



NSS1-IP-24E-xx-2G

Single Axis Industrial Tilt Switching System with 2 Switching Contacts

- Supply voltage 18 ... 28 VDC
- Measuring range up to $\pm 45^\circ$ or 0 ... 90°
- Switching accuracy max. $\pm 0.15^\circ$



The single axis industrial tilt switching system exists by the combination of a non-contact working inclination sensor of the type AccuStar™ and an electronic-board, which is adapted to the sensor. The measuring system is designed for precise tilt measurement in x-axis and is to be mounted vertically. The inclination measuring range, that is to be monitored, can be, depending on version, in the area of $\pm 3^\circ$... $\pm 45^\circ$ or 0 ... 30° up to 0 ... 90°. The relays have potential-free switching contacts (max. 30 VDC / 0.5 A).

The threshold value set points can be adjusted about the whole tilt measuring range.

The tilt switching system is built-in in a robust EMC-safe aluminium diecast enclosure (IP65), which is suited for the application in rough and industrial surroundings.

Technical Data

Number of measuring axis:	1	
Supply voltage:	18 ... 28 VDC	Electronic protected against voltage reversal
Power consumption:	ca. 3 W	
Test signal:	2 ... 10 V	
Frequency range (-3 dB):	0.5 Hz	
Preferred measuring range:	$\pm 3^\circ, \pm 5^\circ, \pm 10^\circ, \pm 15^\circ, \pm 20^\circ, \pm 30^\circ, \pm 45^\circ$ 0 ... 10°, 0 ... 30°, 0 ... 45°, 0 ... 60°, 0 ... 90° Other ranges on request	
Number of relay switching contacts:	2	
Max. Power rating of relay:	30 VDC / 0.5 A	
Switching accuracy at 23 °C:	max. $\pm 0.15^\circ$	
Electrical connection:	M16 x 1.5 EMC-cable gland on internal terminal block	
Enclosure:	EMC-safe aluminium-diecast enclosure (IP65)	
Dimensions (B x H x D):	175 x 80 x 57 mm (without cable gland)	
Protection class:	IP65	
Weight:	1000 g	
Temperature, storage:	-20 °C ... +60 °C	
Temperature, operating:	-20 °C ... +60 °C	

Further specifications see datasheet AccuStar™

Order Description

NSS1-IP-24E-... 1-axis industrial tilt switching system for precise tilt monitoring with 2 adjustable threshold value set points as well as potential-free switching contacts

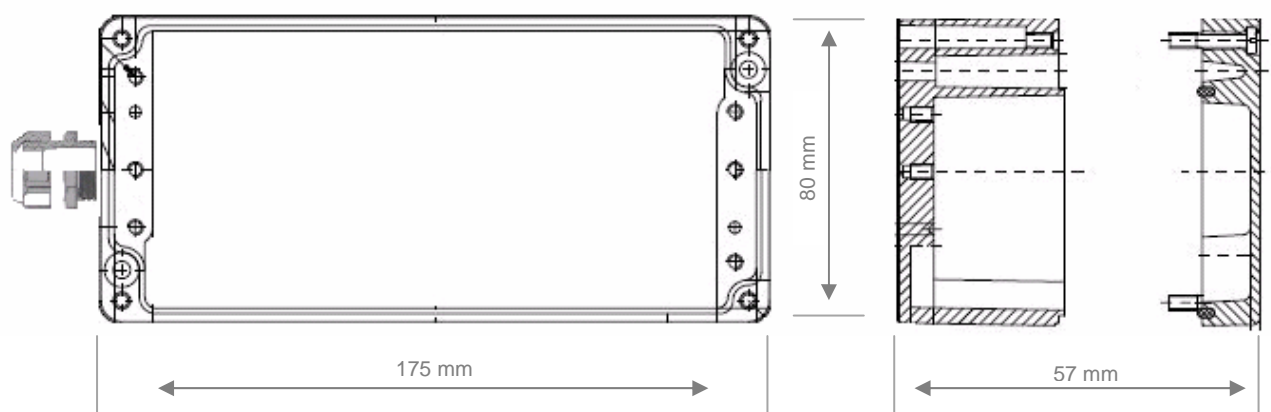
...-xx-... Tilt measuring range (see notice below)

...-2G 2 adjustable threshold value switching points as well as potential-free switching contacts (max. 30 V/ 0.5 A)

Notice: With order, the desired tilt measuring range is to be given as the example shows below.

Example: Tilt measuring range $\pm 45^\circ$ → NSS1-IP-24E-B45-2G
Tilt measuring range 0 ... 60° → NSS1-IP-24E-060-2G

Enclosure 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	6	Set point SP1 N/C contact -x-axis
2	GND Supply voltage	7	Set point SP1 COM -x-axis
3	Set point SP1 N/C contact +x-axis	8	Set point SP1 N/O contact -x-axis
4	Set point SP1 COM +x-axis	9	Test signal GND
5	Set point SP1 N/O contact +x-axis	10	Test signal X-axis

Alignment/Calibration

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

Customized Requirements

Technical modification according customized requirement are possible on request. Moreover, we deliver customized special solutions for a lot of measuring tasks in the section pressure-, force-, distance - and tilt-measuring using our offered measuring transducer. Do not hesitate to contact us.

Our policy is to improve specification of our products continuously, so technical and production details can be changed without any notice.