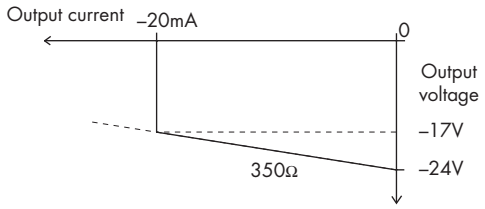
MTL5533
VIBRATION TRANSDUCER INTERFACE
2-channel

The MTL5533 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): 10kΩ
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
<±50mV
AC transfer accuracy at 20°C
0Hz to 1kHz: ±1%
1kHz to 10kHz: –5% to +1%
10kHz to 20kHz: –10% to +1%
Temperature coefficient
±50ppm/°C (10 to 65°C)
±100ppm/°C (–20 to 10°C)
Voltage bandwidth
–3dB at 47kHz (typical)
Phase response
<14µs, equivalent to:
–1° at 200Hz
–3° at 600Hz
–5° at 1kHz
–50° at 10kHz
–100° at 20kHz
Safe-area output impedance
<20Ω

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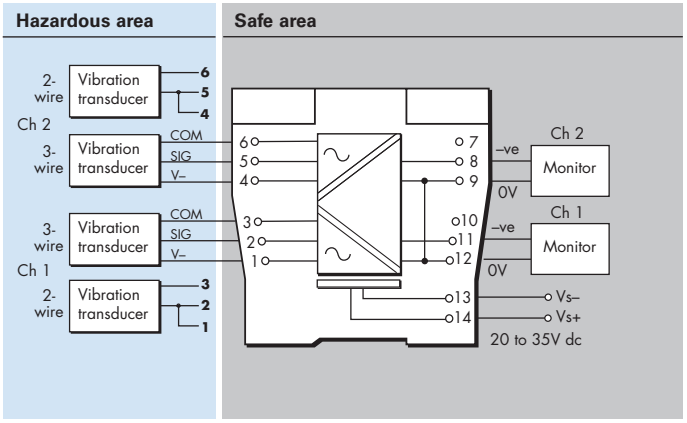

LED indicator
Green: power indication
Supply voltage
20 to 35V dc
Maximum current consumption (10mA transducer load/ch)
130mA at 24V
Maximum power dissipation within unit
2.7W
Safety description
Terminals 3 to 1 and 6 to 4
U_o=26.6V I_o=94mA P_o=0.66W U_m = 253V rms or dc
Terminals 3 to 2 and 6 to 5
Non-energy-storing apparatus ≤1.5V, ≤0.1A and ≤25mW

Note -
Refer to the Instruction Manual for recommendations on mounting of these modules.

A minimum spacing of 10mm must be applied between these and any other modules on the DIN-rail.

Maximum ambient temperature with this spacing is 50°C.

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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Publication No.
EPSx533 Rev6 010916

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