

DWS-CAN

Rotation Sensor with CAN Interface



Precise rotation angle measurement

The DWS-CAN single axis precision fibre optic gyro (FOG) by GeneSys is used for the continuous tracking of rotational motions. It is exceptionally well suited for demanding stabilisation tasks and for exact dynamic angular orientation measurement. Easy integration in civil and industrial applications is provided by the standardized CAN interface.

Range of applications

- ▲ Antenna stabilisation
- ▲ Torsion monitoring
- ▲ Camera stabilisation
- ▲ Crane control
- ▲ Platform alignment
- ▲ Construction machinery control
- ▲ Machine alignment
- ▲ Structural monitoring
- ▲ Reference yaw rate sensor
- ▲ Automated guided vehicles

Technical data and properties

Features

- ▲ Measurement of rotational motion
- ▲ Simultaneous data output of rotation angle and angular rate
- ▲ Earth rotation rate and angular offset compensation capability
- ▲ Easy operation via CAN interface
- ▲ Robust and maintenance-free fibre optic technology without moving parts
- ▲ Wide range power supply input
- ▲ Internal temperature compensation

Gyro

- ▲ Type: maintenance-free fibre optic gyro
- ▲ Measurement range: selectable ± 20 , 100 or 327 °/s
- ▲ Bias stability: better than 6 °/h, typically 1 °/h (selected accuracy available)
- ▲ Bias stability /short term): typically 0,2 °/h
- ▲ Non-linearity: better than 0,1 %, typically 0,06 %
- ▲ Gyro noise: better than 0,6 % \sqrt{h} , typ. 0,2 % \sqrt{h}
- ▲ Gyro bandwidth: 8 kHz

Complete system

- ▲ Processor core: 16 Bit DSP, 80 MHz clock frequency
- ▲ Sensor error compensation: temperature
- ▲ Interface: CAN-Bus CAN 2.0b, 1 Mbaud (optional 500 kbaud)
- ▲ CAN-Identifier: Standard (11 bit) selectable from 50d to 1499d
- ▲ Data output: Angular rate, Angle, Status
- ▲ Data output rate: 10 - 1000 Hz selectable
- ▲ Measurement range (angle): 0...360 ° or -180 ... +180 ° selectable
- ▲ Resolution (angle): 0.01 °
- ▲ Resolution (angular rate): 0.001 °/s
- ▲ Parameter input (via CAN): Earth rotation rate and angle offset
- ▲ Power supply: 9 - 36 Volt DC
- ▲ Power consumption: max 300 mA
- ▲ Weight: 465 g
- ▲ Housing protection class: IP 54
- ▲ Dimensions (W x L x H): 111 x 92 x 52 mm (without flange)
- ▲ Dimensions (W x L x H): 111 x 108 x 60 mm (with flange)
- ▲ Shock: 100 g; 11 ms / 800 g; 0.5 ms (18 bumps, 6 directions)
- ▲ Vibration: 0.1 g/Hz, 10 Hz ... 2 kHz
- ▲ Operation temperature range: -20 to + 65 °C
- ▲ Storage temperature range: -40 to + 70 °C



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