

## 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

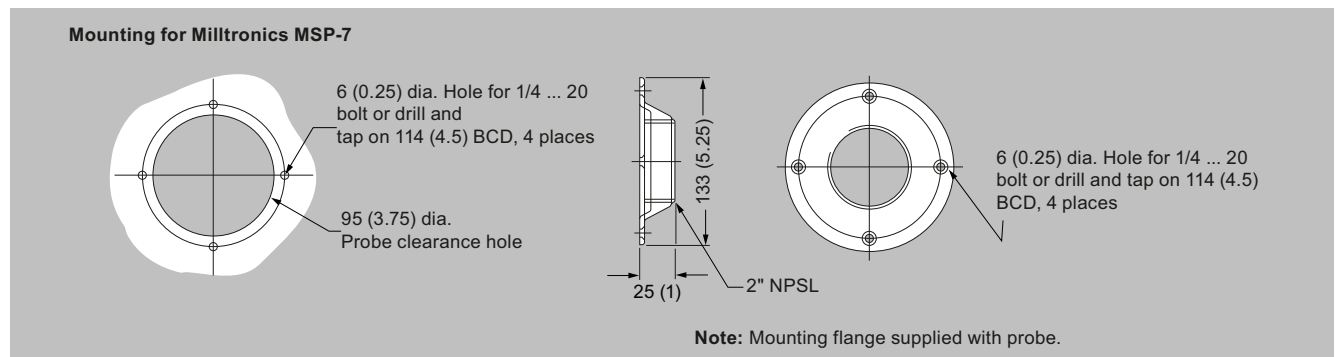
The MSP-7 motion sensing probe can detect changes in the rotation and movement of ferrous equipment. When connected to a PLC it can warn of malfunction and signals to stop or slow down equipment, preventing costly failure or downtime. Its reliability makes it a very cost effective sensor.

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, dimensions in mm (inch)

## Process Protection

### Motion sensors

#### Milltronics MSP-7 Motion sensor

##### Selection and ordering data

	Article No.			
<b>Milltronics Motion sensing probes</b> <b>Heavy duty, 100 mm measuring range, for use with WM300 MFA, or other control.</b>	7MH7146-	●	●	●
Click on the Article No. for the online configuration in the PIA Life Cycle Portal.				
<b>Cable Length</b>				
Standard length (as described in Model options) <sup>1)</sup>		0		
Add Order code Y01 and plain text: "Total cable length ... m"				
Extended cable length 2 ... 30 m (6.6 ... 98.4 ft)		1		
<b>Model [standard cable length/type]</b>				
MSP-7, 1/2" NPT cable inlet [1.5 m (5 ft) cable]			K	
<b>Approvals</b>				
Ordinary Locations/General Purpose (Non-Ex), CE, UKCA, RCM, EAC, KC				A

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

Selection and Ordering data	Order code
<b>Further designs</b>	
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

Spare parts	Article No.
<b>Operating Instructions</b>	
All literature is available to download for free, in a range of languages, at <a href="http://www.siemens.com/processinstrumentation/documentation">http://www.siemens.com/processinstrumentation/documentation</a>	
<b>Spare Parts</b>	
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

### Technical specifications

Milltronics MSP-7 Motion sensor	
Measuring principle	Magnetic
Typical application	Monitoring loss of motion in tail pulley, screw flights, bucket elevators
Features	<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>
Output	NPN open collector, 2 k $\Omega$ pull up to input voltage, 330 $\Omega$ impedance, 40 mA max.
Performance	
Repeatability	$\pm 1\%$
Dead band	$\pm 0.25\%$
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

### Dimensional drawings

