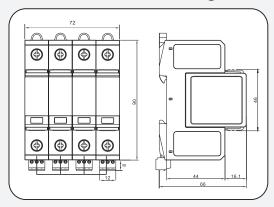




DIN rail, Type 2 / Class II multi-purpose SPD with anti-vibration pluggable module for use in TN-S or TT system at boundaries from LPZ 0<sub>8</sub>-1 and higher.

# **Dimension drawing**



### Monitoring module

Function: degradation monitoring lightning monitoring system communication



| name | type | page |
|------|------|------|
|      |      |      |

SPD monitoring module LCS1-11

### 84

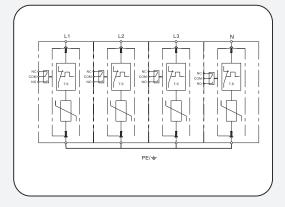
#### **Features**

- Non-destructive screening technology for MOV
- Reliable thermo disconnect device
- High discharge capacity
- Consisting of a base part and pluggable modules
- Easy replacing and anti-vibration due to module releasing and locking system
- Multifunctional terminals for connecting conductors and busbars
- · Visual and remote status indication

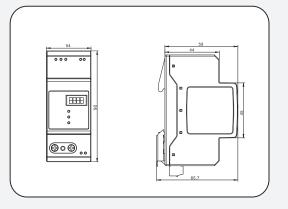
### Approval

TUV、CE、RoHS、UL 94V-0

## **Circuit diagram**



## **Dimension drawing**





| Pace     | Туре   | S760AC-4+0            |                            | S760AC-4+0-S            |
|---|--|-----------------------|----------------------------|-------------------------|
| SPD according to REC 61643-1/11   Type 2   Type 2   | Part No.   | 92 40 20              |                            | 92 40 21                |
| \$P\$ according to \$N 61643-11   | Electrical   |                       |                            |                         |
| Class   | SPD according to IEC 61643-1/11                        |                       | Class II                   |                         |
| Technology  | SPD according to EN 61643-11                           |                       | Type 2                     |                         |
| Recinal ology   | SPD according to GB 18802.1                            |                       | Class II                   |                         |
| Nominal Voltage (Us)         400 / 690 Vac           Max. continuous operating voltage (Us)         760 Vac           Max. discharge current (8/20 µs) (Is)         15 kA           Max. discharge current (8/20 µs) (Is)         25 kB           Voltage protection level (Ur)         3.0 kV           Voltage protection level (Iro F&R (Ur))         2.5 kW           Max. overcurrent protection         < 100 Agl, / g6   | Number of ports  |                       | 1                          |                         |
| Max. continuous operating voltage (U.)  Nominal discharge current (β/20 μs) (I.ω)  Nominal discharge current (β/20 μs) (I.ω)  Nox. discharge current (β/20 μs) (I.ω)  Nox. discharge current (β/20 μs) (I.ω)  Nox. discharge current (β/20 μs) (I.ω)  Notage protection level (U.)  Notage protection level for SKA (U.)  Nox. overcurrent protection  Nox. overcurrent of lightning plans on the protection protection  Nox. overcurrent of lightning plans, switch  Action current of lightning plans, switch  | Technology   |                       | MOV                        |                         |
| Nominal dischange current (8/20 µs) (1)         15 kA           Max. dischange current (8/20 µs) (1)         25 kA           Voltage protection level (Uv)         3.0 kV           Voltage protection level (Uv)         2.5 kV           Response time (Ls)         < 2.5 ms  | Nominal Voltage (UN)                                   |                       | 400 / 690 Vac              |                         |
| Max. dischange current (8/20 jus) (hum)         25 kA           Voltage protection level (Ur)         3,0kV           Voltage protection level (0r)         2,5 kV           Was protection level for SkA (Ur)         2,5 kV           Max. overcurrent protection         < 100 AgL / gG  | Max. continuous operating voltage (Uc)                 |                       | 760 Vac                    |                         |
| Voltage protection level (Uh)  Voltage protection level for SkA (Ur)  Response time (tA)  Ass. overcurrent protection  Ass. overcurrent protection  Ass. overcurrent protection  Ass. overcurrent protection  Short circuit withstand capability (txcw)  Temporary overvoltage (TOV) (Uh)  SBOUV / S  TOV characteristic  Withstand  Method of mounting  Ass m DIN rail  Anticodusured dimensions (tkdWx0)  Pomm×72 mm×66 mm  Poss-sectional area (max.)  Cross-sectional area (max.)  Cross-sectional area (min.)  1.5 mm² stranded / flexible  Stripping length terminals  10 mm  Torque contacts  Tope of remote signaling contact  Withstand  Assimity fault indication  Green / red  Changeover contact  Switching capacity  Stripping length for remote signaling terminals (max.)  Stripping length for remote signaling terminals (max.)  Stripping length for remote signaling terminals  Torque contacts for indication terminals  Torque contacts for indication terminals  Poperation actegory  Indoor only  Operation actegory  Operation temperature range (To)  Relative humidity  Question altitude  4 km  Degree of protection  Thermoplastic, UL 94V-0  Monitoring  Communication mode  7 Res485/ZIGBEE  Monitoring approach  - Remote signaling of SPD, Action time of lightning, Air-switc  Action current of lightning ming a SKA  | Nominal discharge current (8/20 μs) (In)               |                       | 15 kA                      |                         |
| Voltage protection level for SkA (Us)  Response time (ts)  Also, were current protection  Solo AgA / gG  Short circuit withstand capability (\(\text{kew}\))  Temporary overvoltage (TOV) (Us)  Solo Aga / gG  Short circuit withstand capability (\(\text{kew}\))  ToV characteristic  Withstand  Method of mounting  Solo min stranded / flexible  Cross-sectional area (max.)  Cross-sectional area (min.)  Stripping length terminals  Torque contacts  Torque contacts  Tope of remote signaling contact  Withstand  Green / red  Changeover contact  Switching capacity  Cross-sectional area for remote signaling terminals (max.)  Stripping length for remote signaling terminals (max.)  To man  Torque contacts  Torque contacts  Fervioremental  Cross-sectional area for remote signaling terminals (max.)  To man  Torque contacts  Ferviore contacts for indication terminals  Ferviore contacts for in | Max. discharge current (8/20 μs) (I <sub>max</sub> )   |                       | 25 kA                      |                         |
| Response time (tt)  | Voltage protection level (UP)                          |                       | 3.0 kV                     |                         |
| Max. overcurrent protection   | Voltage protection level for 5kA (U <sub>P</sub> )     |                       | 2.5 kV                     |                         |
| Short circult withstand capability (Iscor)  Temporary overvoltage (TOV) (Ur)  800V / 5 s  TOV characterists  Mechanics  Method of mounting  35 mm DIN rail  Enclosure dimensions (HXWD)  90 mm × 72 mm × 66 mm  4 90 mm × 54 mm × 66 mm  Cross-sectional area (max.)  25 mm² stranded / flexible  Cross-sectional area (min.)  1.5 mm² stranded / flexible  Stripping length terminals  10 mm  10 que contacts  10 mm  10 que contacts  10 peration status/fault indication  Type of remote signaling contact  Switching capacity  125 Vac / 1 A, 125 Vdc / 0.2 A  Cross-sectional area for remote signaling terminals  7 mm  1.5 mm²  Stripping length for remote signaling terminals  7 mm  10 que contacts for indication terminals  7 mm  10 que contacts for indication terminals  10 que contacts for indication terminals  10 que verticated (Flow)  440°C+70°C  Relative humidity  9 peration temperature range (To)  440°C+70°C  Relative humidity  9 peration altitude  10 perecof protection  10 perecof p       | Response time (t <sub>A</sub> )                        |                       | ≤ 25 ns                    |                         |
| Short circult withstand capability (Iscor)  Temporary overvoltage (TOV) (Ur)  800V / 5 s  TOV characterists  Mechanics  Method of mounting  35 mm DIN rail  Enclosure dimensions (HXWD)  90 mm × 72 mm × 66 mm  4 90 mm × 54 mm × 66 mm  Cross-sectional area (max.)  25 mm² stranded / flexible  Cross-sectional area (min.)  1.5 mm² stranded / flexible  Stripping length terminals  10 mm  10 que contacts  10 mm  10 que contacts  10 peration status/fault indication  Type of remote signaling contact  Switching capacity  125 Vac / 1 A, 125 Vdc / 0.2 A  Cross-sectional area for remote signaling terminals  7 mm  1.5 mm²  Stripping length for remote signaling terminals  7 mm  10 que contacts for indication terminals  7 mm  10 que contacts for indication terminals  10 que contacts for indication terminals  10 que verticated (Flow)  440°C+70°C  Relative humidity  9 peration temperature range (To)  440°C+70°C  Relative humidity  9 peration altitude  10 perecof protection  10 perecof p       | Max. overcurrent protection                            |                       | ≤ 100 AgL/gG               |                         |
| Method of mounting 35 mm DIN rail Enclosure dimensions (HxWxD) 90 mm × 72 mm × 66 mm + 90 mm × 54 mm × 66 mm  Cross-sectional area (max.) 25 mm² stranded / flexible Cross-sectional area (min.) 1.5 mm² standed / flexible Stripping length terminals 10 mm Torque contacts 3 n n² m  Indication  Operating status/fault indication Green / red Switching capacity 125 wac, 1 A, 125 wdc, 0.2 A Cross-sectional area for remote signaling terminals (max.) 1.5 mm² Stripping length f | Short circuit withstand capability (I <sub>scw</sub> ) |                       |                            |                         |
| Method of mounting 35 mm DIN rail Enclosure dimensions (HxWxD) 90 mm × 72 mm × 66 mm + 90 mm × 54 mm × 66 mm  Cross-sectional area (max.) 25 mm² stranded / flexible Cross-sectional area (min.) 1.5 mm² stranded / flexible Stripping length terminals 10 mm Torque contacts 3 N* m  Operating status/fault indication Type of remote signalling contact Changeover contact Switching capacity 125 Vac./ 1A, 125 Vdc./ 0.2 A  Cross-sectional area for remote signalling terminals (max.) 1.5 mm² Stripping length for remot | Temporary overvoltage (TOV) (U1)                       |                       | 800 V / 5 s                |                         |
| Method of mounting 35 mm DIN rail  Enclosure dimensions (HxWxD) 90 mm ×72 mm × 66 mm  | TOV characteristic                                     |                       | Withstand                  |                         |
| Enclosure dimensions (HxWxD)  90 mm×72 mm×66 mm  1.5 mm² stranded / flexible  1.5 mm² stranded / flexible  10 mm  | Mechanical   |                       |                            |                         |
| Enclosure dimensions (HxWxD)  90 mm×72 mm×66 mm  1.5 mm² stranded / flexible  1.5 mm² stranded / flexible  10 mm  | Method of mounting                                     |                       | 35 mm DIN rail             |                         |
| Cross-sectional area (max.)  Cross-sectional area (min.)  Stripping length terminals  Torque contacts  Indication  Operating status/fault indication  Green / red  Type of remote signaling contact  Switching capacity  Cross-sectional area for remote signaling terminals (max.)  Stripping length for remote signaling terminals (max.)  Stripping length for remote signaling terminals  Torque contacts for indication terminals  Environmental  Location category  Indoor only  Operation temperature range (Tu)  Relative humidity  Operation altitude  Degree of protection  In p 20  Enclosure material  Monitoring  Communication mode  Thermoplastic, UL 94 V-0  Monitoring  Monitoring approach  Remote signaling time  Turrent of lightning sime  Turrent of lightning sime  Turrent of lightning sime  To que contacts for indication time of tightning six Au  Thermoplastic, UL gave-o  Remote signaling of SPD, Action time of lightning six Au  Turrent of lightning sime  Turrent of lightning sime   |  | 90 mm × 72 mm × 66 mm |                            | + 90 mm × 54 mm × 66 mm |
| Torque contacts 3 N*m  Indication  Operating status/fault indication Green / red Type of remote signaling contact 125 Vac / 1A, 125 Vdc / 0.2 A  Cross-sectional area for remote signaling terminals (max.) 1.5 mm²  Stripping length for remote signaling terminals (max.) 1.5 mm²  Stripping length for remote signaling terminals (max.) 1.5 mm²  Stripping length for remote signaling terminals 0.2 N*m  Environmental  Location category Indoor only Operation temperature range (Tv) 40°C +70°C  Relative humidity ≤ 95% Operation altitude ≤ 4 km  Degree of protection IP 20  Enclosure material Thermoplastic, UL 94V-0  Monitoring  Communication mode − RS485/ZIGBEE  Monitoring approach − Remote signaling of SPD, Action time of lightning, Air-switch Action current of lightning ≥ 3KA   | Cross-sectional area (max.)                            |                       | 25 mm² stranded / flexible |                         |
| Torque contacts 3 N*m  Indication  Operating status/fault indication Green / red Type of remote signaling contact 125 Vac / 1A, 125 Vdc / 0.2 A  Cross-sectional area for remote signaling terminals (max.) 1.5 mm²  Stripping length for remote signaling terminals (max.) 1.5 mm²  Stripping length for remote signaling terminals (max.) 1.5 mm²  Stripping length for remote signaling terminals 0.2 N*m  Environmental  Location category Indoor only Operation temperature range (Tv) 40°C +70°C  Relative humidity ≤ 95% Operation altitude ≤ 4 km  Degree of protection IP 20  Enclosure material Thermoplastic, UL 94V-0  Monitoring  Communication mode − RS485/ZIGBEE  Monitoring approach − Remote signaling of SPD, Action time of lightning, Air-switch Action current of lightning ≥ 3KA   | . ,  |                       |                            |                         |
| Indication  Operating status/fault indication  Indication  Operating status/fault indication terminals (max.)  Indication category  Indoor only  Operation temperature range (Tv)  Relative humidity  Operation altitude  Operation temperature range (Tv)  Operation altitude  Operation altitude |  |                       |                            |                         |
| Indication  Operating status/fault indication  Operating status/fault indication  Type of remote signaling contact  Switching capacity  Cross-sectional area for remote signaling terminals (max.)  Stripping length for remote signaling terminals  Tymm  Torque contacts for indication terminals  Environmental  Location category  Indoor only  Operation temperature range (Tu)  Relative humidity  Operation altitude  Degree of protection  IP 20  Enclosure material  Monitoring  Communication mode  — RS485/ZIGBEE  Monitoring approach  — Remote signaling of SPD, Action time of lightning, Air-switch Action current of lightning ≥ 3KA  |  |                       |                            |                         |
| Type of remote signaling contact  Switching capacity  Cross-sectional area for remote signaling terminals (max.)  Stripping length for remote signaling terminals  Torque contacts for indication terminals  Cross-sectional area for remote signaling terminals  Torque contacts for indication terminals  Cross-sectional area for remote signaling terminals  Torque contacts for indication terminals  Cross-sectional area for remote signaling terminals  Torque contacts for indication terminals  Cross-sectional terminals  Torque contacts for indication terminals  Cross-sectional terminals  Theorem termina | Indication   |                       |                            |                         |
| Type of remote signaling contact  Switching capacity  Cross-sectional area for remote signaling terminals (max.)  Stripping length for remote signaling terminals  Torque contacts for indication terminals  Cross-sectional area for remote signaling terminals  Torque contacts for indication terminals  Cross-sectional area for remote signaling terminals  Torque contacts for indication terminals  Cross-sectional area for remote signaling terminals  Torque contacts for indication terminals  Cross-sectional terminals  Torque contacts for indication terminals  Cross-sectional terminals  Theorem termina |  |                       | Green / red                |                         |
| Switching capacity  125 Vac / 1 A, 125 Vdc / 0.2 A  Cross-sectional area for remote signaling terminals (max.)  Stripping length for remote signaling terminals  7 mm  Torque contacts for indication terminals  Environmental  Location category  Indoor only  Operation temperature range (Tv)  Relative humidity  9 55%  Operation altitude  Degree of protection  IP 20  Enclosure material  Monitoring  Communication mode   RS485/ZIGBEE  Monitoring approach   Remote signaling of SPD, Action time of lightning, Air-switch Action current of lightning j 3KA   | · · ·  |                       |                            |                         |
| Cross-sectional area for remote signaling terminals (max.)  Stripping length for remote signaling terminals  Torque contacts for indication terminals  Environmental  Location category  Deration temperature range (Tv)  Relative humidity  Operation altitude  Degree of protection  Enclosure material  Monitoring  Communication mode   RS485/ZIGBEE  Monitoring approach  Action current of lightning time   Stripping length for remote signaling terminals (max.)  1.5 mm²  7 mm  1.6 mm²  1.7 mm  1.6 mm²  1.7 mm  1.7 mm  1.7 mm  1.8 mm²  1.9 mm  1.9       |  |                       | -                          |                         |
| Stripping length for remote signaling terminals 7 mm  Torque contacts for indication terminals 0.2 N*m  Environmental  Location category Indoor only Operation temperature range (Tv) -40°C +70°C  Relative humidity < 95% Operation altitude   |  | max.)                 |                            |                         |
| Torque contacts for indication terminals  Environmental  Location category  Operation temperature range (Tv)  Relative humidity  Operation altitude  Degree of protection  Enclosure material  Enclosure material  Thermoplastic, UL 94V-0  Monitoring  Communication mode   Remote signaling of SPD, Action time of lightning, Air-switch Action current of lightning time   Current of lightning ≥ 3KA  |  |                       |                            |                         |
| Environmental  Location category Indoor only  Operation temperature range (Tu) -40°C +70°C  Relative humidity ≤ 95%  Operation altitude   |  |                       |                            |                         |
| Operation temperature range (Tv)     -40°C+70°C       Relative humidity     ≤ 95%       Operation altitude     ≤ 4 km       Degree of protection     IP 20       Enclosure material     Thermoplastic, UL 94V-0       Monitoring     —       Communication mode     —     RS485/ZIGBEE       Monitoring approach     —     Remote signaling of SPD, Action time of lightning, Air-switch action current of lightning time     —     current of lightning ≥ 3KA  | Environmental  |                       | 0.211 111                  |                         |
| Operation temperature range (Tv)     -40°C+70°C       Relative humidity     ≤ 95%       Operation altitude     ≤ 4 km       Degree of protection     IP 20       Enclosure material     Thermoplastic, UL 94V-0       Monitoring     —       Communication mode     —     RS485/ZIGBEE       Monitoring approach     —     Remote signaling of SPD, Action time of lightning, Air-switch action current of lightning time     —     current of lightning ≥ 3KA  | Location category                                      |                       | Indoor only                |                         |
| Relative humidity ≤ 95%  Operation altitude   |  |                       | <i>'</i>                   |                         |
| Operation altitude <ul> <li>4 km</li> </ul> Degree of protection         IP 20           Enclosure material         Thermoplastic, UL 94V-0           Monitoring         —           Communication mode         —           Monitoring approach         —         Remote signaling of SPD, Action time of lightning, Air-switch action current of lightning time         —         current of lightning ≥ 3KA   |  |                       |                            |                         |
| Degree of protection IP 20  Enclosure material Thermoplastic, UL 94V-0  Monitoring  Communication mode RS485/ZIGBEE  Monitoring approach Remote signaling of SPD, Action time of lightning, Air-switc  Action current of lightning time current of lightning ≥ 3KA  | ,  |                       |                            |                         |
| Enclosure material Thermoplastic, UL 94V-0  Monitoring  Communication mode RS485/ZIGBEE  Monitoring approach Remote signaling of SPD, Action time of lightning, Air-switch action current of lightning time current of lightning ≥ 3KA  | •  |                       |                            |                         |
| Monitoring       Communication mode     —     RS485/ZIGBEE       Monitoring approach     —     Remote signaling of SPD, Action time of lightning, Air-switch       Action current of lightning time     —     current of lightning ≥ 3KA  |  |                       |                            |                         |
| Communication mode — RS485/ZIGBEE  Monitoring approach — Remote signaling of SPD, Action time of lightning, Air-switc  Action current of lightning time — current of lightning ≥ 3KA  |  |                       | memoplastic, 01744 0       |                         |
| Monitoring approach — Remote signaling of SPD, Action time of lightning, Air-switc<br>Action current of lightning time — current of lightning ≥ 3KA   | Communication mode                                     |                       |                            | RS485/7IGBFF            |
| Action current of lightning time —— current of lightning≥3KA  |  |                       | Remote sid                 |                         |
|   | J  |                       | nemote sig                 | • • •                   |
|   | Reset  |                       |                            | software                |