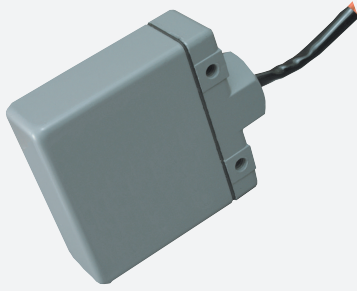


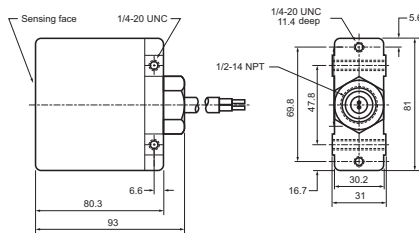
# Magnetic field sensor

## 4FR1-6



- Ferromagnetic actuated reed switch
- Detects ferrous metal through nonferrous metal
- One piece housing

## Dimensions



## Technical Data

### General specifications

Switching function		Normally open (NO)
Output type		Reed Contact
Rated operating distance	$s_n$	12.7 mm
Installation		non-flush
Mechanical life		$5 \times 10^7$ switching cycles

### Nominal ratings

Switching frequency	$f$	100 Hz
Repeat accuracy		$\leq 0.13$ mm
No-load supply current	$I_0$	$\leq 50$ mA
Reed bounce time		max. 0.5 ms

### Electrical specifications

Electrical rating		AC supply: 15 VA, 500 mA, 280 V RMS DC supply: 15 W, 500 mA, 400 V DC
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### Ambient conditions

Ambient temperature		-20 ... 83 °C (-4 ... 181.4 °F)
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### Mechanical specifications

Connection type		cable PVC , 1.83 m
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Refer to "General Notes Relating to Pepperl+Fuchs Product Information".

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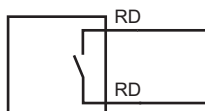
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 PEPPERL+FUCHS

## Technical Data

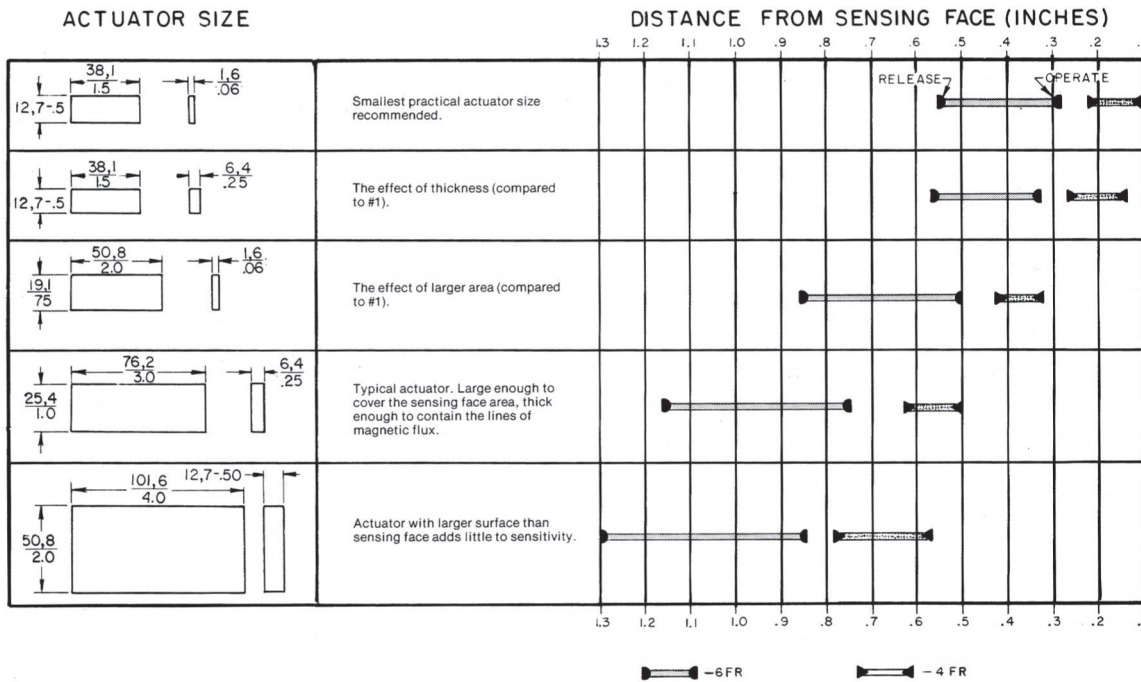
Core cross-section	1.5 mm <sup>2</sup>
Housing material	aluminum
Sensing face	aluminum
Degree of protection	IP68
Note	Full sensing range available for low carbon steel 25.4 x 76.2 x 6.35mm

## Connection



**Function Principle**

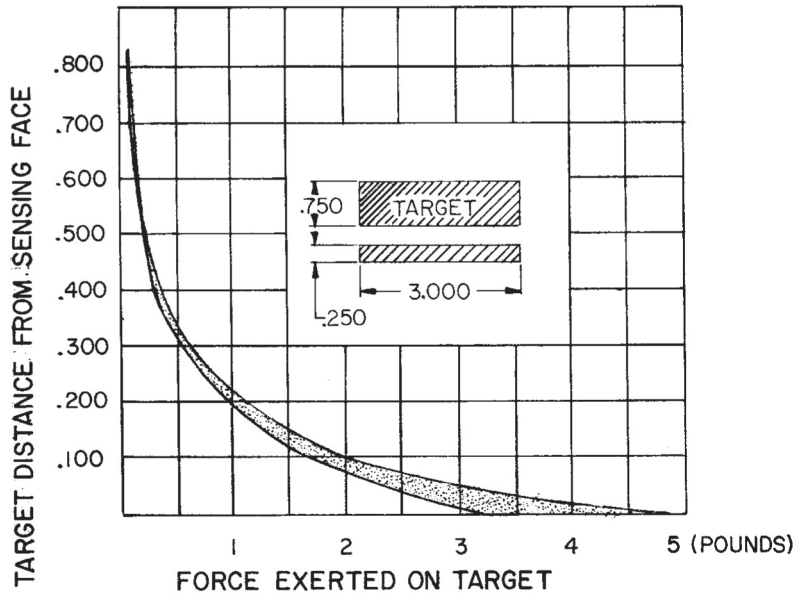
For proper operation over the total temperature range [with typical actuator (#4)], use a minimum overtravel of 0.150 in. (3.8 mm) release travel of 0.250 in. (6.35 mm). Overtravel and release travel will differ for smaller actuators.



**MAGNETIC ATTRACTION**

The switch exerts a magnetic force on the actuator. The actuator should be secured to prevent its being drawn to the sensing face.

1. Do not subject the switch to the influence of strong magnetic fields. External permanent magnets should be a minimum of 6 inches (152mm) from the switch.
2. Ferromagnetic materials (other than the actuator) should be at least 3 inches (76,2mm) from the sensing face.
3. Arc suppression networks must be used in inductive circuits.
4. These switches should not be subjected to severe shock.
5. Mount on solid support and protect from vibration.
6. The switch may fail to release if adjacent steel parts are too close, or if quantities of metallic chips are attracted to the sensing face.
7. Do not subject reed switches to high inrush currents.
8. Each 4/6FR contains a glass reed switch and a magnet, and should be handled and applied accordingly.



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