

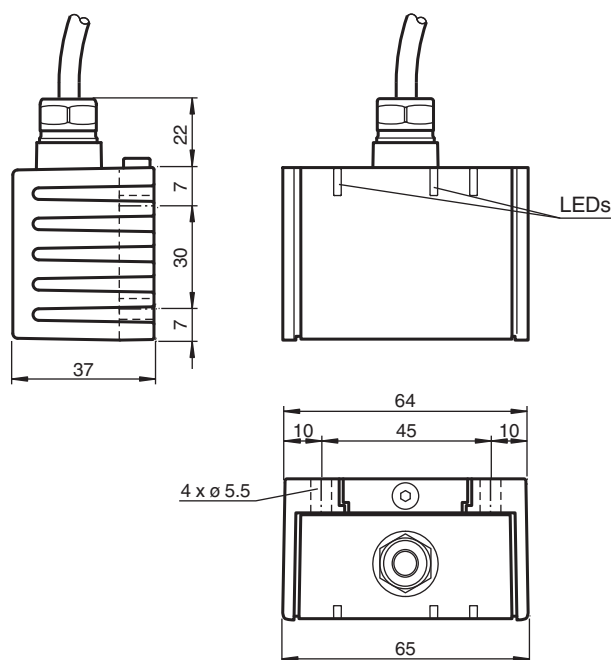


Inclination sensor INY030D-F99-2I2E2-5M

- E1-Type approval
- Measuring range $-15^{\circ} \dots +15^{\circ}$
- Analog output 4 mA ... 20 mA
- Fixed evaluation limits
- High shock resistance
- Increased noise immunity 100 V/m



Dimensions



Technical Data

General specifications

Type	Inclination sensor, 2-axis
Measurement range	$-15 \dots 15^{\circ}$
Absolute accuracy	$\leq \pm 0.2^{\circ}$
Response delay	$\leq 25 \text{ ms}$
Resolution	$\leq 0.01^{\circ}$
Repeat accuracy	$\leq \pm 0.02^{\circ}$
Temperature influence	$\leq 0.004^{\circ}/\text{K}$

Functional safety related parameters

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Refer to "General Notes Relating to Pepperl+Fuchs Product Information".

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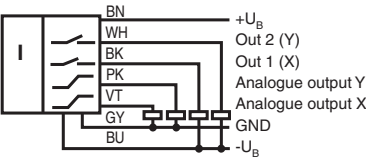
PEPPERL+FUCHS

Technical Data

MTTF _d		304 a
Mission Time (T _M)		20 a
Diagnostic Coverage (DC)		0 %
Indicators/operating means		
Operation indicator		LED, green
Switching state		2 yellow LEDs: Switching status (each output)
Electrical specifications		
Operating voltage	U _B	10 ... 30 V DC
No-load supply current	I ₀	≤ 25 mA
Time delay before availability	t _v	≤ 200 ms
Switching output		
Output type		2 switch outputs PNP, NO , reverse polarity protected , short-circuit protected
Operating current	I _L	≤ 100 mA
Voltage drop		≤ 3 V
Analog output		
Output type		2 current outputs 4 ... 20 mA (one output for each axis)
Load resistor		0 ... 200 Ω at U _B = 10 ... 18 V 0 ... 500 Ω at U _B = 18 ... 30 V
Compliance with standards and directives		
Standard conformity		
Shock and impact resistance		100 g according to DIN EN 60068-2-27
Standards		EN 60947-5-2:2007 IEC 60947-5-2:2007
Approvals and certificates		
UL approval		cULus Listed, Class 2 Power Source
E1 Type approval		10R-04
Ambient conditions		
Ambient temperature		-40 ... 85 °C (-40 ... 185 °F)
Storage temperature		-40 ... 85 °C (-40 ... 185 °F)
Mechanical specifications		
Connection type		5 m, PUR cable 7 x 0.5 mm ²
Housing material		PA
Degree of protection		IP68 / IP69K
Mass		240 g
Factory settings		
Analog output (X)		-15 ° ... 15 °
Analog output (Y)		-15 ° ... 15 °
Switching output (X)		-15 ° ... 15 °
Switching output (Y)		-15 ° ... 15 °

Connection

Standard symbol/Connection:



Mounting

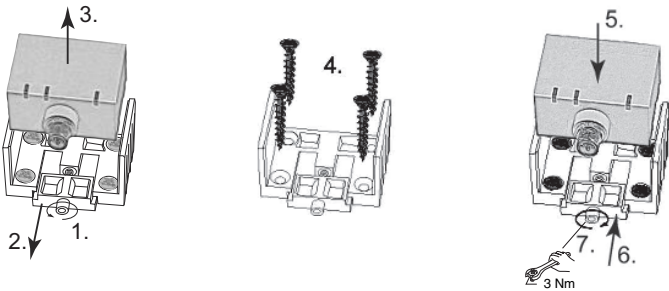
Sensor Orientation

In the default setting the zero position of the sensor is reached, when the sensor is mounted on a horizontal plane and electrical connection faces sideways.

Mounting

Mounting of the sensor

Sensors from the -F99 series consist of a sensor module and accompanying cast aluminum housing. Select a horizontal flat surface with minimum dimensions of 70 mm x 50 mm to mount the sensor. Mount the sensor as follows:



- 1. Loosen the central screw under the sensor connection.
 - 2. Slide back the clamping element until you are able to remove the sensor module from the housing.
 - 3. Remove the sensor module from the housing
 - 4. Position the housing at the required mounting location and secure using four countersunk screws. Make sure that the heads of the screws do not protrude.
 - 5. Place the sensor module in the housing.
 - 6. Slide the clamping element flush into the housing. Check that the sensor element is seated correctly.
 - 7. Finally tighten the central screw.
- The sensor is now mounted correctly.

Technical Features

EMC Properties

Interference immunity in accordance with
DIN ISO 11452-2: 100 V/m
Frequency band 20 MHz up to 2 GHz
Mains-borne interference in accordance with ISO 7637-2:

Pulse	1	2	2	3	3	4
		a	b	a	b	
Severity	I	I	I	I	I	I
level	I	I	I	I	I	I
	I	I	I	I	I	I
Failure	C	A	C	A	A	C
criterion						
EN 61000-4-2:	CD: 8 kV			AD: 15 kV		
	/					
Severity	IV			IV		
level						
EN 61000-4-3:	30 V/m (80...2500 MHz)					
Severity	IV					
level						
EN 61000-4-4:	2 kV					
Severity	III					
level						
EN 61000-4-6:	10 V (0.01...80 MHz)					
Severity	III					
level						
EN 55011:	Klasse A					

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