

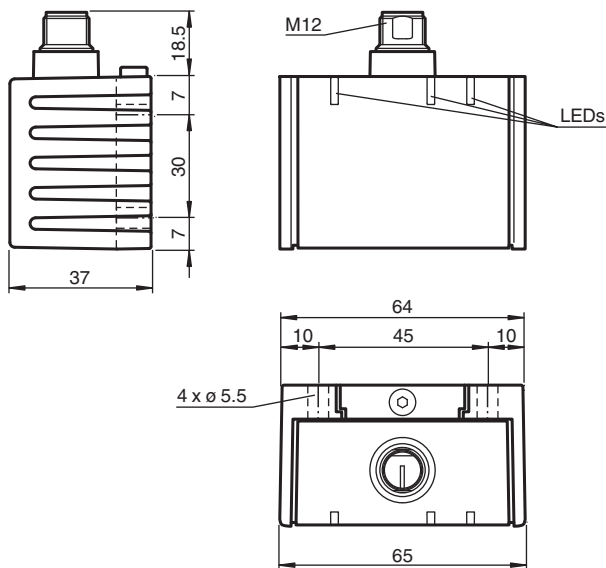
# Inclination sensor INY060D-F99-2I2E2-V17



- Analog output 4 mA ... 20 mA
- Fixed evaluation limits
- High shock resistance
- Increased noise immunity 100 V/m
- Measuring range -30° ... +30°



## Dimensions



## Technical Data

### General specifications

Type	Inclination sensor, 2-axis
Measurement range	-30 ... 30 °
Absolute accuracy	≤ ± 0.2 °
Response delay	≤ 25 ms
Resolution	≤ 0.02 °
Repeat accuracy	≤ ± 0.04 °
Temperature influence	≤ 0.004 °/K

### Functional safety related parameters

Release date: 2020-04-24 Date of issue: 2020-06-03 Filename: 241157\_eng.pdf

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

Pepperl+Fuchs Group  
www.pepperl-fuchs.com

USA: +1 330 486 0001  
fa-info@us.pepperl-fuchs.com

Germany: +49 621 776 1111  
fa-info@de.pepperl-fuchs.com

Singapore: +65 6779 9091  
fa-info@sg.pepperl-fuchs.com

**PF** PEPPERL+FUCHS

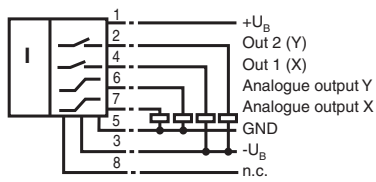
## Technical Data

MTTF <sub>d</sub>		304 a
Mission Time (T <sub>M</sub> )		20 a
Diagnostic Coverage (DC)		0 %
<b>Indicators/operating means</b>		
Operation indicator		LED, green
Switching state		2 yellow LEDs: Switching status (each output)
<b>Electrical specifications</b>		
Operating voltage	U <sub>B</sub>	10 ... 30 V DC
No-load supply current	I <sub>0</sub>	≤ 25 mA
Time delay before availability	t <sub>v</sub>	≤ 200 ms
<b>Switching output</b>		
Output type		2 switch outputs PNP, NO , reverse polarity protected , short-circuit protected
Operating current	I <sub>L</sub>	≤ 100 mA
Voltage drop		≤ 3 V
<b>Analog output</b>		
Output type		2 current outputs 4 ... 20 mA (one output for each axis)
Load resistor		0 ... 200 Ω at U <sub>B</sub> = 10 ... 18 V 0 ... 500 Ω at U <sub>B</sub> = 18 ... 30 V
<b>Compliance with standards and directives</b>		
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
<b>Approvals and certificates</b>		
UL approval		cULus Listed, Class 2 Power Source
<b>Ambient conditions</b>		
Ambient temperature		-40 ... 85 °C (-40 ... 185 °F)
Storage temperature		-40 ... 85 °C (-40 ... 185 °F)
<b>Mechanical specifications</b>		
Connection type		8-pin, M12 x 1 connector
Housing material		PA
Degree of protection		IP68 / IP69K
Mass		240 g
<b>Factory settings</b>		
Analog output (X)		-30 ° ... 30 °
Analog output (Y)		-30 ° ... 30 °
Switching output (X)		-30 ° ... 30 °
Switching output (Y)		-30 ° ... 30 °

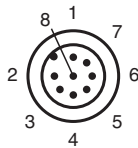
Release date: 2020-04-24 Date of issue: 2020-06-03 Filename: 241157\_eng.pdf

## Connection

Standard symbol/Connection:







## Connection Assignment



Wire colors

1	WH	(white)
2	BN	(brown)
3	GN	(green)
4	YE	(yellow)
5	GY	(gray)
6	PK	(pink)
7	BU	(blue)
8	RD	(red)

## Accessories

	<b>V17-G-2M-PUR</b>	Female cordset, M12, 8-pin, shielded, PUR cable
	<b>V17-G-5M-PUR</b>	Female cordset, M12, 8-pin, shielded, PUR cable
	<b>V17-G-10M-PUR</b>	Female cordset, M12, 8-pin, shielded, PUR cable
	<b>V17-G-10M-PVC-ABG</b>	Female cordset, M12, 8-pin, shielded, PVC cable

Release date: 2020-04-24 Date of issue: 2020-06-03 Filename: 241157\_eng.pdf

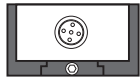
## Mounting

### Sensor Orientation

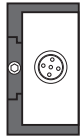
In the default setting the zero position of the sensor is reached, when the sensor is mounted on a horizontal plane and electrical connection faces sideways.

## Mounting

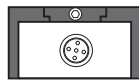
### X Orientation



X = 0°



X = 90°



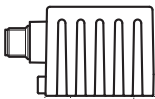
X = ±180°



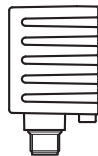
X = 270° (-)

## Mounting

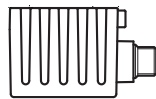
### Y Orientation



Y = 0°



Y = 90°



Y = ±180°



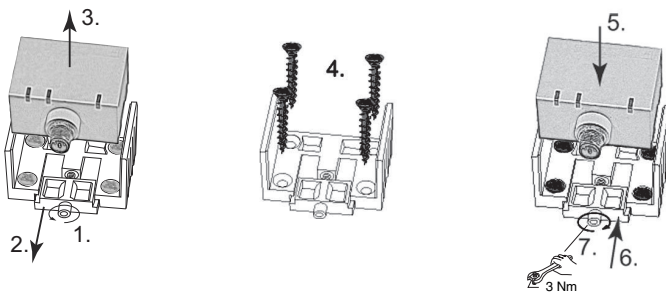
Y = 270° (-)

## 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.

Release date: 2020-04-24 Date of issue: 2020-06-03 Filename: 241157\_eng.pdf