



Rochester Remote Ready Dial & Magneto-resistive Module

Application

The Rochester Remote Ready Dial, R³D®, is a magnetically-driven, Magneto-resistive compatible dial. Dials are utilized on stationary applications where direct reading plus an electrical signal to a remote fuel level monitor may be required. Models are available to fit all Rochester Junior, Senior and Snap-On liquid-level gauges.

Rochester's Magneto-resistive Module is designed to snap-fit into the recess in the Remote Ready Dial lens. Once installed, the module can provide ratiometric voltage output proportional to the liquid volume inside the tank.

General Information & Features

In the area of LP gas measurement, a magnetic drive feature is important because a magnetic drive allows a signal from the float mechanism inside the tank to be transmitted through a solid bulkhead.

The R³D® dial is designed to allow a second magnetic coupling. This is a coupling from the R³D® pointer magnet, through the sealed lens and into the MR Module.

Previous designs of magnetically driven dials that produce an electrical output signal had the disadvantages inherent in using variable resistors with a wiper arm contact. The magnetic connection of the Magneto-resistive sensor is more reliable than systems that depend on the sliding contact of variable resistor devices.

Magneto-resistance is a solid state technology with no moving contacts. Magneto-resistance is the property of a material to change the value of its electrical resistance when an external magnetic field is applied. Microchip technology converts the resistance change to a useable voltage signal.

The R³D® and MR Module can be used as a retrofit on existing LP tank gauges to provide an electrical output which can be utilized for remote monitoring of tank levels. With remote monitoring of tank levels, distributors of LP gas will be able to more efficiently plan deliveries to various consumers.

The R³D® case is hermetically sealed by ultrasonic welding to melt and fuse the case into one solid piece. This keeps weather out, ensuring "no-fog" readability while greatly extending mechanical life. The seal is a high reliability, no-gasket design.

The plastic case is far more resistant to corrosion than any metal-cased version and is capable of withstanding broad variations in temperature. The lens and case are a special, UV stabilized plastic material.

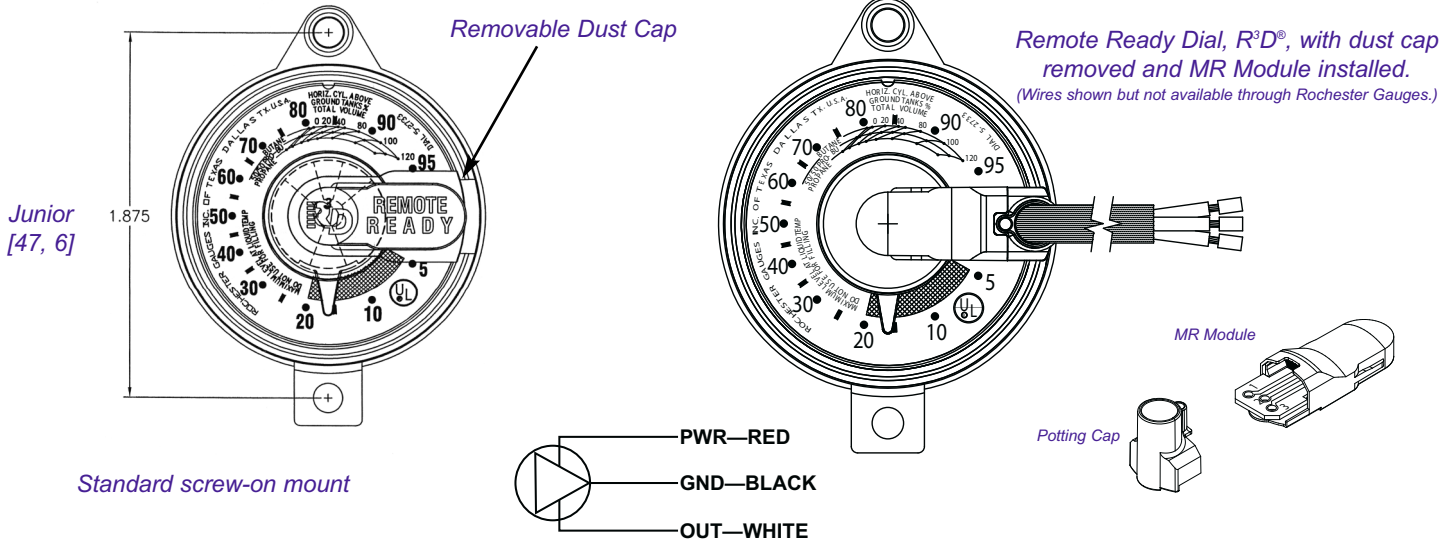
The R³D® dial is mounted onto Rochester Junior or Senior gauges with #0040-00416 stainless steel dial screws (6 — 32 x 3/8"). An additional item available to ensure weatherproof connections from the module to the remote monitor is heat shrink solder sleeve part number 0025-00495.

Remote Ready Gauge

If you specify new Rochester gauges with R³D®, Rochester Remote Ready Dials, MR Modules can be ordered and installed anytime, anywhere.



*US Patents Issued
Foreign Patents Pending*



General Specifications*

Operating Temperature

-40° to 80°C (-40°F to 176°F).

Accuracy

Voltage output ±2% (full scale) of visual dial indication. (Float gauge errors not included.) See DS-1781 for output voltages corresponding with dial graduations.

Repeatability

±1%.

Operational Voltage Range

4.5v to 5.5v ratiometric.

Resolution

Infinite.

Operating Current

8mA (No Load).

Output Current

±1mA.

MR R³D[®] modules MET approved as intrinsically safe when applied to Rochester monitor.

See WD-576 for control drawing.

See DS-1620 for application notes.

See DS-1615 for module installation instructions.

See DS-1781 for output voltages.

When ordering, specify:

1. Junior, Senior or Snap-On, Horizontal Tank, Vertical Tank or Below Ground Tank.
2. Or part number.

WARNING! This sensor is not to be used as the primary means of determining high or low level condition. It must not be used in the absence of redundant systems in critical applications where there may be significant safety risk or financial exposure in the event of fuel overfill or fuel exhaustion condition. This sensor is not to be used for tank filling.

U.S. Patents

10,175,088 - D832,124 (Foreign patents pending).

Materials of Construction*

Crystal & Case

Polycarbonate.

How To Order

Remote Ready Dial (R ³ D [®])		
Part #	Style	Tank
5909S02733	Jr.	Horizontal
5986S02733	Sr.	Horizontal
5AAAS02733	Snap-On	Horizontal
5909S02772	Jr.	Vertical DOT
5909S02799	Jr.	Below Ground

Magnetostrictive Components			
Model	Style	Wires	Potting Cap
0102S00063	MR Module for Jr. & Sr. Horizontal Tank Dials, Replaces 0102S00042.	6 Feet	Vertical
0102S00062	New MR Module for Jr. Vertical Tank Dials.		

Magnetostrictive components only available through remote monitor OEM's.

* Materials and specifications are subject to change without notice. Ratings subject to change due to temperature and other environmental considerations.

WARNING! For LP-Gas and other flammable product service applications, connect only to circuits and power sources classified and labeled as Intrinsically Safe for Class 1, Division 1, Group C and D hazardous locations. The connection of non-intrinsically safe power could cause fire or explosion of flammable vapor which may be present.