

# BRUMIL 21X – Surge-Protector RJ-45 100BaseT Family

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

**Application**

- The BRUMIL 21X family is specially designed for faultless data transfer within Ethernet Cat 5 computer networks
- These products effectively protect the inputs of commercial network devices against damages caused by surge effects
- Used in:
  - TCP/IP WAN/LAN networks.
  - Harsh environment
  - Outdoor
  - Military

**Description**

- These Surge Protection Devices are multi-stage protection devices according to IEC 61643-21:2000.
- The models BRUGG MILLE 212 and 215 are specifically designed for applications with Power over Ethernet (PoE).

**Technical Data**

Characteristics Impedance: 100 Ohm

Insertion loss: typ. 0.4 dB (at 100 MHz)  
Attenuation crosstalk ratio (ACR)

typ. 23.2 dB (at 100 MHz)  
Dual next crosstalk

> 24 dB (at 100 MHz)  
Nominal current  $I_N$

300 mA  
Max. discharge current  $I_{max}$  (8/20 $\mu$ s)

2 kA  
Parasitic capacity C

< 47 pF  
Response time  $t_A$

< 25 ns

**Standards**

Category tested according

IEC 61423-21:2000, A2, B2, C2, C3, D1

**Temperature range**

Operating temperature: -40 ... +80°C

**Environment IP Protection**

BRUMIL 210

IP-65 (prot. cap or plugged)  
BRUMIL 212

IP-65 (prot. cap or plugged)  
BRUMIL 212

IP-54 (built-in)



BRUMIL 210



BRUMIL 212



BRUMIL 215

**Technical data**

Type	Bitrate	Input / Output mm	Number of pro- tected pairs	Nominal voltage $U_N$ V	Voltage protection level at $I_N$ V	Voltage protection at 1 kV/us V
BRUMIL 210	10/100BaseTX	RJ45 / RJ45	1 x 2	6	25	< 10
BRUMIL 212	10/100/1000BaseTX	RJ45 / RJ45	1 x 4	60	82	78
BRUMIL 215	10/100/1000BaseTX	12 x RJ45 / M50	12 x 2	60	82	78

## Deployment Accessories

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### Dimensions

Type	Total length	Diameter	Flange	Distance front panel to backside connector without patch cable
BRUMIL 210	112 mm	28 mm	33 x 33 mm	87 mm
BRUMIL 212	122 mm	48 mm	D-hole: 32 mm	104 mm
BRUMIL 215	117 mm	65 mm (width)	120 mm (depth)	111 mm