

SITRANS L Level instruments

Point level measurement

Pointek PLS 200

Overview



The Pointek PLS 200 is a low-cost rotating paddle switch that detects full, empty, or demand conditions on bulk solids applications.

Benefits

- Proven paddle switch technology for bulk solids
- High integrity mechanical seal
- Switch selectable power supply
- Unique friction clutch mechanism
- Stainless steel 1¼" NPT or 1½" BSP threaded connection
- Rotatable enclosure
- Hinged paddle optional for use with low density materials
- Simple installation through process connection

Application

The paddle switch technology provides superior performance on materials such as grain, feed, cement, plastic granulate, and wood chips. The paddle switch can handle bulk densities as low as 35 g/l (2.19 lb/ft³) with the optional hinged vane, or 100 g/l (6.25 lb/ft³) with the standard measuring vane.

A low revolution gearing motor drives a rotating measuring vane which senses the presence of material at the mounted level of the PLS 200. As material comes into contact with the rotating paddle, rotation stops, which actuates a relay contact closure. When the paddle is no longer covered by material, rotation resumes and the relay reverts to its normal condition.

The PLS 200 is a rugged design for use in harsh conditions within the solids industry. The sensitivity of the paddle can be adjusted for varying material properties like build-up on the vane.

The PLS 200 comes in a variety of configurations including compact, extended and cable extension. The PLS 200 is equipped with a standard vane which is effective in most applications, but can be configured with a hinged vane for increased sensitivity for light materials.

Technical specifications

Mode of operation

- Measuring principle Rotating point level switch

Input

- Measured variable High and low

Output

- Output signal microswitch 5A at 250 V AC, non inductive
- Alarm output approx 1.3 seconds

Sensitivity

- adjustable via reset force of spring or geometry of measuring vane

Rated operating conditions

Installation conditions

- Location indoor/outdoor

Ambient conditions

- Ambient temperature -20 to +60 °C (-4 to +140 °F)
- Installation category III

Medium conditions

- Temperature -20 to +80 °C (-4 to +176 °F)
- Pressure (vessel) max. 0.5 bar (7 psi)
- Minimum material density
 - standard measuring vane
 - 100 g/l (6.25 lb/ft³) when paddle covered by 10 cm (4") of material
 - 200 g/l (12.4 lb/ft³) completely covered
 - hinged measuring vane
 - 35 g/l (2.19 lb/ft³) when paddle covered by 10 cm (4") of material
 - 70 g/l (4.69 lb/ft³) when completely covered

Design

- Material
 - Enclosure Epoxy coated aluminum
 - process connection, measuring shaft and vane Stainless steel
- Process connection Thread 1¼" NPT, 1½" BSP
- Degree of protection IP65/Type 4/NEMA 4
- Conduit entry 2 x M20x1.5 or 2 x ½" NPT

Power supply

- jumper selectable
 - 115 V AC, ±15%, 50 to 60 Hz, 4 VA or 230 V AC, ±15%, 50 Hz, 6 VA
 - or 24 V DC, ±15%, 2.5 W

Certificates and approvals

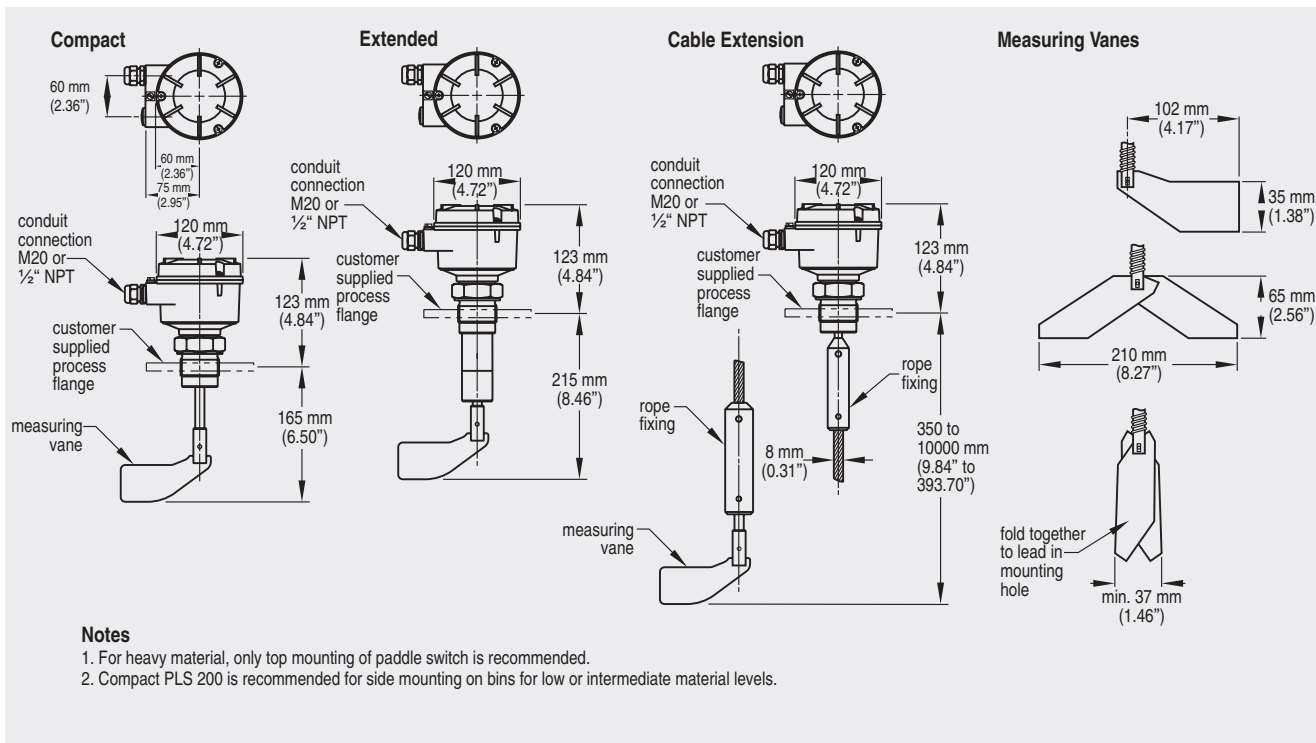
- FM/CSA Class II, Div. 1, Group E, F, G, Class III
- CSA_{US} Class II, Div. 2, Class III
- ATEX II 1/2 D
- CE

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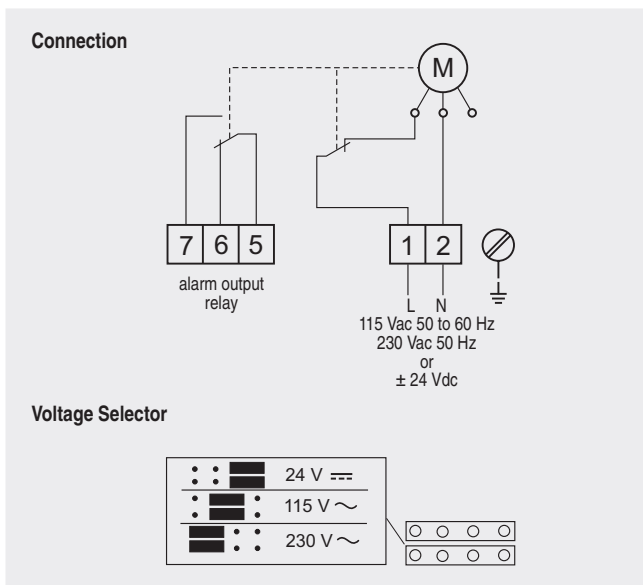
Pointek PLS 200

Dimensional drawings



Pointek PLS 200 dimensions

Schematics



Pointek PLS 200 connections

Ordering data

Pointek PLS 200, compact

Electro-mechanical rotary paddle switch for level detection of powder and granular solids
– Compact design for side or top mounted applications

Input Voltage

switch selectable

Process temperature

up to 80 °C (176 °F)

Process Connection

1½" BSP thread
1¼" NPT thread

Process connection material

stainless steel

Extension length

standard, 165 mm

Measuring vane

boot shaped, 35 x 106 mm

Approvals

CSA/FM Class II, Div. 2, Group E, F, G, Class III,
ATEX II 1/2 D

Additional Instruction Manual

Multi-language
Note: Due to ATEX regulations, one instruction manual is shipped with every product.

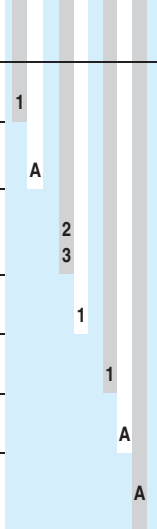
Spare Parts

Motor gear /PLC-multivoltage
Replacement vane, boot shape, 35 x 106 mm
Hinged vane, 65 x 210 mm
Tag, stainless steel, 12 x 45 mm, one text line, suitable for enclosures

Order No.

7MH7164-

A - O



C) 7ML1998-1FS61

PBD-26151547
PBD-26151548
PBD-26151549
PBD-45000786

C) Subject to export regulations AL: N, ECCN: EAR99.

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Ordering data	Order No.
Pointek PLS 200, extended Electro-mechanical rotary paddle switch for level detection of powder and granular solids – Extended length for side or top mounting	7 MH 7 1 6 8 -
Input Voltage switch selectable	1
Process temperature up to 80 °C (176 °F)	A
Process Connection 1½" BSP thread 1¼" NPT thread	2 3
Process connection material stainless steel	1
Extension length standard	1
Measuring vane boot shaped, 35 x 106 mm	A
Approvals CSA/FM Class II, Div. 2, Group E, F, G, Class III, ATEX II 1/2 D	A
Additional Instruction Manual Multi-language Note: Due to ATEX regulations, one instruction manual is shipped with every product.	C) 7ML1998-1FS61
Spare Parts Motor gear /PLC-multivoltage Replacement vane, boot shape, 35 x 106 mm Hinged vane, 65 x 210 mm Tag, stainless steel, 12 x 45 mm, one text line, suitable for enclosures	PBD-26151547 PBD-26151548 PBD-26151549 PBD-45000786

C) Subject to export regulations AL: N, ECCN: EAR99.

Ordering data	Order No.
Pointek PLS 200, cable extension Electro-mechanical rotary paddle switch for level detection of powder and granular solids – Cable extension for top mounting requirements	7 MH 7 1 6 6 -
Input Voltage switch selectable	1
Process temperature up to 80 °C (176 °F)	A
Process Connection 1½" BSP thread 1¼" NPT thread	2 3
Process connection material stainless steel	1
Extension length standard, 2000 mm Customer specified length (min. 350 mm, max. 10000 mm) Add order code N1Y and plain text description "... mm"	1 9
Measuring vane boot shaped, 35 x 106 mm	A
Approvals CSA/FM Class II, Div. 2, Group E, F, G, Class III, ATEX II 1/2 D	A
Additional Instruction Manual Multi-language Note: Due to ATEX regulations, one instruction manual is shipped with every product.	C) 7ML1998-1FS61
Spare Parts Motor gear /PLC-multivoltage Replacement vane, boot shape, 35 x 106 mm Hinged vane, 65 x 210 mm Cable extension kit, 2 m Tag, stainless steel, 12 x 45 mm, one text line, suitable for enclosures	PBD-26151547 PBD-26151548 PBD-26151549 PBD-26151550 PBD-45000786

C) Subject to export regulations AL: N, ECCN: EAR99.