TMS88B-AKC360

TMS/TMM88

INCLINATION SENSORS

SICK
Sensor Intelligence.

TMS88B-AKC360 | TMS/TMM88

INCLINATION SENSORS

Ordering information

Type	Part no.
TMS88B-AKC360	1073790

Illustration may differ

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

CE

Detailed technical data

Safety-related parameters

$MTTF_D$ (mean time to dangerous failure)	299 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. ± 0.15°, max. ± 0.25°
Temperature coefficient (zero point)	Typ. ±0.01°/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	Analog / Current
Current output	4 mA ... 20 mA
Load resistance	≤ 850 Ω [1]
Parameterising data	Measuring range Zeroset Limit frequency Preset value Inverting of counting direction Axis assignment Free adjustable outbound
Programmable/configurable	Over PGT-12-Pro
Initialization time	265 ms

[1] On Us = 24 V.

Electronics

Connection type	Male connector, M12, 5-pin
Supply voltage	17 V DC ... 35 V DC
Current consumption	< 35 mA (+ Iloop) @ 24 V
Reverse polarity protection	✓

Short-circuit protection of the outputs	✓

Mechanics

Dimensions	58 mm x 90 mm x 31 mm
Weight	200 g
Housing material	Aluminum

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

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

Dimensional drawing (Dimensions in mm (inch))

TMx88B-AxC
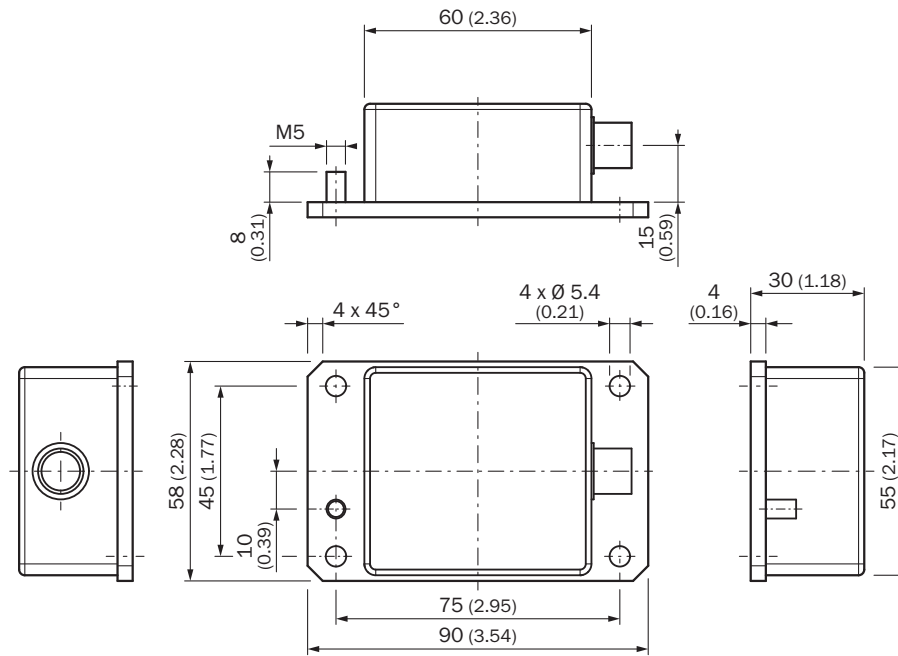
PIN assignment
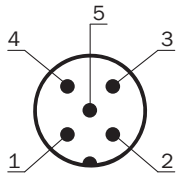
PIN Male connector M12, 5-pin	Signal	
1	VDC	Supply voltage
2	B-OUT	Sensor output B (default: Y)
3	GND	0V (GND)
4	A-OUT	Sensor output A (default: X)
5	TEACH	Input for Zero point setting

Recommended accessories

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

	Brief description	Type	Part no.
Others			
	• **Product segment:** Programming devices • **Product family:** PGT-12 Pro • **Description:** 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. • **Items supplied:** 1 x PGT-12-Pro standalone programming tool, 4 x 1.5 V (AA) alkaline mignon batteries	PGT-12-Pro	1076313
	• **Connection type head A:** Female connector, M12, 5-pin, straight • **Connection type head B:** Female connector, D-Sub, 9-pin, straight • **Signal type:** Analog • **Cable:** 0.5 m • **Description:** Analog, shielded, Adapter cable for inclination sensors with analog interface and M12 • **Note:** Programming adapter cable for programming tool PGT-12-Pro	DDL-2D05-G0M5BC8	2083831
	• **Connection type head A:** Female connector, M12, 5-pin, straight, A-coded • **Description:** Unshielded, Head A: female connector, M12, 5-pin, straight, unshielded, for cable diameter 4 mm ... 6 mm Head B: - • **Connection systems:** Screw-type terminals • **Permitted cross-section:** ≤ 0.75 mm²	DOS-1205-G	6009719
	• **Connection type head A:** Male connector, M12, 5-pin, straight, A-coded • **Description:** Unshielded, Head A: male connector, M12, 5-pin, straight, unshielded, for cable diameter 4 mm ... 6 mm Head B: - • **Connection systems:** Screw-type terminals • **Permitted cross-section:** ≤ 0.75 mm² • **Note:** For field bus technology	STE-1205-G	6022083
	• **Connection type head A:** Female connector, M12, 5-pin, angled, A-coded • **Connection type head B:** Flying leads • **Signal type:** Sensor/actuator cable, Power • **Cable:** 1.5 m, 5-wire, PUR, halogen-free • **Description:** Sensor/actuator cable, Power, shielded, Female connector, M12 Speedcon, A-coded, angled, to open end	DOL-1205-W1M5ACSC0	6049455
	• **Connection type head A:** Female connector, M12, 5-pin, straight, A-coded • **Connection type head B:** Flying leads • **Signal type:** Sensor/actuator cable • **Cable:** 1.5 m, 5-wire, PUR, halogen-free • **Description:** Sensor/actuator cable, shielded • **Application:** Uncontaminated zones, Zones with oils and lubricants, Robot, Drag chain operation	YF2A25-015UB6XLEAX	2095833
	• **Connection type head A:** Female connector, M12, 5-pin, straight, A-coded • **Connection type head B:** Flying leads • **Signal type:** Sensor/actuator cable • **Cable:** 3 m, 5-wire, PUR, halogen-free • **Description:** Sensor/actuator cable, shielded • **Application:** Uncontaminated zones, Zones with oils and lubricants, Robot, Drag chain operation	YF2A25-030UB6XLEAX	2095834
	• **Connection type head A:** Female connector, M12, 5-pin, angled, A-coded • **Connection type head B:** Flying leads • **Signal type:** Sensor/actuator cable • **Cable:** 3 m, 5-wire, PUR, halogen-free • **Description:** Sensor/actuator cable, shielded • **Application:** Uncontaminated zones, Zones with oils and lubricants, Robot, Drag chain operation	YG2A25-030UB6XLEAX	2095791

	Brief description	Type	Part no.
	• **Connection type head A:** Female connector, M12, 5-pin, angled, A-coded • **Connection type head B:** Flying leads • **Signal type:** Sensor/actuator cable • **Cable:** 5 m, 5-wire, PUR, halogen-free • **Description:** Sensor/actuator cable, shielded • **Application:** Uncontaminated zones, Zones with oils and lubricants, Robot, Drag chain operation	YG2A25-050UB6XLEAX	2095792
	• **Connection type head A:** Female connector, M12, 5-pin, angled, A-coded • **Connection type head B:** Flying leads • **Signal type:** Sensor/actuator cable • **Cable:** 10 m, 5-wire, PUR, halogen-free • **Description:** Sensor/actuator cable, shielded • **Application:** Uncontaminated zones, Zones with oils and lubricants, Robot, Drag chain operation	YG2A25-100UB6XLEAX	2095793

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."

WORLDWIDE PRESENCE:

Contacts and other locations –**www.sick.com**

SICK AG | Waldkirch | Germany | www.sick.com