

# MTL5032 PULSE ISOLATOR



The MTL5032 isolates pulses from a switch, proximity detector, current pulse transmitter or voltage pulse transmitter located in a hazardous area.

## SPECIFICATION

See also common specification

### Number of channels

One

### Location of switch

Zone 0, IIC, T6 hazardous area  
Div. 1, Group A hazardous location

### Location of proximity detector or transmitter

Zone 0, IIC, T4–6 hazardous area if suitably certified  
Div. 1, Group A hazardous location

### Safe-area output

Maximum off-state values:  $V = 35V$ ,  $I = 10\mu A$   
Maximum on-state current: 50mA  
Voltage drop:  $[1 + (0.1 \times \text{current in mA})] V$   
Output off if supply fails

### Hazardous-area input

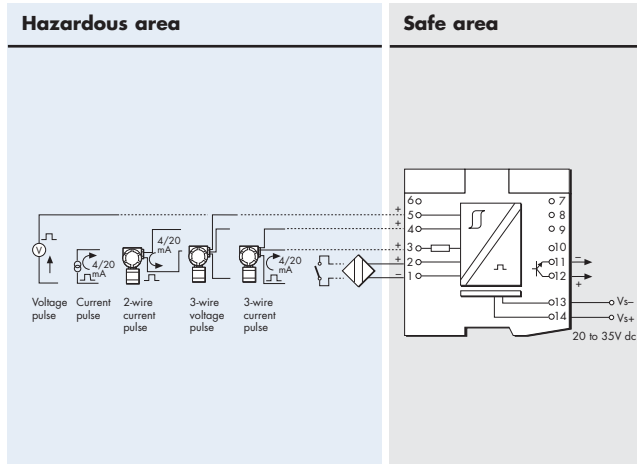
Switch: output-on (off) if switch closed (open)  
Proximity detector: meets NAMUR and DIN 19234 standards  
Pulse (I): Supply 16.5V dc at 20mA,  
Short-circuit current 24mA  
Output on (off) >8.9mA (<6.8mA)  
Switching hysteresis: 0.5mA typical  
Pulse (V): Input impedance >10k $\Omega$   
Switching point voltage ( $V_{sp}$ ): 3, 6 or 12V (selectable)  
Output on (off) if input  $>1.2 \times V_{sp}$  (< $0.8 \times V_{sp}$ )  
Switching hysteresis:  $0.11 \times V_{sp}$  typical

### Pulse width

High: 10 $\mu s$  minimum  
Low: 10 $\mu s$  minimum

### Frequency range

0 to 50kHz



Terminal	Function
1	Common -ve
2	Proximity detector +ve
3	Current +ve
4	Transmitter +ve
5	Voltage +ve
11	Output -ve
12	Output +ve
13	Supply -ve
14	Supply +ve

### LED indicators

Green: power indication  
Yellow: status

### Supply voltage

20 to 35V dc

### Maximum current consumption

65mA at 24V dc  
70mA at 20V dc  
55mA at 35V dc

### Maximum power dissipation within unit

1.35W at 24V  
1.75W at 35V

### Safety description

#### Terminals 2 to 1

10.5V, 800 $\Omega$ , 14mA

#### Terminals 5 to 4 and 1

28V, 94mA, 0.65W

#### Terminals 4 to 3 and 1

28V, 300 $\Omega$ , 93mA

#### Terminal 3 to 1

Non-energy-storing apparatus  $\leq 1.2V$ ,  $\leq 0.1A$ ,  $\leq 20\mu J$  and  $\leq 25mW$ ;  
can be connected without further certification into any IS loop  
with an open-circuit voltage <28V



EUROPE (EMEA)  
AMERICAS  
ASIA PACIFIC  
E-mail: enquiry@mtl-inst.com

Tel: +44 (0)1582 723633  
Tel: +1 281 571 8065  
Tel: +65 6 487 7887

Fax: +44 (0)1582 422283  
Fax: +1 281 571 8069  
Fax: +65 6 487 7997

Web site: www.mtl-inst.com