TMS88A-PCI360S03

TMS/TMM88

INCLINATION SENSORS

SICK
Sensor Intelligence.

TMS88A-PCI360S03 | TMS/TMM88
INCLINATION SENSORS

Ordering information

Type	part no.
TMS88A-PCI360S03	1088422

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

Illustration may differ

CE ✔ UKCA

Detailed technical data

Features

Special device	✓
Specialty	Accuracy: +/- 0.04°
Standard reference device	TMS88A-PCI360, 1073802

Safety-related parameters

MTTF$_D$ (mean time to dangerous failure)	438 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.

Performance

Number of axis	1
Measuring range	360°
Resolution	0.01°
Static measurement accuracy	Typ. ± 0.04°, max. ± 0.12°
Temperature coefficient (zero point)	Typ. ±0.008°/K [1]
Limit frequency	0.1 Hz ... 25 Hz, 8. range (with digital filter)
Sampling rate	80 Hz

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

Interfaces

Communication interface	CANopen
Device profile	CiA DS-301 (Application layer) CiA DS-410 v4.2.0 (Device profile for inclination sensors) CiA DSP-305 (Layer Setting Service (LSS) and protocols)
Address setting	0...127, default: 10
Data transmission rate (baud rate)	10 kbit/s ... 1,000 kbit/s, Default: automatic baud rate detection
Status information	CANopen status via status LED
Bus termination	Via external terminator
Parameterising data	Zeroset Limit frequency Preset value Inverting of counting direction
Programmable/configurable	Over PGT-12-Pro

Initialization time	200 ms

Electronics

Connection type	Male connector, 1x, M12, 5-pin Female connector, 1x, M12, 5-pin
Supply voltage	8 V DC ... 36 V DC
Current consumption	< 33 mA @ 24 V
Reverse polarity protection	✓

Mechanics

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 (IEC 60529) IP67 (IEC 60529)
Operating temperature range	–40 °C ... +80 °C
Storage temperature range	–40 °C ... +85 °C
Resistance to shocks	100 g, 6 ms (EN 60068-2-27)
Resistance to vibration	10 g, 10 Hz ... 2,000 Hz (EN 60068-2-6)

Certificates

EU declaration of conformity	✓
UK declaration of conformity	✓
ACMA declaration of conformity	✓
China RoHS	✓
Information according to Art. 3 of Data Act (Regulation EU 2023/2854)	✓

Classifications

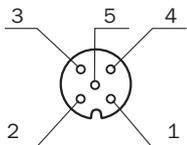| ECLASS 5.0	27270790
ECLASS 5.1.4	27270790
ECLASS 6.0	27270790
ECLASS 6.2	27270790
ECLASS 7.0	27270790
ECLASS 8.0	27270790
ECLASS 8.1	27270790
ECLASS 9.0	27270790
ECLASS 10.0	27271101
ECLASS 11.0	27271101
ECLASS 12.0	27271101
ETIM 5.0	EC001852
ETIM 6.0	EC001852
ETIM 7.0	EC001852

ETIM 8.0	EC001852
UNSPSC 16.0901	41111613

TMx88x-PxI
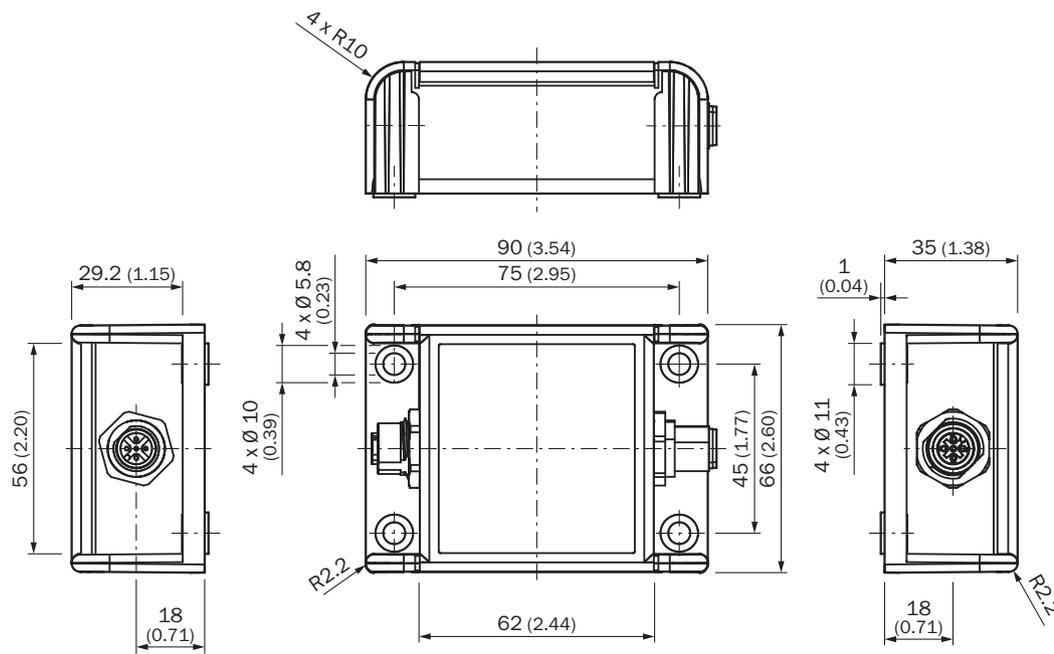
Dimensions in mm (inch)

Anschlussbelegung

PINFemale connector M12, 5-pin	Signal	
1	CAN Shield	Shielding
2	VDC	Supply voltage
3	GND/CAN GND	0V (GND)
4	CAN high	CAN signal
5	CAN low	CAN signal

Anschlussbelegung
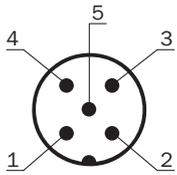
PINPlug, M12, 5-pin	Signal	Description
1	CAN Shield	Shielding
2	VDC	Supply voltage
3	GND/CAN GND	0V (GND)
4	CAN high	CAN signal
5	CAN low	CAN signal

Recommended accessories

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

	Brief description	Type	part no.
connectors and cables			
	• **Description:** CANopen, shielded, DeviceNet™ • **Connection type head A:** Female connector, M12, 5-pin, straight, A-coded • **Signal type:** CANopen, DeviceNet™ • **Connection systems:** Screw-type terminals • **Permitted cross-section:** ≤ 0.75 mm²	DOS-1205-GA	6027534
	• **Connection type head A:** Male connector, M12, 5-pin, straight • **Signal type:** CANopen • **Description:** CANopen, unshielded	CAN male connector	6021167
	• **Description:** Unshielded • **Connection type head A:** Female connector, M12, 5-pin, A-coded • **Connection type head B:** Female connector, M12, 5-pin, A-coded • **Connection type head C:** Male connector, M12, 5-pin, A-coded	DSC-1205T000025KM0	6030664
	• **Connection type head A:** Female connector, M12, 5-pin, straight, A-coded • **Connection type head B:** Flying leads • **Signal type:** Fieldbus, CANopen, DeviceNet™ • **Cable:** 2 m, 4-wire, PUR, halogen-free • **Description:** Fieldbus, shielded, CANopen, DeviceNet™ • **Application:** Drag chain operation, Zones with oils and lubricants	YF2A15-020C1BXLEAX	2106283
	• **Connection type head A:** Female connector, M12, 5-pin, straight, A-coded • **Connection type head B:** Flying leads • **Signal type:** Fieldbus, CANopen, DeviceNet™ • **Cable:** 5 m, 4-wire, PUR, halogen-free • **Description:** Fieldbus, shielded, CANopen, DeviceNet™ • **Application:** Drag chain operation, Zones with oils and lubricants	YF2A15-050C1BXLEAX	2106284
	• **Connection type head A:** Female connector, M12, 5-pin, straight, A-coded • **Connection type head B:** Flying leads • **Signal type:** Fieldbus, CANopen, DeviceNet™ • **Cable:** 10 m, 4-wire, PUR, halogen-free • **Description:** Fieldbus, shielded, CANopen, DeviceNet™ • **Application:** Drag chain operation, Zones with oils and lubricants	YF2A15-100C1BXLEAX	2106286
	• **Connection type head A:** Female connector, M12, 5-pin, straight, A-coded • **Connection type head B:** Male connector, M12, 5-pin, straight, A-coded • **Signal type:** Fieldbus, CANopen, DeviceNet™ • **Cable:** 2 m, 4-wire, PUR, halogen-free • **Description:** Fieldbus, shielded, CANopen, DeviceNet™ • **Application:** Drag chain operation, Zones with oils and lubricants	YF2A15-020C1B-M2A15	2106279
	• **Connection type head A:** Female connector, M12, 5-pin, straight, A-coded • **Connection type head B:** Male connector, M12, 5-pin, straight, A-coded • **Signal type:** Fieldbus, CANopen, DeviceNet™ • **Cable:** 5 m, 4-wire, PUR, halogen-free • **Description:** Fieldbus, shielded, CANopen, DeviceNet™ • **Application:** Drag chain operation, Zones with oils and lubricants	YF2A15-050C1B-M2A15	2106281
	• **Connection type head A:** Female connector, M12, 5-pin, straight, A-coded • **Connection type head B:** Male connector, M12, 5-pin, straight, A-coded • **Signal type:** Fieldbus, CANopen, DeviceNet™ • **Cable:** 10 m, 4-wire, PUR, halogen-free • **Description:** Fieldbus, shielded, CANopen, DeviceNet™ • **Application:** Drag chain operation, Zones with oils and lubricants	YF2A15-100C1B-M2A15	2106282

SICK AT A GLANCE

SICK is one of the leading manufacturers of intelligent sensors and sensor solutions for industrial applications. A unique range of products and services creates the perfect basis for controlling processes securely and efficiently, protecting individuals from accidents and preventing damage to the environment.

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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