

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

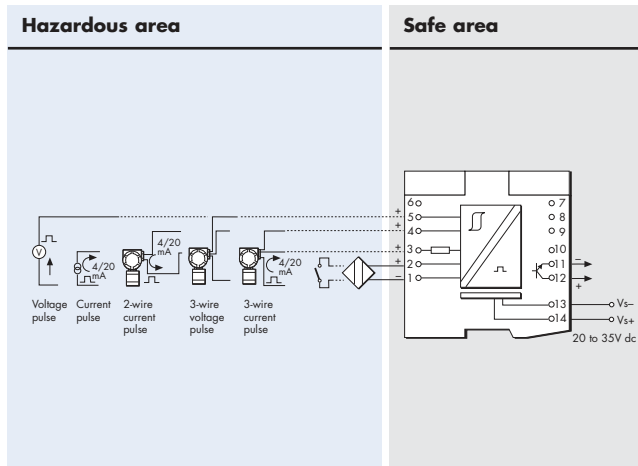
Switch: output-on (off) if switch closed (open)
Proximity detector: meets NAMUR and DIN 19234 standards
Pulse (I): Supply 16.5V dc at 20mA,
Short-circuit current 24mA
Output on (off) >8.9mA (<6.8mA)
Switching hysteresis: 0.5mA typical
Pulse (V): Input impedance >10k Ω
Switching point voltage (V_{sp}): 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 μs minimum
Low: 10 μs 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 Ω , 14mA

Terminals 5 to 4 and 1

28V, 94mA, 0.65W

Terminals 4 to 3 and 1

28V, 300 Ω , 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



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