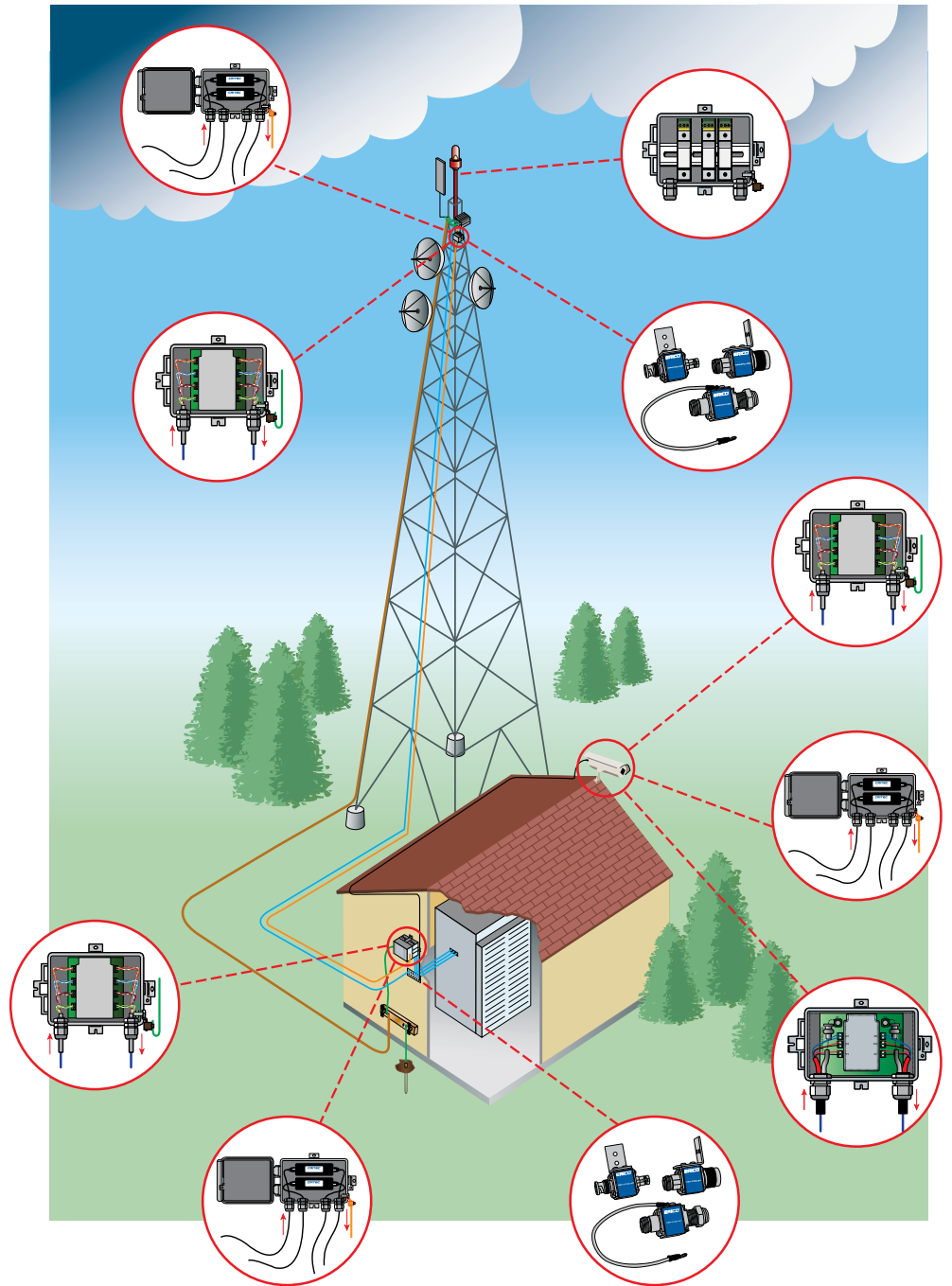


# Wireless Broadband Surge Protection



# Wireless Broadband Surge Protection

The demand for high-speed wireless internet and data network access over a wide area has grown at a rapid pace. This growth has led to a proliferation of access points (base stations) and subscriber units. For optimum transmission and receipt of signals, the antennas on the access points and subscriber units are mounted at the highest point possible. This helps to maximize communication range and to create better line-of-sight advantages. Unfortunately, these mounting locations also increase the possibility of lightning induced surges and they provide a point for static charges to collect.

A single lightning strike involves thousands of volts and thousands of amperes of current that can cause severe damage to radio equipment. Although some equipment contains built-in protection, most cannot handle the transient energy of a powerful strike.

## ERICO Offers a Solution

The Six Point Plan of Protection from ERICO outlines an integrated system design approach to help provide total facility lightning protection. The plan combines the capture and dissipation of lightning strikes, the elimination of ground loops, and the protection of equipment from surges and transients from multiple sources.

The optimum solution for outdoor equipment is a rugged, weatherproof hybrid surge protector that can handle at least 20,000 amperes of lightning-induced current.

The MWE series of protectors from ERICO are ideal for tower or rooftop-mounted radio units. They offer high surge-protection capabilities in weatherproof enclosures.

Two MWE surge devices are recommended per base station or subscriber unit. One should be mounted close (within 5 ft / 1.5 m) to the tower top or rooftop unit and the other at the entrance of the building or shelter. This helps ensure that any surge voltage induced on a length of cable, due to its inductance and the di/dt effect of lightning current, is diverted away from the protected loads.

## Product Offerings

### MWECSPOE

Suitable for 10/100BaseT Power over Ethernet (PoE)-powered base stations, subscriber units, IP network surveillance cameras or any other PoE-powered device. Rated to handle up to 25 kA of lightning-induced surge current (8/20  $\mu$ s).

### MWESS

Ideal for coaxial-fed CCTV surveillance cameras. Designed to provide all-in-one protection for up to four signal lines, an AC/DC power line and a coaxial video cable. Rated to handle up to 25 kA of lightning-induced current (8/20  $\mu$ s).

### MWERJ451/2

Ideal for subscriber units or PoE-powered surveillance cameras.

### MWE + TDS / DSD

Ideal for protection of 12/24/48 VDC or 120/240 VAC aircraft warning lights. Rated to handle 40 kA (DSD) or 50 kA (TDS) of lightning-induced current.

### DSD1402BR 24/48

Protection for 24/48 VDC-powered base stations, subscriber units and other 24/48 VDC-based systems. Rated at 40 kA (8/20  $\mu$ s)  $I_{max}$ , this product offers substantial protection against lightning-induced surges.

### Coaxial Surge Protection (CSP)

Designed to provide robust protection from transients on coaxial antenna RF feeder cables and GPS.

### LAN

The Local Area Network Protector RJ45 series suits a range of applications from 10BaseT, 100BaseT, 1000BaseT to Power over Ethernet networks.



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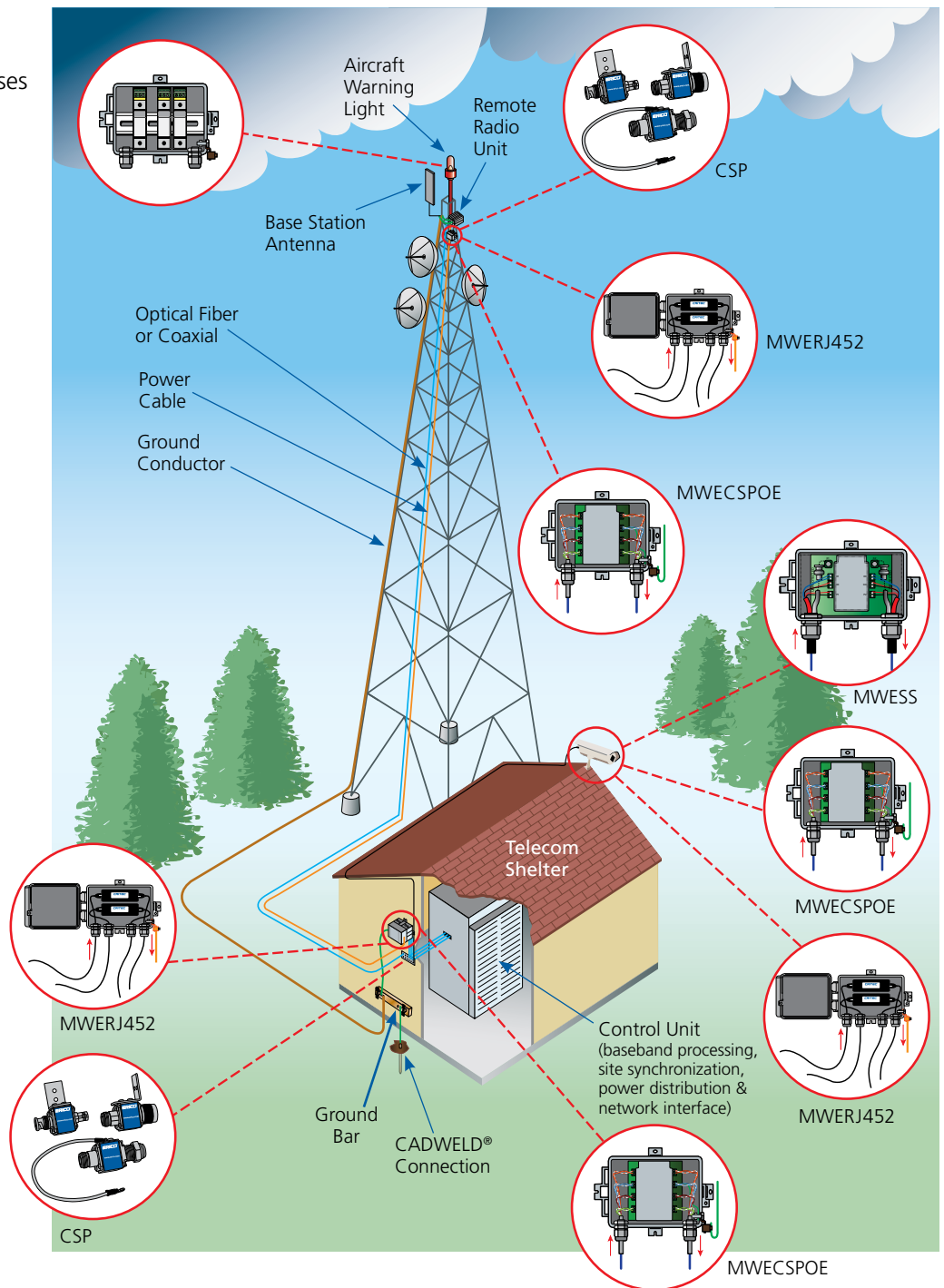
A base station is a transmitter/receiver used to communicate over a radio network. It comprises antennas, radio equipment, power modules and towers. The site or facility may also include surveillance cameras and aircraft warning lights.

The MWE series of products is designed to offer effective and powerful surge-protection capabilities for the various elements of a base station.

A subscriber unit (SU), also known as customer premise equipment (CPE), comprises radio equipment installed at a residential or business site that allows the transmission and receipt of high-speed data. Most SUs include an indoor network interface unit linked by Cat 5e or coaxial cable to a pole-mounted outdoor unit and antenna. Surveillance systems may also be present.

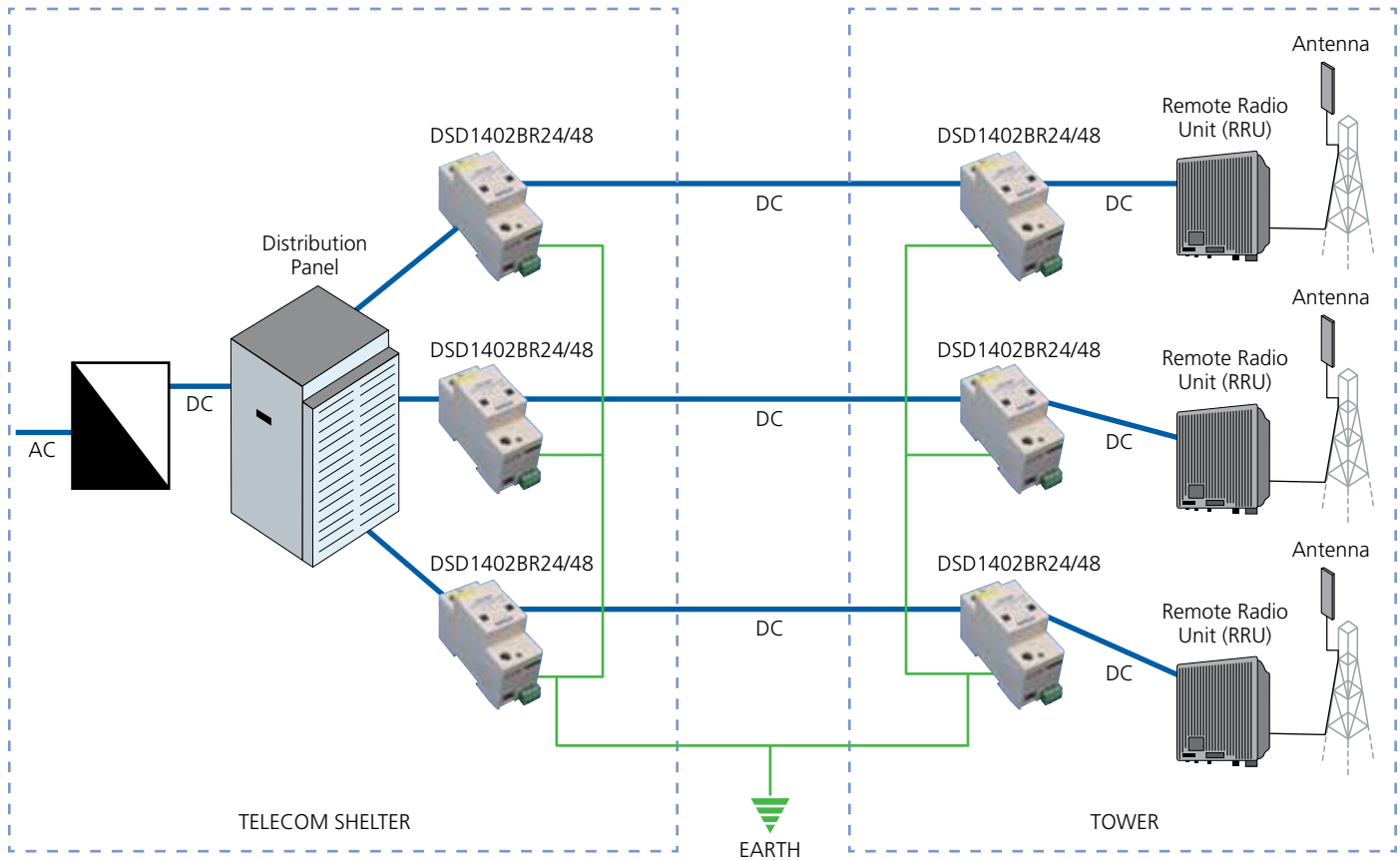
The MWE series is ideal for use in a wide variety of applications, including shopping malls, sea ports, mining, oil and gas, municipalities and education, and internet cafes.

For information on lightning air terminals, down conductors, telecom ground bars, grounding products and connections, contact your ERICO representative.



# Wireless Broadband Surge Protection

## Solution for 24/48 VDC Powered Base Stations

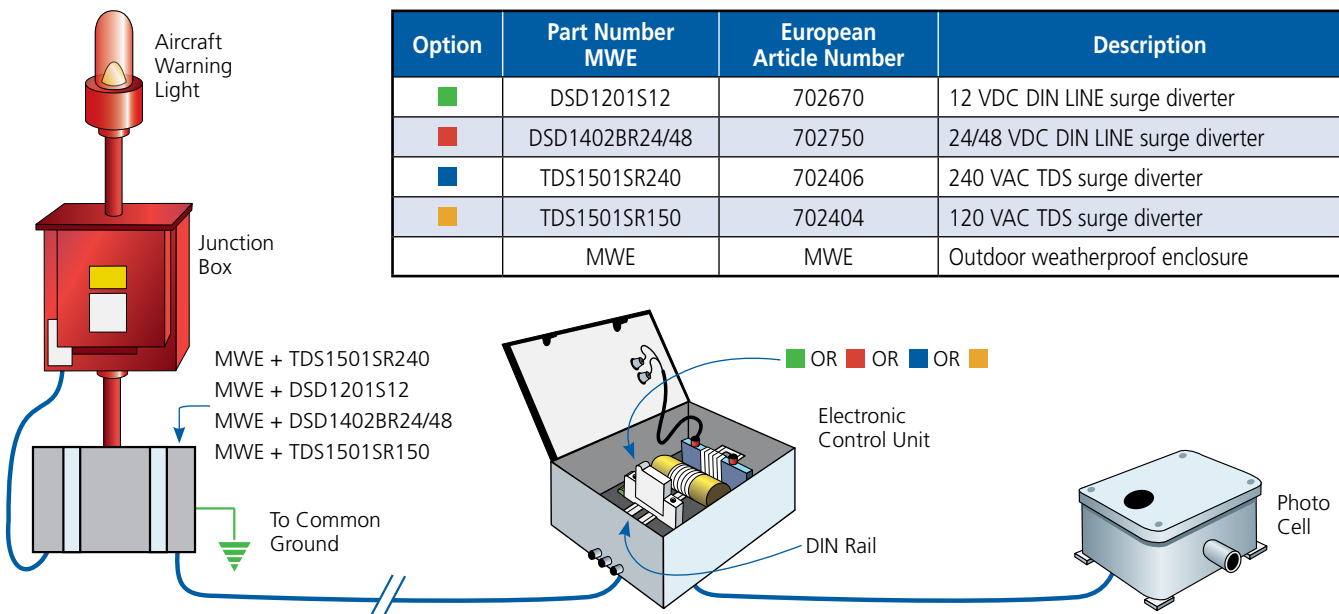


Contact ERICO for information on ERITECH® brand of grounding bus bars, ground rods and CADWELD® welded electrical connections products.

Part Number	European Article Number	Description
DSD1402BR24/48	702750	24/48 VDC DIN LINE surge diverter

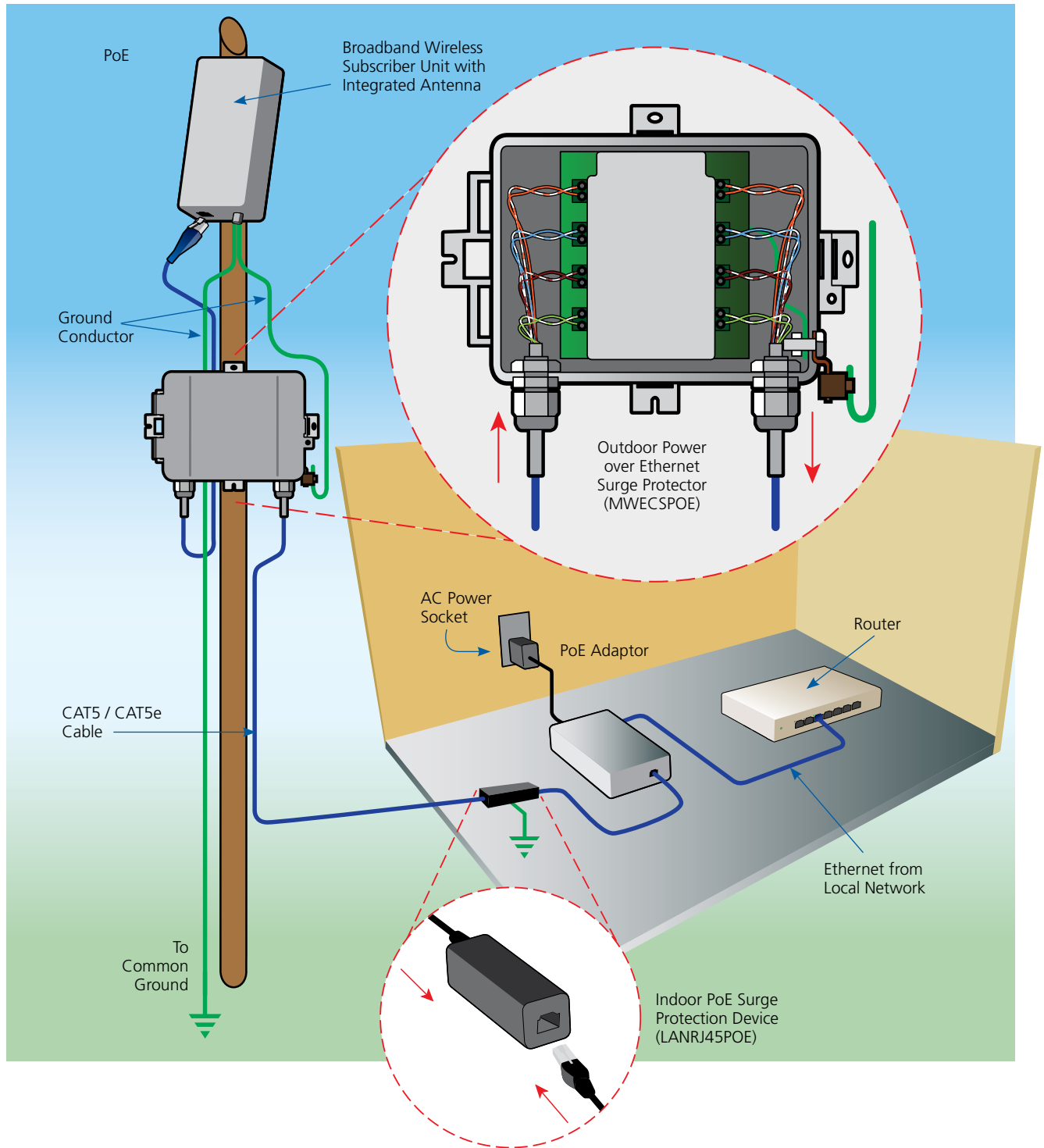
## Solution for Aircraft Warning Lights / Obstruction Lights

Option	Part Number MWE	European Article Number	Description
■	DSD1201S12	702670	12 VDC DIN LINE surge diverter
■	DSD1402BR24/48	702750	24/48 VDC DIN LINE surge diverter
■	TDS1501SR240	702406	240 VAC TDS surge diverter
■	TDS1501SR150	702404	120 VAC TDS surge diverter
	MWE	MWE	Outdoor weatherproof enclosure



# Wireless Broadband Surge Protection

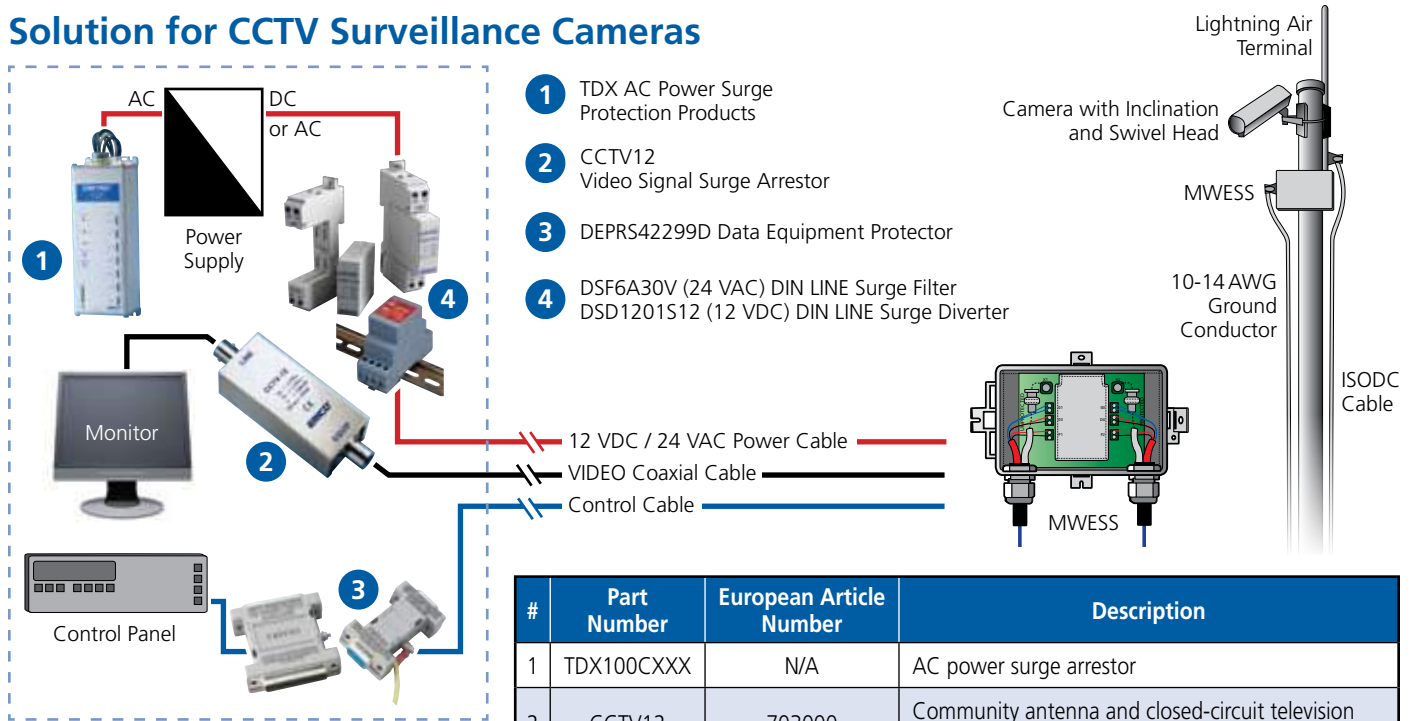
## Solution for Subscriber Units



Part Number	European Article Number	Description
CABTI55	701420	520 mm stainless steel cable tie for pole mounting
MWECSPOE	MWECSPOE	Outdoor Power over Ethernet surge protector
LANRJ45POE	700529	Local area network protection

# Wireless Broadband Surge Protection

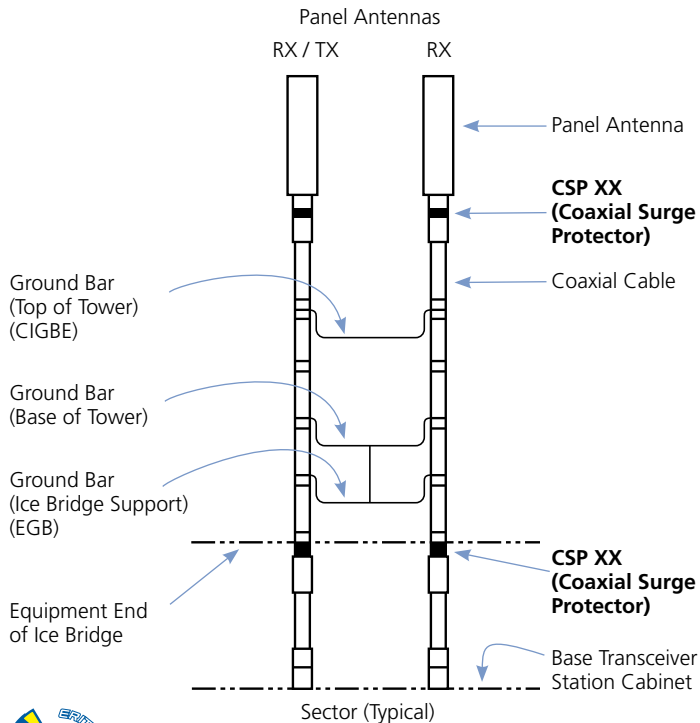
## Solution for CCTV Surveillance Cameras



- 1 TDX AC Power Surge Protection Products
- 2 CCTV12 Video Signal Surge Arrester
- 3 DEPRS42299D Data Equipment Protector
- 4 DSF6A30V (24 VAC) DIN LINE Surge Filter  
DSD1201S12 (12 VDC) DIN LINE Surge Diverter

#	Part Number	European Article Number	Description
1	TDX100CXXX	N/A	AC power surge arrester
2	CCTV12	703000	Community antenna and closed-circuit television protector
3	DEPRS42299D	DEPRS42299D	Data equipment protector
4	DSF6A30V	702090	24 VAC DIN LINE surge filter
4	DSD1201S12	702670	12 VDC DIN LINE surge diverter
	CABTIESS	701420	520 mm stainless steel cable tie for pole mounting
	MWESS	MWESS	Outdoor surveillance system surge protector

## Solution for Coaxial-Fed Base Station

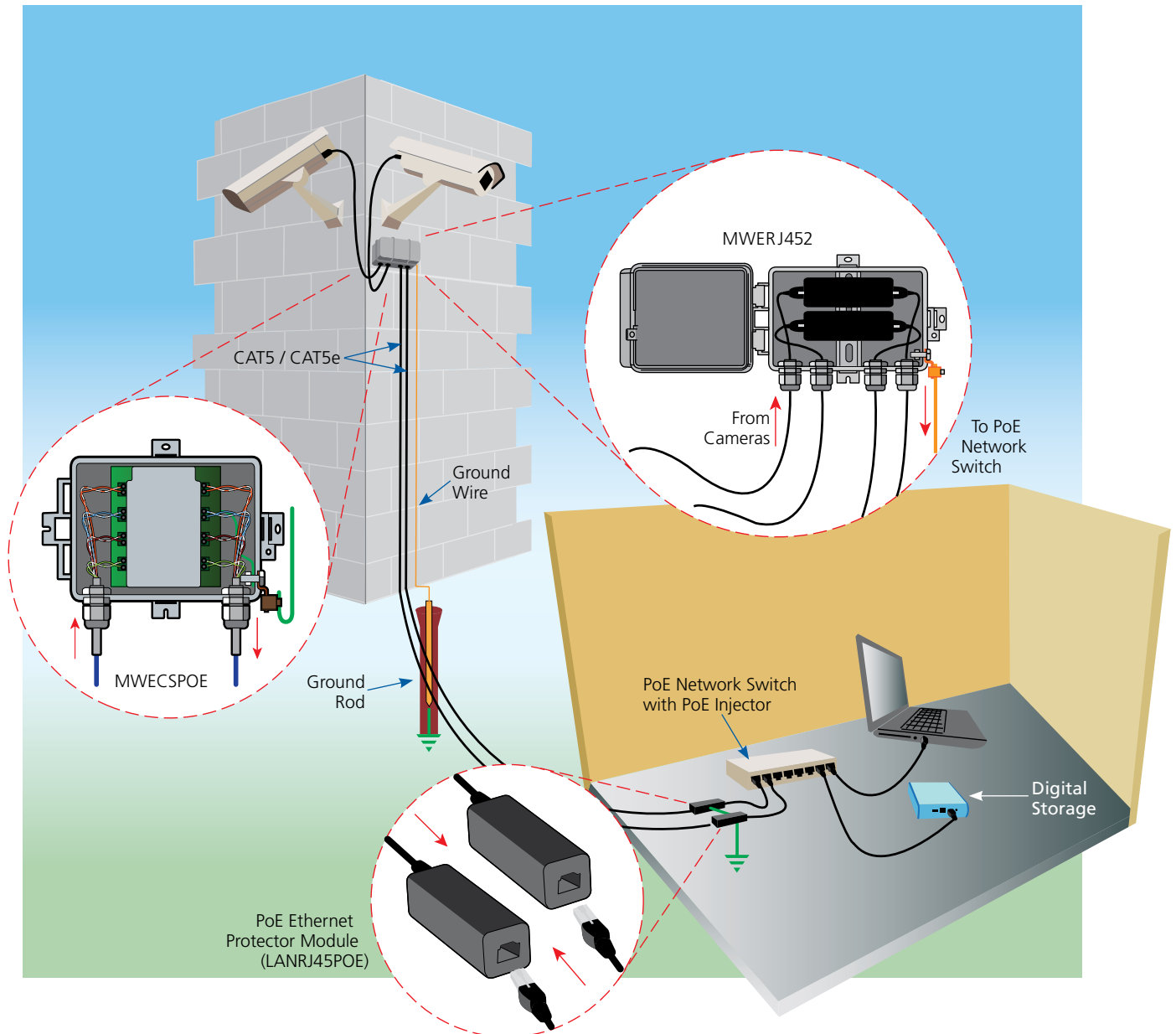


Global Part Number	Description
CSP1NMF90	N-Type M to F, 72-108 V
CSP1NMF600	N-Type M to F, 480-720 V
CSP1BNC90	BNC-Type M to F, 72-108 V
CSP1BNC600	BNC-Type M to F, 480-720 V
CSP1NB90	Bulkhead N-Type F to F, 72-108 V
CSP1NB600	Bulkhead N-Type F to F, 480-720 V



# Wireless Broadband Surge Protection

## Solution for IP Network Surveillance Cameras



Part Number	European Article Number	Description
CABTISS	701420	520 mm stainless steel cable tie for pole mounting
MWECSPOE	MWECSPOE	Outdoor Power over Ethernet surge protector
LANRJ45POE	700529	Local area network protection
MWERJ452	MWERJ452	Outdoor local area network protection

### WARNING

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# Wireless Broadband Surge Protection



## MWECSPOE

- Ideal for 10/100BaseT Cat5e protection
- Weatherproof enclosure
- High-speed, high-energy capability
- Protects all four pairs
- Connected in a pass-through configuration
- Designed to minimize insertion loss and crosstalk
- Up to 25 kA 8/20  $\mu$ s protection
- UL® 497B
- Suitable for up to 213 ft (65 m) of unshielded Cat5e cable



## CSP

- Designed to provide economical protection from transients on coaxial antenna RF feeder cables
- Carefully designed and machined with precision allowing for optimum impedance matching
- Wide operating frequency spectrum
- High impulse current rating
- Mounting bracket and ground lead included
- CE Approved



## DSD1402BR24/48

- Designed for the protection of 24/48 VDC power supplies feeding base stations, subscriber units, and aircraft warning lights
- Weatherproof enclosure
- High surge rating ( $I_{max}$  50 kA 8/20  $\mu$ s)
- Differential and common mode protection
- Status indication with change-over contact (Form C Dry)
- Overcurrent and thermal overload protection



## MWESS

- Surge protection for coaxial-fed video surveillance cameras with PTZ capability
- Weatherproof enclosure
- Designed to protect power, video, and data lines
- Up to 25 kA surge rating (8/20  $\mu$ s)
- Low clamping voltage
- UL 497B



## MWERJ451/2

- Designed for the protection of up to two PoE-powered devices, such as surveillance cameras, subscriber units, traffic lights, etc.
- Weatherproof enclosure
- In-line installation
- High-speed, high-energy capability
- Low shunt capacitance to reduce signal loss
- Adaptability to most industry applications



## TDX

- Transient Discriminating (TD) Technology provides increased service life
- Modular design allows individual modes to be field replaceable, built-in disconnect and fusing eliminates need for external fusing
- Built-in safety features include TD Technology, thermal protection and short circuit current cartridge fusing
- Compact NEMA-4 enclosure design can be flush mounted or installed in a small space
- Status indication flag per mode, voltage presence LEDs, audible alarm and voltage-free contacts providing remote status monitoring
- Up to 200 kA 8/20  $\mu$ s maximum surge rating provides protection suitable for smaller main-distribution panels and an extended operational life
- Available in various operating voltages to suit most common power distribution systems
- CE, UL 1449 Edition 3 Listed



## MWE – Enclosure

- Integral mounting base for easy installation
- Stainless steel hardware for long life and corrosion resistance
- Accessible for connection and inspection
- Polymeric base and housing is impact resistant, UV-stabilized, 94V-0 Flame Class Rating and meets UL 497B rain test
- Grounding lug mounting option
- Quick-release latch with provisions for a small lock
- Slots for straps (Part Number CABTISS) allowing mounting on both vertical and horizontal poles
- #10 Mounting hardware & 2 cord grips strain reliefs (accepting cable diameter 0.44"/ 11.2 mm) included
- Dimensions (LxWxH) 9.1" (231 mm) x 5.8" (147 mm) x 3.5" (89 mm)

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