

SPECTROTILT™ Dual Axis 360 Degree Inclinometer

The SPECTROTILT™ CANbus Dual Axis 360 Deg Inclinometer offers unparalleled accuracy and value. By combining a MEMS sensor, with custom digital electronics and software, Spectron has successfully spanned the gap between cost and performance. The sensor supports 11 different orientations* to accommodate whichever position the sensor is mounted. ESD and EMI protection, aluminum housing, all in a splash and dust proof housing.

Applications

- Construction Equipment
- Aerospace
- Antenna Position
- Oceanographic



General Specifications

Input Voltage.....+11 to +32Vdc (unregulated)
 Input Current.....65mA

Tilt Range:.....0-.360 deg / +/-180 deg
 Accuracy:.....+/-0.3 deg
 Resolution:.....0.01 deg.
 Repeatability:.....0.03 deg

Temperature Range

- operating -40° to +80° C
- storage -55° to +125° C

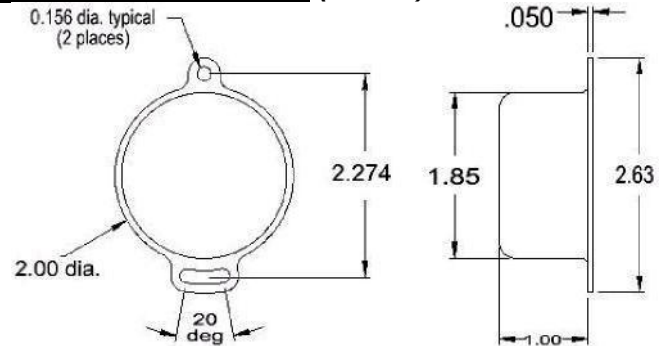
Start-up Time <3 second
 Max Transmission.....200 Meters
 Transmission Rate.....250K Bits

Output.....CANbus
 CAN Interface.....CANopen DS301 and DSP410
 Number of PDO's.....2
 Heartbeat.....Yes
 Number of SDO's.....1 Rx / 1 Tx
 Variable PDO Mapping.....Yes
 Identifier.....11-Bits CAN Identifier
 Default Node ID.....15

CANopen Features:

Device Profile.....Cia standard 410 version 1.2
 NMT master.....No
 NMT slave.....Yes
 PDO modes.....Synchronous, Asynchronous

Physical Dimensions (inches)



Electrical Connections

CANbus.....Tyco1838275-3 connector or equivalent provided
 Cable length.....2 feet
 Termination resistors. Consult factory for options
 Status:.....Yellow LED...Power, no connection to CANbus
 Green LED....Power, with connection to CANbus

Ordering Information

Part Number: SSY2360

Consult factory for further technical information!

Example of Sensor Orientation (vehicle)

The sensor supports 11 different orientations depending on where the Inclinator is mounted.

<u>INDEX</u>	<u>Sub-Index</u>	<u>Type</u> (Value: see table below)
2202h	00	byte

<u>Value</u>	<u>Unit Position</u>	<u>Mounting Eyelet</u>
0	Top of vehicle	Front
1	Top of vehicle	Right
2	Bottom of vehicle	Front
3	Bottom of vehicle	Right
4	Right hand side of vehicle	Front
5	Right hand side of vehicle	Top
6	Left hand side of vehicle	Front
7	Left hand side of vehicle	Top
8	Front of vehicle	Top
9	Front of vehicle	Right
10	Back of vehicle	Top
11	Back of vehicle	Right

Sensor mapping for default setting:

<u>Index</u>	<u>Sub-Index</u>	<u>Object</u>	<u>Type</u>
2200h	04h	Temperature	Integer 16
2203h	00h	Node Identifier	Integer 16
	65h	Emergency COB	Integer 16
	66h	Heartbeat	Integer 16
2202h	00h	Sensor orientation	See Below
6010h	00h	Longitudinal	Integer 16
6020h	00h	Lateral	Integer 16

Example of Setup

```
// start heart beat 200ms
WriteObjectDirectory(0x1017.0.200)
// send roll every 2 sync
WriteObjectDirectory (0x1800.2.2)
// send pitch every 3 sync
WriteObjectDirectory (0x1801, 2, 3)
// Place unit into operating mode
// Start sending sync message
0x80
```

Example to Read Lateral Slope

60F	40 20 60 00	master
58F	42 20 60 00 61 46 00 00	Slave



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Specifications are subject to change without notice!