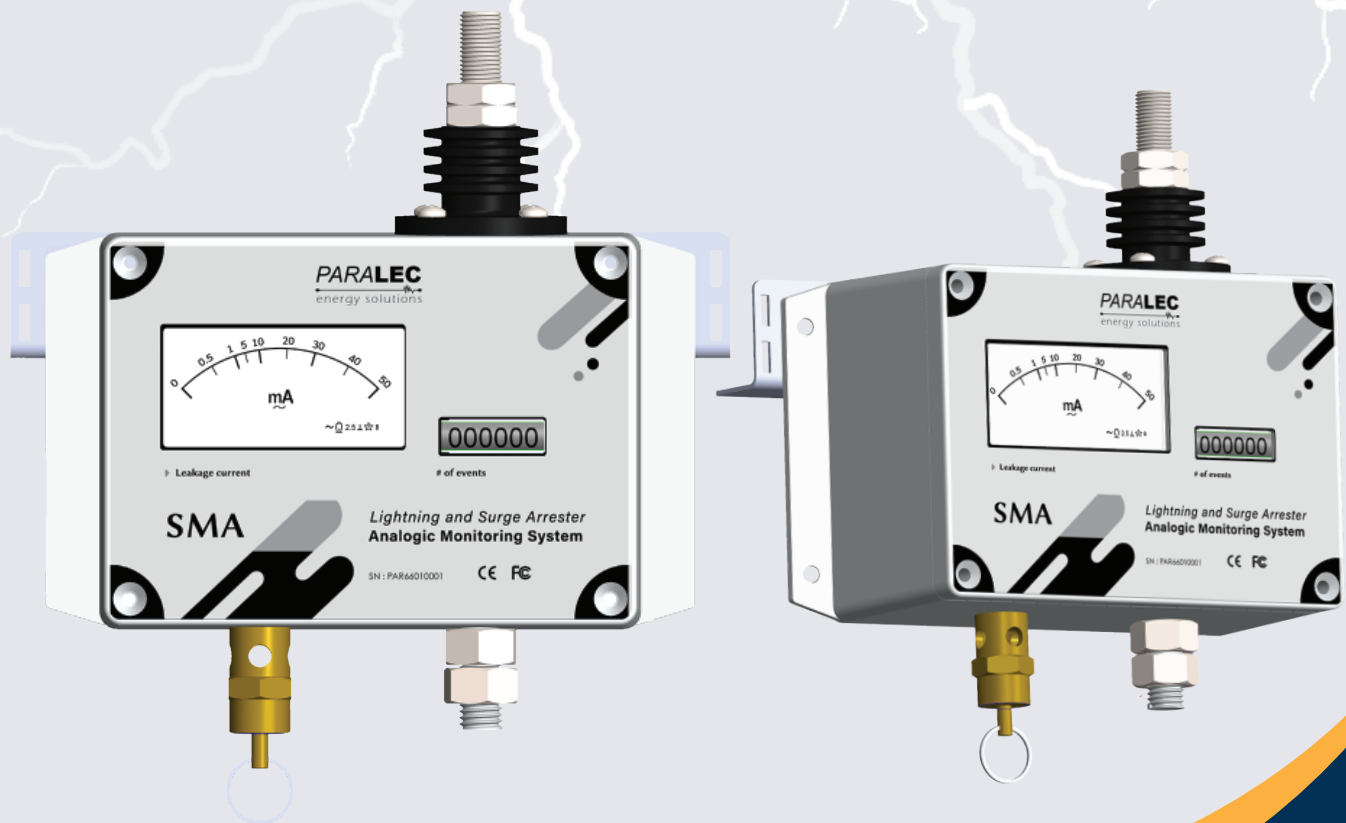


Surge & Lightning Monitoring Device

For Metal Oxide Surge Arresters from 6 to 800kV AC



Monitoring of surge arrester, MOA, MOR, SPD, TLA.

- Analogic total leakage current measurement from 0 to 50 mA
- Surge counting from 100 A minimum to 100 kA detection
- Outdoor and durable device : IP65, glass window, stainless steel, aluminium
- No maintenance : self powered device, no battery
- Easy counter installation : bottom, top, back or strap mounting.

Surge & Lightning Monitoring

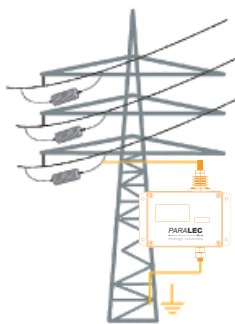
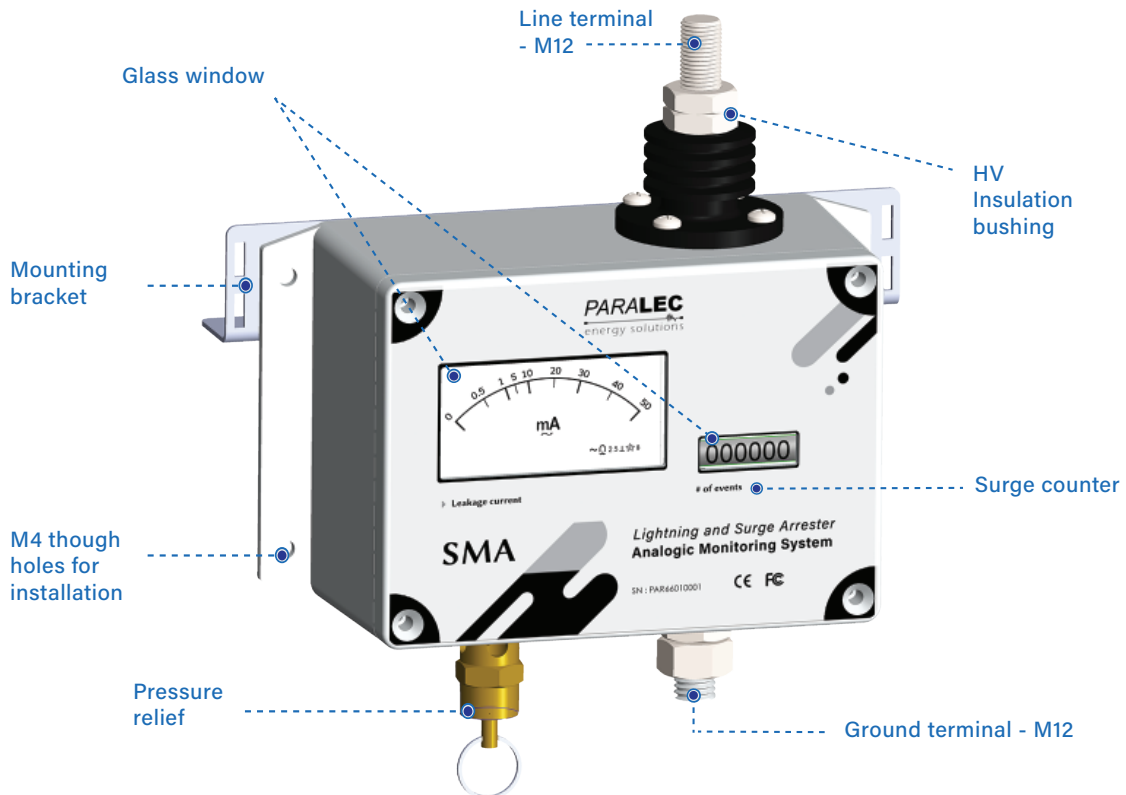


Paralec has dedicated its research activities to lightning surge qualification and protection. This new range of products aims at helping our customers to understand the origin of surges, their parameters and impact on equipment.

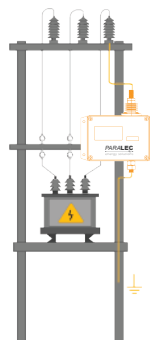
PARALEC SMA is an electro-mechanical leakage measurement device and surge counter. The leakage meter provide the value of the total leakage current flowing through the ground conductor from 0 to 50 mA. The surge counter is meant to count the number of lightning strikes based on the current flowing in a conductor.

The SMA shall be installed in series on the ground leads, at the ground terminal of the metal surge arrester. It can be mounted from the top, the bottom or strapped. Terminals can be used either way. The device complies to the IEC 62561-6.

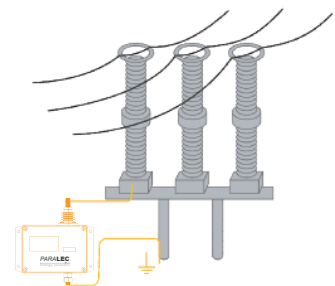
Thanks to its IP65, housing, rugged materials and self power, the SMA is suitable for outdoor and hazardous environment.



On overhead lines with TL



PMT MOA



On substation MOA

TECHNICAL CHARACTERISTICS



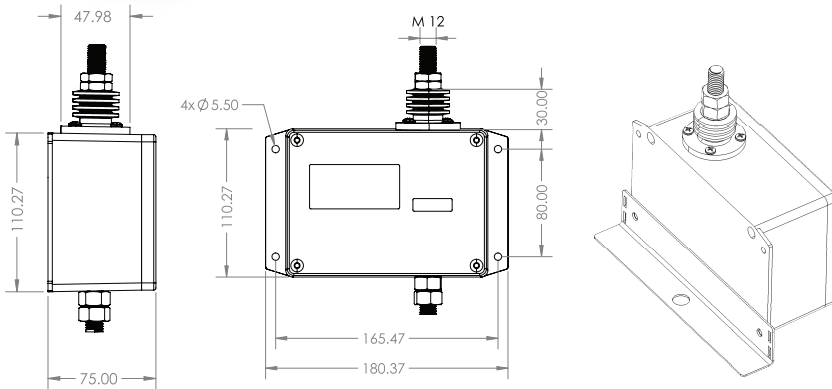
PARALEC
energy solutions

| MODEL | SMA |
|---|-------------------------------------|
| PART NUMBER | LL.SM.A0.S1.01.WW |
| EARTHING CONNECTION | |
| CONDUCTOR DIAMETER RANGE | 5 to 25 35 to 300 mm ² |
| INSTALLATION ON THE CONDUCTOR | Terminals, M12 threads, in series |
| LIGHTNING EVENT COUNTER | |
| INDICATION OF COUNTER | 6 digits |
| MINIMUM DISCHARGE PEAK CURRENT DETECTED - 8/20us waveform - IEC 62561-6 | 100 A |
| MAXIMUM DISCHARGE PEAK CURRENT DETECTED - 10/350us waveform - IEC 62561-6 | 100 kA |
| RESPONSE TIME | ≥ 2 counts/sec |
| MINIMUM TIME BETWEEN 2 STROKE FOR REGISTRATION, RESPONSE TIME | 20 ms |
| LONG DURATION CURRENT WITHSTAND CAPABILITY | 2500 A for 4 ms |
| HIGH CURRENT WITHSTAND CAPABILITY | 100 kA |
| LEAKAGE CURRENT MEASUREMENT | |
| AMMETER SCALE | 0-50 mA |
| READING CURRENT | peak current value/√2 |
| ACCURACY CLASS | 2.5 |
| FREQUENCY, Hz | 47 to 63 |
| OTHERS | |
| BATTERY POWER SUPPLY | NO |
| SELF POWERED | YES |
| RESET COUNTER METHOD | NO |
| WEIGHT, kg | 1.3 kg |
| ENVIRONMENTAL CONSTRAINTS | |
| TEMPERATURE - °C | Class C2: -40 to +70 |
| PROTECTION CLASS | IP65, NEMA 4X |
| TEMPERATURE CHANGE RATE - °C/min | Class C2: 1,0 |
| RELATIVE HUMIDITY - % | Class C2: 10 to 100 |
| MAX ALTITUDE - m | 2000 |
| ATMOSPHERIC PRESSURE - kPa | 70 to 106 |
| STANDARDS/TEST | IEC 62561-6 |
| LABEL INCLUDES | Serial number, manufacturing batch |
| UV STABILIZED HOUSING | YES |
| STAINLESS METAL | YES |
| TYPE OF SURGE COUNTER as per IEC 62561-6 | Type 1 and Type 2; outdoor |

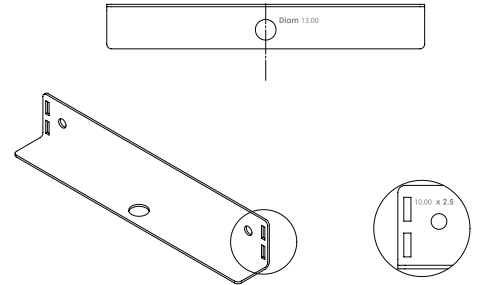
DIMENSIONS



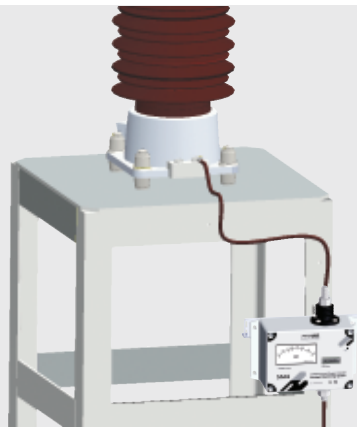
SMA



Mounting bracket (included)



On MOA in Substation



PRODUCT RANGE

| 1,2,3 | 4 | 5 | 6 | 7 | 8 |
|------------|-------------------|----------|----------|----------|----------|
| 102 | | 1 | 1 | 1 | 1 |
| SMA | Scale | N/A | N/A | N/A | N/A |
| 4 | | | | | |
| 1 | 50mA scale | | | | |
| 2 | 30mA scale | | | | |
| 3 | 10mA scale | | | | |



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