

KINAX WT707-SSI

Transmitter for Angular Position

Accessory device in heavy-duty design

Main features

- Robust single and multi-turn rotation angle up to
 - 12 Bit single turn
 - 13 Bit multi turn
- SSI-interface binary or gray-code
- Zero setting input

Intended use

- The KINAX WT707-SSI transmitter is a precision instrument. It serves the acquisition of angular position and rotation, processing and the provision of measured values as electric output signals for the downstream device. Use the transmitter for this purpose only.
- The device is intended for installation in industrial plants and meets the requirements of EN 61010-1.
- Manufacturer is not liable for any damage caused by inappropriate handling, modification or any application not according to the intended purpose.

Technical data

General data

| | |
|---------------------------------|---|
| Power supply: | 10 – 30 V DC |
| Power consumption without load: | typ. 50 mA (at 24 V DC) |
| Output circuit: | SSI, RS 422 |
| Signal coding: | Binary code |
| Max. resolution: | 12 Bit (1 measuring step = 5'16") |
| Fault limit: | ± 1° |
| Repeatability: | 0.3° |
| Max. clock rate: | 1 MHz |
| Zero setting signal: | Zero setting: < 0.4 V, min. 2 ms Idle position: 3.3 V or open |
| Direction of rotation: | Looking at the flange in clockwise rotation increasing position values result |



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Mechanical data

| | |
|-----------------------------------|--|
| Material: | Housing: Steel Back part: Aluminium |
| Connectors: | Metal (M12/8 pin) |
| Housing protection: | IP 66 according to EN 60529 |
| Permissible static load on shaft: | Max. 1000 N (radial) Max. 500 N (axial) |

If subjected to vibration, the shaft load should be as low as possible to ensure optimum life of the bearings

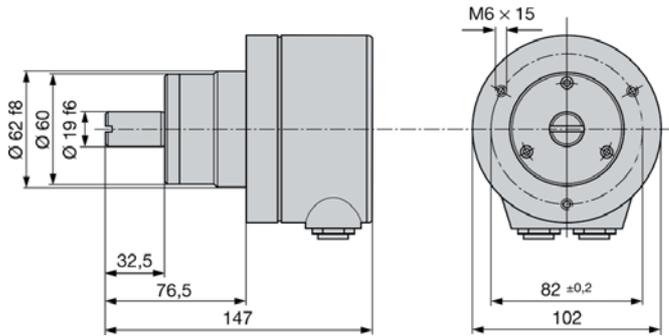
Ambient conditions

| | |
|------------------------------------|--|
| Temperature range: | – 20 to + 70 °C |
| Humidity: | Max. mean annual relative humidity ≤ 95% |
| Transport and storage temperature: | – 40 to + 80 °C |
| Operating altitude: | max. 2000 m |
| Vibration: | ≤ 300 m/s ² / 10 – 2000 Hz (according to IEC 60068-2-6) |
| Shock: | ≤ 1000 m/s ² / 6 ms (according to IEC 60068-2-27) |

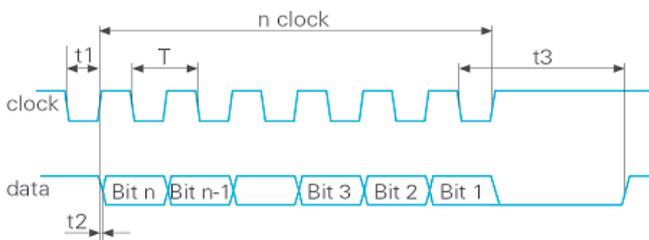
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Dimensions (without connector)



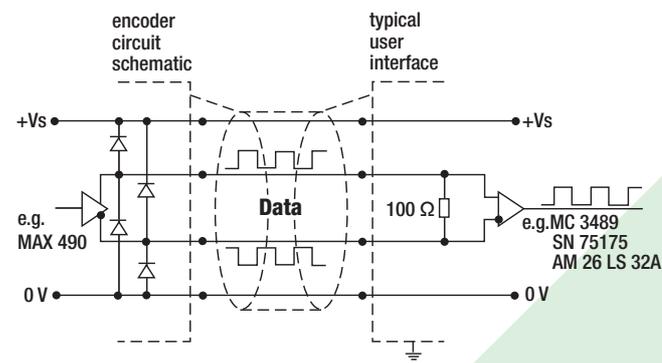
Readout of positional values



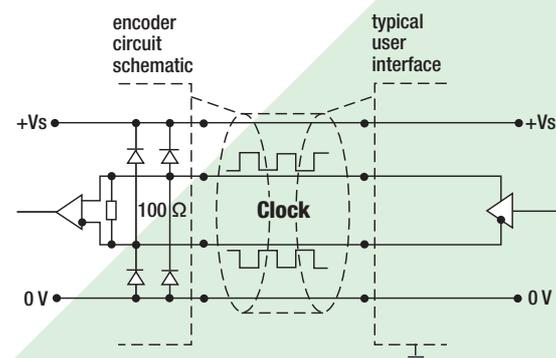
Impulse times: $T = 1$ to $10 \mu\text{s}$ / $t1 = 0.5$ to $5 \mu\text{s}$
 $t2 < 0.2 \mu\text{s}$ / $t3 = >$ 12 to $25 \mu\text{s}$

Output circuits

Data output:



Clocked input:



Pin configuration of connector

| Pin | Cable colour | Signals | Description |
|--------|--------------|---------|--------------------|
| 1 | White | 0V | Power supply |
| 2 | Brown | +Vs | Power supply |
| 3 | Green | Clock+ | Clocking lead |
| 4 | Yellow | Clock- | Clocking lead |
| 5 | Grey | Data+ | Data line |
| 6 | Pink | Data- | Data line |
| 7 | Blue | Zero | Zero setting input |
| 8 | Red | Open | Not connected |
| Shield | | | Housing |

Mounting

Three different ways to mount KINAX WT707-SSI are available.

| Mounting options for the attachment | | |
|-------------------------------------|--------------|----------------|
| Directly | Using a base | Using a flange |
| | | |

Direct mounting requires 3 M6 screws, whereas the variants using a base or a flange require 4 M8 screws and nuts. Screws are not included in the scope of delivery since their length is determined by the thickness of the attachment at the measured object, which fluctuates from case to case.

Electric connections

The transmitter is equipped with a plug to connect the electric lines. In case of customized cable assembly, use shielded lines and plugs in EMC-design exclusively. Observe assembly instructions of the plug supplier.

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Ordering informations

| Description | Order No. |
|--|-----------|
| KINAX WT707-SSI Singleturn Binary code | 161 224 |
| KINAX WT707-SSI Multiturn Binary code | 161 232 |
| KINAX WT707-SSI Singleturn Gray code | 161 240 |
| KINAX WT707-SSI Multiturn Gray code | 161 258 |

Spare parts

| Description | Order No. |
|--|-----------|
| Base To fasten KINAX WT707-SSI 3 M6 x 30 hexagon screws 3 spring washers B6 3 6.4/12.5 x 1.6 washers | 997 182 |
| Flange To fasten KINAX WT707-SSI 3 cheese head screws m I-6kt, M6 x 20 3 spring washers B6 3 6.4/12.5 x 1.6 washers | 997 190 |
| Seal Between rear part and housing as an o-ring 94.97 x 1.78 | 991 861 |



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