



NSZ2-M2

Dual axis industrial tilt switching system with 4 switching contacts and switching delay

- ▣ Supply voltage 18 ... 28 VDC
- ▣ Measuring range up to $\pm 30^\circ$
- ▣ Switching accuracy max. $\pm 0.1^\circ$
- ▣ Output 4 potential-free switching contacts (max. 30 VDC/0.5 A)



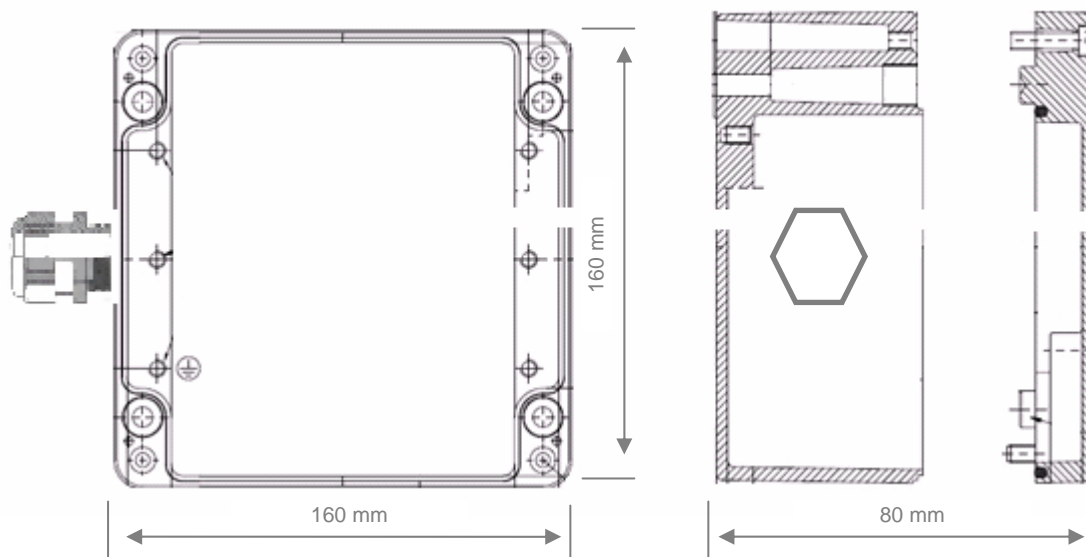
The dual axis industrial tilt switching system is the combination of MEMS tilt sensor and an electronic board, which is adapted to the sensor. The measuring system is designed for precise tilt measuring in X axis and Y axis for horizontal mounting. The inclination measuring range to be monitored depends on version in the range of $\pm 3^\circ$... $\pm 30^\circ$. The set-points can be adjusted with internal potentiometers for both directions. The relays have 4 adjustable threshold value set-points as well as potential-free switching contacts (max. 30 VDC/0.5 A).

The tilt switching system is installed in a robust EMC-safe aluminium die-cast enclosure (IP65) suited for applications in harsh and industrial environments.

▣ Specifications

Number of measuring axes:	2	
Supply voltage:	18 ... 28 VDC	Electronic protected against voltage reversal
Power consumption:	approx. 4 W	
Test output:	2.5 ... 5.5 V, not short-circuit-proof	
Frequency range (-3 dB):	10 Hz	
Preferred measuring ranges:	$\pm 3^\circ$, $\pm 5^\circ$, $\pm 10^\circ$, $\pm 15^\circ$, $\pm 30^\circ$, other ranges on request	
Number of relay switching contacts/ switching delay:	4 / 1 s	
Max. power rating of relay:	30 VDC/0.5 A	
Switching accuracy at 23 °C:	max. $\pm 0.1^\circ$	
Electrical connection:	M16 x 1.5 EMC-cable gland on internal terminal block	
Enclosure:	EMC-safe aluminium die-cast enclosure	
Protection class:	IP65	
Dimensions (W x H x D):	160 x 91 x 160 mm (without EMC-cable gland)	
Weight:	2000 g	
Temperature, storage:	-30 °C ... +60 °C	
Temperature, operating:	-20 °C ... +50 °C	

▣ Dimensions



▣ Terminal Wiring

Electrical connections are made via cable gland on terminal block located in the inside of the enclosure. The maximum cable cross section amounts 2.5 mm². Although this system is designed with a high degree of immunity to Electro Magnetic Interferences (EMI), proper installation and wiring methods must be followed to ensure compatibility in each application.

Terminal	Description	Terminal	Description
1	Supply voltage	10	Test signal Y axis
2	GND Supply voltage	11	Set point SP3 N/O contact +X
3	Set point SP1 N/O contact +Y	12	Set point SP3 COM +X
4	Set point SP1 COM +Y	13	Set point SP3 N/C contact +X
5	Set point SP1 N/C contact +Y	14	Set point SP4 N/O contact -X
6	Set point SP2 N/O contact -Y	15	Set point SP4 COM -X
7	Set point SP2 COM -Y	16	Set point SP4 N/C contact -X
8	Set point SP2 N/C contact -Y	17	GND Test signal X axis
9	GND Test signal Y axis	18	Test signal X axis

▣ 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 sections pressure, force, position and tilt measuring using our offered measuring transducers. Do not hesitate to contact us.

▣ Order Description

NSZ2-M2-IP-24E-... Dual axis industrial tilt switching system for precise tilt monitoring with 4 switching contacts and switching delay

...-xx-... Tilt measuring range (see notice below)

...-4G 4 adjustable threshold value switching points as well as potential-free switching contacts (max. 30 V/0.5 A)

Note: Please add the desired tilt measuring range as shown below:

Example: Tilt measuring range $\pm 15^\circ$ → NSZ2-A2-IP-24E-B15-4G

Due to continual product development, ALTHEN reserves the right to vary the foregoing details without prior notice.

NSZ2-M2-en, © ALTHEN GmbH 11/2011, rev. 1.01

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