

-ANG 130 series

Angle & Inclination sensor – Transistor and Analog Output

Ref: 4228

Rev: A

DESCRIPTION

ANG 130 series, offering both analog output and open collector output, show the inclination and angle of rotation of objects standing perpendicular to the earth, with angle measurement between 0°-360°. The user can set directly measurement ranges and limits.

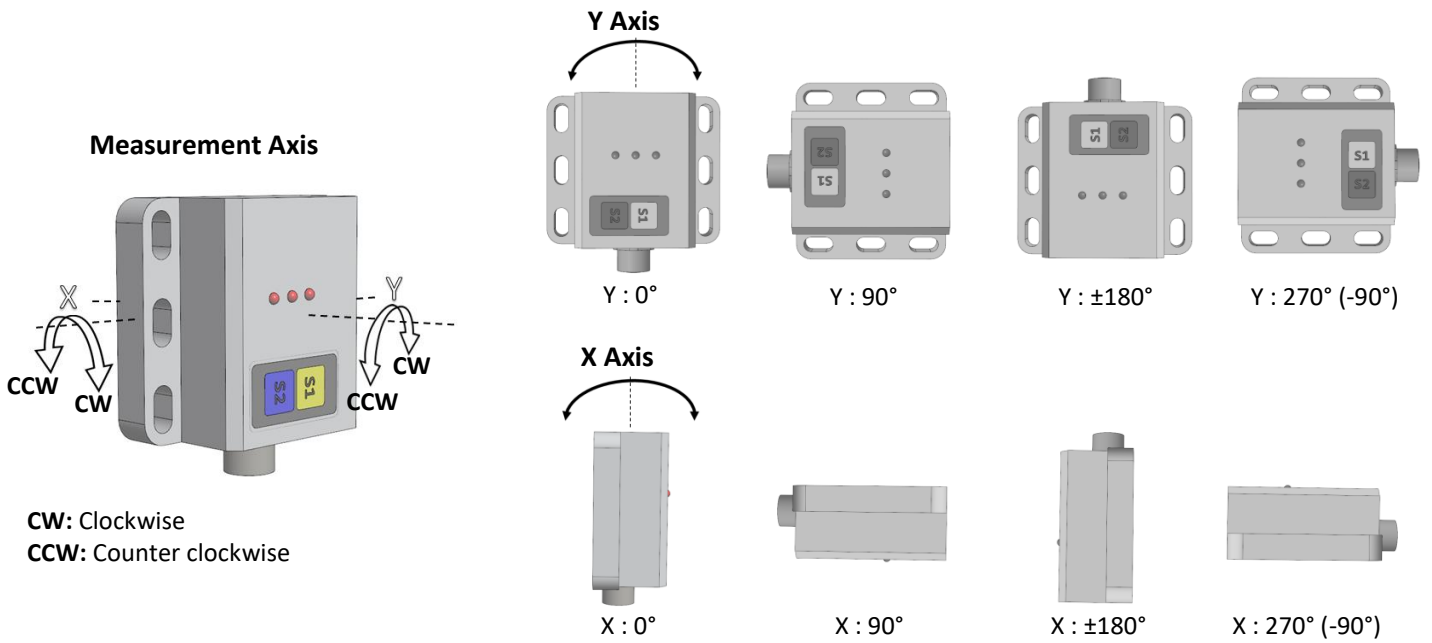
Their high precision (measurement accuracy $\pm 0.15^\circ$), compact design and durable construction (with high IP protection class) make these sensors the perfect instruments for industrial application, even in outdoor environments, such as: crane and lifting systems, construction machinery and special purpose vehicles, solar energy and photovoltaic systems, wind farms, automated guided systems...

TECHNICAL DATA

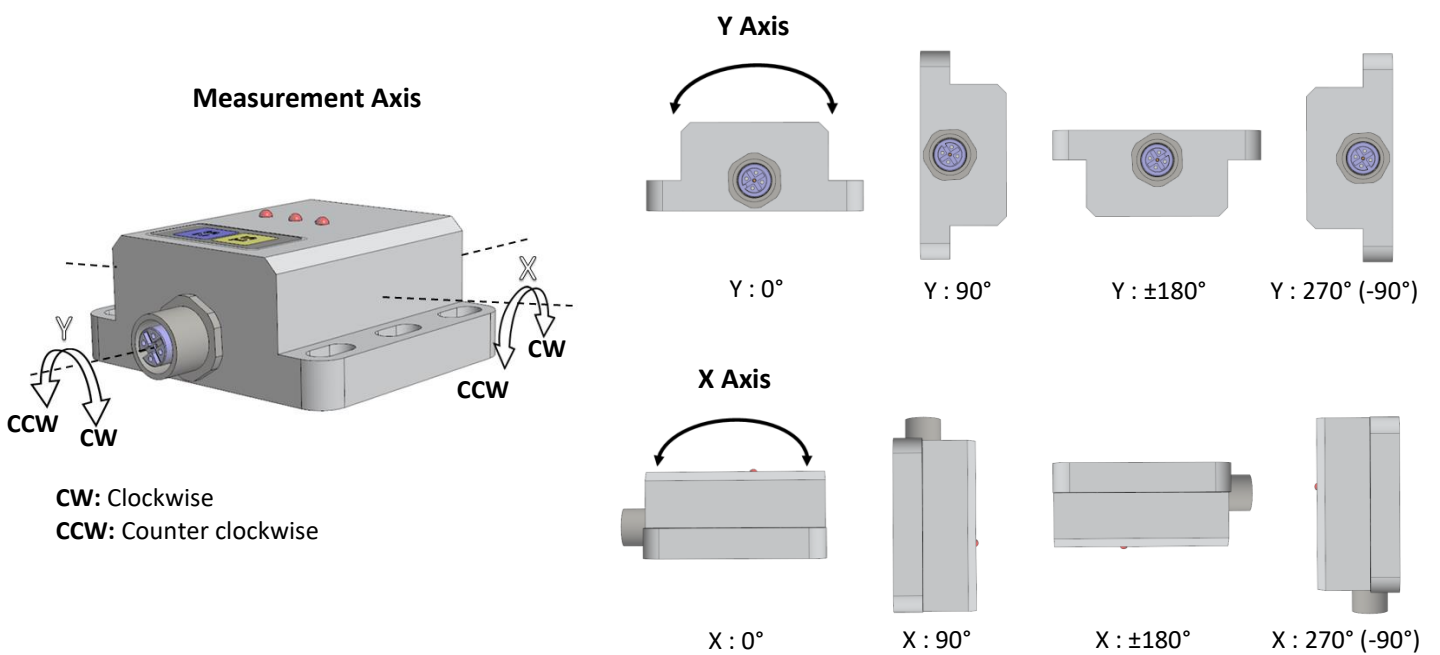
MODEL	
INPUT	
Measuring Range *	0 ... 360°
Measurement Axis	XY
Supply voltage	4-20 mA & Transistor: 12...24 VDC 0-10 VDC & 0-5 VDC: 15...24 VDC
OUTPUT	
Output type *	2 x PNP Open Collector or Analog signal
Open Collector spec. - Output Voltage	$\sim(V-1)$ Volt
Open Collector spec. - Current consumption	< 200mA
Analog Outputs	0-5 VDC, 0-10 VDC or 4-20 mA
Response Time	10 Hz
Resolution	0.05°
Accuracy	$\pm 0,15^\circ$
Electrical Connection*	8 x 0.14 mm ² shielded cable or M12/8 pin male socket
ENVIRONMENTAL	
Operating Temperatures	-30 °C to 70 °C
Relative Humidity	10%...90%
Weight	~ 200 gr
Protection Class	IP64
Body Material	Aluminum

Note: The specifications specified by () vary depending on the model selected. The detailed code table for product selection is shown on page 4.*

ANGLE MEASUREMENT AXIS



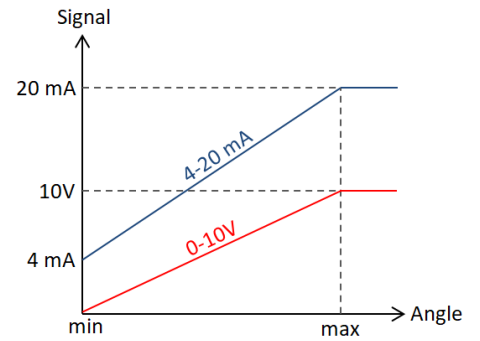
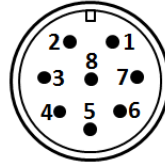
INCLINATION MEASUREMENT AXIS



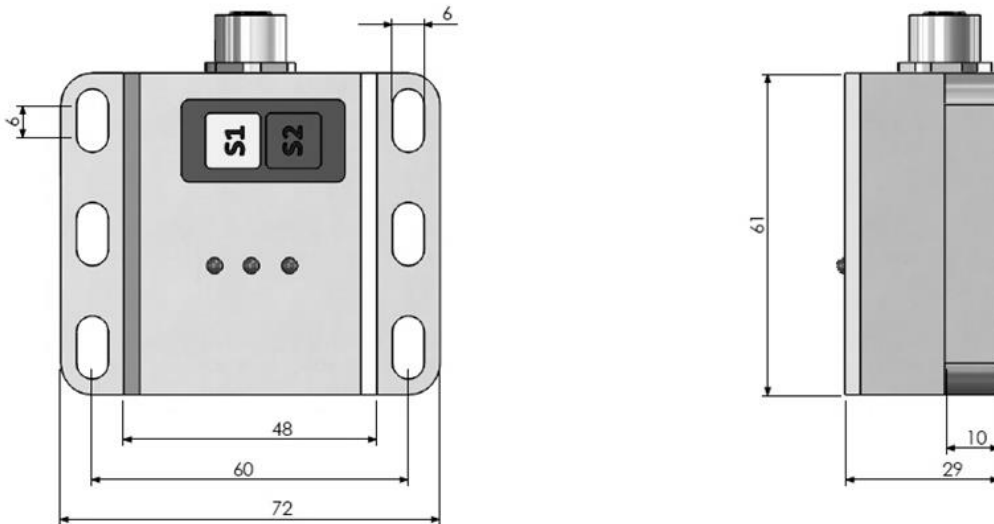
ELECTRICAL CONNECTION

Signal	M12-8 Pin Male Socket	Cable
V+	Pin 1	Red
Transistor Output X	Pin 2	Yellow
GND (0V)	Pin 3	Black
Transistor Output Y	Pin 4	Green
-	Pin 5	Blue
Analog Output X	Pin 6	Pink
Analog Output Y	Pin 7	White
-	Pin 8	Grey

M12-8 Pin Male Socket Analog Signal Output

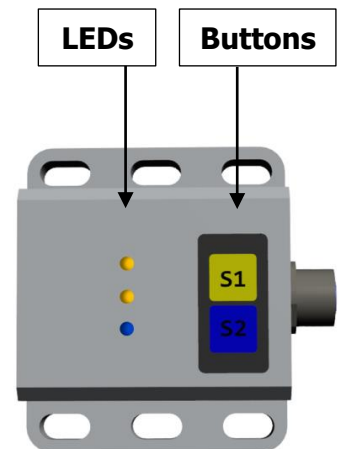


MECHANICAL DIMENSIONS (mm)



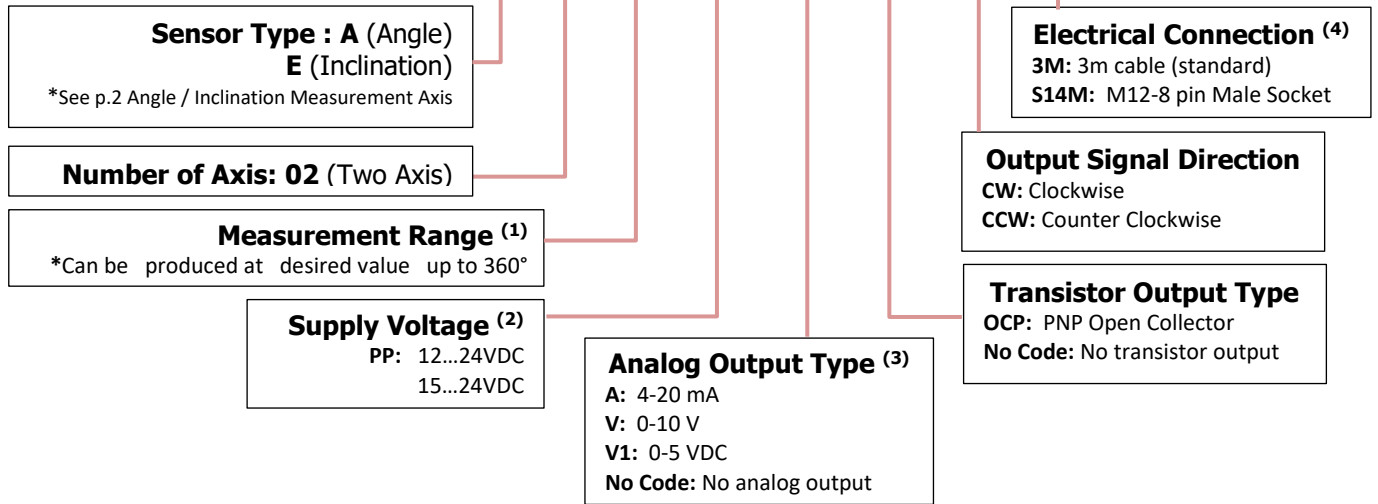
LED & BUTTON FUNCTIONS

Working Status	Blue LED Status	Yellow LED Out X	Yellow LED Out Y
During setting of switching output for X Axis	Light goes OFF	Starts blinking	Light goes OFF
During setting of switching output for Y Axis	Light goes OFF	Light goes OFF	Starts blinking
While switching to analogue setting mode	Light goes OFF	Starts blinking	Starts blinking
During setting of switching output for X Axis	Light goes OFF	Starts blinking	Light goes OFF
During setting of switching output for Y Axis	Light goes OFF	Light goes OFF	Starts blinking
During normal operation	Intermittent blinking	switching mode Status	switching mode Status
Reset to Factory settings: between 5 - 10 sec.	Light goes OFF	Starts blinking	Starts blinking
>10 seconds the end of the process of returning to factory setting, its continue is normal operating mode	Starts blinking	Light goes OFF	light goes out



Button	Color	Function
S1	Yellow	Used to change the set range for switching and analog outputs of X axis. (Refer to the user manual for detailed information)
S2	Blue	Used to change the set range for switching and analog outputs of Y axis. (Refer to the user manual for detailed information)

ORDERING INFORMATION

-ANG130 02

(1) The angle and inclination measurement range can be selected differently for transistor output and analog output. Required measurement range must be specified at the order stage.

(2) The supply voltage is 12...24VDC for 4-20 mA & transistor output models, and 15...24VDC for 0-10VDC and 0-5VDC output models.

(3) Different cable lengths upon user request.


Sample Code 1: -ANG130 E 02 -30...+30 PP A OCP CW S14M

-ANG 130 series, inclination, two axis, -30°...+30°, PP supply, 4-20 mA analog output, PNP open collector output, output signal direction clockwise, M12-8 pin male socket

Sample Code 2: -ANG130 A 02 030 PP A OCP CW S14M

-ANG 130 series, angle, two axis, 0...30°, PP supply, 4-20 mA analog output, PNP open collector output, output signal direction clockwise, M12-8 pin male socket

OPTIONAL PRODUCTS

Product	Code	Description
	CB8 5M / S14F	5 meters 8x0,14 mm ² extension cable + M12/8 pin female connector

REVISIONS HISTORY

REVISION	DATE	DESCRIPTION
A	13/06/2025	Creation of the document

CONTACT

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