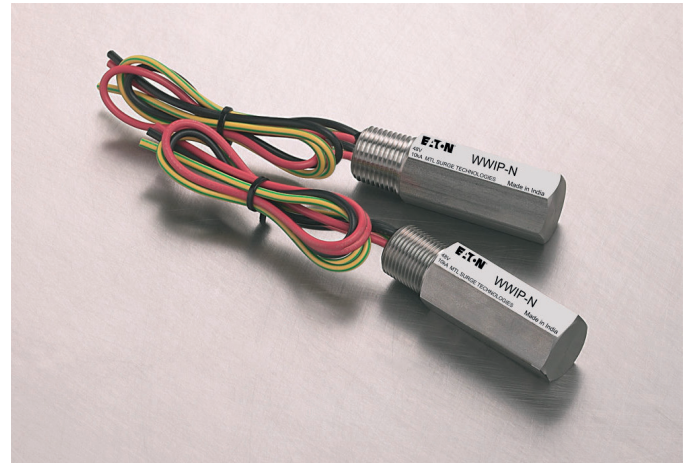


## MTL WWIP-N range

### Transmitter protection for water/wastewater industries

- **Corrosion resistant water/wastewater field instrument protection**
- **Protects 2 wire instruments**
- **Easy and direct mounting — screws into spare conduit entry**
- **Parallel connection avoids introduction of any resistance into loop**
- **High Performance low cost protection**
- **10 year product warranty**



**The WWIP-N range of surge protection** devices uniquely provide a level of protection for 2 wire field-mounted instruments that is far in excess of the optional transient protection facilities available from the transmitter manufacturers- without involving any additional wiring, conduit modifications or other expensive extras.

**The WWIP-N** range consists of high-power, solid-state electronics and a gas-filled discharge tube (GDT) capable of diverting 10kA impulses. Specially designed for the water/wastewater industry with the whole unit encased in a corrosion resistant ANSI 316 stainless steel housing. The units are threaded for the common conduit entries used on field instruments. The WWIP-N is available for 1/2" NPT threaded entries.

**Installation can easily be carried out retrospectively** to existing installations. The WWIP-N is screwed into any unused conduit entry on the field instrument case and flying leads are connected to the terminal block (+ve, -ve) and the internal earth stud. The WWIP-Ns operate without in any way affecting normal operation- passing ac or dc signals without attenuation while diverting surge currents safely to earth and clamping output voltages to specific levels.

**The all-important earthing connection** is made to the local casing of the transmitter with no separate earth connection or ground stake at the transmitter being needed. In operation, the WWIP-N makes sure that the transmitter electronics are never exposed to damaging transients between lines or between lines and casing/earth. Any surge current appearing as a series-mode or common-mode transient is converted into a common-mode voltage- whereupon the transmitter electronics are temporarily raised to some higher voltage level before 'floating' down automatically (and without damage) to resume normal operation.

# MTL WWIP-N range

October 2015

## SPECIFICATION

### Maximum surge current

10kA peak current (8/20 $\mu$ s waveform)

### Leakage current

Less than 10 $\mu$ A at max. working voltage

### Working voltage

24-48VDC

### Bandwidth

1MHz

### Resistance

No resistance introduced into loop

### Ambient temperature limits

-40°C to +85°C

(-40°F to +185°F) (working)

-40°C to +85°C

(-40°F to +185°F) (storage)

### Humidity

5% to 95% RH (non-condensing)

### Electrical connections

3 flying leads (line1, line 2 & earth)

Wire size: 32/0.2 (1.0mm<sup>2</sup>, 18 AWG)

Lead length: 250mm (minimum)

### Casing

ANSI 316 stainless steel hexagonal bar stock, male thread

### Threads

1/2" NPT

### Weight

175g (6.2oz)

### Dimensions

See figure 1

Model		WWIP-N
Nominal Voltage	$U_n$	24-48V
Rated Voltage (MCOV)	$U_c$	58V
Nominal Current	$I_n$	N/A
Nominal Discharge Current (8/20 $\mu$ s)	$i_{sn}$	3kA
Max. Discharge Current (8/20 $\mu$ s)	$I_{max}$	10kA
Lightning Impulse Current (10/350 $\mu$ s)	$I_{imp}$	1.2kA
Residual Voltage @ $i_{sn}$	$U_p$	95V, L-G 500V
Voltage Protection Level @ 1kV/ $\mu$ s	$U_p$	<76V
Bandwidth	$f_G$	1MHz
Capacitance	C	100pF
Series Resistance	R	N/A
Operation Temperature Range		-40°C to +85°C
Category Tested		A2, B2, C1, C2, C3, D1
Overstressed Fault Mode $i_n=3kA$		12kA
Impulse Durability (8/20 $\mu$ s)		10kA
Degree of Protection		IP66
AC Durability		1Arms, 5T
Service Conditions		80kPa-160kPa, 5%-95% RH

## TO ORDER SPECIFY: WWIP-N

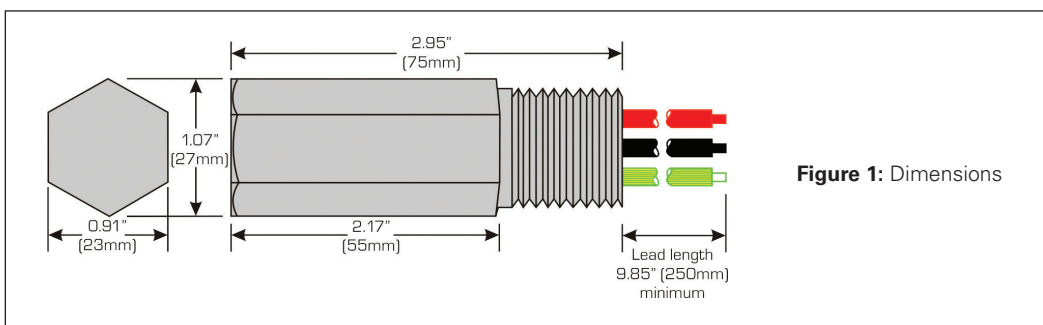


Figure 1: Dimensions



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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.