

Inclination sensor

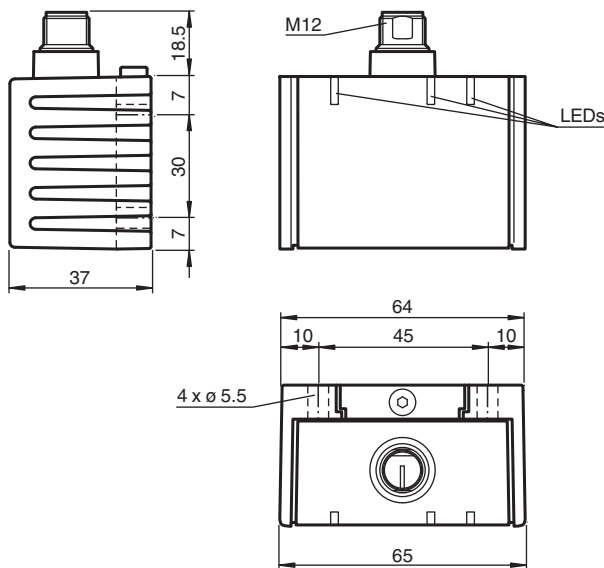
INY340D-F99-2I-V15-Y310917



- E1-Type approval
- Analog output 4 mA ... 20 mA
- High shock resistance
- Increased noise immunity 100 V/m



Dimensions



Technical Data

General specifications

Type	Inclination sensor, 2-axis
Measurement range	X-axis : 10 ... 350 ° Y-axis : 135 ... 225 °
Absolute accuracy	≤ ± 0.5 °
Response delay	≤ 25 ms
Resolution	≤ 0.1 °
Repeat accuracy	≤ ± 0.1 °
Temperature influence	≤ 0.027 °/K

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

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PEPPERL+FUCHS

Technical Data

Functional safety related parameters

MTTF _d	300 a
Mission Time (T _M)	20 a
Diagnostic Coverage (DC)	0 %

Indicators/operating means

Operation indicator	LED, green
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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

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)

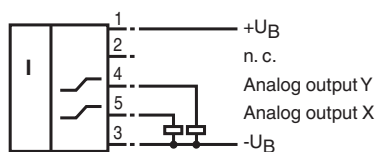
Mechanical specifications

Connection type	5-pin, M12 x 1 connector
Housing material	PA
Degree of protection	IP68 / IP69K
Mass	240 g

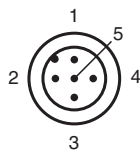
Factory settings

Analog output (X)	10 ° ... 350 °
Analog output (Y)	135 ° ... 225 °

Connection



Connection Assignment



Wire colors in accordance with EN 60947-5-2

1	BN	(brown)
2	WH	(white)
3	BU	(blue)
4	BK	(black)
5	GY	(gray)

Accessories

	V15-G-2M-PUR	Female cordset, M12, 5-pin, PUR cable
	V15-W-2M-PUR	Female cordset, M12, 5-pin, PUR cable

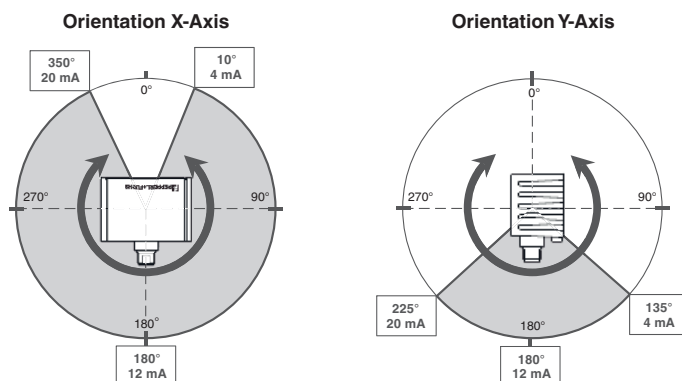
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Mounting

Sensor Orientation

In the default setting the zero position of the sensor is reached, when the electrical connection faces straight downwards.

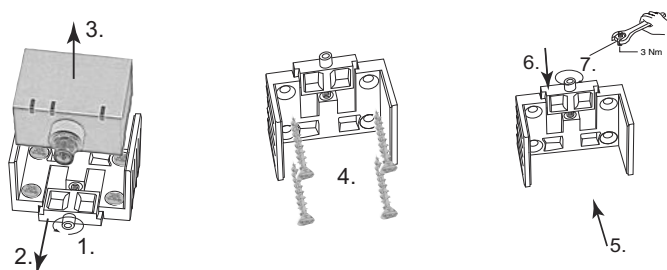
Mounting



Mounting of the sensor

Sensors from the -F99 series consist of a sensor module and accompanying cast aluminum housing. Select a vertical 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 level	I	I	I	I	I	I
	I	I	I	I	I	I
	I	I	I	I	I	I
Failure criterion	C	A	C	A	A	C
EN 61000-4-2:	CD: 8 kV			AD: 15 kV		
	/					
Severity level	IV			IV		
EN 61000-4-3:	30 V/m (80...2500 MHz)					
Severity level	IV					
EN 61000-4-4:	2 kV					
Severity level	III					
EN 61000-4-6:	10 V (0.01...80 MHz)					
Severity level	III					
EN 55011:	Klasse A					

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