

Kombi-Ableiter Typ 1+2 (Anforderungsklasse B+C)

Combined lightning current and surge arrester type 1+2 (class I + II)

P-HMS 280 G - mehrpolig - leckstromfrei

P-HMS 280 G - multipole - no leakage current

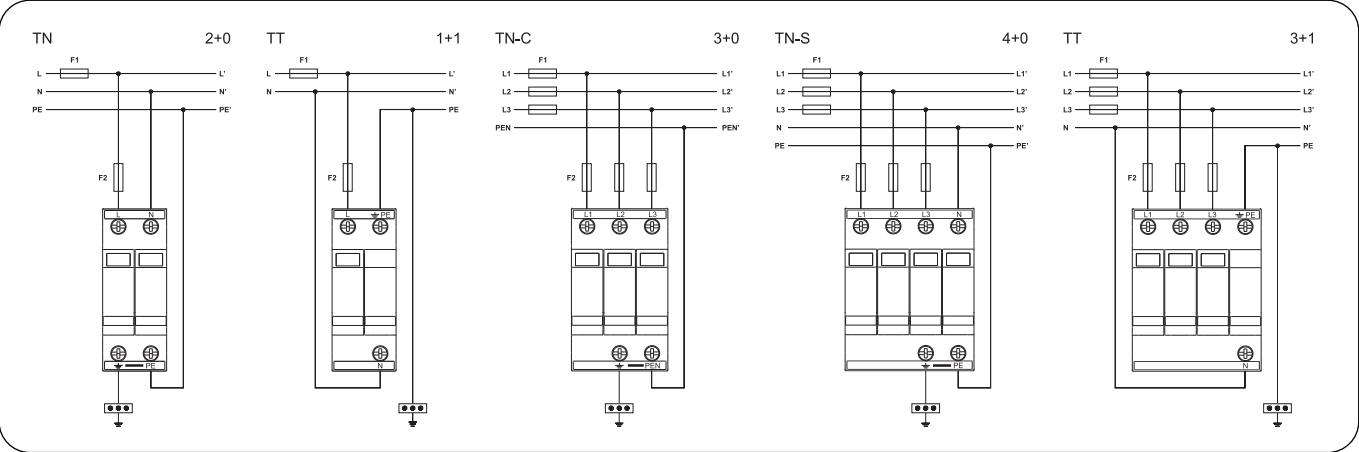
| Bezeichnung<br>Type | Bestell-Nr.<br>Order-no. | Netzform<br>Mains system | Fernmeldung (Fm)<br>Remote signalling (RS) |
|---------------------|--------------------------|--------------------------|--------------------------------------------|
| P-HMS 280 G 2       | 327 220                  | TN                       | <input type="checkbox"/>                   |
| P-HMS 280 Fm G 2    | 327 222                  | TN                       | <input checked="" type="checkbox"/>        |
| P-HMS 280 G 1+1     | 327 210                  | TT / TN                  | <input type="checkbox"/>                   |
| P-HMS 280 Fm G 1+1  | 327 212                  | TT / TN                  | <input checked="" type="checkbox"/>        |
| P-HMS 280 G 3       | 327 230                  | TN-C                     | <input type="checkbox"/>                   |
| P-HMS 280 Fm G 3    | 327 232                  | TN-C                     | <input checked="" type="checkbox"/>        |
| P-HMS 280 G 4       | 327 250                  | TN-S                     | <input type="checkbox"/>                   |
| P-HMS 280 Fm G 4    | 327 252                  | TN-S                     | <input checked="" type="checkbox"/>        |
| P-HMS 280 G 3+1     | 327 240                  | TT / TN-S                | <input type="checkbox"/>                   |
| P-HMS 280 Fm G 3+1  | 327 242                  | TT / TN-S                | <input checked="" type="checkbox"/>        |

| Sicherheitshinweise                                                                                                                                                                                                                                                                                                                                    | Safety regulations                                                                                                                                                                                                                                                                                |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Das Gerät darf nur in einwandfreiem Zustand eingebaut werden und muss vor dem Einbau auf Beschädigung oder andere Mängel geprüft werden. Das Öffnen oder sonstiger Geräteeingriff führt zum Erlöschen sämtlicher Gewährleistungen. Der Einbau darf nur von einer Elektrofachkraft unter Berücksichtigung der DIN-VDE-Bestimmungen durchgeführt werden. | Only install a device that is in perfect condition. Inspect the device for damages or other defects. Opening or any other damage to the device will cancel the warranty. The device may be installed only by an authorized electrician in compliance with IEC regulations and national standards. |
| Installationshinweise                                                                                                                                                                                                                                                                                                                                  | Installation hints                                                                                                                                                                                                                                                                                |
| Vor einer Isolationsmessung werden die Steckteile des Überspannungsschutzgerätes aus dem Messkreis entfernt, damit sie nicht zu einer Beeinflussung der Messergebnisse führen.                                                                                                                                                                         | To avoid inaccurate insulation measurements the plug-ins of the device have to be removed.                                                                                                                                                                                                        |
| N/PE Steckteil                                                                                                                                                                                                                                                                                                                                         | N/PE plug-in                                                                                                                                                                                                                                                                                      |
| N/PE Steckteil mit erhöhter Zieh- und Steckkraft.                                                                                                                                                                                                                                                                                                      | Increased removal and insertion force for N/PE plug-in.                                                                                                                                                                                                                                           |

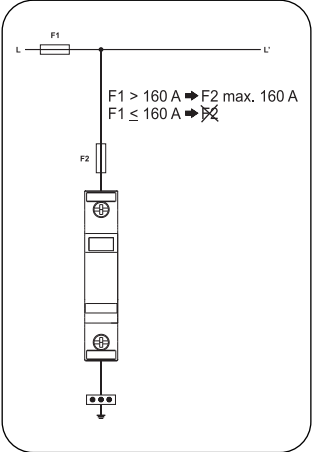
| Technische Daten                        |                    |                                                         |                       |                    |                    |                       |
|-----------------------------------------|--------------------|---------------------------------------------------------|-----------------------|--------------------|--------------------|-----------------------|
| Bestell-Nr.                             | 327 220<br>327 222 | 327 210<br>327 212                                      | 327 230<br>327 232    | 327 250<br>327 252 | 327 240<br>327 242 |                       |
| Nennspannung                            | U <sub>N</sub>     | 230 V~                                                  | 230 V~                | 230/400 V~         | 230/400 V~         | 230/400 V~            |
| Höchste Dauerspannung L-(PE)N           | U <sub>C</sub>     | 255 V~                                                  |                       |                    |                    |                       |
| Blitzstoßstrom (10/350 µs) / Pol        | I <sub>imp</sub>   | 12,5 kA                                                 | 12,5 / 25 kA [N-PE]   | 12,5 kA            | 12,5 kA            | 12,5 / 50 kA [N-PE]   |
| Blitzstoßstrom (10/350 µs) / Gesamt     | I <sub>total</sub> | 25 kA                                                   | 25 kA                 | 37,5 kA            | 50 kA              | 50 kA                 |
| Spezifische Energie / Gesamt            | W/R                | 156 kJ/Ω                                                | 100 kJ/Ω              | 351 kJ/Ω           | 625 kJ/Ω           | 625 kJ/Ω              |
| Nennableitstoßstrom (8/20 µs) / Pol     | I <sub>n</sub>     | 25 kA                                                   | 25 / 40 kA [N-PE]     | 25 kA              | 25 kA              | 25 / 75 kA [N-PE]     |
| Nennableitstoßstrom (8/20 µs) / Gesamt  | I <sub>n</sub>     | 50 kA                                                   | 40 kA                 | 75 kA              | 100 kA             | 75 kA                 |
| Max. Ableitstoßstrom (8/20 µs) / Pol    | I <sub>max</sub>   | 40 kA                                                   | 40 / 60 kA [N-PE]     | 40 kA              | 40 kA              | 40 / 100 kA [N-PE]    |
| Max. Ableitstoßstrom (8/20 µs) / Gesamt | I <sub>max</sub>   | 80 kA                                                   | 60 kA                 | 120 kA             | 150 kA             | 100 kA                |
| Schutzpegel L-PE(N) (2+0, 3+0, 4+0)     | U <sub>p</sub>     | < 1,5 kV                                                |                       |                    |                    |                       |
| Schutzpegel L-N / N-PE (1+1, 3+1)       | U <sub>p</sub>     | < 1,5 kV / < 1,5 kV                                     |                       |                    |                    |                       |
| Max. Vorsicherung                       |                    | 160 A gL/gG                                             |                       |                    |                    |                       |
| Kurzschlussfestigkeit                   | I <sub>SCCR</sub>  | 25 kA / 50 Hz                                           |                       |                    |                    |                       |
| Prüfnorm                                |                    | EN 61643-11                                             |                       |                    |                    |                       |
| Betriebstemperaturbereich               |                    | - 40 °C ... + 80 °C                                     |                       |                    |                    |                       |
| Schutzart nach EN 60529                 |                    | IP 20                                                   |                       |                    |                    |                       |
| Gehäusewerkstoff                        |                    | Thermoplast, UL 94 V-0                                  |                       |                    |                    |                       |
| Anschlussquerschnitt (min.)             |                    | 4 mm² ein-/feindrähtig                                  |                       |                    |                    |                       |
| Anschlussquerschnitt (max.)             |                    | 50 mm² mehrdrähtig / 35 mm² feindrähtig                 |                       |                    |                    |                       |
| Anzugsdrehmoment                        |                    | 4 Nm                                                    |                       |                    |                    |                       |
| Montage auf Hutschiene                  |                    | 35 mm EN 60715                                          |                       |                    |                    |                       |
| Einbauort                               |                    | Innenraum                                               |                       |                    |                    |                       |
| Einbaubreite nach DIN 43880             |                    | 2 TE                                                    | 2 TE                  | 3 TE               | 4 TE               | 4 TE                  |
| Schutzelement                           |                    | MOV+GDT                                                 | MOV+GDT<br>GDT [N-PE] | MOV+GDT            | MOV+GDT            | MOV+GDT<br>GDT [N-PE] |
| Ansprechzeit                            | t <sub>A</sub>     | < 100 ns                                                |                       |                    |                    |                       |
| Folgestrom L-PE(N)                      | I <sub>f</sub>     | kein I <sub>f</sub>                                     |                       |                    |                    |                       |
| Folgestromlöschfähigkeit N-PE           | I <sub>fi</sub>    | 100 A <sub>eff</sub>                                    |                       |                    |                    | 100 A <sub>eff</sub>  |
| Schutzleiterstrom                       | I <sub>PE</sub>    | kein I <sub>PE</sub>                                    |                       |                    |                    |                       |
| Thermische Abtrennvorrichtung           |                    | Ja                                                      |                       |                    |                    |                       |
| Anzahl der Ports                        |                    | 1                                                       |                       |                    |                    |                       |
| TOV-Charakteristik                      | U <sub>T</sub>     | 335 V / 5 s = Festigkeit ; 440 V / 120 min = Festigkeit |                       |                    |                    |                       |

| Technical data                                   |                    |                                                       |                       |                    |                    |                       |
|--------------------------------------------------|--------------------|-------------------------------------------------------|-----------------------|--------------------|--------------------|-----------------------|
| Order-no.                                        | 327 220<br>327 222 | 327 210<br>327 212                                    | 327 230<br>327 232    | 327 250<br>327 252 | 327 240<br>327 242 |                       |
| Nominal voltage                                  | U <sub>N</sub>     | 230 V~                                                | 230 V~                | 230/400 V~         | 230/400 V~         | 230/400 V~            |
| Max. continuous operating voltage L-(PE)N        | U <sub>C</sub>     | 255 V~                                                |                       |                    |                    |                       |
| Lightning impulse current (10/350 µs) / pole     | I <sub>imp</sub>   | 12,5 kA                                               | 12,5 / 25 kA [N-PE]   | 12,5 kA            | 12,5 kA            | 12,5 / 50 kA [N-PE]   |
| Lightning impulse current (10/350 µs) / total    | I <sub>total</sub> | 25 kA                                                 | 25 kA                 | 37,5 kA            | 50 kA              | 50 kA                 |
| Specific energy / total                          | W/R                | 156 kJ/Ω                                              | 100 kJ/Ω              | 351 kJ/Ω           | 625 kJ/Ω           | 625 kJ/Ω              |
| Nom. discharge current (8/20 µs) / pole          | I <sub>n</sub>     | 25 kA                                                 | 25 / 40 kA [N-PE]     | 25 kA              | 25 kA              | 25 / 75 kA [N-PE]     |
| Nom. discharge current (8/20 µs) / total         | I <sub>n</sub>     | 50 kA                                                 | 40 kA                 | 75 kA              | 100 kA             | 75 kA                 |
| Max. discharge current (8/20 µs) / pole          | I <sub>max</sub>   | 40 kA                                                 | 40 / 60 kA [N-PE]     | 40 kA              | 40 kA              | 40 / 100 kA [N-PE]    |
| Max. discharge current (8/20 µs) / total         | I <sub>max</sub>   | 80 kA                                                 | 60 kA                 | 120 kA             | 150 kA             | 100 kA                |
| Voltage protection level L-PE(N) (2+0, 3+0, 4+0) | U <sub>p</sub>     | < 1,5 kV                                              |                       |                    |                    |                       |
| Voltage protection level L-N / N-PE (1+1, 3+1)   | U <sub>p</sub>     | < 1,5 kV / < 1,5 kV                                   |                       |                    |                    |                       |
| Max. backup fuse                                 |                    | 160 A gL/gG                                           |                       |                    |                    |                       |
| Short-circuit current rating                     | I <sub>SCCR</sub>  | 25 kA / 50 Hz                                         |                       |                    |                    |                       |
| Test standard                                    |                    | EN 61643-11                                           |                       |                    |                    |                       |
| Operating temperature range                      |                    | - 40 °C ... + 80 °C                                   |                       |                    |                    |                       |
| Protection class according to EN 60529           |                    | IP 20                                                 |                       |                    |                    |                       |
| Housing material                                 |                    | Thermoplastic, UL 94 V-0                              |                       |                    |                    |                       |
| Cross section for connection (min.)              |                    | 4 mm² single-core/finely-stranded                     |                       |                    |                    |                       |
| Cross section for connection (max.)              |                    | max. 50 mm² stranded / 35 mm² finely-stranded         |                       |                    |                    |                       |
| Torque                                           |                    | 4 Nm                                                  |                       |                    |                    |                       |
| Mounting on DIN rail                             |                    | 35 mm EN 60715                                        |                       |                    |                    |                       |
| Location category                                |                    | Indoor                                                |                       |                    |                    |                       |
| Dimensions according to DIN 43880                |                    | 2 mods.                                               | 2 mods.               | 3 mods.            | 4 mods.            | 4 mods.               |
| Protection component                             |                    | MOV+GDT                                               | MOV+GDT<br>GDT [N-PE] | MOV+GDT            | MOV+GDT            | MOV+GDT<br>GDT [N-PE] |
| Response time                                    | t <sub>A</sub>     | < 100 ns                                              |                       |                    |                    |                       |
| Follow current L-PE(N)                           | I <sub>f</sub>     | no I <sub>f</sub>                                     |                       |                    |                    |                       |
| Follow current interrupt rating N-PE             | I <sub>fi</sub>    | 100 A <sub>eff</sub>                                  |                       |                    |                    | 100 A <sub>eff</sub>  |
| Residual current                                 | I <sub>PE</sub>    | no I <sub>PE</sub>                                    |                       |                    |                    |                       |
| Thermal disconnecter                             |                    | Yes                                                   |                       |                    |                    |                       |
| Number of ports                                  |                    | 1                                                     |                       |                    |                    |                       |
| TOV characteristic                               | U <sub>T</sub>     | 335 V / 5 s = withstand ; 440 V / 120 min = withstand |                       |                    |                    |                       |

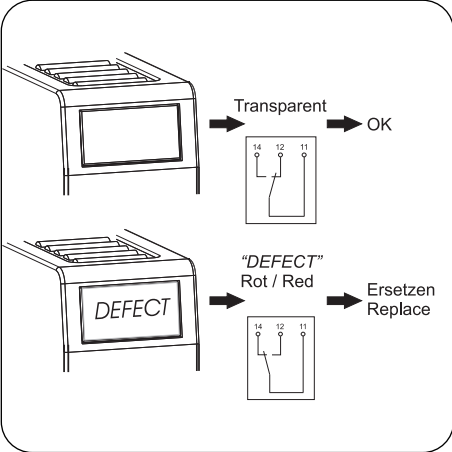
Anschluss  
Connection



Vorsicherung  
Backup fuse



Funktionsanzeige  
Function display



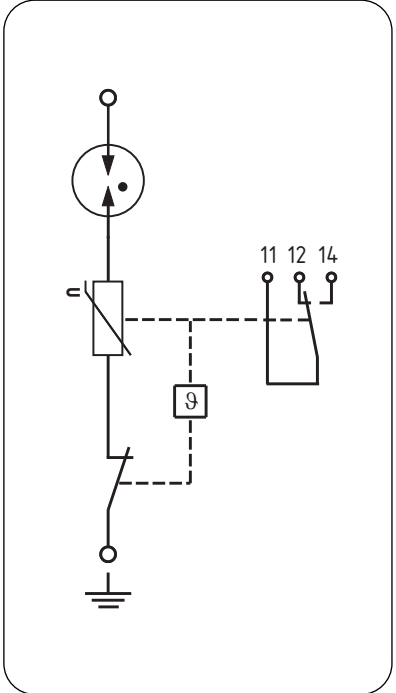
Koordination  
Coordination

| SPD     | LPZ    | Bezeichnung<br>Type                                  | Leitungslänge<br>Cable length |                            |
|---------|--------|------------------------------------------------------|-------------------------------|----------------------------|
| T1      | Q-1    | P-BM                                                 | ≥ 15 m                        | Koordiniert<br>Coordinated |
| T1 + T2 | Q-2    | P-HMS<br>P-HMS DP<br>P-HMS R<br>P-HMS max<br>P-HMS G | ≥ 5 m                         |                            |
| T2      | Q/ 1-2 | P-VM(S)<br>P-VMS R                                   | ≥ 5 m                         |                            |
| T3      | 2-3    | P-DA                                                 | .....                         |                            |

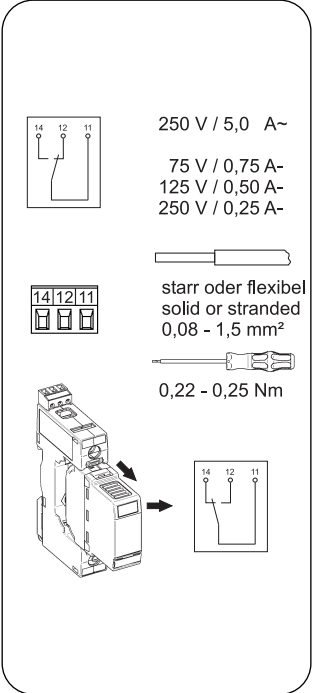
Zubehör und Ersatzteile  
Accessories and spare parts

| Bezeichnung<br>Type | Bestell-Nr.<br>Order-no. | Steckteil<br>plug-in |
|---------------------|--------------------------|----------------------|
| P-HMS 280 G         | 327 201                  |                      |
| P-N/PE BC R         | 317 261                  |                      |
| P-N/PE BC R50       | 317 263                  |                      |

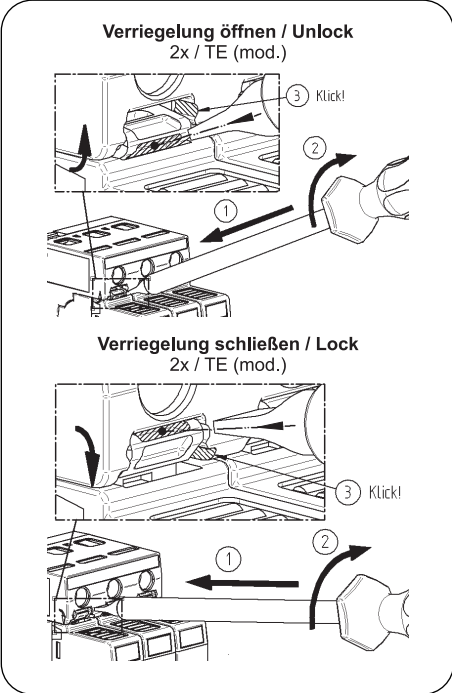
Prinzipschaltbild P-HMS 280 Fm G  
Basic circuit P-HMS 280 Fm G



Fernmeldung (Fm)  
Remote signalling (RS)



Steckteil Verriegelung  
Locking mechanism



Abmessungen  
Dimensions

