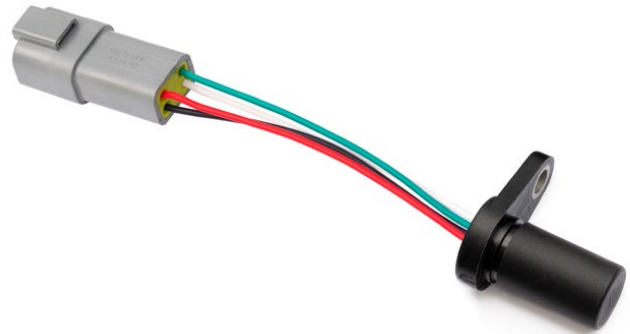


# MFM7-275VPD-RGCD4

## 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.

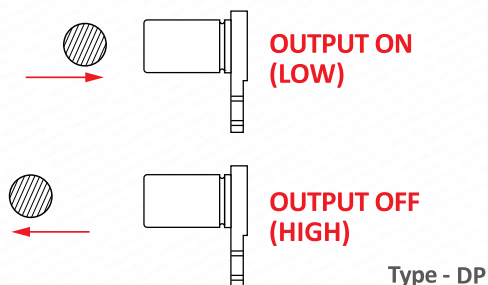
**HOUSING** -Aluminum, stainless steel, plastic, threaded, flange mount, customer specific

**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](https://www.sensorso.com)

### 'Digital Output switches on when Ferrous Metal is present'

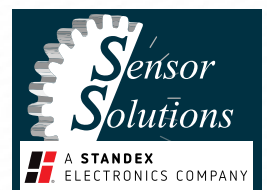


### DESCRIPTION

- 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.

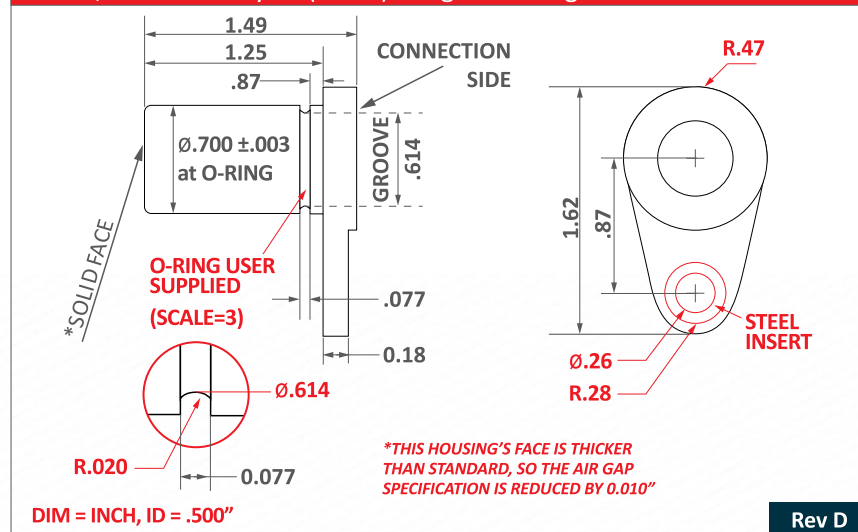
Rev D

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 Sinusoidal
Mechanical Shock	50 G's, 11 ms Half-Sine

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

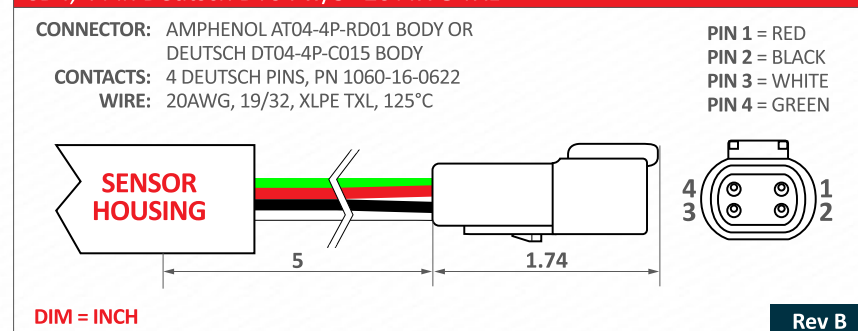


Rev D

Functional Characteristics @25°C	Min	Typ	Max
<b>Sensor Programming + target ferrous content, shape, &amp; size will affect gaps</b>			
<b>Output State, No Target Present: Low (~0V)</b>			
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



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

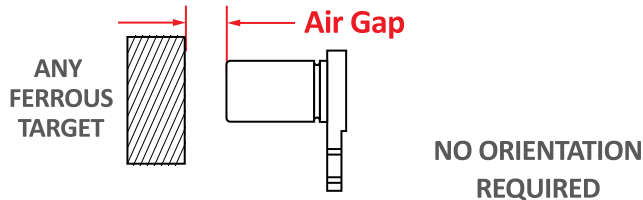


**Caution:** A short from the Pin 4 (Green) Program wire to either Pin 1 (Red) Vcc or Pin 2 (Black) Ground wire will cause component failure.

# MFM7-275VPD-RGCD4

## Digital Ferrous Metal Detection Sensor

### Sensor Function



MFM7-275VPD

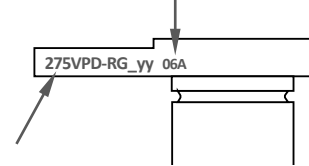
### Date Code 'YYM'

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

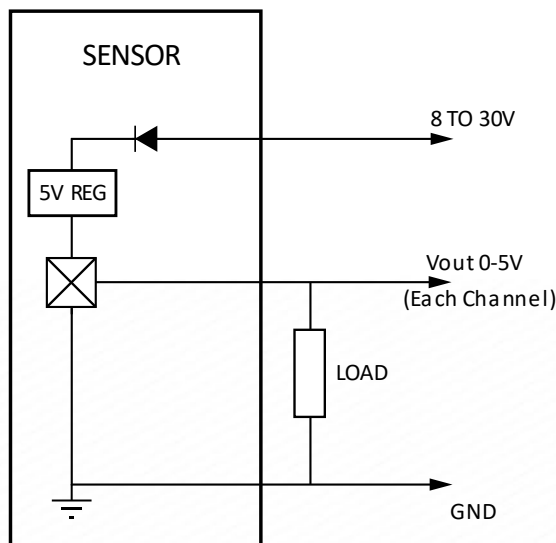
### Marking

DATE CODE, THIS SURFACE

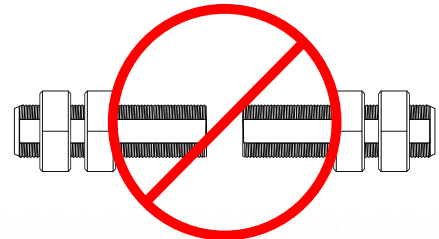


CHARACTERISTIC-OPTION PROGRAMMING MARKED ON THIS SURFACE yy = PROGRAM #

### RG, Linear Regulator



### 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.

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