

ZEROMATIC

ZEROMATIC 2/1

P/N: 065-007-0400-1

Mounting 3 x M4

ZEROMATIC 2/1

P/N: 065-007-0400-2

Mounting 3 x Ø4.3

ZEROMATIC 2/2

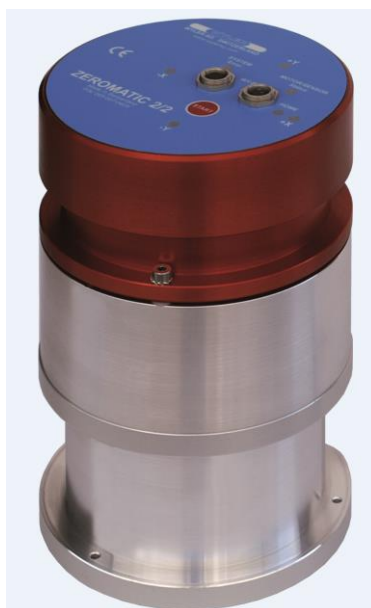
P/N: 065-007-0401-1

Mounting 3 x M4

ZEROMATIC 2/2

P/N: 065-007-0401-2

Mounting 3 x Ø4.3



The two-dimensional inclination measurement sensors ZEROMATIC 2/1 and 2/2 are perfectly suited for any application where monitoring of the smallest changes in absolute inclinations over a longer period of time is required. The extremely high accuracy is achieved by measuring and compensating for any drift of the absolute „zero“ by applying an automatic reversal measurement at defined intervals.

The **ZEROMATIC 2/2** has **two inclination sensors**. They can provide continuous values for the inclination in X and Y axes. At defined intervals it will perform a reversal measurement and compensate for any offsets.

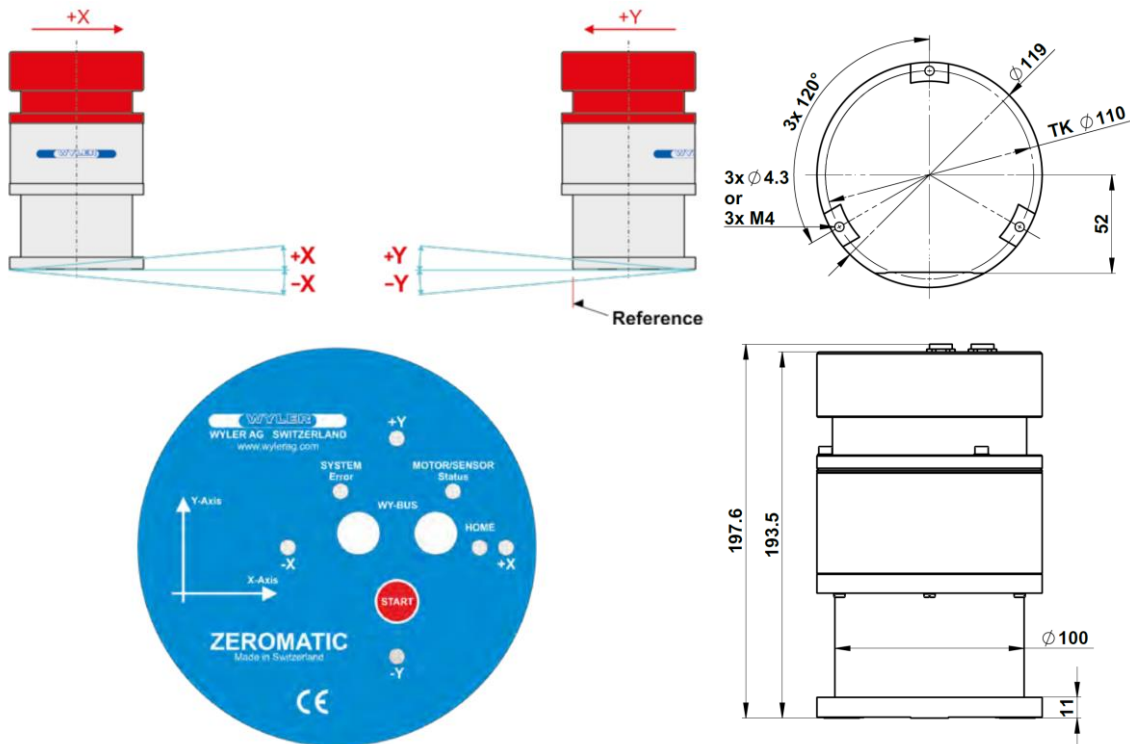
The **ZEROMATIC 2/1** has **one inclination sensor**. It can therefore only provide continuous values in either X or Y axis. At defined intervals it will perform a reversal measurement and compensate for any offset. After such a reversal measurement the sensor will provide one set of precise and absolute inclination values in the X and Y axes.

Typical applications are:

- Monitoring of critical machines
- Monitoring of buildings, bridges or dams
- Defining absolute zero references e.g. for radars

The instruments have the following features:

- High-precision mechanics for the automatic reversal measurement
- Rugged precision aluminum housing for protection against external influences
- Internal sensors with HTR compensation
- LEDs showing the status of the instrument



Specifications

Technical Specifications	Standard
Measuring range	$\pm 1^\circ$
Display range	$\pm 5^\circ$
Resolution at 0° with sampling time 0.1 sec (TA = 20°C)	5.0 arcsec
ZERO-Point limits of error after reversal measurement	± 1 arcsec
Linearity limits of error within 6 months*	0.5 % M_W
Temperature error / °C	
M_E = full scale	0.08 % M_E
Operating temperature	-10 ... 60°C
Time for one reversal measurement	< 2 min
Interval between two reversal measurements	> 2 min, definable by the user
Power supply	24 V $\pm 10\%$ DC
Power consumption	
Measuring	2.4 W
Reversal measurement	7.2 W
Material	Aluminum - anodized
Height / Diameter	198 mm / \varnothing 120 mm
Protection class	IP 50
Weight	
ZEOMATIC 2/1	4.030 kg
ZEOMATIC 2/2	4.150 kg

M_W = measured value

M_E = full-scale

* typical value

RECOMMENDATION FOR THE MOUNTING OF THE ZEROMATIC

Usually when measurements are done on buildings a rectangular mounting bracket is required. With the ZEROMATIC instruments high precision inclination measurements can be done. It is however important to consider the following recommendations:

TEMPERATURE

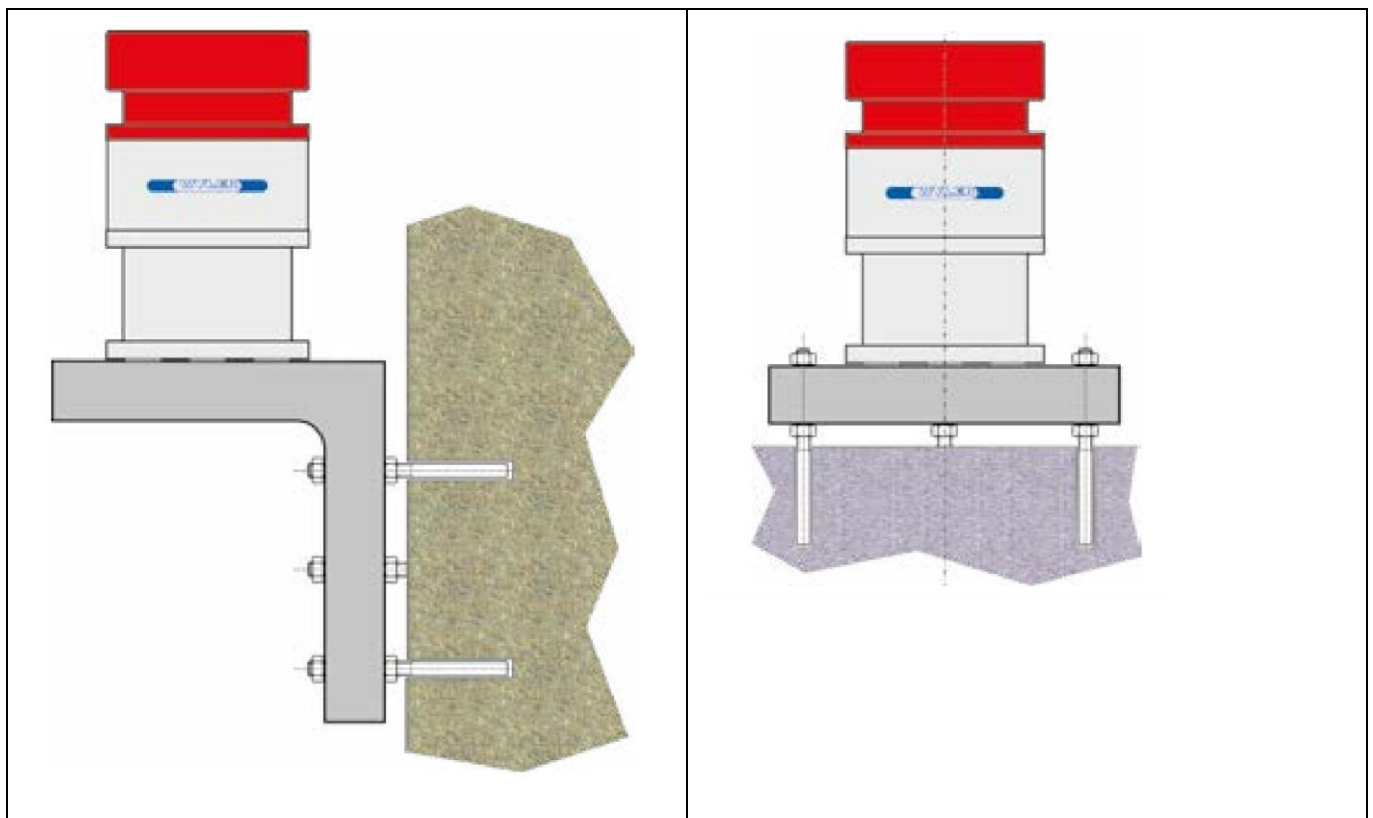
Temperature changes may have a great influence on the measured results. All around the ZEROMATIC the same temperature must be applied.

MECHANICAL TENSIONS

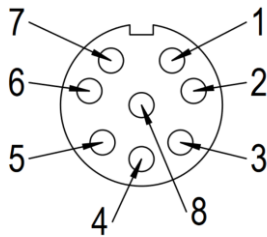
Mechanical tension between the ZEROMATIC and the mounting bracket and/or the anchorage must be avoided, as these tensions are often the cause of unstable values.

THREE-POINT MOUNTING / DESIGN

Whenever possible, use a three-point mounting jig. Use the same geometry and homogenous material all over. Make a „center symmetrical“ design.



Pinout Port



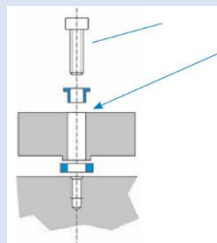
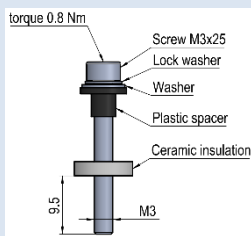
Pin	Name	Description
1	+24 V	+ 24 V DC power
2	GND	Ground
3	--	Reserved (do not connect)
4	RTA	WYLER RS485 channel A
5	RTB	WYLER RS485 channel B
6	--	Reserved (do not connect)
7	--	Reserved (do not connect)
8	--	Reserved (do not connect)

Please Note:

To lock the connectors, the threaded ring is tightened until it is 'finger-tight' (approx. 50 Ncm).

Options

P/N: 065-007-0400-IS



Insulation set for ZEROMATIC sensor consisting of finely lapped ceramic discs, M3 screws, spring washer, washer and plastic spacer.

ZEROMATIC to be used:

ZEROMATIC 2/1 P/N: 065-007-0400-2

ZEROMATIC 2/2 P/N: 065-007-0401-2

Or the M4 threads must be drilled out to \varnothing 4.3 mm.

P/N: 065-007-0001

P/N: 065-007-0003



wylersOLID fully assembled with a new ZEROMATIC 2/2 sensor
wylersOLID fully assembled with a customer owned ZEROMATIC sensor