

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

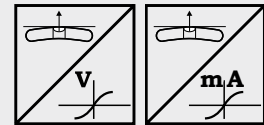


PRELIMINARY



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 | Voltage 0.5 ... 4.5 V ratiometric (sin(θ)) |
| | 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 ² | |
| | Stability (temperature) | ±56 x 10 ⁻⁶ / °F f.s. | |
| | Environmental | | |
| | Temperature | +32 ... +140 °F | |

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

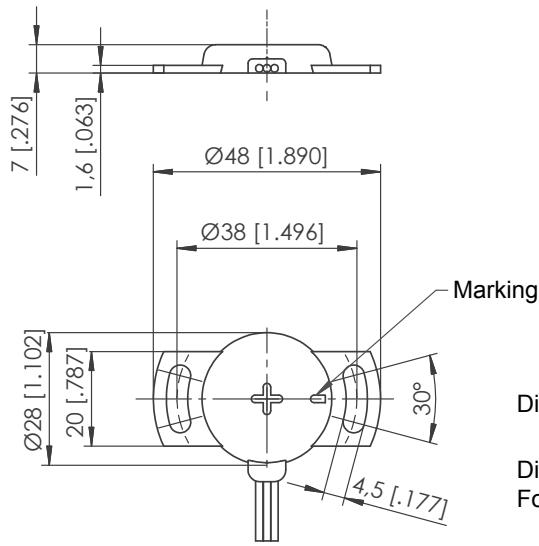
Order example: PTAM20S - 1 - 45 - U2S - CW - T1.0 - A300

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



PRELIMINARY

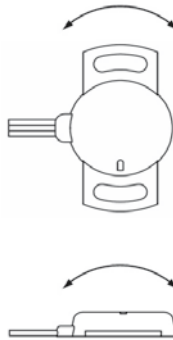
Outline drawing
PTAM20S



Dimensions in mm [inch]

Dimensions informative only.
For guaranteed dimensions consult factory.

Position of the
inclination axis



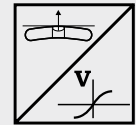
POSITILT®
PTAM20S
MEMS Analog Inclinometer, 2 Axes ±60°

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 ² |
| | Stability (temperature) | | ±56 x 10 ⁻⁶ / °F f.s. |
| Environmental | | | |
| Temperature | | +32 ... +1400 °F | |

Order code PTAM20S



| | |
|---------------------------------|--------------------------------------------------|
| 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 |

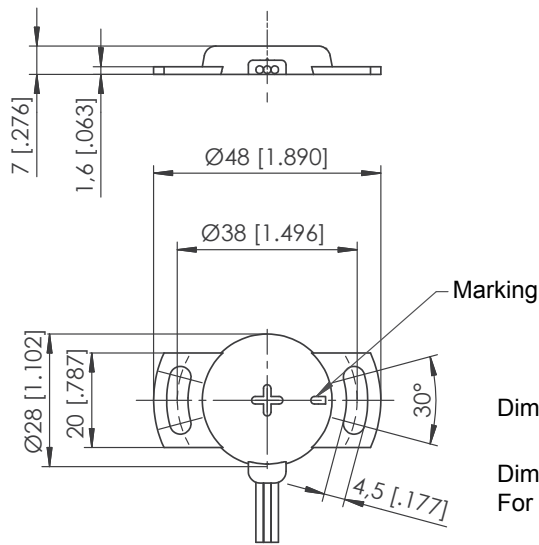
Order example: PTAM20S - 2 - 30 - U6S - CW - T1.0 - A300

POSITILT®
PTAM20S
MEMS Analog Inclinator, 2 Axes ±60°



PRELIMINARY

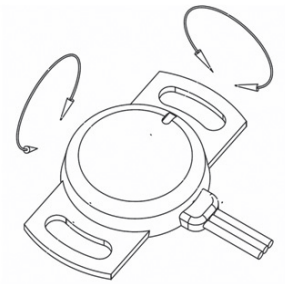
Outline drawing
PTAM20



Dimensions in mm [inch]

Dimensions informative only.
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Position of the
inclination axes

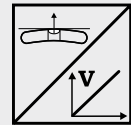


POSITILT®
PTAM20L
MEMS Analog Inclinometer, 1 Axis ±180°



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



| | | | |
|-----------------------|-----------------------------------------|-------------|-----------------------------------------------------|
| Specifications | 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 ² |
| | Stability (temperature) | | ±56 x 10 ⁻⁶ / °F f.s. |
| | Environmental | Temperature | |

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

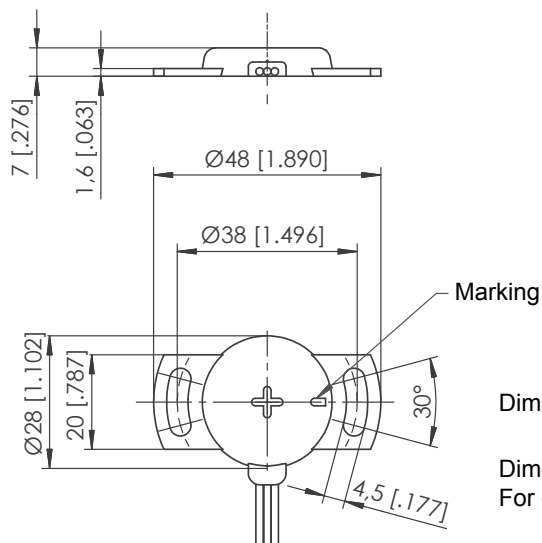
A300 = Wire, length 300 mm, stripped at free end

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

POSITILT®
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MEMS Analog Inclinometer, 1 Axis ±180°



Outline drawing
PTAM20



Dimensions in mm [inch]

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Position of the
inclination axis

