CW-311NG

Wheel Speed Simulation

The CW-311NG wheel speed sensor simulation simulates the active current-modulated wheel speed sensors used in the automotive industry. The CW-311NG can simulate a speed range from 0.1 Hz to 5000 Hz in three different operating modes. It is used, for example, in hardware-in-the-loop (HiL) test environments for control units.

The CW-311NG receives real-time and control data via the integrated CAN bus and uses it to generate signals from wheel speed sensors. The simulation data can be transferred to the CW-311NG from any source via the CAN interface, for example from an automation computer that plays back a realistic track model.

The wheel speed information is output via a current interface. The CW-311NG is possible to simulate sensors from different manufacturers. Various parameters such as air gap reserve error, direction of rotation, installation position signal and more can be dynamically influenced conveniently via a web interface for configuration.

FEATURES

- Simulation from 0.1 Hz - 5000 Hz
- Parameters such as air gap, direction of rotation or installation position configurable
- 3 operating modes (PWM simple, PWM, AK) selectable
- Configuration via web interface over Ethernet
- Functional galvanic isolation between control unit and channels
- Control via CAN bus
- Simple expandability and scalability
- Robust desktop housing

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WHEEL SPEED SIMULATION

Sensor types	Active current-modulated wheel speed sensors
Protocol	PWM simple, PWM, AK
Signal form PWM simple	Rectangular pulse with 50% duty cycle
Signal form PWM	Rectangular pulse with pulse width modulated data
Signal form AK	Speed pulse and Manchester-coded data
Current	7 mA, 14 mA, 28 mA (other currents on request)
Supply voltage sensor channels	5 VDC to 48 VDC

CAN-INTERFACE

Quantity	1
Type	ISO 11898-2 (Highspeed)/ISO 11898-1:2015 (CAN-FD) Hardware preparation
Data rate	Software configurable up to 1 Mbit/s (high speed)
ID	Software configurable
Connection	Phoenix Contact MC 1.5/2-G-3.81

SUPPLY

Supply Voltage	9 VDC to 30 VDC
Current consumption	160 mA at 12 VDC
Connection	Phoenix connector MC 1.5/3-G-3.81
Galvanic isolation	between control unit and channels (functional)

ENVIRONMENT

Temperature range operation	0°C bis +40 °C
Temperature range storage	-20 °C bis +70 °C
Relative humidity	35 % to 85 % without condensation

GENERAL INFORMATION

Housing	Robust desktop housing
Dimensions (LxWxH)	106 mm x 150 mm x 32 mm
Weight	420 g

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