

## BRUMIL 230 – EMP Protector RJ45-1000 incl. PoE

The efficient devices to protect equipment against the effects of EMP (Electromagnetic Pulses)

### Applications:

- The BRUMIL 230 protects all four twisted pairs of a 10/100/1000 Mbit/s Ethernet Cat 5 computer network. These devices safeguard effectively the inputs of sensitive electronics such as computers, telecommunication equipment etc. against damages caused by surge effects as lightning and EMP
- Fitted with shielded RJ45 jacks, which can be easily connected with of-the-shelf patch cables. For best results when installing the cable through unprotected areas shielded cables are recommended
- The implemented Power over Ethernet (PoE) enables supply to external devices with up to 50VDC
- The BRUMIL 230 is designed to be used in fixed installations (buildings, underground shelters etc.) as well as in portable and mobile systems like containers, shelters, and vehicles, whereby these mobile housings need to be EMP-tested according to RS105 of MIL-STD-461F
- Used in:
  - TCP/IP WAN/LAN networks
  - Harsh environment
  - Indoor and outdoor
  - Military



- Special features of these protection circuit series, BRUMIL 220/230 include high surge current capability, compact feed-through design and a simple installation directly to the protected housing which works as a Faraday cage
- The BRUMIL 230 EMP Protector RJ45-1000 is threat-level tested against EMP according to **MIL-STD-188-125**, short pulse and intermediate pulse

### Dimensions:

Total length: 112.5 mm (without patch cable)  
Diameter: M32 mm

### Description:

- The BRUMIL 230 Surge Protection Device offers a highly effective multi-stage protection design combined with filtering components
- It provides excellent protection against the effects of atmospheric discharges (lightning, electrostatic discharge) or a High Altitude Electro-Magnetic Pulse (HEMP), sometimes also referred to as Nuclear Electro-Magnetic Pulse (NEMP) or simply EMP

### BRUMIL 230 – EMP Protector RJ45-1000

Max. operating voltage peak signal	±3V	Voltage between wire pairs 1-2, 3-6, 4-5 and 7-8
Max. operating voltage DC	±55V	Max.DC voltage pair to pair and pair to ground (PoE IEEE 802.3af)
Data rate	10/100/1000Mb/s	Ethernet, Fast Ethernet or Gigabit Ethernet as per IEEE 802.3
Max. surge current I <sub>Max</sub>	2x10 kA *)	Each wire to ground/case, shape 8/20 µs, at least 1 pulse
Max. lightning impulse current I <sub>imp</sub>	2x2 kA *)	Each wire to ground/case, shape 10/350 µs, at least 1 pulse
DC resistance input – output	<6Ω	Each wire
Residual voltage common mode surge	< 100 V	pair to ground/case, pulse 4kV/2kA according to IEC61000-4-5
Residual voltage common mode fast pulse	< 300 V	pair to ground/case, fast pulse 4 kV, 5/50ns, load 1 MOhms
Connection terminals	RJ45 shielded	Use of shielded cables recommended
Case material	Brass	Nickel-plated
Max. allowed installation torque	30Nm	Not to be exceeded under all circumstances
Dimensions	Ø 32x112.5mm	2 nuts M32x1.5 for feed-through installation
Weight	Approx. 250g	Incl. 2 nuts

\*) Surge current > 2kA (8/20 µs) per wire may damage RJ45 contacts