







Single Axis Industrial Tilt Measuring System with RS232-Data Interface

- Supply voltage 22 ... 26 VDC
- Adjustable measuring range up to 360°
- Accuracy ±0.2°
- 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.

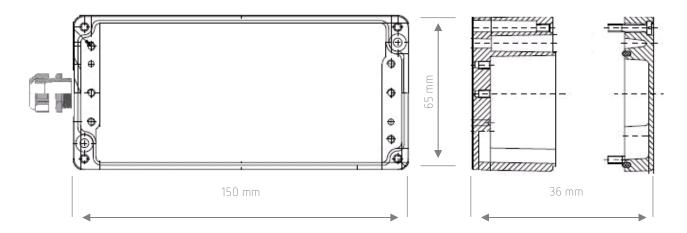
The tilt measuring system is built-in into a robust EMC-safe aluminium die-cast enclosure (IP66), which is suited for applications in rough and industrial environments.

Number of measuring axes:	1
Supply voltage:	22 26 VDC, electronics protected against voltage reversal
Power consumption:	ca. 3 W
Data Interface/Analogue output/	RS232 Data Interface,
Power rating:	4 20 mA (Option420), max. 500 Ohm
Measuring frequency:	0.4 Hz
Adjustable measuring range	Measuring range about internal DIP-Switch ±10°, ±20°, ±30°, ±45°, ±60°, ±90°, ±120°, ±180° Inclination
Accuracy:	±0.2°
Repeatability:	±0.1°
Hysteresis:	±0.1°
Temperature Error:	±0.015°/°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 mm²
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

# 💶 Technical Data



### Enclosure Dimensions



### 🖾 Terminal Pin Assignment

The connection of the measuring system is done via a connecting cable (Unitronic-FD CP plus, 3x2x0.25mm<sup>2</sup>, 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-Technolgie, 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 420 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  $3m \rightarrow 0$ rder 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.

Due to continuous product development, ALTHEN and partners reserve the right to vary the foregoing details without prior notice.

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