

MTL4533 – MTL5533

VIBRATION TRANSDUCER INTERFACE

2-channel

The MTLx533 repeats signals from vibration sensors in a hazardous area, providing outputs for a monitoring system in the safe area. The interface is compatible with 3-wire eddy-current probes and accelerometers or 2-wire current sensors, the selection is made by switches on the side of the module.

SPECIFICATION

See also common specification

Number of channels

Two

Sensor type

2- or 3-wire vibration transducer

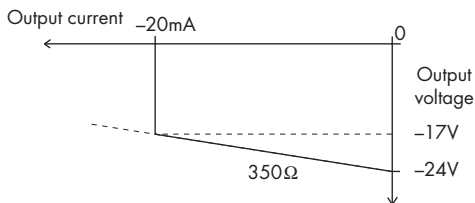
Location of signal source

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

Hazardous-area input

Input impedance
(terminals 2 & 3, 5 & 6): 10k Ω

Transducer supply voltage, 3-wire (terminals 3 & 1 and 6 & 4)



Transducer supply current, 2-wire

3.3mA (nom.) for 2-wire sensors, user selectable by switch

Signal range

Minimum -20V, maximum -0.5V

DC transfer accuracy at 20°C

< \pm 50mV

AC transfer accuracy at 20°C

0Hz to 1kHz: \pm 1%
1kHz to 10kHz: -5% to +1%
10kHz to 20kHz: -10% to +1%

Temperature coefficient

\pm 50ppm/ $^{\circ}$ C (10 to 65 $^{\circ}$ C)
 \pm 100ppm/ $^{\circ}$ C (-20 to 10 $^{\circ}$ C)

Voltage bandwidth

-3dB at 47kHz (typical)

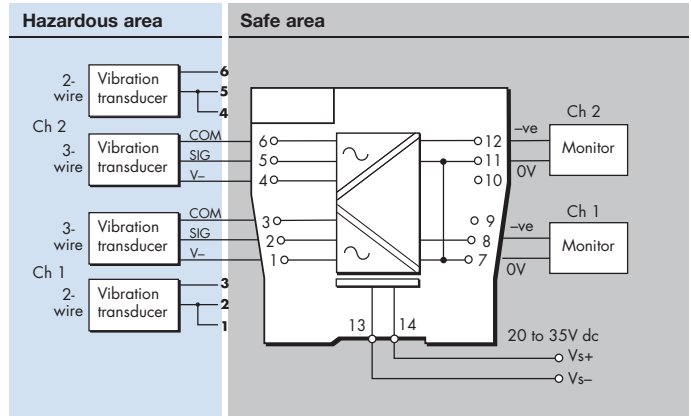
Phase response

<14 μ s, equivalent to:
-1 $^{\circ}$ at 200Hz
-3 $^{\circ}$ at 600Hz
-5 $^{\circ}$ at 1kHz
-50 $^{\circ}$ at 10kHz
-100 $^{\circ}$ at 20kHz

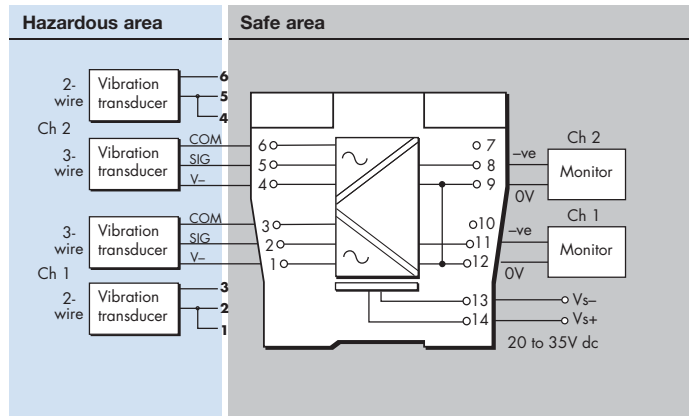
Safe-area output impedance

<20 Ω

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LED indicator

Green: power indication

Supply voltage

20 to 35V dc

Maximum current consumption (10mA transducer load/ch)

130mA at 24V

Maximum power dissipation within unit

2.7W *

Safety description

Terminals 3 to 1 and 6 to 4

$U_o=26.6V$ $I_o=94mA$ $P_o=0.66W$ $U_m=253V$ rms or dc

Terminals 3 to 2 and 6 to 5

Non-energy-storing apparatus $\leq 1.5V$, $\leq 0.1A$ and $\leq 25mW$

* Refer to installation manual for recommendations on unit spacing.

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.



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