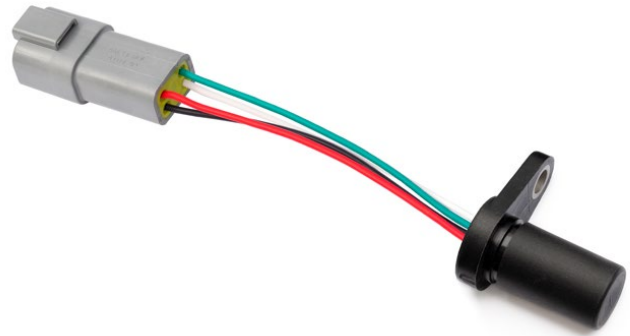


MFM7-275VPD-RGCD4

Digital Ferrous Metal Detection Sensor

- Ferrous Metal Hall Proximity Sensor
- .375" detection gap
- Regulated input, 0-5V output
- Plastic .7" flange mount 1.5" long housing
- Deutsch DT04 4 pin with 5" 20 AWG XLPE



CUSTOMER FOCUSED ENGINEERING + MODULAR DESIGN

Part Description: **MFM7-275VPD-RGCD3**

| Housing | Sensor Type & Function | Electrical Option | Connection Type |
|--|---|--|-------------------------------------|
| Glass Filled Nylon Flange Mount $\varnothing.7"$ x 1.5" | Digital Ferrous Metal Proximity Sensor | Regulated Input 0-5V Digital Output | Deutsch DT 4 pin w/5" 20AWG XLPE |

Modify, update, or enhance any sensor with our modular features and functionality.

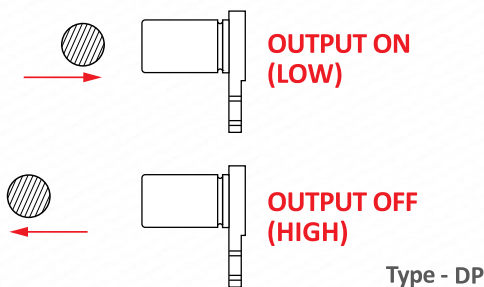
HOUSING - Aluminum, stainless steel, plastic, threaded, flange mount, customer specific

ELECTRICAL - Every sensor function available in various electrical options (NPN, PNP, TTL, etc.)

CONNECTION - Deutsch, Amphenol, many other brands, free end wires, pigtails, any length

Need a Custom Sensor Solution?... Send us your application specific requirements at sensorso.com

'Digital Output switches on when Ferrous Metal is present'

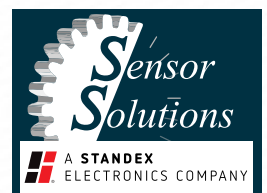


DESCRIPTION

- Digital output turns on when ferrous metal is detected
- Programmed to detect a large steel target at 0.375"
- Target detection gap is dependent on shape/size/ferrous content.
- Custom programming available for precision repeatable detection of targets, contact Sensor Solutions.
- Flange mount installation sets fixed gap from target.

FEATURES

- True Zero Speed
- Large Detection Gap
- Internal Hysteresis
- Detects Through Aluminum



MFM7-275VPD-RGCD4

Digital Ferrous Metal Detection Sensor

Note: Check our website or contact us for details on all our ferrous metal detection options.

| Electrical Specifications | Conditions | Min | Max | Unit |
|----------------------------|-------------------|---------|-----------|----------|
| Temperature Range* | Operating | -40 | +110* | Deg C |
| Supply Voltage, Vcc | Over temperature | +8.0 | +30 | Volts DC |
| Supply Current, Output Off | Into Vcc | (typ 8) | +12 | mA |
| Output Current | Continuous | -1 | +1 | mA |
| Load Capacitance | Cable and Load | n/a | +1.0 | µF |
| Frequency Range ** | Std Programmable | 0 | 500 | Hz |
| Frequency Range ** | Max Programmable | 0 | 2000 | Hz |
| Digital Voltage Low Vol | I sink < 1.0 mA | 0 | (typ 0.2) | Volts |
| Digital Voltage High Voh | I source < 1.0 mA | 4.60 | 5.5 | Volts |
| Output Rise Time 10-90% | Ro=10k, C<100 pF | - | 5 | µS |
| Output Fall Time 90-10% | Ro=10k, C<100 pF | - | 5 | µS |

* T max = 150°C is available, contact factory.
 ** Frequency, Detection and Hysteresis are Factory Programmable.

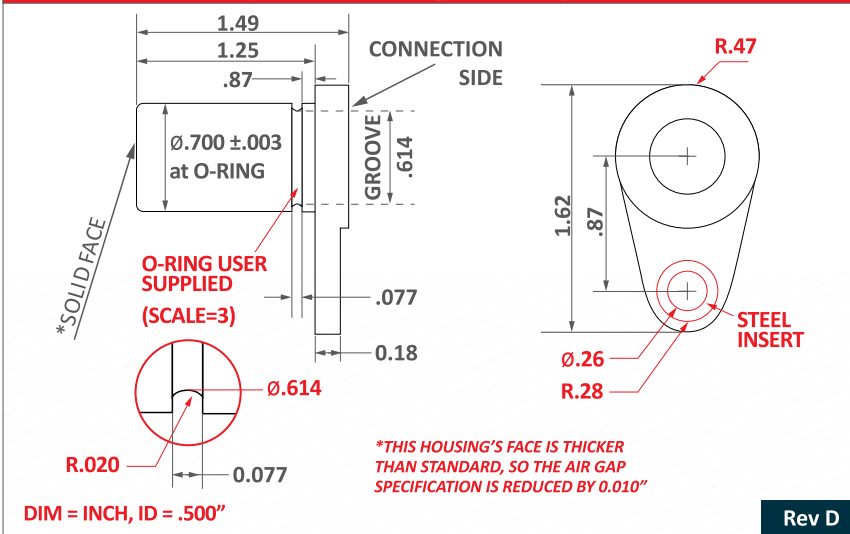
Rev D

| Absolute Max Limits | Min | Max | Unit |
|-----------------------------|-----|------|----------|
| Supply Voltage, Vcc | -24 | +30 | Volts DC |
| Voltage at Output | -5 | +8.5 | Volts |
| Reverse Supply Current | - | 5.0 | mA |
| Peak Output Current | -10 | +10 | mA |
| Vout Short Circuit Duration | - | 10 | Minutes |

Environmental Specifications

| | |
|----------------------|---------------------------------|
| Corrosion Resistance | 500 hours salt spray ASTM B-117 |
| Installation Torque | 15 Foot-Pounds Maximum |
| Enclosure | Nema 1,3,4,6,13 & IEC IP67 |
| Vibration | 10 G's 10 to 2000 Hz Sinusodal |
| Mechanical Shock | 50 G's, 11 mS Half-Sine |

MFM7, Glass Filled Nylon (150°C) Flanged Housing



Rev D

Functional Characteristics @25°C

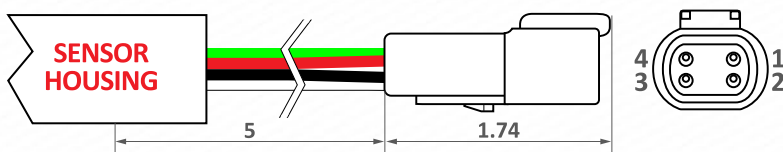
| | Min | Typ | Max |
|--|--------|--------|--------|
| <i>Sensor Programming + target ferrous content, shape, & size will affect gaps</i> | | | |
| Output State, No Target Present: Low (~0V) | | | |
| Detect Large Steel Target T=25C** | 0.350" | 0.375" | 0.400" |
| Hysteresis, Large Steel Target T=25C** | .020" | .050" | .080" |
| Detect 0.5" ø Steel Target | - | .360" | - |
| Detect 0.1" ø Steel Target | - | .215" | - |

** Frequency, Detection and Hysteresis are Factory Programmable and can be decreased upon request.

CD4, 4 Pin Deutsch DT04 w/5" 20 AWG TXL

CONNECTOR: AMPHENOL AT04-4P-RD01 BODY OR DEUTSCH DT04-4P-C015 BODY
 CONTACTS: 4 DEUTSCH PINS, PN 1060-16-0622
 WIRE: 20AWG, 19/32, XLPE TXL, 125°C

PIN 1 = RED
 PIN 2 = BLACK
 PIN 3 = WHITE
 PIN 4 = GREEN



Rev B

Connections Chart

| | |
|----------------------|-----------------------------------|
| Pin 1 (Red) Vcc | Pin 3 (White) Digital Vout |
| Pin 2 (Black) Ground | Pin 4 (Green) Program, No Connect |

CD4-275VPD



Caution: A short from the Pin 4 (Green) Program wire to either Pin 1 (Red) Vcc or Pin 2 (Black) Ground wire will cause component failure.

MFM7-275VPD-RGCD4

Digital Ferrous Metal Detection Sensor

Sensor Function

ANY FERROUS TARGET

Air Gap

NO ORIENTATION REQUIRED

MFM7-275VPD

Date Code 'YYM' YY = YEAR, M = MONTH

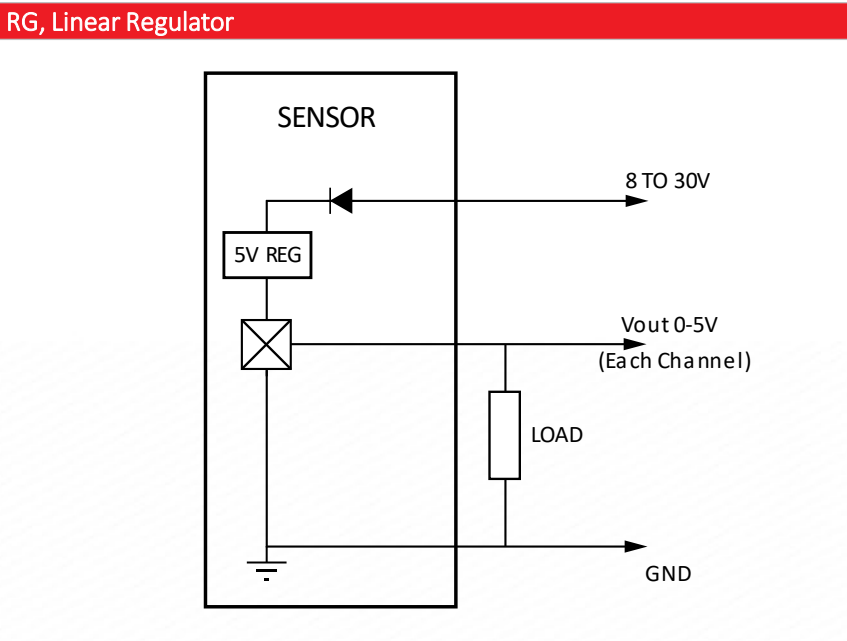
| | | | |
|-------|-------|-------|-------|
| A JAN | D APR | H JUL | L OCT |
| B FEB | E MAY | J AUG | M NOV |
| C MAR | G JUN | K SEP | N DEC |

Marking

DATE CODE, THIS SURFACE

275VPD-RG_YY 06A

CHARACTERISTIC-OPTION_PROGRAMMING MARKED ON THIS SURFACE yy = PROGRAM #



Handling Instructions

DO NOT CONTACT FACE TO FACE

CONTACT WITH OTHER MAGNETS MAY REDUCE THE MAXIMUM OPERATING GAP

Please note: All technical specifications on this series datasheet refer to the standard product range. Modifications in the sense of technical progress are reserved. For general information only. For more specific information, please consult the product datasheet, available upon request.

This series datasheet could contain technical inaccuracies or typographical errors. Changes are periodically made to the information herein. These change will be incorporated in future revisions.

For deviating values, most current specifications and products please contact your nearest sales office.