

# SITRANS L Level instruments

## Point level measurement

### Tilt Switches

#### Overview



The Milltronics Tilt Switch probe is an electro-mechanical tilt switch for point level detection, plugged chute detection, belt tracking alarm, and feed loss detection on conveyor belts.

#### Benefits

- High or low alarm
- Easy installation and operation
- Low cost
- Customised options

#### Application

Tilt switches also provide simple high and low alarm for both dry bulk solids and liquids.

The rugged, stainless steel encapsulated probe is suspended vertically over a bin or belt, and the potted switch inside the probe provides a signal when material tilts it through an angle of more than 17° from vertical in any direction. Additional assembly options are available including replaceable wear extensions (for coarse and abrasive materials), flat or cross paddles (for medium bulk density materials), and floats (for liquids or light density bulk materials). The probes are also available for high or low temperature applications.

Using a variable alarm delay in the associated switch isolator or PLC is recommended for best results.

#### Technical specifications

##### Mode of operation

- |                       |   |
|-----------------------|---|
| • Measuring principle | Tilting of encapsulated mercury switch  |
| • Typical application | <ul style="list-style-type: none"> <li>• High or low level alarm on bulk solids</li> <li>• High or low level alarm for liquids (when used with float option)</li> </ul> |

##### Features

- |                    |  |
|--------------------|--|
| • Number of points | Single point detection   |
| • Output           | <ul style="list-style-type: none"> <li>• Single N.C. contact</li> <li>• 2 A @ 24 V DC</li> </ul> |
| • Transducers      | Encapsulated tilt angle-sensitive mercury switch   |

##### Probe Characteristics

- Resolution: nominal 17° from vertical
- Switch: totally encapsulated mercury switch rated at 1.7 A @ 115 V AC max., non-inductive

##### Design

- |                   |  |
|-------------------|--|
| • Housing         | Schedule 80 stainless steel pipe with 1/2" NPT mounting for extensions   |
| • Material type   | <ul style="list-style-type: none"> <li>• 304 Stainless steel:               <ul style="list-style-type: none"> <li>- low temperature: -40 to +90 °C (-40 to +194 °F)</li> <li>- high temperature: -40 to +230 °C (-40 to +450 °F)</li> </ul> </li> </ul> |
| • Shipping Weight | 2 kg (4.4 lbs)   |

##### Approvals

CE

##### Options

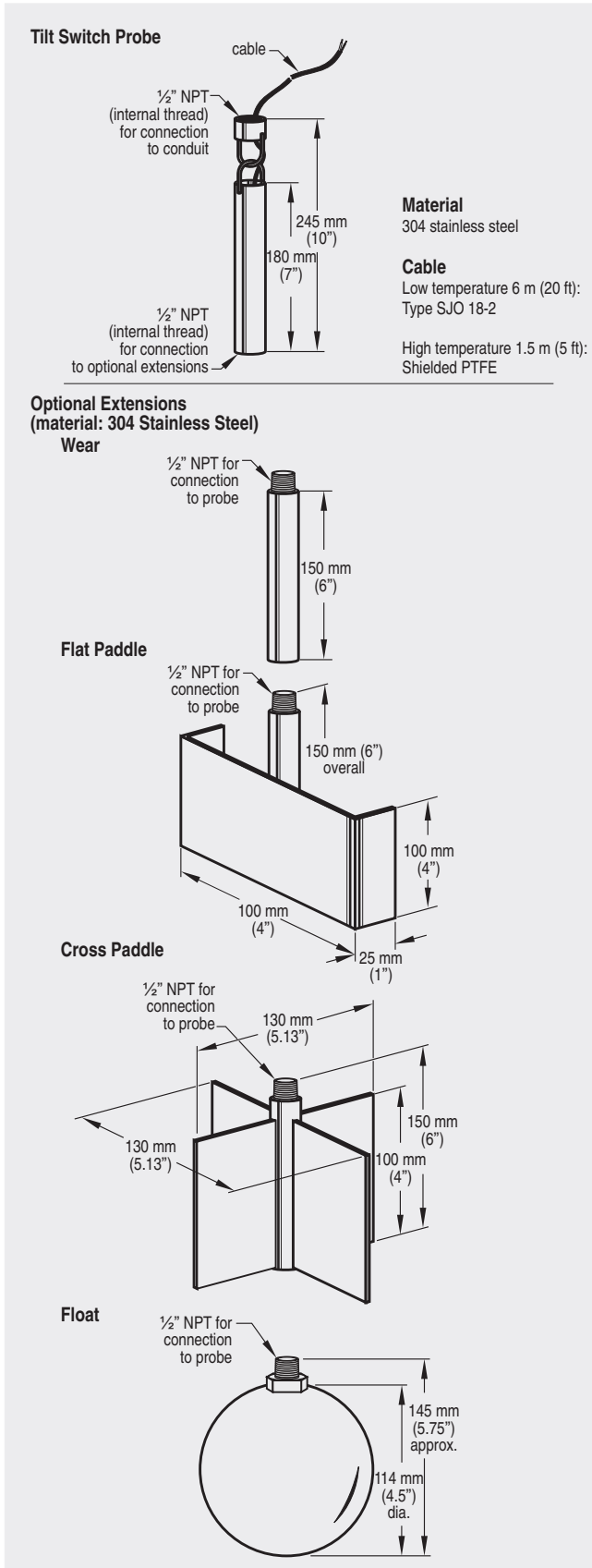
Extensions: stainless steel Wear, Cross Paddle, Flat Paddle or Float

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### Tilt Switch

#### Dimensional drawings



Tilt Switch dimensions

#### Ordering data

Order No.

#### Tilt Switch Probe

A) **7MH7143-**

Electro-mechanical tilt switch for point level detection, plug chute detection, belt tracking, and feed loss detection on conveyor belts

#### Model

Standard CE

#### Sensor Construction

Stainless steel

#### Temperature Rating

Low temperature with 6 m (20 ft) of cable

High temperature with 1.5 m (5 ft) of cable

#### Probe Extension

None

Wear extension, stainless steel

Cross paddle extension, stainless steel

Flat paddle extension, stainless steel

Float, stainless steel

#### Instruction Manual

Tilt Switch Probe, English

Note: The instruction manual should be ordered as a separate item on the order.

A) **7ML1998-5FL01**

A) Subject to export regulations AL: N, ECCN: EAR99