

Overview



Milltronics MSP-7 is a heavy-duty 3-wire motion sensor that provides an NPN open collector output to PLCs.

Benefits

- Up to 100 mm (4 inch) gap between target and probe
- Corrosion resistant construction
- General purpose, suitable for majority of industrial applications; rugged probe designs provide unmatched reliability

Application

The MSP-7 motion sensing probe can detect changes in the rotation and movement of ferrous equipment. When connected to a PLC it can warn of malfunction and signals to stop or slow down equipment, preventing costly failure or downtime. Its reliability makes it a very cost effective sensor.

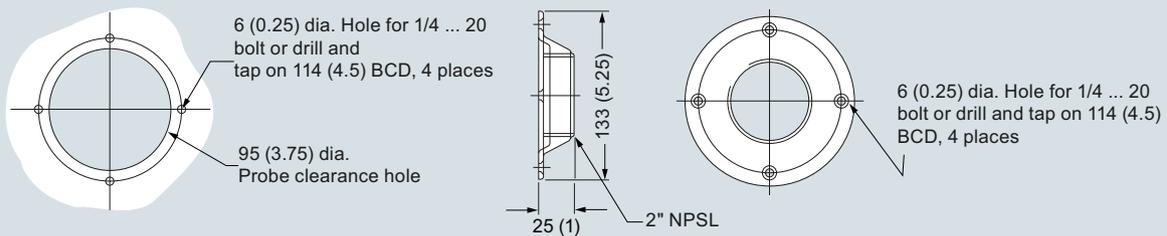
The single setpoint system suits most industrial applications. This versatile unit can be used on tail pulley shafts, driven pulleys, motor shaft sensing, belt or drag conveyors, screw conveyor flights, bucket elevators, fans and pumps.

An NPN open collector 3-wire output allows for versatile connection to most PLC models and a large dynamic range ensures that the MSP-7 can detect changes in target speed for a variety of applications.

- Key Applications: tail pulleys, motor shaft sensing, screw conveyor flights, bucket elevators

Design

Mounting for Milltronics MSP-7



Note: Mounting flange supplied with probe.

Mounting for Milltronics MSP-7, dimensions in mm (inch)

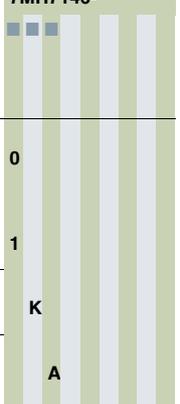
Technical specifications

Mode of operation	
Measuring principle	Magnetic
Typical application	Monitoring loss of motion in tail pulley, screw flights, bucket elevators
Features	
	<ul style="list-style-type: none"> • Rugged corrosion resistant aluminum body • Low voltage operation • Large dynamic range • Threaded body for finite adjustment
Output	
	NPN open collector, 2 k Ω pull up to input voltage, 330 Ω impedance, 40 mA max.
Performance	
Repeatability	± 1 %
Dead band	± 0.25 %
Dynamic Range	
	0 ... 7 200 PPM
Ambient Temperature Range	
	-40 ... +60 °C (-40 ... +140 °F)
Storage temperature	
	-40 ... +60 °C (-40 ... +140 °F)
Design	
Enclosure rating	Type 4X/NEMA 4X/IP67
Power Supply	
	21 ... 28 V DC, 40 mA max.
Certificates and approvals	
	CE, UKCA, RCM, EAC, KC

Process Protection

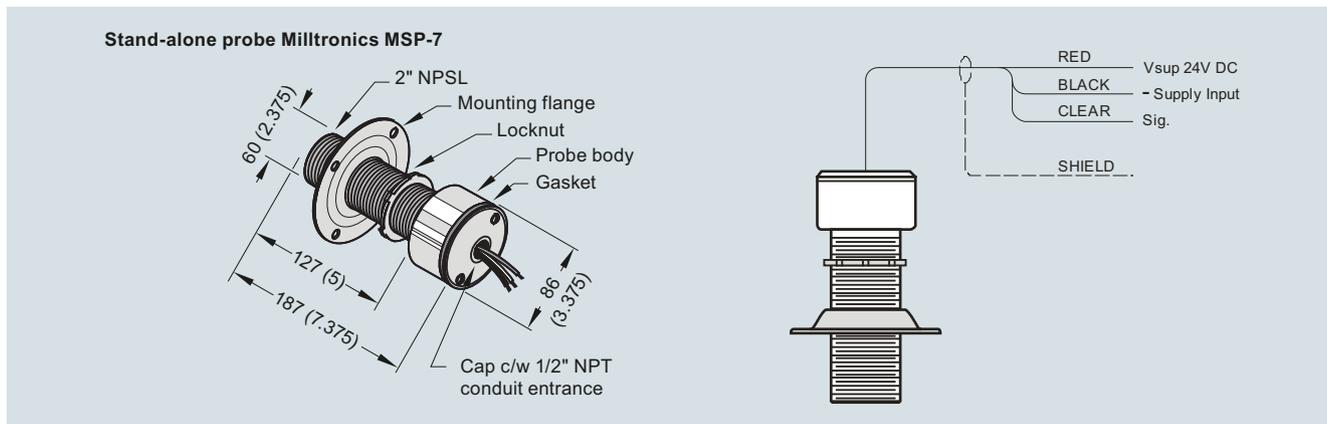
Motion sensors

Milltronics MSP-7 Motion sensor

Selection and ordering data	Article No.	Selection and ordering data	Order code	
Milltronics Motion sensing probes Heavy duty, 100 mm measuring range, for use with RMA, MFA 4p, WM300 MFA, or other control. ↗ Click on the Article No. for the online configuration in the PIA Life Cycle Portal.	7MH7146- 	Further designs Please add "-Z" to Article No. and specify Order code(s). Total cable length: enter the total cable length in plain text description Acrylic coated, stainless steel tag [13 x 45 mm (0.5 x 1.75 inch)]: Measuring-point number/identification (max. 16 characters), specify in plain text Cable gland kit Manufacturer's test certificate: According to EN 10204-2.2	Y01 Y17 A57 C11	
Cable Length Standard length (as described in Model options) ¹⁾ Add Order code Y01 and plain text: "Total cable length ... m" Extended cable length 2 ... 30 m (6.6 ... 98.4 ft)		0 1	Operating Instructions All literature is available to download for free, in a range of languages, at http://www.siemens.com/processinstrumentation/documentation	
Model [standard cable length/type] MSP-7, 1/2" NPT cable inlet [1.5 m (5 ft) cable]		K	Spare Parts Locknut, for MSP-3, MSP-7, MSP-12, XPP-5 Mounting flange, for MSP-3, MSP-7, MSP-12, XPP-5 Lid, 1/2" NPT cable inlet for MSP-3, MSP-7, MSP-12 Lid gasket, for MSP-7, MSP-12 Motion cable gland adaptor kit	Article No. 7MH7723-1CR 7MH7723-1CS 7MH7723-1CU 7MH7723-1CX 7MH7723-1JU
Approvals Ordinary Locations/General Purpose (Non-Ex), CE, UKCA, RCM, EAC, KC ¹⁾ No Y01 needed in Order code for standard length.		A		

6

Dimensional drawings



Stand-alone probe Milltronics MSP-7, dimensions in mm (inch)