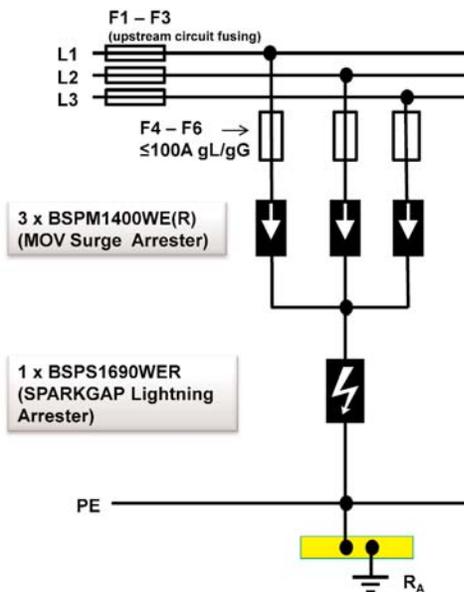
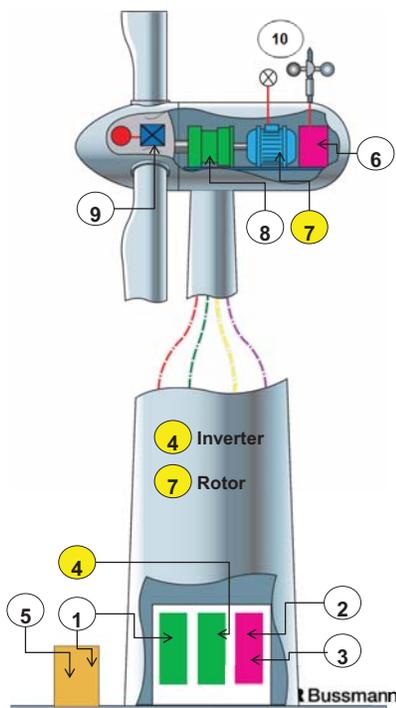


## Surge Protection Made Simple™

### Winf Power SPD

### SPD Combination for Protecting the Rotor and Inverter of Wind Turbines

- Robust Class II protection for wind turbine rotor and inverters
- Non exhausting “NEPTUNE” circuit offers no leakage current
- High 50Hz power frequency withstand voltage prevents the response of the SPD combination up to 1.6 kV<sub>peak</sub>
- High TOV resistance
- Reliable insulation resistance of the arrester structure to equi-potential bonding (PA/PE) due to lightning current carrying spark gap type BSPS1690WER
- Nominal voltage [U<sub>n</sub>] up to 760Vac
- BSPS1690WER & BSPM1400WE(R) are tested for vibration- and shock-resistant according to EN 60068-2
- BSPM1400WE(R) offers convenience of modular replacement plugs



#### Class II SPD combination for protecting the rotor and inverter of wind turbines consisting of:

- 1 x BSPM1400WE(R) – MOV based surge arrester
- 1 x BSPS1690WER – Spark gap based lightning arrester

**Contains Arrester in Accordance with:**

EN 61643-11/IEC 61643-1	BSPS1690WER	Type 1 / Class I
Contains arresters in accordance with EN 61643-11/IEC 61643-1	BSPM1400WE(R)	Type 2 / Class II
Max. continuous operating voltage AC [U <sub>C</sub> ]	BSPS1690WER	760V
Max. continuous operating voltage AC [U <sub>C</sub> ]	BSPM1400WE(R)	440V
Nominal discharge current [I <sub>n</sub> ] (8/20 μs)	BSPM1400WE(R)	20kA / circuit
Maximum discharge current [I <sub>max</sub> ] (8/20 μs)	BSPM1400WE(R)	40kA / circuit
Maximum total discharge current [I <sub>total</sub> ] (8/20 μs)		60kA
Lightning impulse current [I <sub>imp</sub> ] (10/350 μs)	BSPS1690WER	25kA
Voltage protection level [U <sub>p</sub> ]	BSPM1400WE(R)	< 1.7kV
Voltage protection level [U <sub>p</sub> ]	BSPS1690WER	< 4kV
Voltage protection level [L-L] U <sub>p</sub>		< 3.4kV
Voltage protection level [L-PA] U <sub>p</sub>		< 5.7kV
Rated power frequency withstand voltage U <sub>W/AC</sub> (50Hz) / TOV resistance	BSPS1690WER	> 1.1kV
Peak power frequency withstand voltage U <sub>W/AC</sub> (peak) / TOV resistance	BSPS1690WER	> 1.6kV
Response time t <sub>A</sub> (L-L)	BSPM1400WE(R)	< 25 ns
Response time t <sub>A</sub> (L-PA)	BSPS1690WER	< 100 ns
Maximum overcurrent	BSPM1400WE(R)	100A gG
Short-circuit withstand capability for max. back-up fuse	BSPM1400WE(R)	25kA
Cross-sectional area (min)		10mm <sup>2</sup> solid/flexible
Cross-sectional area (max)		35mm <sup>2</sup> stranded / 25mm <sup>2</sup> flexible
Insulation resistance	BSPS1690WER	> 10 <sup>3</sup> MΩ
Installation on		35mm DIN rail in accordance with EN 60715
Dimensions		1 Modules, DIN 43880 [3 x] 2 Modules, DIN 43880 [1 x] ----- 5 Modules, DIN 43880
Operating temperature range T <sub>U</sub>		-40°C to +80°C
Material of the enclosure		Thermoplastic, UL 94V0
Degree of protection		IP20
Operating state / fault indication		Green (good) / Red (replace)
Type of remote signalling contact		Changeover contact
Switching capacity AC		250V/0.5 A
Switching capacity DC		250V/0.1 A; 125V/0.2 A; 75V/0.5 A
Cross-sectional area for remote signalling terminals		Max. 1.5mm <sup>2</sup> solid/flexible

**Ordering information**

1 x Three-Pole Pluggable Surge Arrester	Part No	BSPM1400WE(R) System BPM440WE (Replacement Plugs)
1 x Single-Pole Lightning Arrester	Part No	BSPS1690WER