



GS100 CAN Speed Sensors

Catalog MSG33 – 2383/US



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Application

The GS100 speed and direction sensor belongs to the Parker family of accessories provided to complement electronic control systems. The GS100 utilizes non-contact Hall-effect technology to measure the speed and direction of a ferrous gear. The sensor broadcasts the measured data over a CAN bus using SAE J1939 protocol. OEMs can customize multiple CAN parameters like baud rate, message frequency rate, and source address which provide easy tuning of the sensor according to the application need. The GS100 is designed for reliability and ease of installation making it suitable for mobile equipment on and off highway.

Properties

Reliability

The GS100 housing is a glass-filled nylon plastic construction selected for sturdiness and corrosion resistance. The mounting hole is reinforced with an aluminum insert for added strength. The sensor uses back-biased Hall-effect technology for trouble free operation. Along with providing output messages over J1939 CAN bus the sensor also provides an analog open-drain output for diagnostic purposes or redundancy.

Installation

The GS100 has a single hole flange and uses a standard M8 bolt to simplify alignment during installation even in field conditions. The sensor barrel fits a 20 mm port and includes an AS-568A-114 O-ring to secure the product while also preventing fluid leaks in application. The 6-pin connector is a sealed Deutsch DTM designed for automotive use. The connector combined with the potted electronics gives this sensor IP67 and IP69k protection for exposure in outdoor applications.

Environmental Protection

EMC

ANSI/SAE EP455:2008	EMC Emissions - Level 1
ISO 13766:2006	EMC Susceptibility - Level 3

EMI

ISO 7637-2	Transients
ISO 7637-3	

ESD

ISO 10605:2008	Direct Contact: $\pm 8KV$ Air: $\pm 15KV$
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Mechanical

J1455:2006 Shock	1m drop
J1455:2006 Vibration	Sine Sweep Level 2

Climate

Sealing	IP67 / IP69k
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Chemical

Liquids (resistance)	Standard automotive
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Markings and Approvals

CE	2014/30/EU EMC
	2011/65/EU RoHS 2

General

Weight	0.10kg
Temperature (operating)	-40 °C to 85°C
Temperature (storage)	-40 °C to 105°C
Air gap	1.02 to 2.03 mm

Communication

CAN protocol	SAE J1939
CAN messages	see part drawing
CAN bus speed	250 k, up to 500 k
Data broadcast rate	50 ms, up to 2000 ms
CAN source address	0x80
CAN Broadcast PGN	0xFF75
Speed Output Tolerance	$\pm 2\%$

Mechanical Characteristics

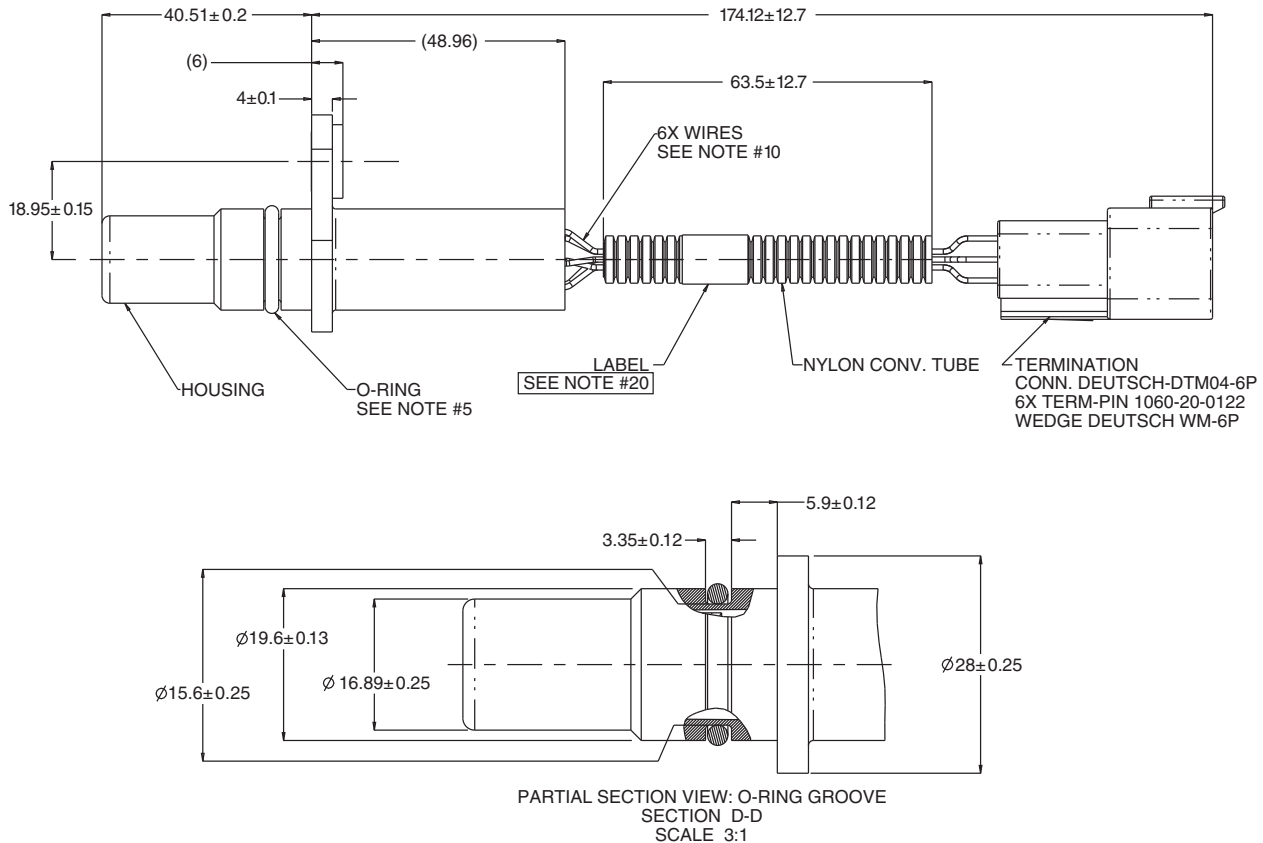
Mounting	Flange M8 bolt
Mounting torque	100 in-lb (11.3 N-m) max
Connector	Deutsch DTM

Electrical Specifications

Supply Voltage(Vs)	8-16 V
Reverse Voltage Protection	-26 V
Supply Current @12V	34 mA typical
Startup Voltage	6 V minimum
Startup Duration	20 ms typical
Frequency range (operational)	0-5 kHz

Ordering Part Number

GS1000	167758ECD
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WARNING - USER RESPONSIBILITY

FAILURE OR IMPROPER SELECTION OR IMPROPER USE OF THE PRODUCTS DESCRIBED HEREIN OR RELATED ITEMS CAN CAUSE DEATH, PERSONAL INJURY AND PROPERTY DAMAGE.

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WARNING - California Proposition 65

This product can expose you to chemicals including ANTIMONY TRIOXIDE, CARBON BLACK (AIRBORNE, UNBOUND PARTICLES OF RESPIRABLE SIZE) which is known to the State of California to cause cancer and 4,4'-(PROPANE-2,2-DIYL)DIPHENOL, BPA, P,P'-ISOPROPYLIDENEBISPHENOL, which is known to the State of California to cause birth defects or other reproductive harm.

For more information go to www.P65Warnings.ca.gov

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