DIS sensors

NEW:
Dynamic Inclinometer

Reliable angle measurement under dynamic conditions

Vibration and dynamic movement causes an inclinometer to transmit 'dirty' angle measurements. Filtering or gyro-compensating to obtain a 'clean' signal increases system response time, cost and complexity. Now there's a solution: based on MEMS technology, the new dynamic inclinometers from DIS Sensors combine both accelerometer and inertial angle measurement on three axes simultaneously in a smart, all-in-one sensor. Customisable built-in algorithms filter out signal noise, so that only clean, gyro-compensated angle data is transmitted, as a separate CANopen object per axis.

DIS makes sense!

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Characteristics

- Gyro-compensated MEMS-based inclinometer
- Measurement range 1 axis up to 0 - 360°, 2 axes up to ±90°
- CANopen interface (data and configuration)
- Advanced hardware and software technology
- User friendly configuration tool
- Zero point/preset configuration by CANopen
- Compact, robust sensor housing
- UL approval
- Internal CANbus termination resistor on/off by CANopen

Applications

- Agricultural and forestry machinery
- Construction machinery (platform lifts/cranes/excavators/ wheel loaders/concrete pumps)
- Internal transport (AGV's/order pickers/forklifts)
- Production machines (robots/palletizers)

General	1 axis	2 axis
Measurement range	up to 0 - 360	±30°, ±90°
Resolution	0,01°	
Static accuracy	± 0.1° typ.	
Dynamic accuracy	± 0.5° typ.	
Bandwidth	0 - 100 Hz	
Temperature coefficient (zero point)	to be defined	
Sampling rate	1000Hz	
Interface		
CANopen	Physical layer: ISO 11898-1 & ISO 11898-2 (CAN 2.0 A/B) Application layer: CiA301 V4.2.0 (EN 50325-4) Device profile: CiA410 DSP 2.0.0 for inclinometers *Optional* - TPDO-mapping: inclination + 3-axes acceleration & gyroscope	
Programmable parameters	Sync mode, event mode, heartbeat, node ID, application profiles, filtering, baud rate, TPDO-mapping	
Electrical parameters		
Supply voltage	10 – 32 V DC	
Current consumption	≤ 50 mA	
Mechanical parameters		
Connector	Default M12 5-pole male	
Level of protection	IP67 & IP69K	
Operating/storage temperature	-40 °C ... +80 °C	
Dimensions/weight	60x50x27 mm/approx. 110 gram	
Housing material	Reinforced plastic injection molded housing with stainless steel fibers for effective EMI shielding	
Options	2nd M12 (female): internal T-junction, IP68, stainless steel housing, cable gland output	

Order information

Model	Order code	Description
QG65D-KIXv-360H-CAN-CM-UL	12609	Dynamic inclinometer 1-axis vertical mounting, 360°, interface CANopen, with 1x M12 5-pole male
QG65D-KIXv-360H-CAN-CFM-UL	12610	Dynamic inclinometer 1-axis vertical mounting, 360°, interface CANopen with 1x M12 5-pole male with extra M12 5-pole female (internal T-junction)
QG65D-KDXYh-090H-CAN-CM-UL	12611	Dynamic inclinometer 2-axes horizontal mounting, ±90°, interface CANopen, with 1x M12 5-pole male
QG65D-KDXYh-090H-CAN-CFM-UL	12612	Dynamic inclinometer 2-axes horizontal mounting, ±90°, interface CANopen with 1x M12 5-pole male, with extra 1x M12 5-pole female (internal T-junction)
QG65D-KDXYh-030H-CAN-CM-UL	12698	Dynamic inclinometer 2-axes horizontal mounting, ±30°, interface CANopen, with 1x M12 5-pole male
QG65D-KDXYh-030H-CAN-CFM-UL	12699	Dynamic inclinometer 2-axes horizontal mounting, ±30°, interface CANopen with 1x M12 5-pole male, with extra 1x M12 5-pole female (internal T-junction)

Contact your local distributor for more information, see www.dis-sensors.com/our-distributors.