

#### 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.

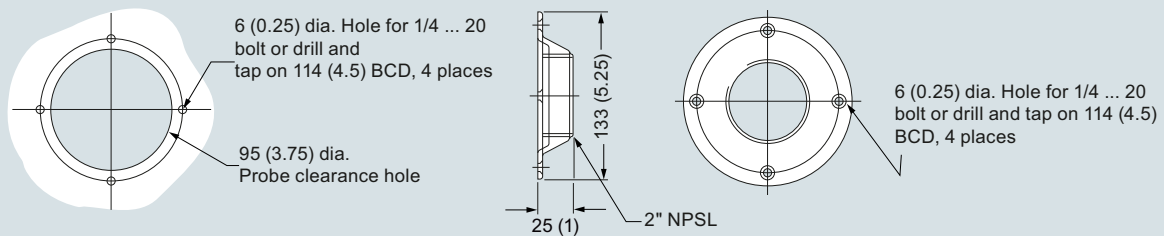
The single setpoint system suits most industrial applications. This versatile unit can be used on tail pulley shafts, driven pulleys, motor shaft sensing, belt or drag conveyors, screw conveyor flights, bucket elevators, fans and pumps.

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

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

## Process Protection

### Motion sensors

#### Milltronics MSP-7 motion sensor

##### Selection and Ordering data

###### Milltronics Motion Sensing Probes

Milltronics MSP-7: heavy-duty, 3 wire stand-alone

➤ Click on the Article No. for the online configuration in the PIA Life Cycle Portal.

###### Cable Length

Standard length (as described in Model options)<sup>1)</sup>

Add Order code Y01 and plain text:

"Total cable length ... m"

Extended cable length 2 ... 30 m (6.6 ... 98.4 ft)

###### Model [standard cable length/type]

MSP-7, 1/2" NPT cable inlet [1.5 m (5 ft) cable]

###### Approvals

CE, RCM, EAC, KCC

<sup>1)</sup> No Y01 needed in Order code for standard length

Article No.

**7MH7146-**



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K

A

##### Selection and Ordering data

Order code

###### 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

**Y01**

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

**Y17**

Cable gland kit

**A57**

Manufacturer's test certificate: According to EN 10204-2.2

**C11**

###### Operating Instructions

All literature is available to download for free, in a range of languages, at <http://www.siemens.com/processinstrumentation/documentation>

###### Spare Parts

Article No.

Locknut, for MSP-3, MSP-7, MSP-12, XPP-5

**7MH7723-1CR**

Mounting flange, for MSP-3, MSP-7, MSP-12, XPP-5

**7MH7723-1CS**

Lid, 1/2" NPT cable inlet for MSP-3, MSP-7, MSP-12

**7MH7723-1CU**

Lid gasket, for MSP-7, MSP-12

**7MH7723-1CX**

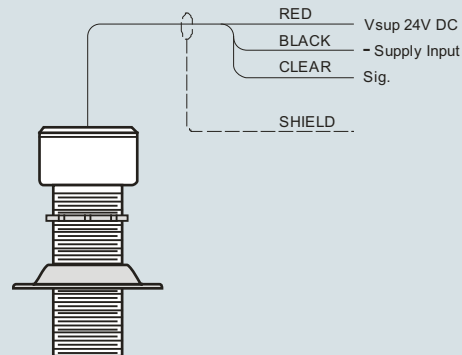
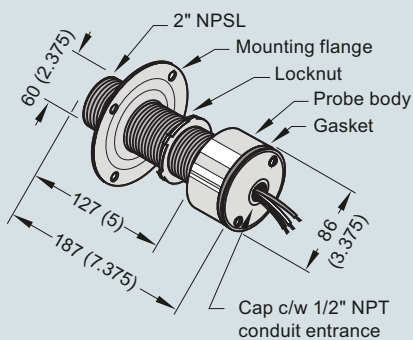
Motion cable gland adaptor kit

**7MH7723-1JU**

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#### Dimensional drawings

Stand-alone probe Milltronics MSP-7



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