

Steering Wheel Torque and Angle Transducer

Model SW-SR2

- Accurately measures steer effort torque and steering wheel angle
- Optional 100, 200, 300 N · m torque capacity
- Mounts to OEM steering wheel or steering shaft
- Maintains normal steering function**
- Simple suction cup mounting of anti-rotation steer angle restraint
- Analog output for torque and steering angle
- CAN output for torque, steering angle and steering rate
- ± 1440 degree Steering Angle Encoder



Description

The *SW-SR2 Steering Wheel Torque and Angle Transducer* is capable of measuring the steering wheel torque, steering angle, and steering velocity on a full range of vehicles. *SW-SR2* has a ± 1440 degree multi-turn encoder and both Analog and CAN signal outs.

The *SW-SR2* has the option of mounting to the existing vehicle steering wheel or to replace the existing steering wheel by mounting directly to the splined steering shaft. The airbag should be disabled during *SW-SR2* testing. The *SW-SR2* has convenient mounting of the anti-rotation restraint of the steering angle sensor. The anti-rotation restraint for the steering angle sensor can be easily mounted to the windshield of the vehicle with the provided suction cup restraint.

The *SW-SR2* is a strain gauge based sensor made from high strength stainless steel and is fully temperature compensated. The steering angle signal is generated from a high resolution inductive encoder. The *SW-SR2* utilizes a high quality Michigan Scientific slip ring assembly for signal transmission. *SW-SR2* comes with a dedicated electronics box that provides both Analog and CAN signal outputs, and well as provides a zeroing function.

*Preliminary Datasheet

**The airbag should be disabled when using the *SW-SR2*. Also note that the mounting bracket may block some buttons on the steering wheel.

Specifications

Rated Torque Capacity	100, 200, 300 N · m torque range
Safe Axial Load at Wheel Edge	100 lbf (440 N)
Signal Outputs	Analog ± 10 V and CAN 2.0
Torque Sensor Type	Full Bridge Strain gauge
Torque Nonlinearity	< 0.25 % of full scale output
Steering Angle Range	± 1440 degrees
Angular Accuracy	0.18°
Angular Resolution	0.04°
Temperature Range, Compensated	70 °F to 185 °F (24 °C to 85 °C)
Temperature Range, Operating	-40 °F to 185 °F (-40 °C to 85 °C)
Weight (Transducer & Slip Ring Electronics)	9.0 lb (4.0 kg)

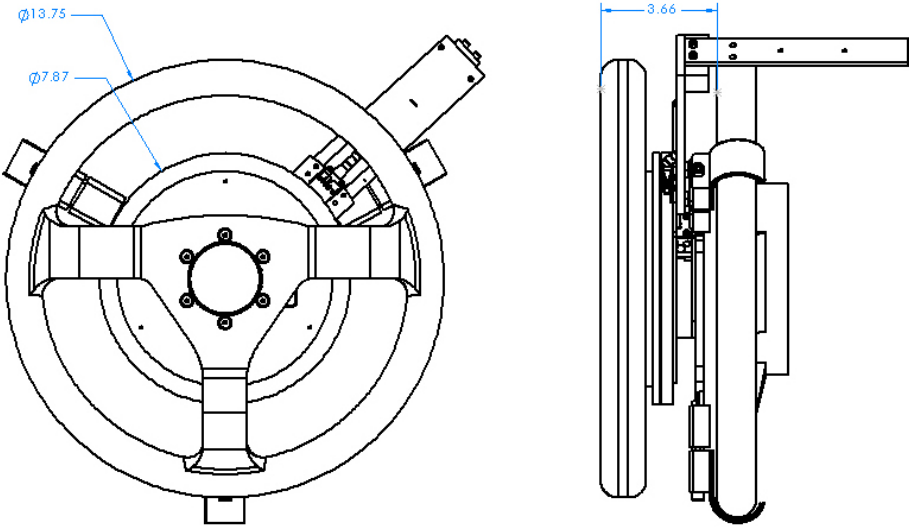
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Steering Wheel Torque and Angle Transducer

SW-SR2 Mounting



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