

MZT8-2V8-N-KWDS01

MZT8 ATEX

SENSORS FOR T-SLOT CYLINDERS





Ordering information

Туре	Part no.
MZT8-2V8-N-KWDS01	1070462

Other models and accessories → www.sick.com/MZT8_ATEX



Detailed technical data

Features

Cylinder type	T-slot
Cylinder types with adapter	Profile cylinder Tie rod cylinder Round body cylinder Dovetail groove cylinder SMC rail CDQ2 SMC rail ECDQ2
Housing length	24 mm
Switching output	NAMUR
Output characteristic	Control current depending on switching state according to NAMUR EN 60947-5-6
Switching frequency	1,000 Hz
Electrical wiring	DC 2-wire
Enclosure rating	IP67 ¹⁾

 $^{^{1)}}$ According to EN 60529 (IP 67 / IP 68).

Mechanics/electronics

Ex area category	1G, 1D
Device labeling	II 1G Ex ia IIC T4 Ga, II 1D Ex ia IIIC T ₂₀₀ 135 °C Da
Response sensitivity, typ.	2.8 mT
Overrun distance, typ.	9 mm
Hysteresis, typ.	≤ 0.5 mT
Reproducibility	≤ 0.1 mT $^{1)}$
Reverse polarity protection	Yes
Short-circuit protection	Yes

 $^{^{1)}\,\}mbox{Supply}$ voltage $\mbox{U}_{\mbox{\footnotesize B}}$ and constant ambient temperature Ta.

 $^{^{2)}}$ PVC-cable without UL-Certificate.

 $^{^{\}rm 3)}$ For connection to a separately certified intrinsically safe circuit only.

Status indicator LED Yes Power-up pulse protection Yes Ambient operating temperature -25 ° C +80 ° C Shock and vibration resistance 30 g, 11 ms / 10 55 Hz, 1 mm EMC According to EN 60947-5-2 Connection type Cable, 2-wire, 6 m Connection type Detail 0.12 mm² Cable diameter Bending radius 20.19 mm Cable outlet Axial Material Housing Plastic, PA12 Cable PVC ²) EC-Type examination certificate UL 22UKEX2384 Certificate (IECEx) IECEX TUN 14.0038 Input voltage U ₁ max. 100 mW ³³ Input qurrent I ₁ max. 60 mA ³³ Internal capacitance C ₁ max. 130 n F ³¹ Internal inductance L ₁ max. 82 V DC		
Ambient operating temperature Shock and vibration resistance BMC Connection type Cable, 2-wire, 6 m Conductor cross section Cable diameter Bending radius Cable outlet Housing Cable Cable examination certificate UK type exa	Status indicator LED	Yes
Shock and vibration resistance EMC According to EN 60947-5-2 Cable, 2-wire, 6 m Connection type Detail Conductor cross section Cable diameter Bending radius Cable outlet Cable outlet Housing Cable	Power-up pulse protection	Yes
EMC Connection type Cable, 2-wire, 6 m Conductor cross section Cable diameter Bending radius Cable outlet Material Housing Cable	Ambient operating temperature	-25 °C +80 °C
Connection type Connection type Detail Conductor cross section Cable diameter Bending radius Cable outlet Cable outlet Cable outlet Axial Material Housing Cable Cable TÜV 14 ATEX 143125 UK type examination certificate UL22UKEX2384 Certificate (IECEx) Input voltage U ₁ max. Input current I ₁ max. Internal capacitance C ₁ max. Internal inductance L ₁ max. Cable 2.9 wire, 6 m O.12 mm² O.29 mm With fixed installation > 3 x cable diameter For flexible use > 5 x cable diameter Axial O.12 mm² O.29 mm With fixed installation > 3 x cable diameter For flexible use > 5 x cable diameter Axial O.29 mm With fixed installation > 3 x cable diameter For flexible use > 5 x cable diameter For flexible use > 5 x cable diameter Axial O.21 mm² O.29 mm Vith fixed installation > 3 x cable diameter For flexible use > 5 x cable diameter Axial Axial Oxial Oxial	Shock and vibration resistance	30 g, 11 ms / 10 55 Hz, 1 mm
Connection type Detail Conductor cross section Cable diameter Bending radius Cable outlet Cable outlet Housing Cable	EMC	According to EN 60947-5-2
Conductor cross section Cable diameter Bending radius With fixed installation > 3 x cable diameter For flexible use > 5 x cable diameter For flexible use > 5 x cable diameter Axial Material Housing Cable Plastic, PA12 PVC 2) EC-Type examination certificate UL22UKEX2384 Certificate (IECEx) IECEX TUN 14.0038 Input voltage U ₁ max. Input power P ₁ max. Input current I ₁ max. Internal capacitance C ₁ max. Internal inductance L ₁ max. 130 µH 3) O.12 mm² Ø 2.9 mm With fixed installation > 3 x cable diameter For flexible use > 5 x cable diameter Axial Axial VA14 ECEX TUN 14.02 Axial Axial Plastic, PA12 PVC 2) EC-Type examination certificate UL22UKEX2384 Certificate (IECEx) IECEX TUN 14.0038 Input current I ₁ max. 100 mW 3) Internal capacitance C ₁ max. 130 µH 3)	Connection type	Cable, 2-wire, 6 m
Cable diameter Bending radius Cable outlet Cable outlet Material Housing Cable Cable PVC 2) EC-Type examination certificate UK type examination certificate UK type examination certificate UL22UKEX2384 Certificate (IECEx) Input voltage U ₁ max. Input current I ₁ max. Internal capacitance C ₁ max. Internal inductance L ₁ max. Viin fixed installation > 3 x cable diameter For flexible use > 5 x cable diameter Axial Plastic, PA12 PVC 2) TÜV 14 ATEX 143125 UL22UKEX2384 ECEX TUN 14.0038 Input voltage U ₁ max. 100 mW 3) Input current I ₁ max. 130 nF 3) 130 nF 3) Internal inductance L ₁ max. 130 nF 3)	Connection type Detail	
Bending radius With fixed installation > 3 x cable diameter For flexible use > 5 x cable diameter Axial Material Housing Cable PVC 2) EC-Type examination certificate UL22UKEX2384 Certificate (IECEx) IECEX TUN 14.0038 Input voltage U _I max. Input current I _I max. Input current I _I max. Internal capacitance C _I max. 130 nF 3) Internal inductance L _I max. With fixed installation > 3 x cable diameter For flexible use > 5 x cable diameter Axial With fixed installation > 3 x cable diameter For flexible use > 5 x cable diameter Axial With fixed installation > 3 x cable diameter For flexible use > 5 x cable diameter Axial Axial With fixed installation > 3 x cable diameter For flexible use > 5 x cable diameter Axial Axial Housing Plastic, PA12 PVC 2) TÜV 14 ATEX 143125 UL22UKEX2384 Certificate (IECEx) IECEX TUN 14.0038 Input voltage U _I max. 100 mW 3) Input current I _I max. 100 mW 3) Internal inductance C _I max. 130 nF 3) Internal inductance L _I max. 30 µH 3)	Conductor cross section	0.12 mm ²
For flexible use > 5 x cable diameter Axial Material Housing Cable PVC 2) EC-Type examination certificate UK type examination certificate UL22UKEX2384 Certificate (IECEx) IECEX TUN 14.0038 Input voltage U _i max. Input power P _i max. Input current I _i max. Internal capacitance C _i max. 130 nF 3) Internal inductance L _i max. Internal inductance L _i max. Internal capacitance C _i max. Internal capacitance C _i max. Internal inductance L _i max. Internal capacitance C _i max.	Cable diameter	Ø 2.9 mm
Material Housing Cable Cable Cable PVC 2) EC-Type examination certificate UK type examination certificate UL22UKEX2384 Certificate (IECEx) IECEX TUN 14.0038 Input voltage U ₁ max. Input power P ₁ max. Input current I ₁ max. Internal capacitance C ₁ max. Internal inductance L ₁ max. Internal inductance L ₁ max.	Bending radius	
Housing Cable PVC 2) EC-Type examination certificate TÜV 14 ATEX 143125 UK type examination certificate UL22UKEX2384 Certificate (IECEx) IECEx TUN 14.0038 Input voltage U _i max. 20 V 3) Input power P _i max. 100 mW 3) Input current I _i max. 60 mA 3) Internal capacitance C _i max. 130 nF 3) Internal inductance L _i max. 30 μH 3)	Cable outlet	Axial
Cable PVC ²⁾ EC-Type examination certificate TÜV 14 ATEX 143125 UK type examination certificate UL22UKEX2384 Certificate (IECEx) IECEX TUN 14.0038 Input voltage U _i max. 20 V ³⁾ Input power P _i max. 100 mW ³⁾ Input current I _i max. 60 mA ³⁾ Internal capacitance C _i max. 130 nF ³⁾ Internal inductance L _i max. 30 µH ³⁾	Material	
EC-Type examination certificate UK type examination certificate UL22UKEX2384 Certificate (IECEx) IECEX TUN 14.0038 Input voltage U _i max. 20 V ³⁾ Input power P _i max. 100 mW ³⁾ Input current I _i max. 60 mA ³⁾ Internal capacitance C _i max. 130 nF ³⁾ Internal inductance L _i max. 30 μH ³⁾	Housing	Plastic, PA12
UK type examination certificate UL22UKEX2384 Certificate (IECEx) IRDUT voltage U _i max. 100 mW ³⁾ Input current I _i max. Input current I _i max. 130 nF ³⁾ Internal inductance L _i max. 30 µH ³⁾	Cable	PVC ²⁾
$ \begin{array}{llllllllllllllllllllllllllllllllllll$	EC-Type examination certificate	TÜV 14 ATEX 143125
$\begin{array}{llllllllllllllllllllllllllllllllllll$	UK type examination certificate	UL22UKEX2384
Input power P_i max. $100 \text{ mW}^{3)}$ Input current I_i max. $60 \text{ mA}^{3)}$ Internal capacitance C_i max. $130 \text{ nF}^{3)}$ Internal inductance L_i max. $30 \mu\text{H}^{3)}$	Certificate (IECEx)	IECEx TUN 14.0038
$\begin{array}{llllllllllllllllllllllllllllllllllll$	Input voltage U _i max.	20 V ³⁾
Internal capacitance C_i max. $130 \text{ nF}^{3)}$ Internal inductance L_i max. $30 \mu\text{H}^{3)}$	Input power P _i max.	100 mW ³⁾
Internal inductance L _i max. 30 µH ³⁾	Input current I _i max.	60 mA ³⁾
30 μπ	Internal capacitance C _i max.	130 nF ³⁾
Nominal voltage 8.2 V DC	Internal inductance L _i max.	30 μH ³⁾
Tomas Totage	Nominal voltage	8.2 V DC

 $^{^{1)}\,\}mbox{Supply}$ voltage $\mbox{U}_{\mbox{\footnotesize B}}$ and constant ambient temperature Ta.

Classifications

ECLASS 5.0	27270104
ECLASS 5.1.4	27270104
ECLASS 6.0	27270104
ECLASS 6.2	27270104
ECLASS 7.0	27270104
ECLASS 8.0	27270104
ECLASS 8.1	27270104
ECLASS 9.0	27270104
ECLASS 10.0	27270104
ECLASS 11.0	27270104
ECLASS 12.0	27274301
ETIM 5.0	EC002544
ETIM 6.0	EC002544

²⁾ PVC-cable without UL-Certificate.

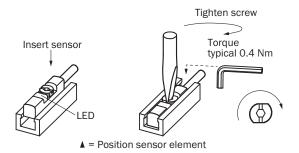
³⁾ For connection to a separately certified intrinsically safe circuit only.

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SENSORS FOR T-SLOT CYLINDERS

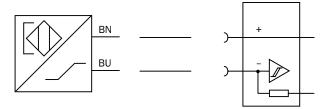
ETIM 7.0	EC002544
ETIM 8.0	EC002544
UNSPSC 16.0901	39122230

Installation note



Connection diagram

Cd-305

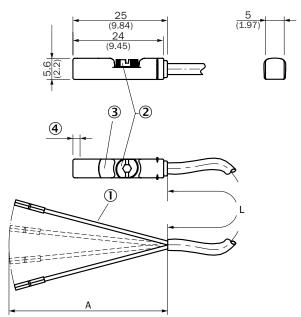


Cd-304



Dimensional drawing (Dimensions in mm (inch))

Cable



- ① Connection
- ② Fixing screw SW 2.0
- ③ Display LED
- 4 Sensor element position = long overrun distance (9 mm): 1.6 mm

Part no.	Туре	L	A	Number of cores
1069424	MZT8-2V8-N-KW0	2 m	42 mm	2
1070456	MZT8-2V8-N-KWA	3 m	42 mm	2
1070461	MZT8-2V8-N-KWB	5 m	42 mm	2
1070462	MZT8-2V8-N-KWDS01	6 m	42 mm	2
1070463	MZT8-2V8-N-KWDS02	7 m	42 mm	2
1070464	MZT8-2V8-N-KWDS03	7 m	42 mm	2

Recommended accessories

Other models and accessories → www.sick.com/MZT8_ATEX

	Brief description	Туре	Part no.		
Power supply	Power supply modules				
	NAMUR isolating amplifier, Cable fault detection, Switching outputs: 2 NO relay (1 per channel), Supply voltage: 24 V \dots 230 V, Voltage type: AC/DC	EN2-2EX1	6041096		
	NAMUR isolating amplifier, Cable fault detection, Switching outputs: 2 NO relay (1 per channel), Supply voltage: 19,2 V \dots 30 V, Voltage type: DC	EN2-2EX3	6041095		

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SENSORS FOR T-SLOT CYLINDERS

	Brief description	Туре	Part no.		
Brackets for cylinder sensors					
	Mounting bracket for cylinder with dovetail slot, Aluminum, without mounting hardware	BEF-KHZ-ST1	2022703		
	Mounting bracket for integrated profile cylinder/tie-rod cylinder, zinc diecast, mounting hardware included	BEF-KHZ-PT1	2022702		
	1 piece, Mounting bracket on round body cylinder with piston diameter of 12 mm, ambient temperature min 0 °C max 50 °C, plastic, Aluminum	BEF-KHZ-RT-12	2077681		
	1 piece, Mounting bracket on round body cylinder with piston diameter of 16 mm, ambient temperature min 0 °C max 50 °C, plastic, Aluminum	BEF-KHZ-RT-16	2077680		
	1 piece, Mounting bracket on round body cylinder with piston diameter of 20 mm, ambient temperature min 0 °C max 50 °C, plastic, Aluminum	BEF-KHZ-RT-20	2077679		
	1 piece, Mounting bracket on round body cylinder with piston diameter of 25 mm, ambient temperature min 0 °C max 50 °C, plastic, Aluminum	BEF-KHZ-RT-25	2077678		
	1 piece, Mounting bracket on round body cylinder with piston diameter of 32 mm, ambient temperature min 0 °C max 50 °C, plastic, Aluminum	BEF-KHZ-RT-32	2077677		
	1 piece, Mounting bracket on round body cylinder with piston diameter of 40 mm, ambient temperature min 0 °C max 50 °C, plastic, Aluminum	BEF-KHZ-RT-40	2077676		
	1 piece, Mounting bracket on round body cylinder with piston diameter of 50 mm, ambient temperature min 0 °C max 50 °C, plastic, Aluminum	BEF-KHZ-RT-50	2077675		
	1 piece, Mounting bracket on round body cylinder with piston diameter of 63 mm, ambient temperature min 0 °C max 50 °C, plastic, Aluminum	BEF-KHZ-RT-63	2077674		
	1 piece, Mounting bracket on round body cylinder with piston diameter of 8 mm \dots 130 mm, ambient temperature min –30 °C max 80 °C, stainless steel, Zinc cast	BEF-KHZ-RT1-130	2077684		
TIG.	1 piece, Mounting bracket on round body cylinder with piston diameter of 8 mm 25 mm, ambient temperature min $-30~^\circ\text{C}$ max 80 $^\circ\text{C}$, stainless steel, Zinc cast	BEF-KHZ-RT1-25	2077682		
	1 piece, Mounting bracket on round body cylinder with piston diameter of 8 mm 63 mm, ambient temperature min $-30~^\circ\text{C}$ max 80 $^\circ\text{C}$, stainless steel, Zinc cast	BEF-KHZ-RT1-63	2077683		
•	Mounting bracket for mounting on SMC rails CDQ2 (T-slot), Aluminum, without mounting hardware	BEF-KHZ-TT2	2046440		
0	Mounting bracket for mounting on SMC rails ECDQ2 (T-slot), Aluminum, without mounting hardware	BEF-KHZ-TT1	2046439		
Device protection (mechanical)					
	Protective adapter, die-cast zinc, mounting hardware included	BEF-SG-MRZT	2077201		

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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