

## Overview

The N/O4S is a general purpose industrial quality limit / position switch. Housed in a rugged polycarbonate moulding which is fully potted. The 3 metre cable is protected with an IP67 strain relief cable gland.

Magnetic proximity switches are very tolerant to misalignment and are particularly suited to environments contaminated by dust, dirt, liquid and where non-contact switching or hygiene is a consideration.

N/O4S switches should **not** be used in or relied on in safety related applications.

## Principles of operation and use

The N/O4S is a normally open reed switch based sensor, its contact closes when in the presence of a magnetic actuator.

When mounted on or near ferrous surfaces the operating distance will be reduced. Avoid close proximity to strong magnetic fields i.e. electric motors and solenoids. The switch may be operated through a non ferrous skin such as non magnetic stainless steel, plastic, aluminium and non ferrous castings etc. possibly enabling the switch and its connections to be inside a housing.

N/O4S sensors may be operated from three sides, see diagram.

## Loads

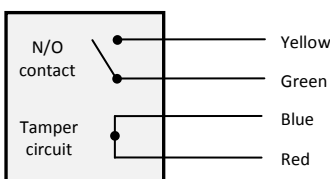
Maximum ratings in the "Specification and ratings" are for DC voltage and resistive loads. Protect against inductive, capacitive or reactive loads. For maximum contact life and reliability, ensure the ratings are not exceeded.

## Fitting and adjustment

When considering fixing positions refer to "Principles of operation and use". Ensure vibration and shock limits will not be exceeded both in normal and in any foreseen abnormal operation. To help reduce the effects of vibration or shock the switch unit may be mounted on a rubber pad or foam tape. The switch and actuator should not be fixed so that they slide longitudinally against each other as multiple operations may occur; they should be mounted so that that switch and actuator move parallel to each other, see "Operating positions". When adjusting the N/O4S sensor for maximum operation distance it is recommended that it is magnetically overdriven by 25% i.e. with an application that gives a maximum operating distance of 40 mm it should be considered that the maximum distance is actually 30 mm.

Consideration should be given to the safe routing of the connecting cable, avoid tight bends and allow a minimum of 30mm of straight cable from the sensor housing before any bends.

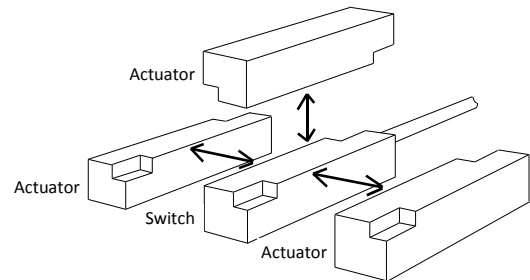
## Schematic diagram



## Specifications and ratings

Specification	N/O4S
Contact form	N/O normally open
Max contact rating	10 VA - Do not exceed product voltage x amps
Max switching voltage	50 VDC – Protect against high voltage spikes
Max switching current	0.5 Amp DC resistive
Max carry current	1 Amp DC resistive
Contact resistance	0.150 Ω
Vibration 10-2000 Hz (G's Max)	50 G
Shock - 11ms ½ Sine wave (G's Max)	100 G
Resonant frequency (typical)	3.2 KHz
Temperature range	-10 to 70 °C
Environmental protection	IP67
Encapsulant	Polyurethane resin
Cable	3 metres DEF 16-2-4A - 4 core
Max operating distance (mounted on non ferrous surfaces)	50mm
EN 50131-2-6:2008	Grade 1 Environmental Class III
RoHS	Compliant
Dimensions	Switch and Actuator L84.5mm x W20.5mm x D20.5mm

## Operating positions



## Image



Code	Standard Pressure Mat Sensors
N/O4S	Industrial / Vehicle Security Switch Set c/w 3 metre cable.
AM/10	Spare actuator magnet

Longer cable lengths are available. The order code for N/O4S with a 5 metre cable would be N/O4S/5M

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