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AXISENSE-1 SERIES VOLTAGE TILT SENSOR

SPECIFICATIONS

- · Single axis tilt sensor
- Measurement ranges ±180°
- Voltage output

FEATURES

- 8 to 30 VDC supply voltage
- Up to ±90 degree tolerance on 2nd axis
- Digital signal processing includes
 - o filter (e.g. vibration damping)
 - temperature compensation
- 12-bit resolution
- 100 Hz refresh rate
- -40 °C to 85 °C temperature range
- Accuracy typically
 - o 0.6° | -40 °C to 85 °C
 - o 0.2° | 25 °C

APPLICATIONS

- Mobile and stationary cranes
- Lift platforms
- Building control
- Weighing systems
- Truck chassis levelling
- Vehicle applications
- Road construction machines

The **AXISENSE-1 Series tilt sensor** is mainly developed with focus on platform leveling, dynamic engine management, tip-over protection and tilt alarm.

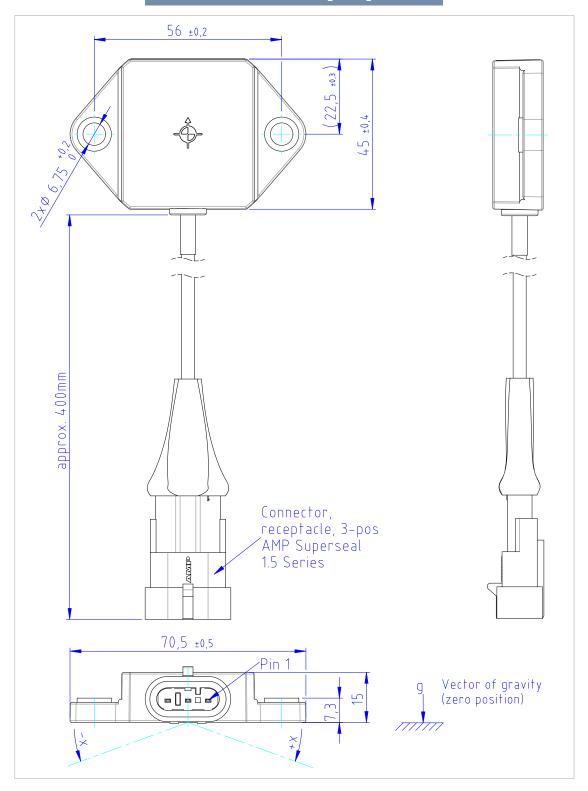
A fast response time and good accuracy makes this device the ideal choice for mobile leveling applications. It features digital signal processing including temperature compensation.

The integrated filter improves performance and allows using the sensor in many noisy environments (e.g. vibrations).

The tilt sensor includes a powerful digital signal processing that offers various filteralgorithms and allows customer specific OEM solutions. It is possible to adjust the sensor to different environments yielding an optimized performance. Customization can also be made in terms of angular range and connectivity, i.e. cable and connector.

The PA6.6 housing is very compact in size and has compression limiter bushings for safe installation of the sensor. It is compatible with oil, grease and fuel also. Therefore it is frequently used for engine and vehicle applications.

Dimensions [mm]



PARAMETERS

Parameter	Value	Comment	
Range	±180°	Single axis sensor; other axis has to be kept in a ±90° range	
Accuracy, typ.	0.6°	T= -40 °C to +85 °C	
Accuracy, typ.	0.2°	T= 25 °C	
Resolution	12 bit		
Refresh rate	100 Hz		
Startup time	<1 s	Valid output signal	
Supply/excitation voltage	8 to 30 V	Direct current (DC) stabilized	
Supply current, typ.	15 mA	No load	
Output	0.5 to 4.5 V	-180° to 180°, x-direction only	
Connector	AMP Superseal 1.5-Series, 3-pos. cap housing TE Connectivity part-no. 282105-1	Requires 3-pos. plug housing AMP Superseal 1.5-Series at connecting harness, TE Connectivity part-no. 282087-1	
Cable	3 wire 0.25 mm², outer diameter Ø3.9mm	PUR, length incl. connector 400 mm, full temperature range, flexible	
Operation temperature range	-40 °C to +85 °C		
Storage temperature range	-40 °C to +85 °C		
Weight, typ.	60 g		
Dimensions	70.5 mm x 45 mm x 15 mm	WxDxH	

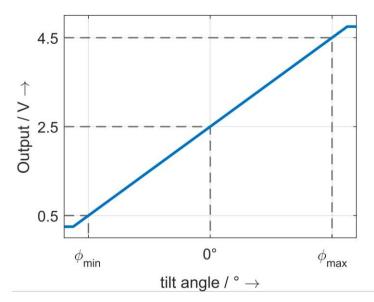
Applicable **Mounting Recommendations for Sensor Modules of AXISENSE-Series** can be downloaded from te.com Resources section as Document Number 114-160013.

CONNECTOR PINNING

Pin	Function	Description	
1	Vcc	8 to 30 V supply input (+)	
2	GND	GND	
3	Output	0.5 to 4.5 V, X axis output	



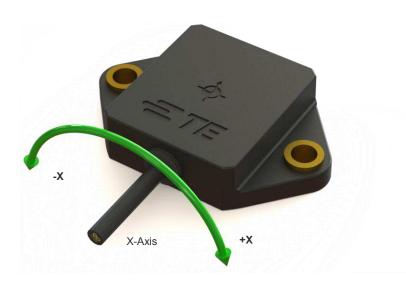
TRANSFER CHARACTERISTIC



Part-No.	$oldsymbol{\phi}_{min}$	$oldsymbol{\phi}_{max}$
AXISENSE-1-006	-180°	180°

Linear transfer characteristic between $oldsymbol{arphi}_{ ext{min}}$ and $oldsymbol{arphi}_{ ext{max}}$

FUNCTION VIEW



This AXISENSE-1 series voltage tilt sensor is designed for floor mount application.

AXISENSE-1 SERIES VOLTAGE TILT SENSOR

ORDERING INFORMATION

PART NUMBER SHORT DESCRIPTION

AXISENSE-1-006 Single axis tilt sensor, floor mount, **angular range ±180°**, (TCPN G-NSDOG1-006) supply 8 to 30 VDC, output voltage 0.5 to 4.5 V

For other orientations, measurement ranges or supply voltages please contact TE Connectivity sales representatives.

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