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Product data sheet




# TMS88A-PKC360

## TMS/TMM88

**INCLINATION SENSORS**

SICK
Sensor Intelligence.

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# TMS88A-PKC360 | TMS/TMM88

INCLINATION SENSORS



Illustration may differ

## Ordering information

| Type | Part no. |
|---|---|
| TMS88A-PKC360 | 1073798 |

Other models and accessories → www.sick.com/TMS_TMM88

## Detailed technical data

### Performance

| | |
|---|---|
| **Number of axis** | 1 |
| **Measuring range** | 360° |
| **Resolution** | 0.01° |
| **Accuracy** | Typ. ± 0.04°, max. ± 0.12° |
| **Temperature coefficient (zero point)** | Typ. +0.0088°/K, –0.0102°/K [1] |
| **Limit frequency** | 0.1 Hz ... 25 Hz, 8. range (with digital filter) |
| **Sampling rate** | 100 Hz |

[1] Reffering to the temperature of 25 °C.

### Interfaces

| | |
|---|---|
| **Communication interface** | Analog / Current |
| **Current output** | 4 mA ... 20 mA |
| **Load resistance** | ≤ 850 Ω |
| **Parameterising data** | Measuring range<br>Zeroset<br>Limit frequency<br>Preset value<br>Inverting of counting direction<br>Axis assignment<br>Free adjustable outbound |
| **Programmable/configurable** | Over PGT-12-Pro |
| **Initialization time** | 330 ms |

### Electrical data

| | |
|---|---|
| **Connection type** | Male connector, M12, 5-pin |
| **Supply voltage** | 17 V DC ... 35 V DC |
| **Current consumption** | 40 mA @ 24 V + Iloop |
| **Reverse polarity protection** | ✓ |
| **Short-circuit protection of the outputs** | ✓ |
| **MTTFd: mean time to dangerous failure** | 301 years (EN ISO 13849-1) [1] |

[1] This product is a standard product and does not constitute a safety component as defined in the Machinery Directive. Calculation based on nominal load of components, average ambient temperature 40 °C, frequency of use 8760 h/a. All electronic failures are considered hazardous. For more information, see document no. 8015532.

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## Mechanical data

| | |
|---|---|
| **Dimensions** | 66 mm x 90 mm x 36 mm |
| **Weight** | 200 g |
| **Housing material** | Plastic (PBT) |

## Ambient data

| | |
|---|---|
| **EMC** | EN 61326-1, EN ISO 14982, EN ISO 13309 |
| **Enclosure rating** | IP65, IP67 |
| **Operating temperature range** | –40 °C ... +80 °C |
| **Storage temperature range** | –40 °C ... +85 °C |
| **Resistance to shocks** | 100 g, 6 ms (according to EN 60068-2-27) |
| **Resistance to vibration** | 10 g, 10 Hz ... 2,000 Hz (EN 60068-2-6) |

## Classifications

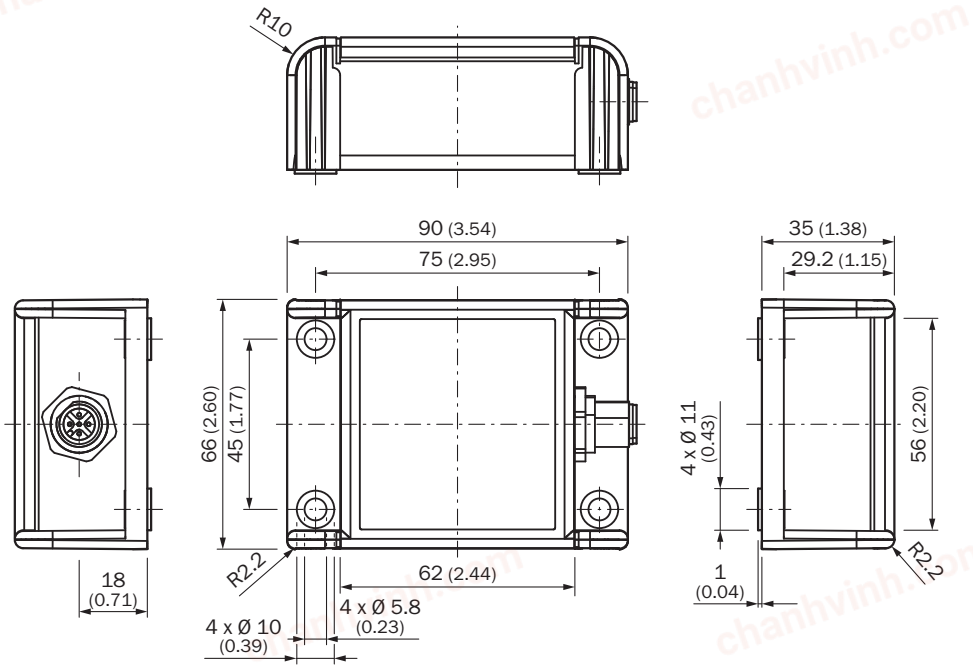
| | |
|---|---|
| **eCl@ss 5.0** | 27270790 |
| **eCl@ss 5.1.4** | 27270790 |
| **eCl@ss 6.0** | 27270790 |
| **eCl@ss 6.2** | 27270790 |
| **eCl@ss 7.0** | 27270790 |
| **eCl@ss 8.0** | 27270790 |
| **eCl@ss 8.1** | 27270790 |
| **eCl@ss 9.0** | 27270790 |
| **eCl@ss 10.0** | 27271101 |
| **eCl@ss 11.0** | 27271101 |
| **eCl@ss 12.0** | 27271101 |
| **ETIM 5.0** | EC001852 |
| **ETIM 6.0** | EC001852 |
| **ETIM 7.0** | EC001852 |
| **ETIM 8.0** | EC001852 |
| **UNSPSC 16.0901** | 41111613 |

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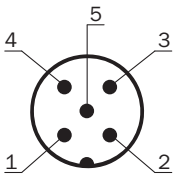


## Dimensional drawing (Dimensions in mm (inch))

TMx88x-PxC




## PIN assignment




| PIN<br>Male connector M12, 5-pin | Signal | Function |
|---|---|---|
| 1 | VDC | Supply voltage |
| 2 | B-OUT | Sensor output B (default: Y) |
| 3 | GND | 0V (GND) |
| 4 | A-OUT | Sensor output A (default: X) |
| 5 | TEACH | Input for Zero point setting |

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## Recommended accessories

Other models and accessories ➜ www.sick.com/TMS_TMM88

| | Brief description | Type | Part no. |
|---|---|---|---|
| Plug connectors and cables | | | |
|  | Head A: female connector, M12, 5-pin, angled, A-coded<br>Head B: Flying leads<br>Cable: Sensor/actuator cable, Power, PUR, halogen-free, shielded, 1.5 m | DOL-1205-W1M5ACSCO | 6049455 |
|  | Head A: female connector, M12, 5-pin, straight, A-coded<br>Head B: Flying leads<br>Cable: Sensor/actuator cable, PUR, halogen-free, shielded, 1.5 m | YF2A25-015UB6XLEAX | 2095833 |
| | Head A: female connector, M12, 5-pin, straight, A-coded<br>Head B: Flying leads<br>Cable: Sensor/actuator cable, PUR, halogen-free, shielded, 3 m | YF2A25-030UB6XLEAX | 2095834 |
|  | Head A: female connector, M12, 5-pin, angled, A-coded<br>Head B: Flying leads<br>Cable: Sensor/actuator cable, PUR, halogen-free, shielded, 3 m | YG2A25-030UB6XLEAX | 2095791 |
| | Head A: female connector, M12, 5-pin, angled, A-coded<br>Head B: Flying leads<br>Cable: Sensor/actuator cable, PUR, halogen-free, shielded, 5 m | YG2A25-050UB6XLEAX | 2095792 |
| | Head A: female connector, M12, 5-pin, angled, A-coded<br>Head B: Flying leads<br>Cable: Sensor/actuator cable, PUR, halogen-free, shielded, 10 m | YG2A25-100UB6XLEAX | 2095793 |
|  | Head A: female connector, M12, 5-pin, straight<br>Cable: unshielded | DOS-1205-G | 6009719 |
|  | Head A: male connector, M12, 5-pin, straight<br>Cable: unshielded<br>For field bus technology | STE-1205-G | 6022083 |
| Others | | | |
|  | Hand-held programming device for the programmable SICK AHS/AHM36 CANopen encoders, TMS/TMM61 CANopen inclination sensors, TMS/TMM88 CANopen, TMS/TMM88 Analog, and wire draw encoders with AHS/AHM36 CANopen. Compact dimensions, low weight, and intuitive operation. | | On request |

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We have extensive experience in a wide range of industries and understand their processes and requirements. With intelligent sensors, we can deliver exactly what our customers need. In application centers in Europe, Asia and North America, system solutions are tested and optimized in accordance with customer specifications. All this makes us a reliable supplier and development partner.

Comprehensive services complete our offering: SICK LifeTime Services provide support throughout the machine life cycle and ensure safety and productivity.

**For us, that is "Sensor Intelligence."**

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