

COMPACT SENSOR, MARINE AND EX



- MKTS-GL · MKTS-GLEx (2)
- DNV · EU RO · ATEX · IECEx
- 250 BAR, BURST 375 BAR
- MEDIUM UP TO +425 °C
- IP 65 / IP 68



KEY DATA

Property	Value	Property	Value
Versions	MKTS-GL · MKTS-GLEx (2)	Input	1x or 2x Pt100 · Pt1000, class A
Output	4...20 mA · 0...10 V · 0.5...10.5 V · 2...10 V	Medium	-50 ... +425 °C (3)
Ambient MKTS-GL	-40 ... +85 °C (1)	Ambient MKTS-GLEx	per temperature class (1)
Marine approval	DNV TAA00003GS · EU RO MRA0000052	System pressure	250 bar, burst 375 bar
Ex, MKTS-GLEx only	II 1 G Ex ia IIC T6..T1 Ga (4)	Supply	12 ... 30 VDC · code MK resp. GN (5)

The same sensor with marine approval, the MKTS-GLEx intrinsically safe for zone 0 on top.



TECHNICAL DATA

INPUT AND OUTPUT

Sensor	1x or 2x Pt100 · Pt1000
Classes	class A — the only possibility
Sensor connection	2-, 3- or 4-wire
Maximum range	-50 ... +200 °C, smallest span 50 K
Current output	4 ... 20 mA, 2-wire, 3.8 ... 20.5 mA
Fault signal	3.6 mA low · 21 mA high
Voltage output	0...10 V · 0.5...10.5 V · 2...10 V, 3-wire
Without transmitter	resistance directly on the connector

PERFORMANCE

Accuracy -40 ... 0 °C	max. 0.1 % ± 0.0015 % FS/K
Accuracy 0 ... +40 °C	max. 0.1 % FS
Accuracy +40 ... +80 °C	max. 0.1 % ± 0.019 % FS/K
Plus	the error of the sensing element
Resolution	24 bit
Filter	5 ... 5000 ms
Switch-on delay	1 s
Setting	with the TrComm Panel software
System pressure	250 bar, burst pressure 375 bar
Medium temperature	-50 ... +425 °C (2)

SUPPLY AND ENVIRONMENT

Supply	12 ... 30 VDC, short-circuit and reverse-polarity proof
Ambient MKTS-GL	-40 ... +85 °C (1)
Ambient MKTS-GLEx	current -40...+75 · voltage -40...+50 · passive -50...+100 °C (1)
Medium MKTS-GL	-50 ... +425 °C (3)
Medium MKTS-GLEx T1 · T2 · T3	+425 · +275 · +180 °C
Medium MKTS-GLEx T4 · T5 · T6	+115 · +80 · +65 °C
Storage	-40 ... +85 °C
Condensation	< 95 % rH

MECHANICS

Process connection	none · 1/4" · 3/8" · 1/2" · 3/4" · 1" ·
	1/4NPT · 3/8NPT · 1/2NPT · 1NPT · M14x1.5
Sensor tube	Ø 6 mm, stainless steel 1.4571
Housing	stainless steel 1.4571
Connector insert	stainless steel 1.4571 — no plastic here
Mounting position	any
System pressure	250 bar, burst pressure 375 bar
Protection	IP 65 electronics · IP 68 sensor

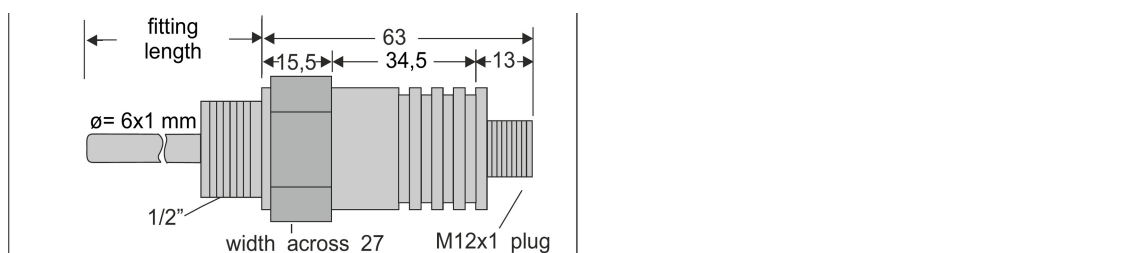
- (1) For the MKTS-GLEx the working temperature depends on temperature class and kind of output, in T5 and T6 on the dissipated power; it is not the medium temperature.
- (2) MKTS-GL and MKTS-GLEx differ in approval and working temperature; the type designation belongs in plain text in the order.
- (3) The measuring range is at most -50 to +200 °C; the medium temperature may be -50...+425 °C, for the MKTS-GLEx limited by the temperature class.
- (4) Special conditions (X) for the MKTS-GLEx: heat flowing back, impact and friction, electrostatic charging.
- (5) The order code begins with MK for the MKTS-GL and with GN for the MKTS-GLEx; every following position is the same.

ELECTRICAL CONNECTION

Four electrical connections are available: M12x1 four- and eight-pole, valve plug to EN 175301-803 type A four-pole, MIL six-pole and cable. The connector insert is always stainless steel in this version. The pin assignment depends on the number of wires.



DIMENSIONS



Dimensions in mm. Both versions have the same dimensions. Some words in the drawing are German.



CONFORMITY

Type approval DNV	TAA00003GS — both versions
Type approval EU RO	MRA0000052 — both versions
Explosion protection	MKTS-GLEEx only: II 1 G Ex ia IIC T6..T1 Ga · II 1/2 G Ga/Gb · II 2 G Gb. The MKTS-GL has no explosion protection
ATEX · IECEx	MKTS-GLEEx only: TÜV 21 ATEX 201293 X · IECEx TUN 21.0005X — the X means special conditions (4)
Protection	IP 65 electronics, IP 68 sensor — both versions

ORDER INFORMATION

Accessories

- Configurator DEV-KMA with the TrComm software. Without it the transmitter cannot be programmed; the software is included with the configurator and is also available separately on request. Without a transmitter there is nothing to configure: the sensor then sits directly on the connector.

ORDER KEY

Field	Value	Meaning
Product code	MK · GN	MK for the MKTS-GL, GN for the MKTS-GLEEx (5)
Transmitter	0 ... 4	none · 4...20 mA 2-wire · 0...10 V · 0.5...10.5 V · 2...10 V, 3-wire each
Sensing element	0 ... 3	Pt100 · Pt1000 · 2× Pt100 · 2× Pt1000 (2× only without transmitter)
Sensor connection	0 · 1 · 2	2-wire · 3-wire · 4-wire
Accuracy	0	class A — the only possibility
Fitting length	0	10 ... 300 mm in 5 mm steps, please state
Process connection	0 ... A	1/2" · 1/4" · 3/8" · 3/4" · 1" · 1/4NPT · 3/8NPT · 3/4NPT · 1/2NPT · 1NPT · M14x1.5
Electrical connection	0 ... 4	M12x1 4-pole · valve plug · MIL 6-pole · cable 2 m · M12x1 8-pole
Configuration	0 · 1	factory setting 0...100 °C · customer-specific within -50...+200 °C
Special model	0 · 1	no · yes, please state

The order code is formed from the product code and the fields of the key.

