

Level instruments

Point level measurement - Ultrasonic switch

Pointek ULS200

Technical specifications

Mode of operation	
Measuring principle	Ultrasonic level switch
Measuring range	
Measuring range in liquids	0.25 to 5 m (0.8 to 16.4 ft)
Measuring range in bulk solids	0.25 to 3 m (0.8 to 9.8 ft)
Output	
AC Version (relay)	2 SPDT Form C contacts rated 5 A at 250 V AC, resistive load
DC Version (relay)	2 SPDT Form C contacts rated 5 A at 48 V DC
DC Version (transistor)	2 switches, rated max. 100 mA, 48 V DC
Accuracy	
AC/DC version	
• Resolution	3 mm (0.1")
• Repeatability	0.25% of measuring range
Rated operation conditions	
<u>Installation conditions</u>	
• Location	Indoors/outdoors
• Beam angle	12°
<u>Ambient conditions</u>	
• Ambient temperature	-40 to +60 °C (-40 to +140 °F)
• If mounted in metal threads	-20 to +60 °C (-5 to +140 °F)
<u>Medium conditions</u>	
• Process pressure	0.5 bar (7.25 psi) max.
Design	
Material	Polycarbonate or epoxy-coated aluminum with gasket
Weight	Approx. 1.5 kg (3.3 lbs)
Transducer material	PVDF copolymer
Threaded mounting	2" NPT [(Taper), ANSI/ASME B1.20.1] R 2" [(BSPT), EN 10226] or G 2" [(BSPP), EN ISO 228-1]
• Optional flange adapter	For 3" ASME, DN 65, PN 10 and JIS 10 K3B
Sanitary mounting	4" sanitary fitting clamp according to 3A guidelines
Power supply	
AC version	100 to 230 V AC, ± 15%, 50/60 Hz, max. 12 VA, 5 W
DC version	18 to 30 V DC, 3 W
Displays and controls	
Display	LCD, three digits, 9 mm (0.35") high, for display of distance between sensor face and material, multisegment graphic for operating state
Memory	EEPROM, non-volatile
Programming	2 keys
Electronics/enclosure	
Degree of protection	Connection: terminal block, max. 2.5 mm ² (14 AWG) solid/1.5 mm ² (16 AWG) stranded
Cable inlet	IP67/Type 6/NEMA 6 2 x ½" NPT or 2 x PG 13.5
Certificates and approvals	
<ul style="list-style-type: none"> • CE (EMC certificate available on request), CSA_{NRTL/C}, FM • CSA/FM Class I, Div. 1, Groups A, B, C, D; Class II; Groups E, F, G; Class III • ATEX II 2G EEx md II C T5 • 3A Approval 	

Selection and Ordering data

Order No.
C) 7ML1510-
Pointek ULS200 Ultrasonic non-contacting switch with two switch points for level detection of bulk solids, liquids and slurries in a wide variety of industries; ideal for sticky materials
Power supply 24 V DC, relay output 24 V DC, transistor output 100 to 230 V AC, relay output
Approvals CE, ATEX II 2G EEx md IIC T5, SAA ¹⁾ CE, CSA Class I Div. 1, Class II Div. 1, Class III ²⁾ CE, FM Class I Div. 1, Class II Div. 1, Class III ²⁾ CE, CSA _{NRTL/C} , FM, 3A CE, CSA Class I Div. 2, Class II Div. 2 ³⁾
Transducer/Process connection ETFE, 2" NPT [(Taper), ANSI/ASME B1.20.1] ETFE, R 2" [(BSPT), EN 10226] ETFE, G 2" [(BSPP), EN ISO 228-1] PVDF copolymer, 2" NPT [(Taper), ANSI/ASME B1.20.1] PVDF copolymer, R 2" [(BSPT), EN 10226] PVDF copolymer, G [(BSPP), EN ISO 228-1] PVDF copolymer, 4" sanitary mounting, 3A approved ⁴⁾
Enclosure/cable inlet Polycarbonate • Cable inlet PG 13.5 • Cable inlet ½" NPT Aluminum • Cable inlet PG 13.5 • Cable inlet ½" NPT
Instruction manual Additional Multi-language Quick Start manual C) 7ML1998-1XB81 This device is shipped with the Siemens Milltronics manual CD containing the complete ATEX Quick Start and instruction manual library.
Accessories Tag, stainless steel, 12 x 45 mm (0.47 x 1.77"), one text line, suitable for enclosures Universal Box Bracket Mounting Kit 3" ASME, DN 65, PN 10, JIS 10K 3B ETFE Flange adapter for 2" NPT 3" ASME, DN 65, PN 10, JIS 10K 3B ETFE Flange adapter for 2" BSPT 2" BSPT Locknut, plastic 2" NPT Locknut 4" sanitary mounting clamp
Spare Parts Polycarbonate Lid Aluminum Lid
1) Available with enclosure/cable inlet option 4 only 2) Available with enclosure/cable inlet option 4 only and process connection options A and E only 3) Available with enclosure/cable inlet options 2 and 4 only 4) Available with approval option H only
C) Subject to export regulations AL: N, ECCN: EAR99

Order No.

C) 7ML1510-

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C) 7ML1998-1XB81

7ML1930-1AC

7ML1830-1BK

7ML1830-1BT

7ML1830-1BU

7ML1830-1DQ

7ML1830-1DT

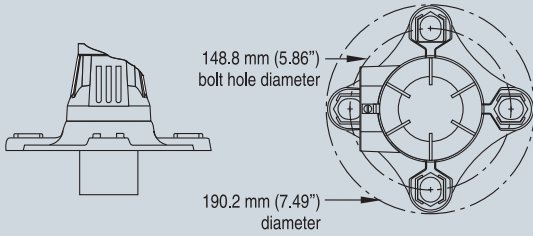
7ML1830-1BR

7ML1830-1LG

7ML1830-1LH

Options

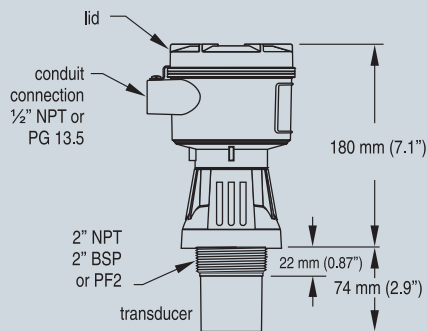
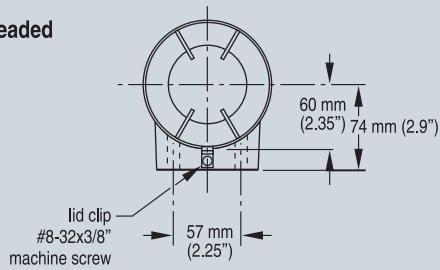
Flange adapter for mating 2" NPT or 2" BSP process connections to 3" ANSI, DIN 65 PN10, and JIS 10K 3B flanges



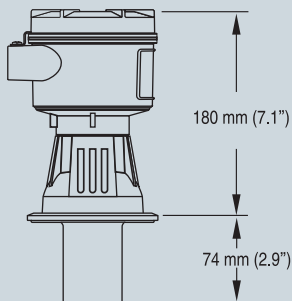
Pointek ULS200 Optional Flange Adapter

Dimensional drawings

Threaded



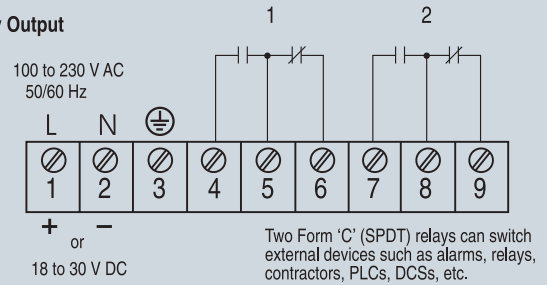
Sanitary



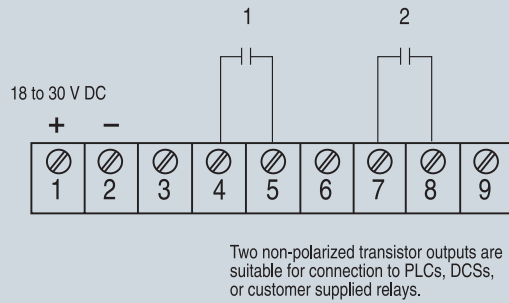
Pointek ULS200 dimensions

Schematics

Relay Output



Transistor Output: DC version only



Pointek ULS200 connections