

**POSITILT®**  
**PTAM20S**  
**MEMS Analog Inclinometer, 1 Axis ±60°**

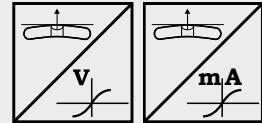


PRELIMINARY



**Analog inclinometer with 1 axis in MEMS technology**

- Measurement range ±60°
- Contact-free, wear free, high resolution
- High shock resistance
- Protection class IP60
- Analog output sine



Specifications	Output	U2S	Voltage 0.5 ... 10 V (sin(θ))
		U6S	
	I1S		Current 4 ... 20 mA, 3 wire (sin(θ))
Excitation voltage	U2S		18 ... 36 V DC
	U6S		5 V DC ±5 %
	I1S		18 ... 36 V DC
Power consumption typical, without load			3 mA
Measurement range			±15, ±30, ±45, ±60°
Resolution			0.05 °
Deviation from the sine characteristic			1% f.s.
Settling time			1 s / 90 %
Protection class			IP60
Connection			Wire 3 x 0.5 mm <sup>2</sup>
Stability (temperature)			±100 x 10 <sup>-6</sup> / °C f.s.
Environmental			
Temperature			0 ... +60 °C

**Order code PTAM20S**



- Model**
- Number of axes**  
1
- Measurement range [in °]**  
15 ... 60 = ±15, ±30, ±45, ±60
- Output**  
 U2S = 0.5 ... 10 V, sine output  
 U6S = 0.5 ... 4.5 V, ratiometric sine output  
 I1S = 4 ... 20 mA, sine output
- Characteristic**  
 CW = Increasing signal for CW inclination
- Output delay 0 ... 90 %**  
 T1.0 = 1 s
- Connection**  
 A300 = Wire, length 300 mm, stripped at free end

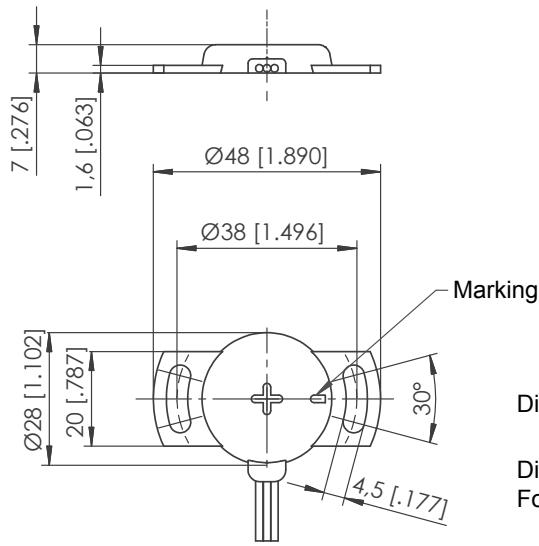
**Order example: PTAM20S - 1 - 45 - U2S - CW - T1.0 - A300**

**POSITILT®**  
**PTAM20S**  
**MEMS Analog Inclinometer, 1 Axis ±60°**



PRELIMINARY

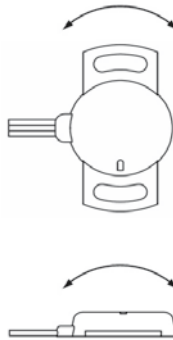
**Outline drawing**  
**PTAM20S**



Dimensions in mm [inch]

Dimensions informative only.  
For guaranteed dimensions consult factory.

**Position of the**  
**inclination axis**



**POSITILT®**  
**PTAM20S**  
**MEMS Analog Inclinometer, 2 Axes ±60°**

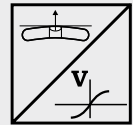


PRELIMINARY



**Analog inclinometer with 2 axes in MEMS technology**

- Measurement range ±60°
- Contact-free, wear free, high resolution
- High shock resistance
- Protection class IP60
- Analog output sine
- Supply voltage 5 V



Specifications	Output	U6S	Voltage 0.5 ... 4.5 V ratiometric (sin(θ))
	Excitation voltage		5 V DC ±5%
	Power consumption typical, without load		3 mA
	Measurement range		2 x ±15, ±30, ±45, ±60°
	Resolution		0.05°
	Linearity		1 % f.s.
	Settling time		1 s / 90 %
	Protection class		IP60
	Connection		Wire 4 x 0.5 mm <sup>2</sup>
	Stability (temperature)		±100 x 10 <sup>-6</sup> / °C f.s.
Environmental			
Temperature		0 ... +60 °C	

**Order code PTAM20S**

PTAM20S - [ ] - [ ] - [ ] - CW - T1.0 - A300

- Model** PTAM20S
- Number of axes** 2
- Measurement range [in °]** 15 ... 60 = ±15, ±30, ±45, ±60
- Output** U6S = 0.5 ... 4.5 V, ratiometric sine output
- Characteristic** CW = Increasing signal for CW inclination
- Output delay 0 ... 90 %** T1.0 = 1 s
- Connection** A300 = Wire, length 300 mm, stripped at free end

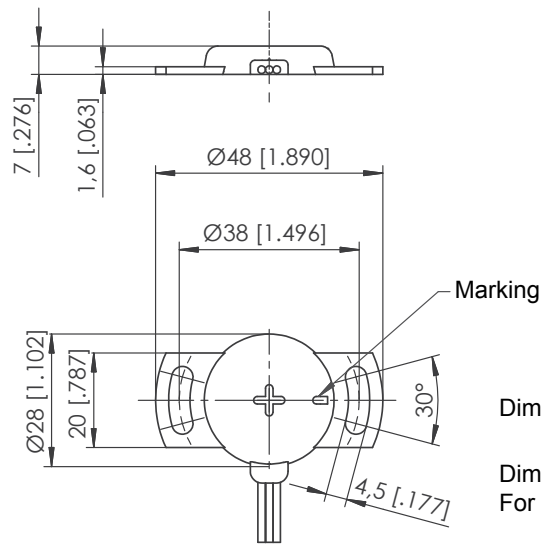
**Order example: PTAM20S - 2 - 30 - U6S - CW - T1.0 - A300**

**POSITILT®**  
**PTAM20S**  
**MEMS Analog Inclinometer, 2 Axes ±60°**



PRELIMINARY

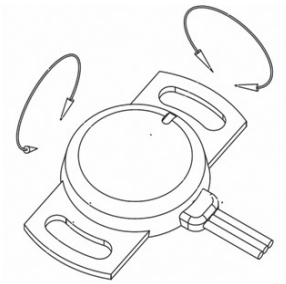
**Outline drawing**  
**PTAM20**



Dimensions in mm [inch]

Dimensions informative only.  
For guaranteed dimensions consult factory.

**Position of the**  
**inclination axes**

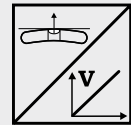


**POSITILT®**  
**PTAM20L**  
**MEMS Analog Inclinometer, 1 Axis ±180°**



**Analog inclinometer with 1 axis in MEMS technology**

- Measurement range ±180°
- Contact-free, wear free, high resolution
- High shock resistance
- Protection class IP60
- Analog output linear
- Supply voltage 5 V



<b>Specifications</b>	Output	U6L	Voltage 0.5 ... 4.5 V (linearized)
	Excitation voltage		5 V DC ±5%
	Power consumption typical, without load		20 mA
	Measurement range		±15 ... ±180°
	Resolution		0.1°
	Linearity		±1° for ±180° f.s.; ±0.5° for ±90°; ±0.25° for ±45°
	Settling time		0.1 ... 10 s / 90 %, configurable
	Protection class		IP60
	Connection		Wire 3 x 0.5 mm <sup>2</sup>
	Stability (temperature)		±100 x 10 <sup>-6</sup> / °C f.s.
Environmental			
	Temperature		0 ... +60 °C

**Order code PTAM20L**

**PTAM20L** - **1** - **U6L** - **A300**

**Model**

**Number of axes**

1

**Measurement range [in °]**

15 ... 180 = ±15 ... ±180 in 15° increments

**Output**

U6L = 0.5 ... 4.5 V, linear output

**Characteristic**

CW = Increasing signal for CW inclination

CCW = Increasing signal for CCW inclination

**Output delay 0 ... 90 %**

Tx.x = 0.1 s ... 10 s

**Connection**

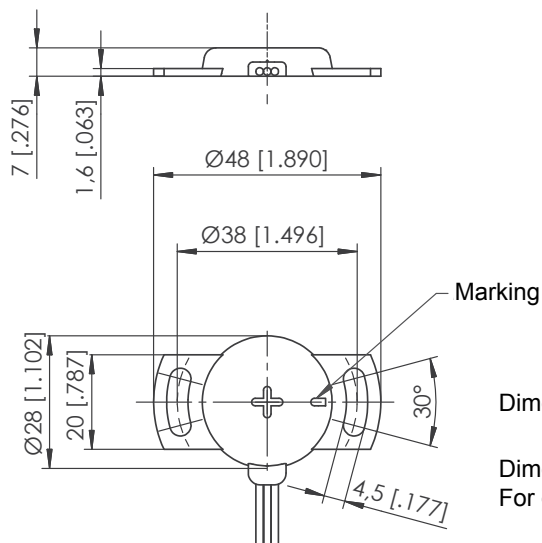
A300 = Wire, length 300 mm, stripped at free end

**Order example: PTAM20L - 1 - 90 - U6L - CCW - T1.0 - A300**

**POSITILT®**  
**PTAM20L**  
**MEMS Analog Inclinator, 1 Axis ±180°**



**Outline drawing**  
**PTAM20**



**Position of the**  
**inclination axis**

