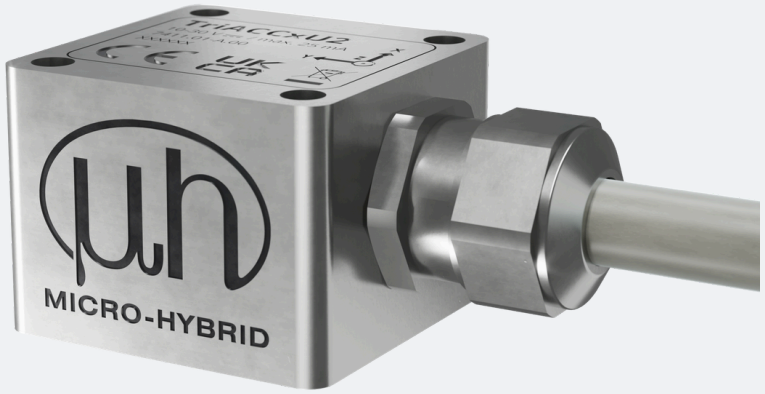
PRODUCT DATA SHEET

TriACCx datasheet



Voltage

Current

3-axis acceleration sensor with voltage or current output and ± 2 up to 40 g measurement range.

The TriACCx is a compact, robust, and versatile triaxial MEMS accelerometer for industrial and railway applications. Its micromechanical spring-mass system continuously measures acceleration along three axes and provides three output channels. Thanks to DIN EN 50155 type testing, it operates reliably under harsh railway conditions.

Key performance features include wide bandwidth, low noise, and high temperature stability. The sensor is housed in a durable stainless steel enclosure (IP67), making it suitable for demanding environments.

Available ranges: ±2 g, ±4 g, ±8 g, ±10 g, ±20 g, ±40 g.

Applications

- Monitoring: 3-axis vibration/shock on axles, bogies, car bodies, etc.
- Industrial machines: vibration/impact diagnostics, easy PLC integration (4-20 mA).
- Harsh environments: IP67 cable version for wet/dirty/outdoor use.

Product benefits

- True 3-axis measurement for complete vibration/impact insight in one sensor
- Railway-ready robustness via DIN EN 50155 type testing
- Integration-friendly electronics: choice of voltage or current output

Features

- Triaxial MEMS acceleration measurement (3 axes)
- DIN EN 50155 type-tested for railway applications
- 4–20 mA current output (variant-specific; alternative: voltage output in the product group)

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Technical data

Parameter		Unit
Sensitive axis	3 (x, y, z)	
Measurement range	± 2 / ± 4 / ± 8 / ± 10 / ± 20 / ± 40	g
Noise	22.5 at ± 2 g 75 at ± 10 g	µg/√Hz
Output options Voltage output Current output	 0.5 ... 2.5 4 ... 20	 V mA
Nonlinearity	0.1	% FS
Sensitivity	mV/g mA/g 500 4 at ± 2 g 250 2 at ± 4 g 120 1 at ± 8 g 100 0.8 at ± 10 g 50 0.4 at ± 20 g 25 0.2 at ± 40 g	
Sensitivity vs. temperature	0.01	%/K
0g offset	1.5 12	V mA
0g offset vs. temperature	± 0.15 mg/K at ± 2 g ± 0.75 mg/K at ± 10 g	
Supply voltage	9 ... 30	VDC
Power consumption	< 1	W
Low-pass cutoff frequency (-3d B)	Customizable up to 1000 Hz	
Interface	Cable, 5 x 0.14 mm², shielded; length 3.0 m	

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ACCELERATION SENSORS

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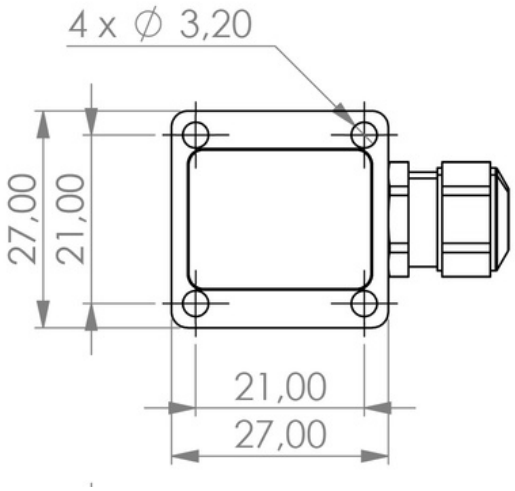
Environmental data

Parameter		Unit
Shock resistant - unpowered	5000	g
Operating temperature	-40 ... +85	°C
Protection class	IP67	
Housing material	Stainless steel	
Weight (without cable)	80	grams

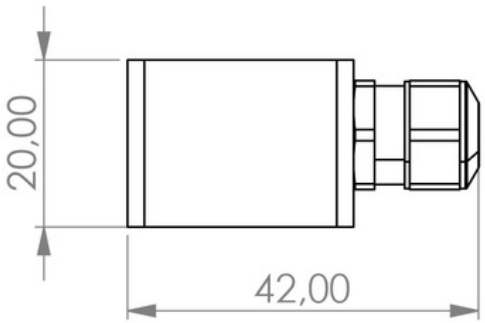
Mechanical drawings

All geometrical dimensions in mm

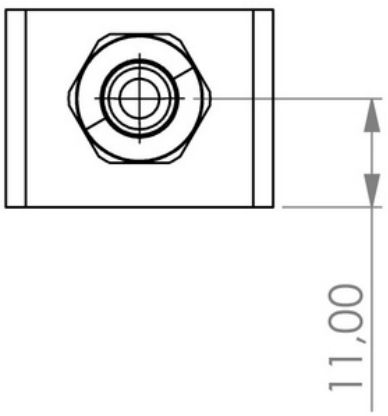
Top



Side



Front



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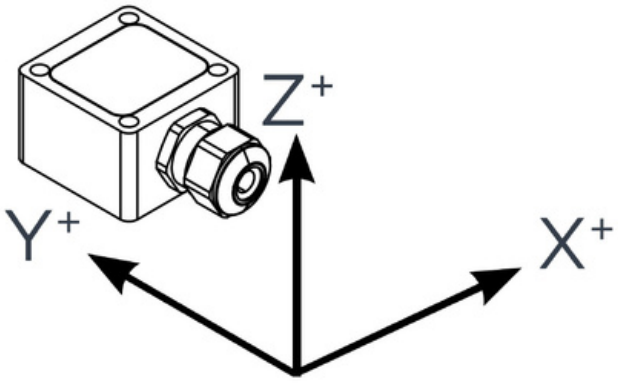
Cable assignment and measurement orientation

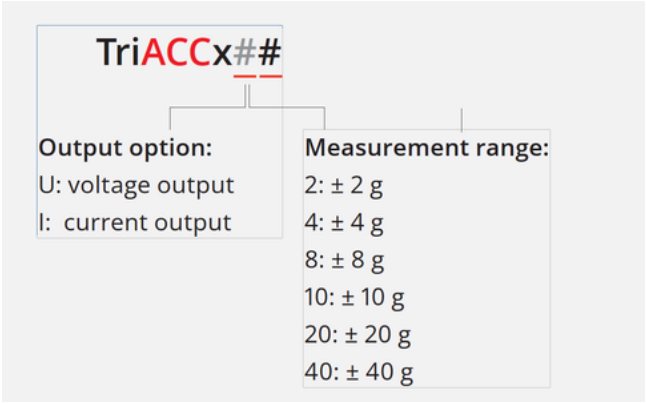
Wire	Assignment
brown	VDC supply
white	Supply ground
yellow	Signal output x-axis
grey	Signal output y-axis
green	Signal ground z-axis



Product line

Article Number	Product Name
7411.01	TriACCxU2
7411.02	TriACCxU4
7411.03	TriACCxU8
7411.04	TriACCxU10
7411.05	TriACCxU20
7411.06	TriACCxU40
7411.07	TriACCxI2
7411.08	TriACCxI4
7411.09	TriACCxI8
7411.10	TriACCxI10
7411.11	TriACCxI20
7411.12	TriACCxI40

Product key



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