SPD accord. to IEC 61643-1	Category A / Class III
Rated voltage (50/60 Hz) [V]	240 V
Maximum continuous voltage AC [U _c]	255 V
Maximum continuous voltage DC [U _c]	255 V
Max. continuous operating voltage [MCOV]	255 V
Voltage protection rating [VPR]	1200 V
Rated current AC acc. UL 1449 3rd edition EN 61643-11	20 A 25 A
Rated discharge current (8/20) [I _n]	3 kA
Total discharge current (8/20) [L+N-PE] [I _{total}]	5 kA
Combined surge [U _{oc}]	6 kV
Combined surge [L+N-PE] [U _{oc total}]	10 kV
Protection level [L-N] [U _p]	≤ 1250 V
Protection level [L/N-PE] [U _p]	≤ 1500 V
Operating time [L-N] [t _Δ]	≤ 25 ns
Operating time [L/N-PE] [t _Δ]	≤ 100 ns
Maximum network overcurrent protection	25 A gL/gG or B 25 A
Short-circuit proof with network overcurrent protection with 25 A gL/gG	6 kA _{rms}
TOV-voltage [L-N] [U _T]	335 V / 5 sec.
TOV-voltage [L/N-PE] (I) [U _T]	400 V / 5 sec.
TOV-voltage [L+N-PE] (II) [U _T]	1200 V + UCS / 200 ms
Temperature range [T _u]	0... +85 °C
acc. to UL 1449 3rd edition	-40... +85 °C
acc. to EN 61643-11	
Function/failure indication	green / red
Wire range (min.)	0.5 mm ² (AWG 20) solid/fine-stranded
Wire range (max.)	4 mm ² (AWG 12) solid / 2.5 mm ² (AWG 14) fine-stranded
Mounted on DIN rail acc. to EN 60715	35 mm
Housing material	thermoplastic, UL 94 V-0
Degree of protection	IP 20
Dimensions	1 mod., DIN 43880
Remote signaling contacts (FM)	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 for remote signaling terminals	max. 1.5 mm ² (AWG 16) solid/fine-stranded
Approvals	CE



Overvoltage protection for Photovoltaic systems

Photovoltaic systems, abbreviated as PV systems, are a considerable investment that must be protected from failure and damage. As these systems are installed outdoors, they are exposed to the danger of overvoltage from lightning strikes.

Overvoltage protection in the DC circuit with central inverters

The generator circuit (the PV modules) produces a direct current. Connecting the PV modules and arrays in series allows voltages of 1000 V to be reached. This combination with the fact that the generator circuit can continue to supply energy after overvoltage requires sophisticated technology for the overvoltage arrester.

DC overvoltage protection:

The PV/DC overvoltage arresters are specially designed for use in PV systems.

Both the housing technology and the connections are designed for the requirements of a PV systems high voltages and conductor cross-sections. With a width of only 36 or 48mm, the units are easily installed inside distribution panels, requiring the minimum of space.

- High discharge capacity due to powerful zinc-oxide varistor
- No fire hazard caused by permanent electric arc due to combined disconnect and short-circuit facility. Overload indicated in display window
- Signaling contacts for remote monitoring in all remote signaling types

AC overvoltage protection:

On the AC side of the inverters overvoltage protection must also be installed. The arresters listed here are the most commonly used versions.

Suitable units can be found inside the chapters **wietap** IEC and **wietap** UL/CSA.

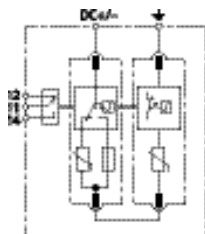


Surge protection for solar modules

To be used in photovoltaic DC circuits

wietap GS PV SCI 600 (FM)

- DC solar arrester for 600 V string voltage
- For DC grounded solar systems
- No fire hazard during overload due to combined disconnection and short-circuit device
- Safe, arc-free replacement of protection modules due to integrated DC fuse
- High discharge capacity
- Function/failure indication
- **wietap** GS PV SCI 600 FM with remote signaling contact (FM)



Type	Part No.
wietap GS PV SCI 600	84.995.2550.0
wietap GS PV SCI 600 FM	84.995.2555.0

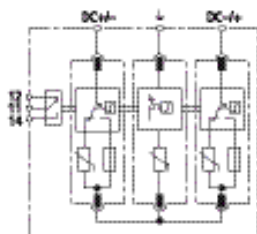
Technical Data	
Connection between	DC – Grnd
Conformity according	prEN 50539-11
SPD-accord. to EN 61643-11	Type 2
SPD-accord. to IEC 61643-1	Class II
Maximum PV voltage [UPV _{max}]	≤ 600 V
Protection level [U _p]	≤ 2.5 kV
Protection level at 5 kA [U _p]	≤ 2 kV
Nominal discharge current (8/20) [(DC+/DC-) → PE] [I _n]	12.5 kA
Max. discharge current (8/20) [(DC+/DC-) → PE] [I _{max}]	25 kA
Operating time [t _A]	≤ 25 ns
Temperature range [T _u]	-40 ... +80 °C
Short-circuit resistance (I _{scwPV})	1000 A
Function/failure indication	green / red
Wire range (min.)	1.5 mm ² (AWG 14) solid/fine-stranded
Wire range (max.)	35 mm ² (AWG 2) stranded / 25 mm ² (AWG 4) fine-stranded
Mounted on DIN rail acc. to EN 60715	35 mm
Housing material	Thermoplast, UL 94 V-0
Degree of protection	IP 20
Dimensions	2 TE, DIN 43880 (36 mm)
Remote signaling contacts (FM)	Change-over 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 for remote signaling terminals	max. 1.5 mm ² (AWG 14) solid/fine-stranded
Approvals	CE  

Surge protection for solar modules

To be used in photovoltaic DC circuits

wietap GM YPV SCI 600 (FM)

- DC solar arrester for 600 V string voltage
- No fire hazard during overload due to combined disconnection and short-circuit device
- Safe, arc-free replacement of protection modules due to integrated DC fuse
- High discharge capacity
- Function/failure indication
- **wietap** GM YPV SCI 600 FM with remote signaling contact (FM)



Type	Part No.
wietap GM YPV SCI 600	84.995.2511.0
wietap GM YPV SCI 600 FM	84.995.2516.0
Repl. module "+" or "-" against int. neutral point	84.995.2053.0
Repl. module int. neutral point against $\perp$	84.995.2010.0
Technical Data	
Connection between	DC+ – Grnd – DC-
Conformity according	prEN 50539-11
SPD-accord. to EN 61643-11	Type 2
SPD-accord. to IEC 61643-1	Class II
Maximum PV voltage [UPV _{max}]	≤ 600 V
Protection level [U _p]	≤ 2.5 kV
Protection level at 5 kA [U _p]	≤ 2 kV
Total discharge current (8/20) [I _{total}]	40 kA
Nominal discharge current (8/20) [(DC+/DC-) → PE] [I _n]	12.5 kA
Max. discharge current (8/20) [(DC+/DC-) → PE] [I _{max}]	25 kA
Operating time [t _a]	≤ 25 ns
Temperature range [T _u]	-40 ... +80 °C
Short-circuit resistance [I _{SCWPV}]	1000 A
Function/failure indication	green / red
Wire range (min.)	1.5 mm ² (AWG 14) solid/fine-stranded
Wire range (max.)	35 mm ² (AWG 2) stranded / 25 mm ² (AWG 4) fine-stranded
Mounted on DIN rail acc. to EN 60715	35 mm
Housing material	Thermoplast, UL 94 V-0
Degree of protection	IP 20
Dimensions	3 TE, DIN 43880 (54 mm)
Remote signaling contacts (FM)	Change-over 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 for remote signaling terminals	max. 1.5 mm ² (AWG 14) solid/fine-stranded
Approvals	CE

Replacement module for wietap GM YPV SCI 600 (FM)

wietap G MOD PV SCI 300

"+" or "-" against internal neutral point

wietap G MOD 275

Internal neutral point against PE

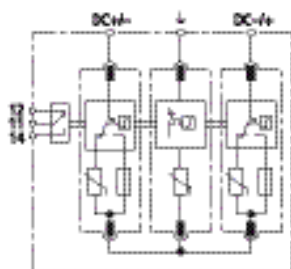
Type	Part No.
wietap G MOD PV SCI 300	84.995.2053.0
wietap G MOD 275	84.995.2010.0

Surge protection for solar modules

To be used in photovoltaic DC circuits

wietap GM YPV SCI 1000 (FM)

- DC solar arrester for 1000 V string voltage
- No fire hazard during overload due to combined disconnection and short-circuit device
- Safe, arc-free replacement of protection modules due to integrated DC fuse
- High discharge capacity
- Function/failure indication
- **wietap** GM YPV SCI 1000 FM with remote signaling contact (FM)



Type	Part No.
wietap GM YPV SCI 1000	84.995.2510.0
wietap GM YPV SCI 1000 FM	84.995.2515.0
Repl. module "+" or "-" against int. neutral point	84.995.2051.0
Repl. module int. neutral point against $\pm$	84.995.2015.0
Technical Data	
Connection between	DC+ – Grnd – DC-
Conformity according	prEN 50539-11
SPD-accord. to EN 61643-11	Type 2
SPD-accord. to IEC 61643-1	Class II
Maximum PV voltage [UPV _{max}]	≤ 1000 V
Protection level [U _P]	≤ 4 kV
Protection level at 5 kA [U _P]	≤ 3.5 kV
Total discharge current (8/20) [I _{total}]	40 kA
Nominal discharge current (8/20) [(DC+/DC-) → PE] [I _n]	12.5 kA
Max. discharge current (8/20) [(DC+/DC-) → PE] [I _{max}]	25 kA
Operating time [t _A]	≤ 25 ns
Temperature range [T _U]	-40 ... +80 °C
Short-circuit resistance (I _{scwPV})	1000 A
Function/failure indication	green / red
Wire range (min.)	1.5 mm ² (AWG 14) solid/fine-stranded
Wire range (max.)	35 mm ² (AWG 2) stranded / 25 mm ² (AWG 4) fine-stranded
Mounted on DIN rail acc. to EN 60715	35 mm
Housing material	Thermoplast, UL 94 V-0
Degree of protection	IP 20
Dimensions	3 TE, DIN 43880 (54 mm)
Remote signaling contacts (FM)	Change-over 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 for remote signaling terminals	max. 1.5 mm ² (AWG 14) solid/fine-stranded
Approvals	CE

Replacement module for **wietap** GM YPV SCI 1000 (FM)

wietap G MOD PV SCI 500

"+" or "-" against internal neutral point

wietap G MOD 440

Internal neutral point against PE

Type	Part No.
wietap G MOD PV SCI 500	84.995.2051.0
wietap G MOD 440	84.995.2015.0

Surge protection for solar modules

To be used in photovoltaic DC circuits

AC arrester on mains for Class 1/2/3



The used arrester type of the AC side is depending on the mains system.

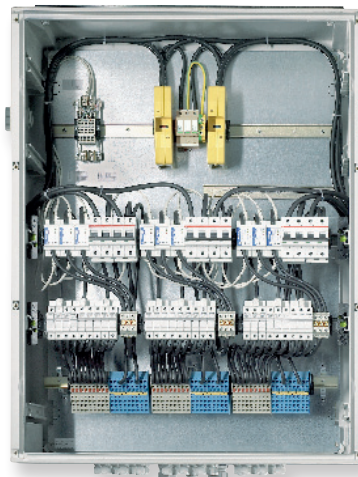
A suitable arrester with the relevant certifications can be found in the previous chapters.



The suitable distribution for your project



AC combiner box



DC combiner box

Housing

Protection	Class II
UV-resistant	yes
Material	polycarbonate
Cable connection	pluggable or gland

Build in components

- Termination points for solar connectors
- Big termination points for inverter connection
- PE connection
- String fusing
- Reverse current diodes
- String monitoring
- Main switch
- Circuit breaker
- Overvoltage protection and many more

Wieland will support you during the planning phase. High product quality and documentation are a standard for us.

More information and a planning tool can be found in the brochure **gesis** SOLAR, Part No. 0164.0, and at <http://solar.gesis.wieland-electric.de>



Hotline • advice

Additional information

Technical support

Automation technology:

Phone: +49 951 9324- . . .

- Safety technology **safety** -999
e-mail: safety@wieland-electric.com
- **interface:** -995
Power supply, industrial Ethernet switches, timer relays, measuring and monitoring relays, coupling relays, analog modules, remote I/O, surge protection, passive interfaces, remote power distribution **podis®**
- DIN rail terminal blocks **fasis, selos** -991
Industrial multipole connectors **revos**
PCB terminals and connectors **wiecon**, appliance terminals, european terminal strips, housings for electronic components

Fax: +49 951 9326-991
e-mail: AT.TS@wieland-electric.com

Technical Support

Building services engineering:

Phone: +49 951 9324- . . .

- System connectors for building installation -996
gesis CON, **gesis** RAN, **gesis** ELECTRONIC
- DIN rail terminal blocks **fasis** BIT, **selos** BIT -991

Fax: +49 951 9326-996
e-mail: BIT.TS@wieland-electric.com

Technical Support

Photovoltaics/solar technology:

Phone: +49 951 9324- . . .

- Photovoltaics **gesis** SOLAR -972

Fax: +49 951 9326-977
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Sales service:

- To contact our sales department regarding availability, delivery schedules, and pricing please call

Phone: +49 951 9324-990

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Industrial technology

Solutions for the control cabinet

- DIN rail terminal blocks
 - Screw, tension spring or push-in connection technology
 - Wire cross sections up to 240 mm²
 - Numerous special functions
 - Software solutions interfacing to CAE systems
- Safety
 - Safe signal acquisition
 - Safety switching devices
 - Modular safety modules
 - Compact safety controllers
 - Application consulting and training
- Network engineering and fieldbus systems
 - Remote maintenance via VPN industrial router and VPN service portal
 - Industrial Ethernet switches
 - PLC and I/O systems, standard and increased environmental conditions
- Interface
 - Power supply units
 - Overvoltage protection
 - Coupling relays, semiconductor switches
 - Timer relays, measuring and monitoring relays
 - Analog coupling and converter modules
 - Passive interfaces

Solutions for field applications

- Decentralized installation and automation technology
 - Electrical installation for wind tower
 - Fieldbus interfaces and motor starters
- Connectors for industrial applications
 - Rectangular 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
 - Low-voltage connectors
 - Power distribution system with flat cables
 - Distribution systems
 - Bus systems in KNX, LON and wireless technology
 - DIN rail terminal blocks for electrical installations
 - Overvoltage protection

**contacts
are
green.**