









RS53 Sensors

Catalog MSG33-2366/US





Application

The RS53 rotary sensor belongs to the Parker family of accessories provided to complement electronic control systems. The RS53 is a 0-5V ratiometric output, non-contact, rotary sensor suitable for a variety of applications. The RS53 sensor has a full revolution, continuous rotation working range. The sensor has a short length of wire, terminated with a Deutsch DTM connector. To make the sensor suitable for mobile equipment, we have focused upon properties such as reliability, electromagnetic immunity and ease of installation.

Properties

Reliability

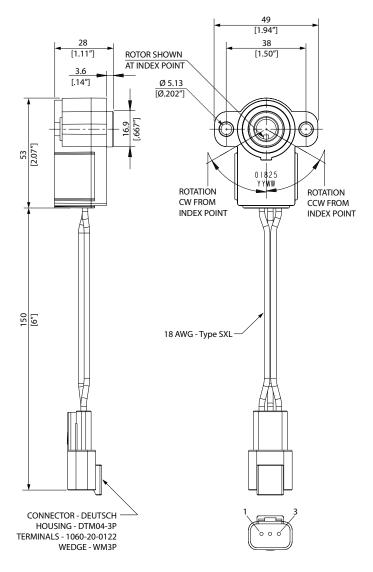
The RS53 has a glass-filled nylon plastic construction for strength and corrosion resistance. The sensor uses noncontact, amplitude independent Hall-effect technology for trouble free operation. The sensor is very robust and able to withstand rugged applications.

Electromagnetic immunity

The design of the RS53 has a high level of EMI protection. The sensor is also over-voltage and reverse polarity protected.

Installation

The RS53 is well designed for the mobile hydraulics industry. The connector is a sealed connector of type Deutsch DTM, designed for automotive use. The sealed connector, combined with potted electronics, give the sensor IP66 protection for exposed outdoor applications. The mounting holes have inserts for strength, which are closely toleranced to hold angular alignment. The housing has a raised boss diameter for center location. These features provide for easy installation and removal, even in field conditions.





RS53 Sensors

General

Weight 72 g
Temperature range -40°C to 125°C
Operating life 10 million cycles

Total error (near 360°)1) Max 2.0%

Hysteresis 0.5% when no shaft

end float is allowed

 Total accuracy includes non- linearity, hysteresis, repeatability and temperature effects.

Mechanical characteristics

Angular travel 360° continuous Connector Deutsch DTM

Electrical specifications

Working angle unlimited
Supply Voltage(Vs) 5.0+/-10% Vdc
Current supply Max 12.0 mA

Output at 359.5° 2) 4.5 V Output at 0° 2) 0.5 V

Output current Max. 1.0 mA

2) The output is ratiometric to supply voltage (Vs)

Ordering part number

RS53 01825ECD

Environmental protection

EMI

ISO 11452-2 150 V/m ISO 11452-4 100 mA

ESD

EN 61000-4-2 7 kV

Mechanical

Shock 1m drop Vibration 30 Gs

Climate

Sealing (electronics) IP66

Chemical environment

Liquids (resistance) standard automotive



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 CARBON BLACK (AIRBORNE, UNBOUND PARTICLES OF RESPIRABLE SIZE), LEAD AND LEAD COMPOUNDS (PB), SILICA, CRYSTALLINE (AIRBORNE PARTICLES OF RESPIRABLE SIZE) (O2SI) which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov



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