

NM1-ISU



Single Axis Industrial Tilt Measuring System with RS232-Data Interface

- Supply voltage 22 ... 26 VDC
- Adjustable measuring range up to 360°
- Accuracy $\pm 0.2^\circ$
- RS232 Data Interface, optionally analogue output 4 ... 20 mA)

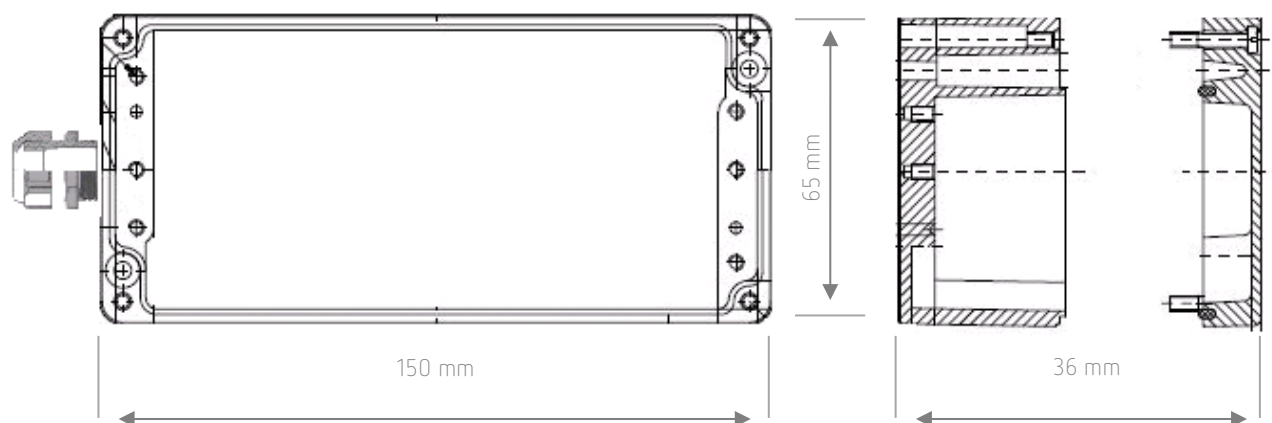
The single axis industrial tilt measuring system NM1-ISU is designed for precise tilt measurement in X axis and intended for the side wall mounting. The inclination ranges are selectable via an internal DIP switch. The measuring data are output via a RS232 data interface. Optional an additional scalable analogue output 4... 20 mA is available.

The tilt measuring system is built-in into a robust EMC-safe aluminium die-cast enclosure (IP66), which is suited for applications in rough and industrial environments.

Technical Data

Number of measuring axes:	1
Supply voltage:	22 ... 26 VDC, electronics protected against voltage reversal
Power consumption:	ca. 3 W
Data Interface/Analogue output/ Power rating:	RS232 Data Interface, 4 ... 20 mA (Option ...-420..-), max. 500 Ohm
Measuring frequency:	0.4 Hz
Adjustable measuring range	Measuring range about internal DIP-Switch $\pm 10^\circ$, $\pm 20^\circ$, $\pm 30^\circ$, $\pm 45^\circ$, $\pm 60^\circ$, $\pm 90^\circ$, $\pm 120^\circ$, $\pm 180^\circ$ Inclination
Accuracy:	$\pm 0.2^\circ$
Repeatability:	$\pm 0.1^\circ$
Hysteresis:	$\pm 0.1^\circ$
Temperature Error:	$\pm 0.015^\circ / ^\circ\text{C}$
Electrical connection:	Standard: 3 m connecting cable (optionally are cable versions up to 10 m available) Type of cable: Unitronic FD CP plus 3 x 2 x 0.25 mm ²
Enclosure:	EMC-safe aluminium die-cast enclosure
Protection-class:	IP66
Dimensions (W x H x D):	150 x 65 x 36 mm (without EMC-cable gland)
Weight:	Approx. 630 g with 3 m connecting cable, electronics not moulded in casting compound Approx. 1150 g with 10 m connecting cable, electronics not moulded in casting compound
Temperature, storage:	-20 ... +60 °C
Temperature, operating:	-20 ... +60 °C

✚ Enclosure Dimensions



✚ Terminal Pin Assignment

The connection of the measuring system is done via a connecting cable (Unitronic-FD CP plus, 3x2x0.25mm², core insulation PUR mixture). The cable length varies according to type and version of the inclination measurement system. The cable shield is connected to the enclosure.

Terminal	Description	Cable colour
1	Supply voltage	White
2	GND Supply voltage (GND Data Interface RS232)	Brown
3	Data Interface RS232 (9600 Baud, 8N1)	Pink
4	Connection for external control signal for zero point signal	Grey
5	GND analogue output	Green
6	Analogue output 4 ... 20 mA	Yellow
	Screen	Cable Screen/blank

Note: The cable screen is connected via the EMC cable gland. The cable screen has to be connected to earth ground

✚ Ordering Information

NM1-ISU-IP-3L-24...	Single axis industrial tilt measurement system, 3-Wire-Technologie, Supply voltage 22 ... 26 VDC
...-RS232-...	Measuring value issue about Data-Interface RS232
...-420-...	Measuring value issue about Data-Interface RS232, with additional scalable analogue output 4...20 mA
...-x-...	Cable length in m
...-V	Electronic moulded in casting compound against humidity and vibrations

Note: Please specify the desired cable length (in meters) when ordering

Example: Cable length 3m → Order description ...-3m

✚ Alignment/Calibration

A calibration with a traceable factory calibration certificate is available on request and for an extra charge.

✚ Customized Requirements

Technical modifications according to customized requirements are available on request. Moreover, we deliver customized special solutions for a lot of measuring tasks in the section pressure, force, position and tilt measuring using our measuring transducers. Do not hesitate to contact us.