

# Surge Protection Made Simple™ for IEC Applications

## IEC Class II Surge Arresters for 230-600 Volt, 1-Pole TN & TT Systems



### Description

The Cooper Bussmann IEC Class II 275, 320, 385, 440 and 600 volt, one-pole, modular surge arresters feature local, *easyID*™ visual indication and optional remote contact signaling. The unique module locking system fixes the protection module to the base part. Modules can be easily replaced without tools by simply depressing the release buttons. Integrated mechanical coding between the base and protection module ensures against installing an incorrect replacement module.

Class II single-pole surge arrester models are offered with MCOV ratings of 255, 275, 320, 385, 440 and 600 volts.

### TN System Arresters

The features of these single-pole devices are for use as a single device or in combination with other devices.

### TT System Arrester

Provides a current arresting means between neutral conductor and protective conductor in TT systems, this device helps ensure fulfilling the requirements for protection of personnel and equipment in “3+1” and “1+1” circuits.

### Remote Signaling Contact

The three-pole terminal remote signaling contact versions have a floating changeover contact for use as a break or make contact, according to circuit concept.



BSPM1275TN(R)  
BSPM1320TN(R)  
BSPM1385TN(R)  
BSPM1440TN(R)  
BSPM1600TN(R)  
BSPG1255NPE(R)



*easyID*™  
Visual Status Indication



Remote Signal Contact Available



### Dimensions - mm



Shown with optional remote contact signaling

### Module Circuit Diagrams - Shown with optional remote contact signaling



BSPM1275TN(R)  
BSPM1320TN(R)  
BSPM1385TN(R)  
BSPM1440TN(R)  
BSPM1600TN(R)

BSPG1255NPE(R)

- MOV
- Thermal Disconnector
- Gas Discharge Tube (single)

| Ordering Information   |   |                     |                     |                     |             |                     |
|--|---|---------------------|---------------------|---------------------|-------------|---------------------|
| System Voltage/Poles   | 230V/1  | 230V/1              | 230V/1              | 400V/1              | 600V/1      | 230V/1*             |
| Max. Continuous operating AC voltage (MCOV) [U <sub>C</sub> ]                  | 275V  | 320V                | 385V                | 440V                | 600V        | 255V                |
| Catalog Numbers: Without Remote Signaling                                      | BSPM1275TN  | BSPM1320TN          | BSPM1385TN          | BSPM1440TN          | BSPM1600TN  | BSPG1255NPE         |
| (Base + Modules) With Remote Signaling   | BSPM1275TNR   | BSPM1320TNR         | BSPM1385TNR         | BSPM1440TNR         | BSPM1600TNR | BSPG1255NPER        |
| Replacement Modules  | BPM275IEC   | BPM320IEC           | BPM385IEC           | BPM440IEC           | BPM600IEC   | BPG255NPE           |
| Specifications   |   |                     |                     |                     |             |                     |
| Line system type   | TN / TT   | TN / TT             | TN / TT             | TN                  | TN          | TT                  |
| Max. Continuous operating DC voltage [U <sub>C</sub> ]                         | 350V  | 420V                | 500V                | 585V                | 600V        | --                  |
| Voltage protection level [U <sub>p</sub> ]                                     | ≤ 1.25kV  | ≤ 1.5kV             | ≤ 1.75kV            | ≤ 2kV               | ≤ 2.5kV     | ≤ 1.5kV             |
| Voltage protection level at 5kA [U <sub>p</sub> ]                              | ≤ 1kV   | ≤ 1.2kV             | ≤ 1.35kV            | ≤ 1.7kV             | ≤ 2kV       | --                  |
| Max. mains-side overcurrent protection   | 125A gL/gG  | 125A gL/gG          | 125A gL/gG          | 125A gL/gG          | 100A gL-gG  | --                  |
| Short-circuit withstand capability for max. mains-side overcurrent protection  | 50kA <sub>rms</sub>   | 25kA <sub>rms</sub> | 25kA <sub>rms</sub> | 25kA <sub>rms</sub> | 25kA rms    | --                  |
| Temporary overvoltage (TOV) [U <sub>T</sub> ]                                  | 335V/5 sec.   | 335V/5 sec.         | 385V/5 sec.         | 580V/5 sec.         | 600V/5 sec. | 1200V/200 ms        |
| Response time [t <sub>A</sub> ]  | ≤ 25 ns   | ≤ 25 ns             | ≤ 25 ns             | ≤ 25 ns             | ≤ 25 ns     | ≤ 100 ns            |
| Follow current extinguishing capability [I <sub>fi</sub> ]                     | --  | --                  | --                  | --                  | --          | 100A <sub>rms</sub> |
| Lightning impulse current (10/350 μs) [I <sub>imp</sub> ]                      | --  | --                  | --                  | --                  | --          | 12kA                |
| Nominal discharge current (8/20 μs) [I <sub>n</sub> ]                          | 20kA  | 20kA                | 20kA                | 20kA                | 15kA        | 20kA                |
| Max. Discharge current (8/20 μs) [I <sub>max</sub> ]                           | 40kA  | 40kA                | 40kA                | 40kA                | 30kA        | 40kA                |
| Standards Information  | KEMA  | KEMA, CSA           | KEMA, CSA           | KEMA, CSA           | KEMA        | KEMA                |
| Capacity   | 1 mod., DIN 43880   |                     |                     |                     |             |                     |
| SPD according to EN 61643-11   | Type 2  |                     |                     |                     |             |                     |
| SPD according to IEC 61643-1   | Class II  |                     |                     |                     |             |                     |
| TOV characteristics  | Withstand   |                     |                     |                     |             |                     |
| Operating temperature range [T <sub>U</sub> ]                                  | -40°C to +80°C  |                     |                     |                     |             |                     |
| Operating state/fault indication   | Green (good) / Red (replace)                                      |                     |                     |                     |             |                     |
| Number of ports  | 1   |                     |                     |                     |             |                     |
| Cross-sectional area (min.)  | 1.5mm <sup>2</sup> /14AWG solid/flexible                          |                     |                     |                     |             |                     |
| Cross-sectional area (max.)  | 35mm <sup>2</sup> /2AWG stranded-25mm <sup>2</sup> /4AWG flexible |                     |                     |                     |             |                     |
| Mounting   | 35mm DIN Rail per EN 60715  |                     |                     |                     |             |                     |
| Enclosure material   | Thermoplastic, UL 94V0  |                     |                     |                     |             |                     |
| Location category  | Indoor  |                     |                     |                     |             |                     |
| Degree of protection   | IP20  |                     |                     |                     |             |                     |
| Product Warranty   | Five Years**  |                     |                     |                     |             |                     |
| Remote Contact Signaling   |   |                     |                     |                     |             |                     |
| Remote Contact Signaling Type  | Changeover Contact  |                     |                     |                     |             |                     |
| AC Switching Capacity (Volts/Amps)   | 250V/0.1A   |                     |                     |                     |             |                     |
| DC Switching Capacity (Volts/Amps)   | 250V/0.1A; 125V/0.2A; 75V/0.5A                                    |                     |                     |                     |             |                     |
| Conductor Ratings and Cross-Sectional Area for Remote Contact Signal Terminals | 60/75°C Max. 1.5mm <sup>2</sup> /14AWG Solid/Flexible             |                     |                     |                     |             |                     |
| Ordering Information   | Order from Catalog Numbers Above                                  |                     |                     |                     |             |                     |

\* N-PE Surge arrester for location between neutral conductor and protective conductor in TT systems.

\*\* See Cooper Bussmann SPD Limited Warranty Statement (3A1502) for details at [www.cooperbussmann.com/surge](http://www.cooperbussmann.com/surge).

| Recommended Cooper Bussmann Back Up Fuses |                                     |               |
|---|-------------------------------------|---------------|
| DIN Fuse Size                             | TT / TN System NH Fuse Part Numbers |               |
|   | 275, 320, 385, 440V                 | 600V          |
| 00  | 125NHG00B                           | 100NHG00B-690 |
| 0   | 125NHG0B                            | 100NHG0B-690  |
| 01  | 125NHG01B                           | --            |
| 1   | --                                  | 100NHG1B-690  |
| 02  | 125NHG02B                           | --            |
| 2   | --                                  | 100NHG2B-690  |

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