

Benefits



- 2 switch outputs for high-high, high, low, and low-low level alarms or pump up/pump down control
- Integral temperature compensation
- AC or DC power supply
- Electronics provided with fail-safe function
- Threaded and sanitary fitting clamp process connections
- Polycarbonate enclosure, Type 6/NEMA 6/IP67
- Easy, two-button programming

Application

The measuring range for bulk solids is max. 3 m (9.8 ft) and 5 m (16.4 ft) for liquids and slurries. Unlike invasive contacting devices, there is no material buildup on the sensor.

The level switch has a rugged design, combining the transducer and electronics in one durable device. It has no moving parts and is virtually maintenance-free.

The transducer, available in ETFE or PVDF copolymer, is inert to most chemicals. This means the device can be used in the chemical, petrochemical, water, and wastewater industries. A sanitary version of the ULS200, with an industry standard flange option, is easy to remove from the application for cleaning. It thus satisfies the prerequisites for use in the food, beverage, and pharmaceutical industries. The Pointek ULS200 delivers superior performance while reducing maintenance, downtime, and equipment replacement costs.

- Key Applications: liquids, slurries, fluid materials, plugged chute detection, chemical industry

Design

Installation

The Pointek ULS200 should be mounted in an area that is within the temperature range specified and that is suitable to the enclosure rating and materials of construction. The cover should be accessible to allow programming, wiring and display viewing.

It is advisable to keep the Pointek ULS200 away from high voltage or current runs, contactors and SCR control drives.

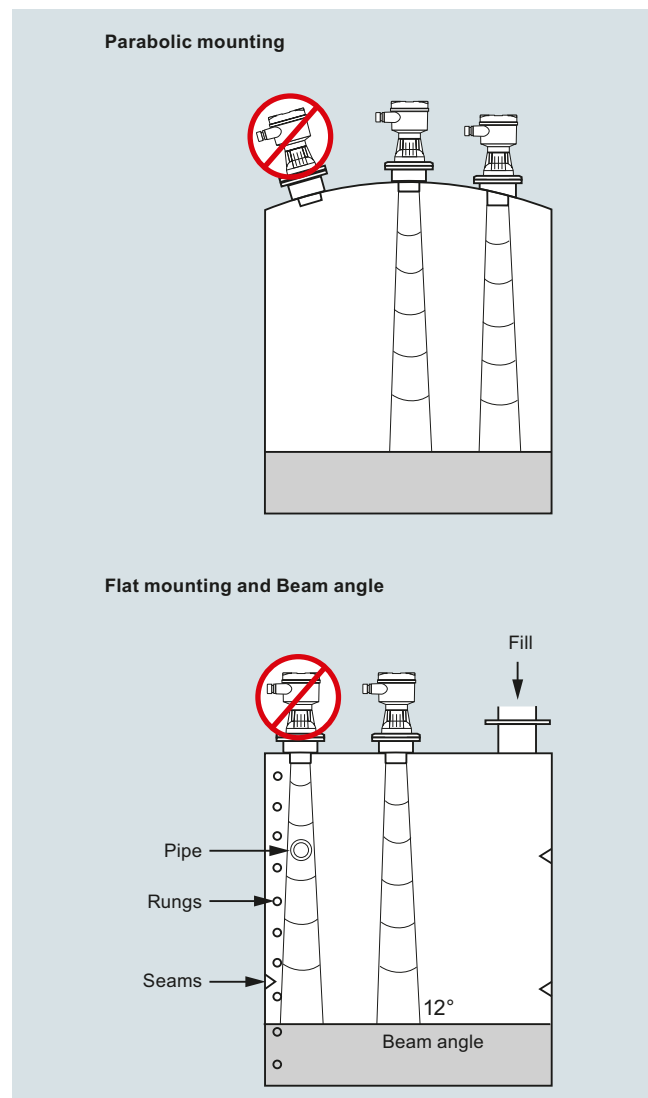
Locate the Pointek ULS200 so that it has a clear sound path perpendicular to the material surface. The sound path should not intersect the fill path, rough walls, seams, rungs etc.

Mounting and Interconnection

The Pointek ULS200 is available in three thread types: 2" NPT, R 2" (BSPT), EN 10226 or PF2 and can be fitted with the optional 75 mm (3 inch) flange adapter for mating to 3" ASME, DN 65, PN 10, and JIS 10K 3B sized flanges.

Separate cables and conduit may be required to conform to standard instrumentation wiring or electrical codes.

Configuration



Pointek ULS200 mounting

Level measurement

Point level measurement

Ultrasonic non-contacting switch

Pointek ULS200**Technical specifications****Mode of operation**

Measuring principle Ultrasonic level switch

Measuring range

Measuring range in liquids 0.25 ... 5 m (0.8 ... 16.4 ft)

Measuring range in bulk solids 0.25 ... 3 m (0.8 ... 9.8 ft)

Output

AC Version (relay) 2 SPDT Form C contacts, rated 5 A at 250 V AC or 30 V DC, resistive load; rated 1 A at 48 V DC resistive load

DC Version (relay) 2 SPDT Form C contacts, rated 5 A at 30 V DC, resistive load; rated 1 A at 48 V DC resistive load

DC Version (transistor) 2 switches, rated max. 100 mA, 48 V DC

Accuracy

AC/DC version

- Resolution 3 mm (0.1 inch)
- Repeatability 0.25 % of measuring range

Rated operation conditions

Installation conditions

- Location Indoors/outdoors
- Beam angle 12°

Ambient conditions

- Ambient temperature -40 ... +60 °C (-40 ... +140 °F)
- Storage temperature -40 ... +60 °C (-40 ... +140 °F)
- If mounted in metal threads -20 ... +60 °C (-5 ... +140 °F)

Medium conditions

- Process pressure 0.5 bar (7.25 psi) max.

Design

Material Polycarbonate with gasket

Weight Approx. 1.5 kg (3.3 lb)

Transducer material PVDF or ETFE 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

Power supply

AC version 100 ... 230 V AC, ± 15 %, 50/60 Hz, max. 12 VA, 5 W

DC version 18 ... 30 V DC, 3 W

Displays and controls

Display LCD, three digits, 9 mm (0.35 inch) high, for display of distance between sensor face and material, multi-segment graphic for operating state

Memory EEPROM, non-volatile

Programming 2 keys

Electronics/enclosureConnection: terminal block, max. 2.5 mm² (14 AWG) solid/1.5 mm² (16 AWG) stranded

Degree of protection IP67/Type 6/NEMA 6

Cable inlet 2 x 1/2" NPT or 2 x PG 13.5

Certificates and approvals

CE, CSA US/C, FM

Level measurement
Point level measurement
Ultrasonic non-contacting switch

Pointek ULS200

Selection and ordering data

Article No.

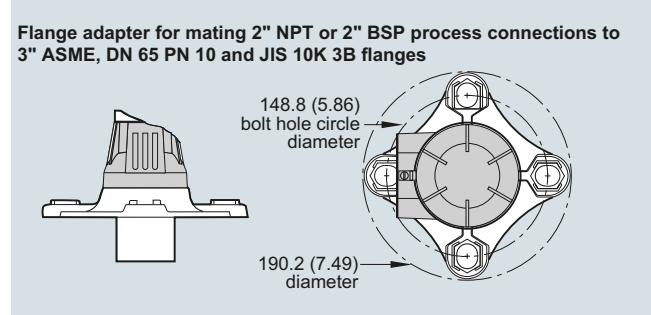
Pointek ULS200 Ultrasonic point level switch ↗	7ML1510-
Non-contact, 5 m (16.4 ft) range, for bulk solids, liquids, and slurries.	0
↗ Click on the Article No. for the online configuration in the PIA Life Cycle Portal.	
Power supply	
24 V DC, relay output	1
24 V DC, transistor output	2
100 ... 230 V AC, relay output	3
Approvals	
CE, RCM, CSA Class I, II, Div. 2 ¹⁾	J
CE, RCM, CSA _{us/c} , FM	K
Transducer/Process connection	
ETFE, 2" NPT [(Taper), ANSI/ASME B1.20.1]	A
EFTE, R 2" [(BSPT), EN 10226]	B
EFTE, G 2" [(BSPP), EN ISO 228-1]	C
PVDF copolymer, 2" NPT [(Taper), ANSI/ASME B1.20.1]	E
PVDF copolymer, R 2" [(BSPT), EN 10226]	F
PVDF copolymer, G [(BSPP), EN ISO 228-1]	G
PVDF copolymer, 4" sanitary mounting ²⁾	J
Enclosure/cable inlet	
<u>Polycarbonate</u>	
Cable inlet PG 13.5	1
Cable inlet 1/2" NPT	2
<u>Aluminum</u>	
Aluminum housing, Cable inlet PG 13.5	3
Aluminum housing, Cable inlet 1/2" NPT	4

1) Available with Enclosure/cable inlet option 2 only.

2) Available with Approvals option K only.

Further designs	Order code
Please add "-Z" to Article No. and specify Order code(s)	
Stainless steel tag [69 x 50 mm (2.71 x 1.97 inch)]; Measuring-point number/identification (max. 27 characters) specify in plain text	Y15
Operating Instructions	
All literature is available to download for free, in a range of languages, at http://www.siemens.com/processinstrumentation/documentation	
Accessories	Article No.
Tag, stainless steel, 12 x 45 mm (0.47 x 1.77 inch), one text line, suitable for enclosures	7ML1930-1AC
Universal Box Bracket Mounting Kit	7ML1830-1BK
3" ASME, DN 65 PN 10, JIS 10K 3B ETFE Flange adapter for 2" NPT	7ML1830-1BT
3" ASME, DN 65 PN 10, JIS 10K 3B ETFE Flange adapter for 2" BSPT	7ML1830-1BU
2" BSP nylon plastic locknut	7ML1830-1DQ
2" NPT nylon plastic locknut	7ML1830-1DT
4" sanitary mounting clamp	7ML1830-1BR
Spare Parts	
Polycarbonate Lid	7ML1830-1LG

Options



Pointek ULS200 optional flange adapter, dimensions in mm (inch)

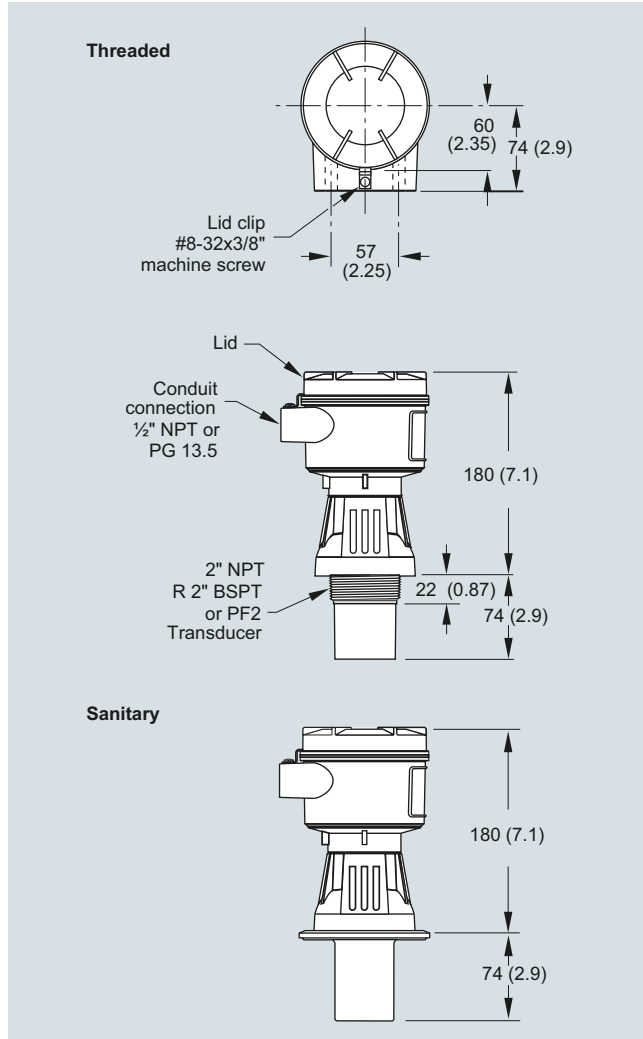
Level measurement

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Ultrasonic non-contacting switch

Pointek ULS200

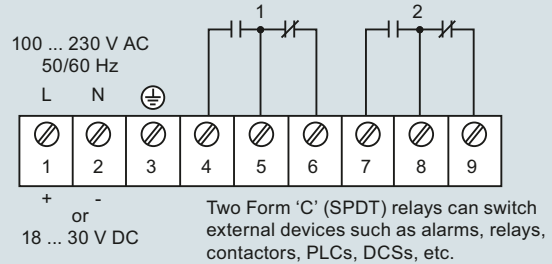
Dimensional drawings



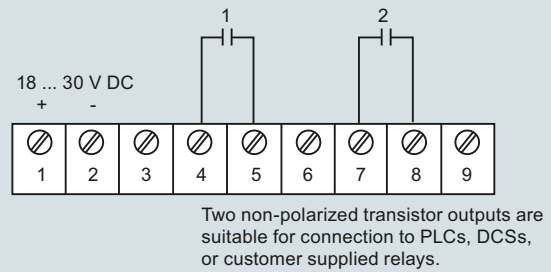
Pointek ULS200, dimensions in mm (inch)

Circuit diagrams

Relay output



Transistor output: DC version only



Pointek ULS200 connections