# 1-Pole IEC Class I coordinated lightning current arresters for 75V to 1000V TN and TT wind power systems



RoHS

Remote contact signaling available
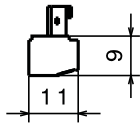
*easy*ID™ local visual status indication
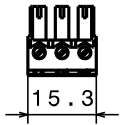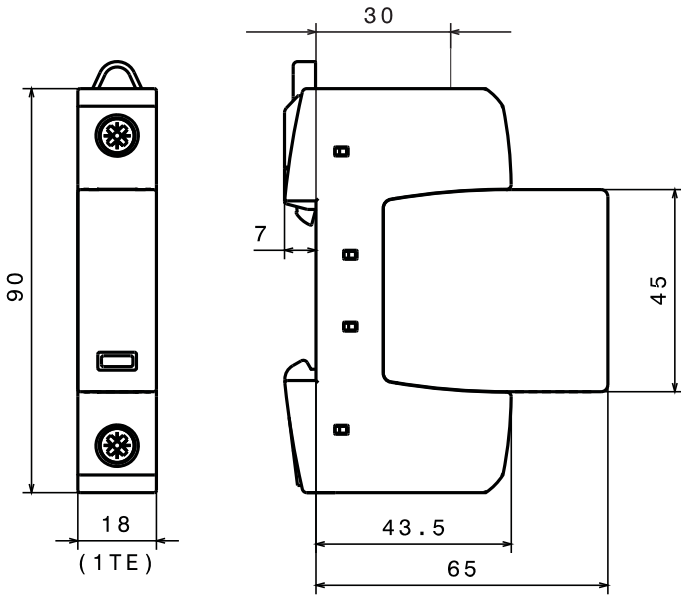
## Catalog symbol:

• BSPG1230WE
• BSPG1230WER
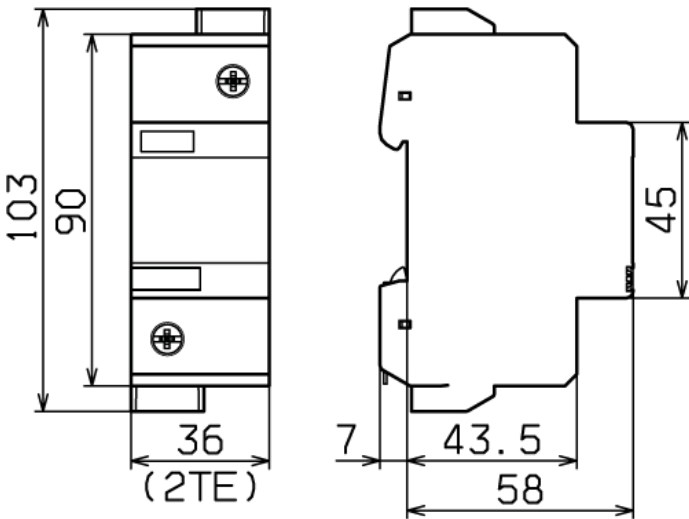• BSPM_WE
• BSPM_WER

## Description:

Eaton's Bussman™ series of one-pole IEC Class II modular surge arresters feature local, *easy*ID™ visual indication and optional remote contact signaling. The unique module locking system on the 75 to 690 volt arresters 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.

## TN and 1-phase TT system arresters

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

## TT system arresters

Provide a current arresting means between neutral conductor and protective conductor in TT systems. These devices help ensure fulfilling the requirements for protection of personnel and equipment in "3+1" and "1+1" circuits.

## Optional remote contact signaling

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

## Specifications:

### System volts

• 75Vac to 1000Vac (see ordering information table for details)

### System types

• TN
• TT

### Agency information

• CE
• CSA
• KEMA
• RoHS compliant

### Mounting

• 35mm DIN-Rail

### Warranty

• Five years

## E·T·N

*Powering Business Worldwide*

## Dimensions - mm:

**75V to 690V**

30

7

90

45

18
(1TE)

43.5

65

15.3

9

11

**1000V**

103

90

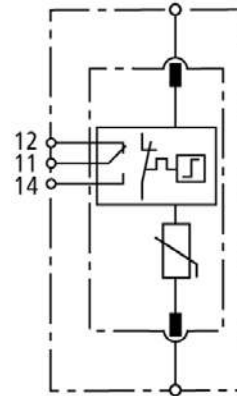45

36
(2TE)

7    43.5

58

Shown with optional remote contact signaling.

## Module circuit diagrams:

Shown with optional remote contact signaling.

Gas discharge tube (single)

Thermal disconnecter

MOV

12
11
14
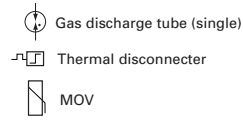
BSPM175WE(R)
BSPM1400WE(R)
BSPM1690WE(R)
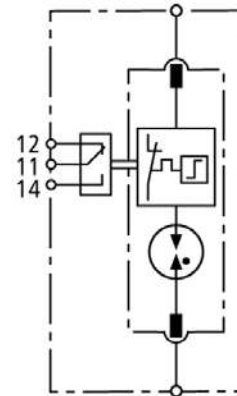
12
11
14

BSPG1230WE(R)

12
11
14

BSPM11000WE(R)

## Ordering information:

| System voltage (50-60Hz) / poles | | 75V / 1 | 230V / 1 | 400V / 1 | 400V†/690V†† / 1 | 1000V / 1 |
|---|---|---|---|---|---|---|
| Max. Continuous Operating Voltage (MCOV) [$U_c$] AC (50-60Hz) | | 75V | 255V | 440V | 600V | 1000V |
| Catalog numbers (base + modules) | W/ remote signaling | BSPM175WE | BSPG1230WE | BSPM1400WE | BSPM1690WE | BSPM11000WE |
| | W/ remote signaling | BSPM175WER | BSPG1230WER | BSPM1400WER | BSPM1690WER | BSPM11000WER |
| Replacement modules | | BPM75WE | BPG255NPEWE* | BPM440WE | BPM750WE | N/A |
| **Specifications** | | | | | | |
| Line system type | | TN / TT | TT | TN / TT | TN / TT | TN / TT |
| Max. continuous operating DC voltage [$U_c$] | | 100V | — | 585 | 600V | 1000V |
| Rated varistor voltage AC [$U_{mov}$] | | — | — | — | 750V | 1000V |
| Nominal discharge current (8/20µs) [$I_n$] | | 10kA | 20kA | 20kA | 15kA | 15kA |
| Max. discharge current (8/20µs) [$I_{max}$] | | 40kA | 40kA | 40kA | 25kA | 30kA |
| Follow current extinguishing capability [$I_{fi}$] | | — | 100 Arms | — | — | — |
| Lightning impulse current (10/350µs) [$I_{imp}$] | | — | 12kA | — | — | — |
| Voltage protection level | [$U_p$] | ≤ 0.4kV | ≤ 1.5kV | ≤ 2.0kV | ≤ 3kV | ≤ 4.2kV |
| | [$U_p$] at 5kA | ≤ 0.35kV | — | ≤ 1.7kV | ≤ 2.5kV | ≤ 3.5kV |
| Response time [$t_A$] | | ≤ 25 ns | ≤ 100 ns | ≤ 25 ns | ≤ 25 ns | ≤ 25 ns |
| Max. mains-side overcurrent protection | | 125A gG | — | 125A gG | 100A gG | 100A aM** |
| Short-circuit withstand capability for max. mains-side overcurrent protection ($I_{SCCR}$) | | 50kA$_{rms}$ | — | 25kA$_{rms}$ | 25kA$_{rms}$ | 25kA$_{rms}$ |
| Temporary Overvoltage (TOV) [$U_T$] | Withstand | 90V / 5 sec. | 1200V / 200ms | 580V / 5 sec. | 900V / 5 sec. | 1000V / 5 sec. |
| | Safe failure | | | | | |
| Agency information | | KEMA, CSA | KEMA | KEMA, CSA | KEMA, CSA | — |
| Capacity (DIN 43880) | | 1 Mod. | 1 Mod. | 1 Mod. | 1 Mod. | 2 Mod. |
| SPD according to | | EN 61643-11 Type 2, IEC 61643-11 Class II | | | | |
| Operating environment [$T_U$] | | -40°C to +80°C, 5% to 95% RH | | | | |
| Operating state/fault indication | | Green (good) / Red (replace) | | | | |
| Number of ports | | 1 | | | | |
| Cross-Sectional Area | Min. | 1.5mm² / 14AWG solid / flexible | | | | |
| | Max. | 35mm² / 2AWG stranded-25mm² / 4AWG flexible | | | | |
| Mounting | | 35mm DIN-Rail per EN 60715 | | | | |
| Enclosure material | | Thermoplastic, UL 94V0 | | | | |
| Location category | | Indoor | | | | |
| Degree of protection | | IP20 (built-in) | | | | |
| Product warranty | | Five years*** | | | | |
| **Remote contact signaling** | | | | | | |
| Remote contact signaling type | | Changeover contact | | | | |
| Switching capacity (volts/mps) | AC | 250V / 0.5A | | | | |
| | DC | 250V / 0.1A; 125V / 0.2A; 75V / 0.5A | | | | |
| Conductor ratings and cross-sectional area | | 60/75°C Max. 1.5mm² / 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.
  ** 125A gG @ 690Vac.
 *** See Eaton's Bussmann series SPD limited warranty statement (3A1502) for details at www.cooperbussmann.com/surge.
   † 400V [L-N]
  †† 690V [L-L]

### Recommended Bussmann series NH DIN back up fuses

| Size | Fuse catalog number |
|---|---|
| 00 | 100NHG00B-690 |
| 00 | 125NHG00B-690 |

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