

YUTTAH



Inclination Sensor INC8

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Inclination Sensor INC8

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The sensor INC8 is a precise inclination sensor, using MEMS technology. The INC8 provides single-axis and dual-axis inclination measurement. The sensor is available with Analog and Digital output options.

Technology

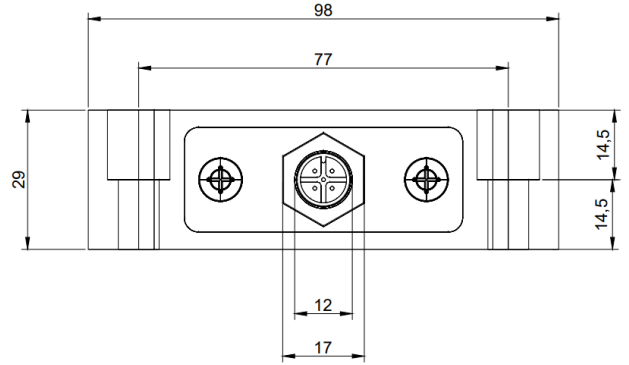
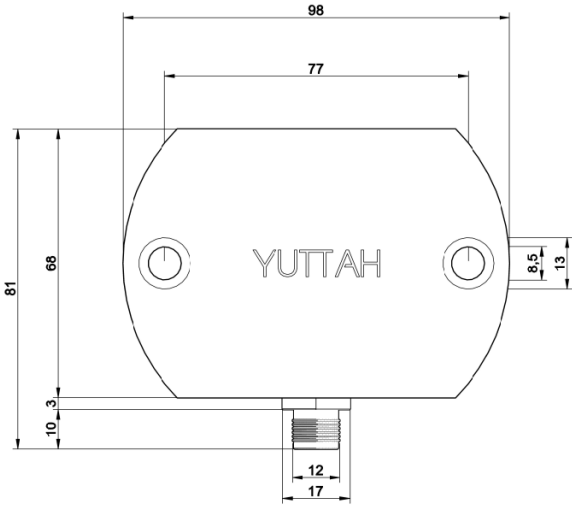
- High-precision inclination sensor
- MEMS technology
- Non-contact working principle
- Available with many measurement-range options
- Available with Analog and digital outputs
- Easy mounting and direct application



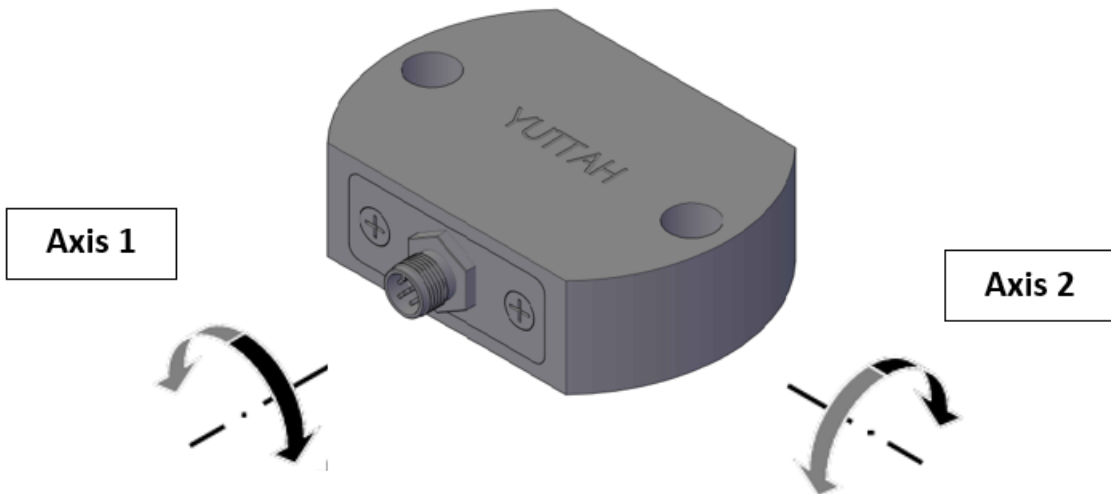
Specifications

Measurement ranges	<ul style="list-style-type: none">• Single-axis: up to +/- 180°• Dual-axis: up to +/- 90 °
Output options	<ul style="list-style-type: none">• Analog: 4 – 20 mA, 0 – 10 V, 0 – 5 V• Digital absolute: CANopen, RS485 Modbus• Other interfaces: on request
Resolution	0.1°
Linearity	±0.5°
Supply Voltage	Flexible 9 – 36 VDC or 5 VDC (+/- 5%)
Excitation Current	max. 30 mA
Protection Class	IP67 / IP69
Operating Temperature	-40 °C to +85 °C
Housing	Stainless Steel 1.4404 (AISI 316L)
Mounting	M8 bolts
Weight	approx. 850 g
Shock	DIN EN 60068-2-27:2010, 100 g/11 ms, 100 shocks
Vibration	DIN EN 60068-2-6:2008, 20 g 10 Hz-2 kHz, 10 cycles
EMC	DIN EN 61326-1:2013

Drawings



Dimensions in mm



Other axis-orientations available on request

Analog Output

Order Code

INC8 - 2 - 3 - 4 - 5

1 Model INC8

2 Supply Voltage SV1: Flexible 9 – 36 VDC
SV2: 5 VDC (+/- 5%)

3 Output A1: 4 – 20 mA
A2: 0 – 10 V
A3: 0 – 5 V

4 Axis 1: Single-axis
2: Dual-axis

5 Measurement range Single-axis: up to +/- 180°
Dual-axis: up to +/- 90° each

Example: INC8 - SV1 - A1 - 2 - 45

CANopen Output

Order Code

INC8 - 2 - 3 - 4 - 5

1

Model

INC8

2

Supply Voltage

SV1: Flexible 9 – 36 VDC
SV2: 5 VDC (+/- 5%)

3

Output

CANopen

4

Axis

1: Single-axis
2: Dual-axis

5

Measurement range

Single-axis: up to +/- 180°
Dual-axis: up to +/- 90° each

Example: INC8 - SV1 - CANopen - 2 - 90

RS485 Modbus Output

Order Code

INC8 - 2 - 3 - 4 - 5

1

Model

INC8

2

Supply Voltage

SV1: Flexible 9 – 36 VDC

SV2: 5 VDC (+/- 5%)

3

Output

RS485 Modbus

4

Axis

1: Single-axis

2: Dual-axis

5

Measurement range

Single-axis: up to +/- 180°

Dual-axis: up to +/- 90° each

Example: INC8 - SV1 - RS485/M - 2 - 90

Pinout

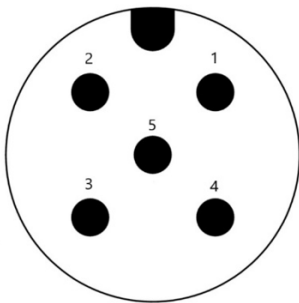
Analog Output / Single-Axis

M12 male connector, 5 pin

Connector pin no

Output signals

Wire color



- 1
- 2
- 3
- 4
- 5

- GND
- Do not connect
- +V (excitation voltage)
- Analog output axis 1
- Do not connect

- Black
-
- Red
- Orange
-

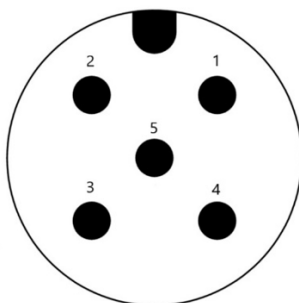
Analog Output / Dual-Axis

M12 male connector, 5 pin

Connector pin no

Output signals

Wire color



- 1
- 2
- 3
- 4
- 5

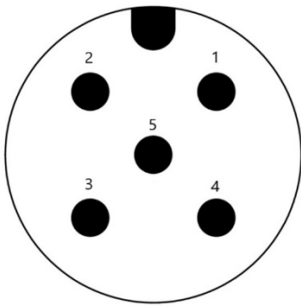
- GND
- Do not connect
- +V (excitation voltage)
- Analog output axis 1
- Analog output axis 2

- Black
-
- Red
- Orange
- Yellow

Pinout

CANopen Output

M12 male connector, 5 pin



Connector pin no

- 1
- 2
- 3
- 4
- 5

Output signals

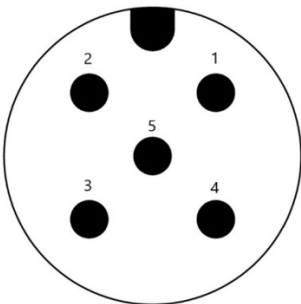
- GND
- Do not connect
- +V (excitation voltage)
- CAN-H
- CAN-L

Wire Color

- Black
-
- Red
- Orange
- Yellow

RS485 Modbus Output

M12 male connector, 5 pin



Connector pin no

- 1
- 2
- 3
- 4
- 5

Output signals

- GND
- Do not connect
- +V (excitation voltage)
- TXD / D- / B
- RXD / D+ / A

Wire Color

- Black
-
- Red
- Orange
- Yellow

Advantages

- High precision
- High robustness
- High resistance against shocks and vibrations
- High protection class
- Non-contact technology
- Wear-free and maintenance-free
- Long lifetime
- Easy mounting and direct application
- Design flexibility

Applications

- Industrial Applications
- Industrial Vehicles
- Communal Vehicles
- Material Handling
- Forest and Agriculture Machines
- Heavy duty applications
- Power and Energy
- Medical
- Other Applications

YUTTAH

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YUTTAH is a leading manufacturer of sensors, located in the United Arab Emirates. Our main product lines are: Position Sensors, Angle Sensors, Inclination Sensors, Acceleration Sensors, Vibration Sensors, Temperature Sensors, Pressure Sensors and Weight Sensors.

It is our main goal to help our customers to fulfil their needs. Our quality products are designed flexible to meet the application requirements of our customers. Our mission is to help our customers in the engineering phase to reach the wished results by providing customer customized sensor solutions. Our team is highly excited to help you in the stages of your development as well as providing a lifetime support. The combination of our know-how, quality products, flexible customized solutions, extensive lifetime support, and our experienced team is the right solution for you.

