

# Topcon MS-1

## Ultrasonic Sensor

### Electrical Specifications

Supply Voltage	8-24 Vdc
Supply Current	0.2 A @ 12 Vdc
Power	2.4 W (typ)
Start-up time	2.5 seconds
CAN Baud rate	250 kbps typical 1 Mbps max
Adjustable Report Frequency	35 ms typical (5 ms increments)

### Environmental

Operating Temperature Range	-40 °C to 85 °C
Storage Temperature Range	-40 °C to 85 °C
Ingress Protection Rating	IP67
Humidity	5-95% non condensing

### Distance Specifications

Distance Measurement Range	30 cm - 500 cm
Blanking Range	30 cm typical (adjustable)
Resolution	1 mm
Ultrasonic Burst Frequency	52 kHz
Ultrasonic Transmit Power	110 dB Max
Ultrasonic Receiver Sensitivity	-20 dB - 73.2 dB

### Angular Rate Specifications

Range	±15.625 °/s to ±2000 °/s
Configurable Bandwidth	5-50 Hz

### Acceleration Performance Specifications

Range	±2 g to ±16 g
Configurable Bandwidth	2-50 Hz

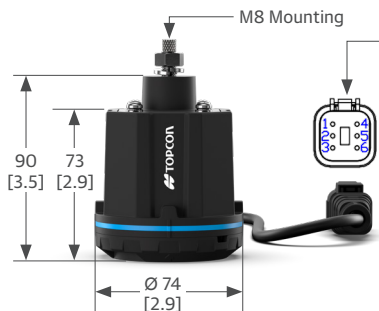
### Mechanical and Electric Loads

Over Voltage	24 V for 1 hour
Reverse Voltage	-24 V for 5 minutes
Short Circuit	ISO16750: Signal Circuits Function Class C
Vibration (Random)	ISO 15003 (2008)
Drop Test	IEC 60068-2.31/2.32 ISO 2248 (Ed 2.0)

### Physical Specifications

Dimensions	74 mm x 74 mm x 109 mm
Weight	0.35 kg
Connection Type	Deutsch DT06-6s
Cable Length	590 +/- 25 mm
Mounting Hole Diameter	8 mm bolt
Mounting Plate Thickness	<4.8 mm
Torque Spec	12 Nm (108 in-lb)
Housing Material	Glass Reinforced Nylon

### Dimensions



### Connector Pin Definition

Pin #	Signal
1	Unused
2	Ground
3	CAN L
4	CAN H
5	Power
6	Unused

Measurements in millimeters (mm) and inches (in)