PRODUCT DATA SHEET

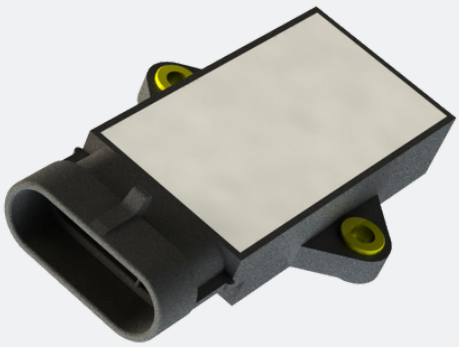
ACC530x
Beschleunigungssensor

RS485

Current

Voltage

Art. no. 7210.01-A



The ACC530x product line is a robust family of single-axis and dual-axis acceleration sensors for reliable static and dynamic acceleration measurement in industrial and mobile applications.

The ACC530x series combines compact design, high reliability, and cost-effective performance for acceleration measurement in demanding environments. Designed for both static and dynamic applications, the sensors are available in single-axis and dual-axis configurations, making them suitable for a wide range of motion and vibration monitoring tasks

With a space-saving plastic housing, high shock resistance, and simple integration via an AMP connector, the ACC530x product line is ideally suited for high-volume series production and mobile machinery. Depending on the configuration, sensors are available with either voltage or current output, allowing easy integration into a variety of control and monitoring systems.

Applications

- Acceleration and vibration monitoring in mobile machinery
- Motion analysis in industrial automation systems
- Machine condition and health monitoring
- Detection of critical acceleration events
- OEM and high-volume series applications

Product benefits

- Suitable for both static and dynamic acceleration measurement
- Compact and robust plastic housing for demanding environments
- High shock resistance for reliable operation
- Simple installation through AMP connector
- Excellent price-performance ratio for series applications

Features

- 1-axis or 2-axis acceleration measurement
- Designed for static and dynamic applications
- Analog output options: voltage or current
- Compact housing for space-constrained installations
- High mechanical robustness and shock resistance

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Technical data

Parameter	ACC5301-2	ACC5302-2	Unit
Number of axes	1	2	
Measuring range	±2		g
Resolution	100		µg/√Hz
Sensitivity	4 mA/g bzw. 1 V/g		mA/g, V/g
Linearity	< ±1,25		% d.M.
Frequency range	0 ... 100 Hz (-3dB)		Hz (-3dB)
Temperature stability, zero point	±200		ppm / °C
Temperature stability, sensitivity	±40		ppm / °C
Temperature stability	10.8–30		VDC
Supply voltage	10.8–30		VDC
Power consumption	< 1		W
Connection	AMP Superseal 1.5 plug connector		
Mounting	Screw mounting via mounting holes (M4)		

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Environmental data

Parameter	ACC5301-2	ACC5302-2	Unit
Temperature range (storage)	-40 to +85 °C		°C
Temperature range (operating)	-40 to +85 °C		°C
Analog output	4–20 mA (max. 300 Ω) or 0.5–4.5 V (min. 1 kΩ)		
Shock	1000 g / 0.5 ms in 3 axes (half sine)		
Protection class	IP67 (mated)		
Material	Polyamide (glass-fiber reinforced)		
Weight	approx. 40		g

Special features

Special features include adjustable filters, sensorFUSION, and a low-pass filter. On request, predefined application-specific configuration files can be provided. Individual parameter sets can also be configured for series applications. Additional measurement parameters (raw values) can be output: acceleration along the x, y, and z axes with a measuring range of ±2 g, and angular velocity along the x, y, and z axes with a measuring range of ±500°/s.

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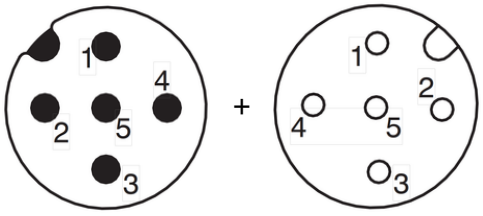
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Mechanical drawings

CAN-Bus Pinout

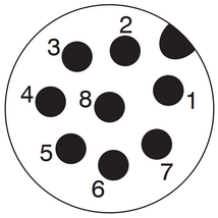


5-pin housing connector
View on pin side
A-coded

5-pin housing connector
View on socket side
A-coded

- Pin 1 - Shield (CAN_SHLD)
- Pin 2 - Supply voltage (9 ... 32 VDC) V+
- Pin 3 - GND / 0 V / V-
- Pin 4 - CAN_H bus cable CAN_H
- Pin 5 - CAN_L bus cable CAN_L

Analog Pinout

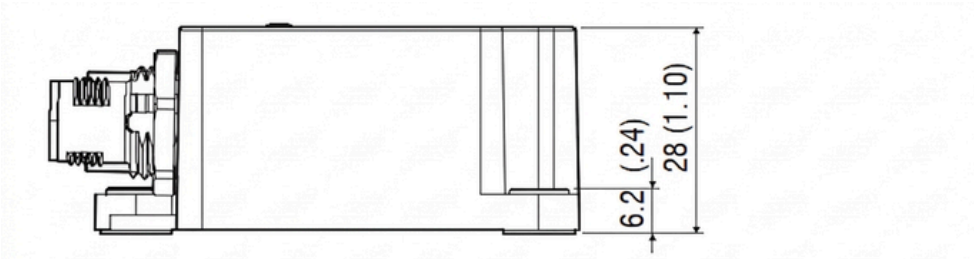


8-pin housing plug
M12 View of pin side
A-coded

- Pin 1 - X-axis inclination (4 ... 20 mA/0.5 ... 4.5 V/0 ... 10 V)
- Pin 2 - Signal GND
- Pin 3 - Y-axis inclination (4 ... 20 mA/0.5 ... 4.5 V/0 ... 10 V)
- Pin 4 - RS485 bus line (RS485+)
- Pin 5 - Teach-in (9 ... 32 VDC, ≥ 300 ms IN)
- Pin 6 - GND / 0 V / V- (V-)
- Pin 7 - RS485 bus line (RS485-)
- Pin 8 - Supply voltage 9 ... 32 VDC (V+)

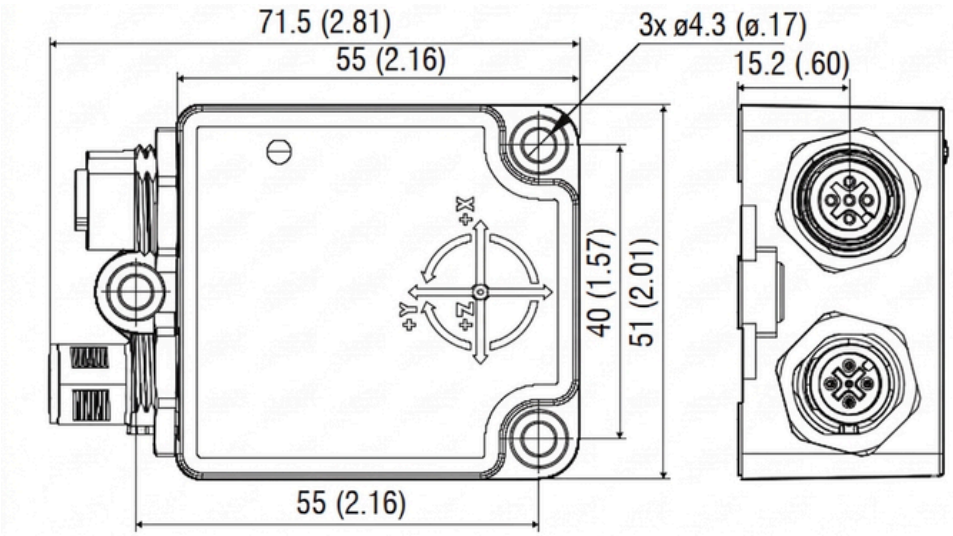
Dimensional Drawing INC5502D-360/90-P-OS

Side



Top

Side



All geometrical dimensions in mm

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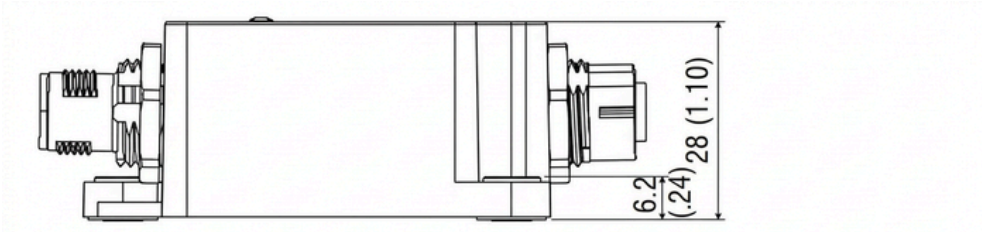
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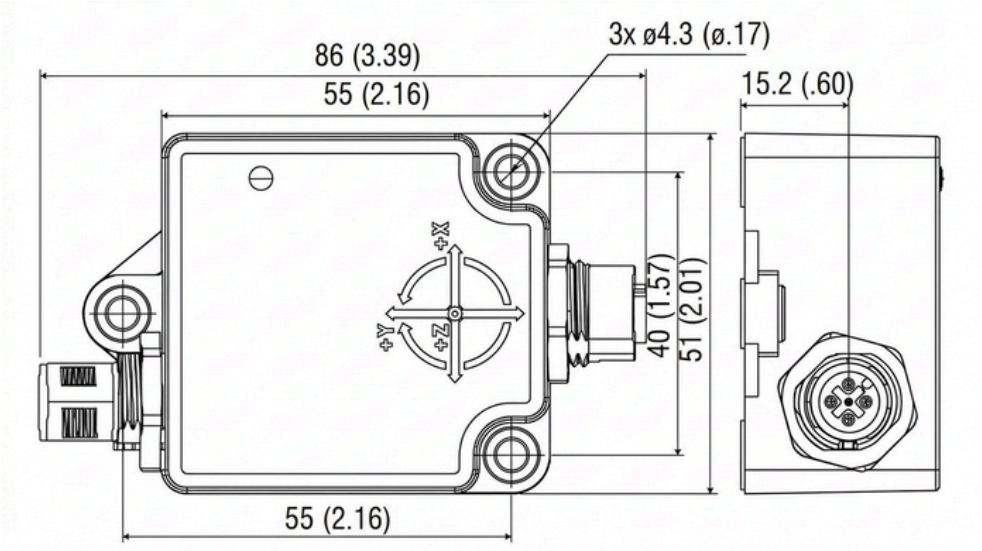
Dimensional Drawing INC5502D-360/90-P-DS-CO

Side



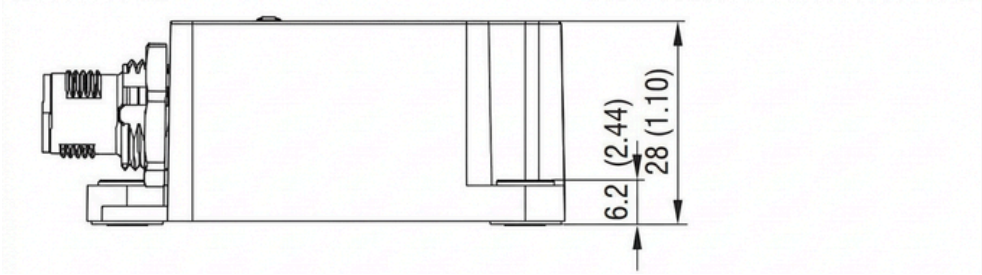
Top

Side



Dimensional Drawing INC5502D-360/90-P-S-CO

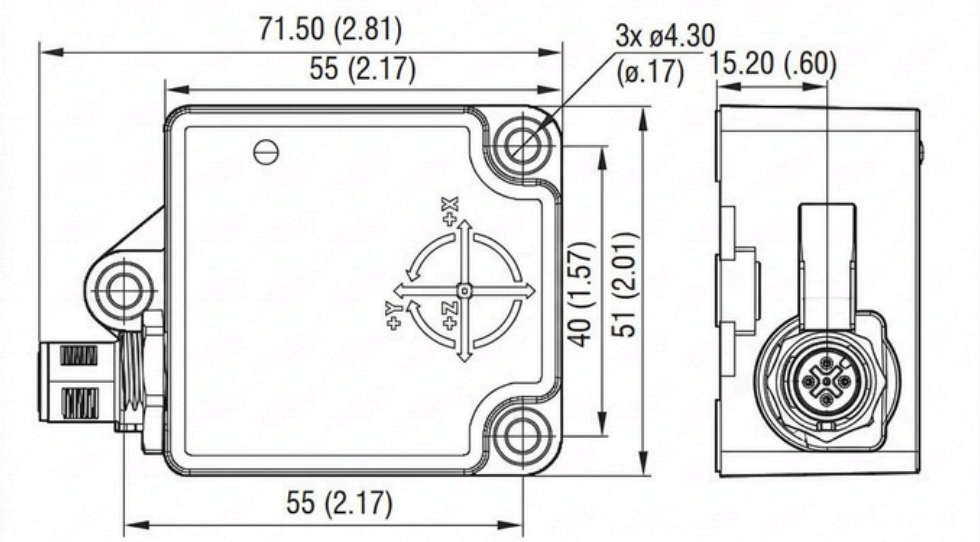
Side



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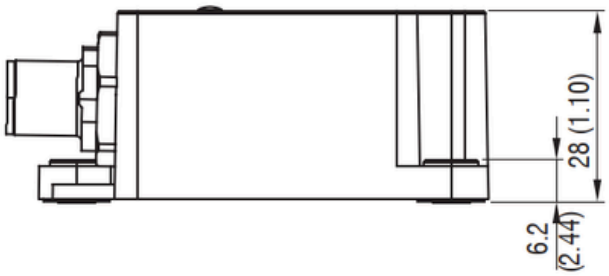
Dimensional Drawing INC5502D-360/90-P-S-CO (continued)

Top **Side**

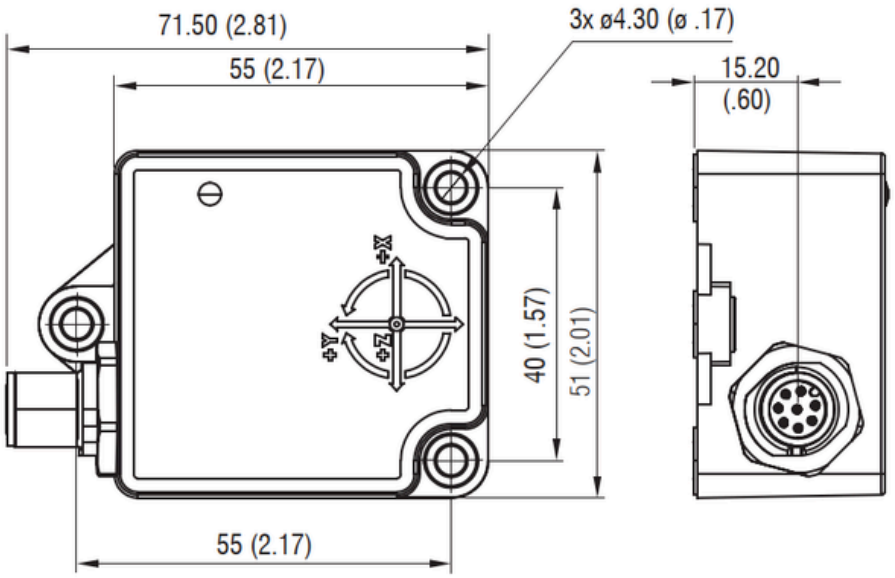


Dimensional Drawing INC5502D-360/90-P-S-U and INC5502D-360/90-P-S-I

Side



Top **Side**



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