

# ZoneBarrier

## High Energy Ethernet range

Surge protection for 1000/100/10-Base-T Ethernet Applications

- Rugged 10kA Surge Capacity
- Models for Standard Ethernet, Industrial Ethernet and PoE
- DIN Rail or Surface Mount
- 3 Stage Hybrid Protection Circuit
- Precise voltage limiting characteristics
- Shielded RJ45 Connectors
- 10 Year "No Fuss" Warranty
- UL497B Listed



**The ZoneBarrier High Energy Ethernet range combines high speed, high surge current capacity, industrial capabilities, and hazardous area capabilities (pending) into a single package.**

This product is ideally suited for industrial, process, network, plus security, and surveillance camera applications.

The application of high speed Ethernet and Power over Ethernet (PoE) devices is increasing dramatically in industries such as process, industrial, manufacturing, intelligent transportation system (ITS), and Security. Due to the application flexibility of these new high speed Ethernet devices many are now being installed in areas very susceptible to lightning and other types of damaging surge events.

Due to the operational criticality of many of these devices, any downtime or loss of function can become a major concern to the overall system availability and functional safety.

The need for a durable high speed protection solution capable of being installed into these harsh and sometimes hazardous locations has become increasingly more in demand.

**The ZoneBarrier High Energy Ethernet range was developed specifically to fit the needs for these types of applications.**



*Powering Business Worldwide*

**Eaton Electric Limited,**  
Great Marlings, Butterfield, Luton  
Beds, LU2 8DL, UK.  
Tel: + 44 (0)1582 723633 Fax: + 44 (0)1582 422283  
E-mail: [mtlenquiry@eaton.com](mailto:mtlenquiry@eaton.com)  
[www.mtl-inst.com](http://www.mtl-inst.com)

© 2016 Eaton  
All Rights Reserved  
Publication No. EPS 901-181 revC  
September 2016

# 901-181 RevC

September 2016

## SPECIFICATION

All figures typical at 25°C (77°F) unless otherwise stated

### Maximum surge current

10kA (8/20µs waveform) per wire

### Leakage Current

<1µA

### Maximum rated load current

1.0A

### Maximum Frequency

See table below

### Attenuation

Better than: -0.5dB at 250MHz

### N.E.X.T.

Worst pair: Better than -37dB

### Return Loss

Better than -10dB at 250MHz

### Ambient temperature

-40 C to +85 C (working)

-40 F to +185 F (working)

### Humidity

5 to 95% RH (non-condensing)

### Lines protected

Eight (8) per port

### Connector type

SRJ45 (Shielded RJ45)

### Compliance

BS EN 61326-1:2006

IEC 61643.21-2009

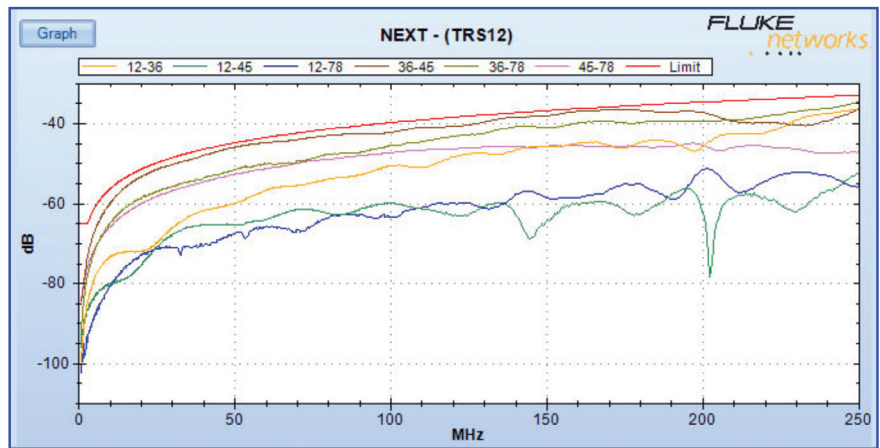
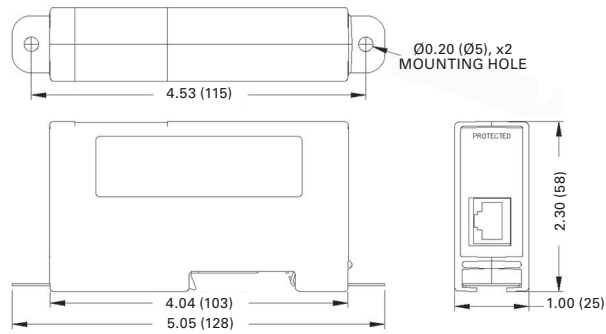
### Standards

TIA/EIA-568-B.2-1

IEEE 802.3ab

IEEE 803.3af

IEEE 803.3at



N.E.X.T. Performance

## APPROVALS

Country (Authority)	Standard No.	Certificate / File	Approved for	Product
UL (USA)	UL 497B Listed	E175267	Isolated loop communication circuits	ZB24596 ZB24598 ZB24597
EC (Baseefa)	EN 60079-0:2012 EN 60079-11:2012	BASEEFA 13ATEX0257X	II 1G Ex ia IIC T4 Ga	ZB24596 ZB24598 ZB24597
Global (IEC)	IEC 60079-0:2011 IEC 60079-11:2011	IECEX BAS 13.0136X	Ex ia IIC T4 Ga	ZB24596 ZB24598 ZB24597

## To order specify -

Order by model, as listed in the Specification table

Model	ZB24596	ZB24598	ZB24597
Application	Standard 1000-Base-T Ethernet	Industrial 1000-Base-T Ethernet	PoE 1000-Base-T Ethernet
Nominal voltage	5V	12V	48V
Rated voltage	8V	17V	52V
Voltage protection level	10V	20V	90V
Maximum Frequency	300MHz per pair	300MHz per pair	300MHz per pair



**Eaton Electric Limited,**  
Great Marlings, Butterfield, Luton  
Beds, LU2 8DL, UK.  
Tel: + 44 (0)1582 723633 Fax: + 44 (0)1582 422283  
E-mail: mtlenquiry@eaton.com  
www.mtl-inst.com

© 2016 Eaton  
All Rights Reserved  
Publication No. EPS 901-181 revC 190916  
September 2016

**EUROPE (EMEA):**  
+44 (0)1582 723633  
mtlenquiry@eaton.com

**THE AMERICAS:**  
+1 800 835 7075  
mtl-us-info@eaton.com

**ASIA-PACIFIC:**  
+65 6 645 9888  
sales.mtlsing@eaton.com

The given data is only intended as a product description and should not be regarded as a legal warranty of properties or guarantee. In the interest of further technical developments, we reserve the right to make design changes.