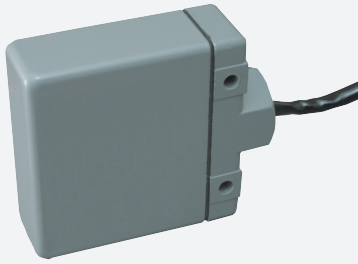


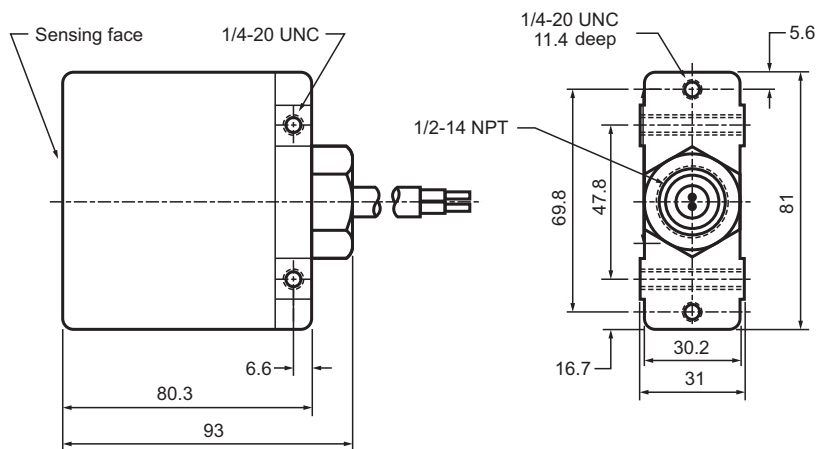
Magnetic field sensor

6FR1-6



- 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	19.1 mm
Installation		non-flush
Mechanical life		5 x 10 ⁷ switching cycles

Nominal ratings

Refer to "General Notes Relating to Pepperl+Fuchs Product Information".

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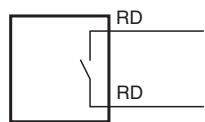
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PEPPERL+FUCHS

Technical Data

Switching frequency	f	100 Hz
Repeat accuracy		≤ 0.13 mm
No-load supply current	I ₀	≤ 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
Standard conformity		
Standards		EN 60947-5-2
Ambient conditions		
Ambient temperature		-20 ... 83 °C (-4 ... 181.4 °F)
Mechanical specifications		
Connection type		cable
Housing material		Aluminum
Sensing face		Aluminum
Degree of protection		IP68
Cable		
Material		PVC
Core cross section		1.5 mm ²
Length	L	1.83 m
Dimensions		
Width		81 mm
Depth		31 mm
Length		93 mm
Note		Full sensing range available for low carbon steel 25.4 x 76.2 x 6.35mm

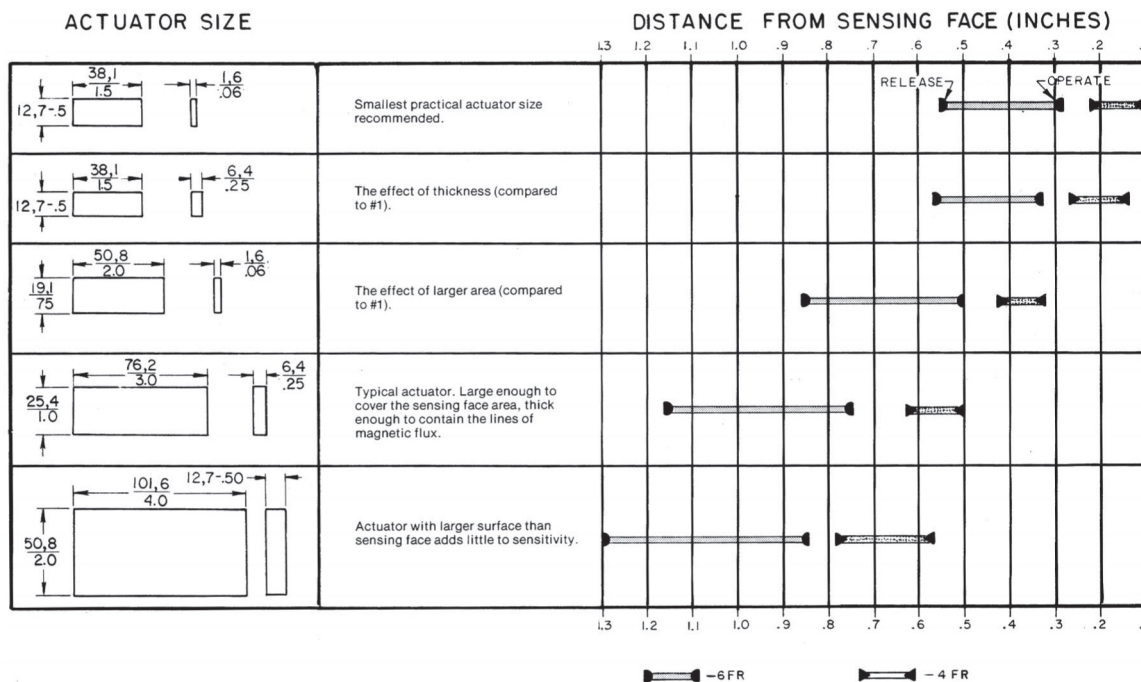
Connection



Release date: 2025-04-02 Date of issue: 2025-04-02 Filename: 450075_eng.pdf

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 in-rush currents.
8. Each 4/6FR contains a glass reed switch and a magnet, and should be handled and applied accordingly.

