

Overview



Pointek CLS200 (standard version) is a versatile inverse frequency shift capacitance level switch with optional rod/cable choices and configurable output, ideal for detection of liquids, solids, slurries, foam and interfaces.

Benefits

- Potted construction protects signal circuit from shock, vibration, humidity and/or condensation
- High chemical resistance
- Level detection independent of tank or pipe earth reference
- Insensitive to product buildup due to high frequency oscillation
- 3 LED indicators for sensor status, output status, and power

Application

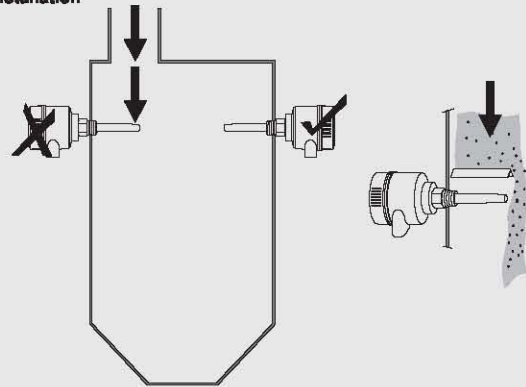
Pointek CLS200 standard version has 3 LED indicators with basic relay and solid-state switch alarms.

The power supply is galvanically isolated and accepts a wide range of voltages (12 to 250 V AC/DC). When used with thermal isolator, the stainless steel and PPS (PVDF optional) materials used in the probe construction provide a temperature rating up to +125 °C (+257 °F) on the process wetted portion of the probe. The switch responds to any material with a dielectric constant of 1.5 or more by detecting a change in oscillating frequency, and it can be set to detect before contact or on contact with the probe. The CLS200 operates independently of the tank wall or pipe so it does not require an external reference electrode for level detection in a non-conductive vessel such as concrete or plastic (EMC regulations applicable in some regions).

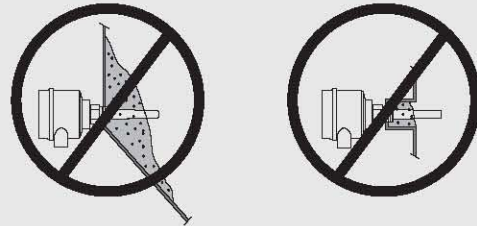
- Key Applications: liquids, slurries, powders, granules, pressurized applications, hazardous areas

Configuration

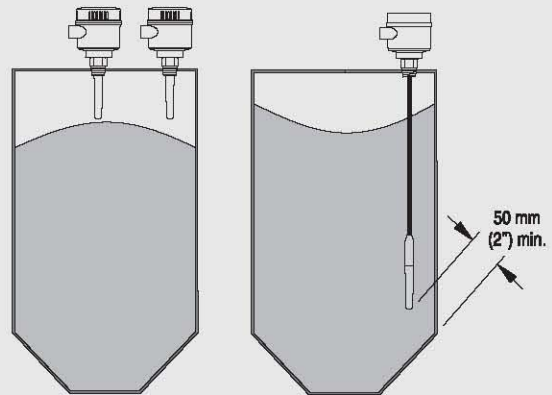
Installation



Keep unit out of path of falling material, or protect probe from falling material.



Avoid areas where material buildup occurs.



Install probe at least 50 mm from tank wall.

Pointek CLS200 installation

Level instruments

Point level measurement - Capacitance switches

Pointek CLS200 - Standard

Technical specifications

Mode of operation	
Measuring principle	Inverse frequency shift capacitive level detection
Input	
Measured variable	Change in picoFarad (pF)
Output	
<u>Output signal</u>	
• Relay output	1 SPDT Form C relay
- Max. contact voltage	• 30 V DC • 250 V AC
- Max. contact current	• 5 A (DC) • 8 A (AC)
- Max. switching capacity	150 W (DC) 2000 VA (AC)
- Time delay (ON and/or OFF)	1 to 60 s
• Solid-state output	
- Output	Galvanically isolated
- Protection	Against reversed polarity (bipolar)
- Max. switching voltage	• 30 V (DC) • 30 V peak (AC)
- Max. load current	82 mA
- Voltage drop	< 1 V, typical at 50 mA
- Time delay (pre or post switching)	1 to 60 s
Rated operating conditions¹⁾	
<u>Installation conditions</u>	
• Location	Indoor/outdoor
<u>Ambient conditions</u>	
• Ambient temperature	-40 to +85 °C (-40 to +185 °F) ²⁾
• Installation category	II
• Pollution degree	4
<u>Medium conditions</u>	
• Relative dielectric constant ϵ_r	Min. 1.5
• Process temperature	
- Without thermal isolator	-40 to +85 °C (-40 to +185 °F) ²⁾
- With thermal isolator	-40 to +125 °C (-40 to +257 °F)
• Process pressure (rod version)	-1 to +25 bar g (-14.6 to +365 psi g) (nominal)
• Process pressure (cable version) ³⁾	-1 to +10 bar g (-14.6 to +150 psi g) (nominal)
• Process pressure (sliding coupling version)	-1 to +10 bar g (-14.6 to +150 psi g) (nominal)
<u>Electromagnetic Compatibility</u>	
To comply with CE EMC regulations (where applicable); the CLS200 should only be used under these conditions:	
- Installed in a metallic vessel	
- Wired with shielded cable	
- Cable shields are terminated in suitable EMC rated cable glands at the device cable entry point.	

Design	
• Material	
- Enclosure	Epoxy-coated aluminum with gasket
- Optional thermal isolator	316L stainless steel
• Connection	Removable terminal block, max. 2.5 mm ²
• Degree of protection	IP65/Type 4/NEMA 4 (optional IP68)
• Cable inlet	2 x M20x1.5 thread (option: 2 x 1/2" NPT conduit entry including 1 plugged entry)
Power supply	
12 to 250 V AC/DC, 0 to 60 Hz max. 2 W	
Certificates and approvals	
• General Purpose	CSA, FM, CE, C-TICK
• Dust Ignition Proof	ATEX II 1/2 D T100°C
• Flameproof Enclosure with IS Probe	ATEX II 1 G EEx d[ia] IIC T6...T4 ATEX II 1/2 D T100°C
• Dust Ignition Proof with IS Probe	CSA/FM Class II, Div. 1, Gr. E, F, G CSA/FM Class III T4
• Explosion Proof Enclosure With IS Probe	CSA/FM Class I, Div. 1, Gr. A, B, C, D CSA/FM Class II, Div. 1, Gr. E, F, G CSA/FM Class III T4
• Marine	Lloyds Register of Shipping, Categories ENV1, ENV2 and ENV5
• Overfill Protection	WHG (Germany) VLAREM II
• Others	Pattern Approval (China)

- 1) When operation is in areas classified as hazardous, observe restrictions according to relevant certificate. See also Pressure/Temperature curves on page 5/34.
- 2) Thermal isolator is used if process connection temperature exceeds +85 °C (+185 °F)
- 3) Pressure rating of process seal is temperature dependent. See Pressure/Temperature curves on page 5/34.

Level instruments

Point level measurement - Capacitance switches

Pointek CLS200 - Standard

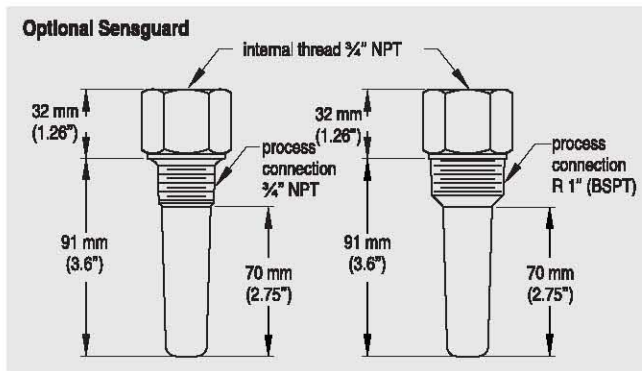
Design: Probe				
	Rod version	Sanitary version	Cable version	Sliding Coupling version
Max. length	5500 mm (216.53")	5500 mm (216.53")	30000 mm (1181.1") liquids and slurries 5000 mm (196.85") solids (under loads)	5500 mm (216.53")
Process connection	R ¾", 1", 1¼", 1½" [(BSPT), EN 10226/PT (JIS-T), JIS B 0203] ¾", 1", 1¼", 1½" NPT [(Taper), ANSI/ASME B1.20.1] G ¾", 1", 1½" [(BSPP), EN ISO 228-1/PF (JIS-P), JIS B 0202] 316L stainless steel ASME/EN flange	1½", 2" sanitary fitting clamp 316L stainless steel	R ¾", 1", 1¼", 1½" [(BSPT), EN 10226/PT (JIS-T), JIS B 0203] ¾", 1", 1¼", 1½" NPT [(Taper), ANSI/ASME B1.20.1] G ¾", 1", 1½" [(BSPP), EN ISO 228-1/PF (JIS-P), JIS B 0202] 316L stainless steel ASME/EN flange	R ¾", 1", 1¼", 1½" [(BSPT), EN 10226/PT (JIS-T), JIS B 0203] ¾", 1", 1¼", 1½" NPT [(Taper), ANSI/ASME B1.20.1] G ¾", 1", 1½" [(BSPP), EN ISO 228-1/PF (JIS-P), JIS B 0202]
Extension material	316L stainless steel optional PFA coated ¹⁾	316L stainless steel	Fluoroethylene propylene (FEP) cable with stainless steel core	316L stainless steel
Sensor wetted parts	PPS (optional PVDF)	PPS (optional PVDF)	PPS (optional PVDF)	PPS (optional PVDF)
O-ring seal material	FKM (optional FFKM) ²⁾	FKM (optional FFKM) ²⁾	FKM (optional FFKM) ²⁾	FKM (optional FFKM) ²⁾
Thermal isolator ³⁾	Optional	Optional	Optional	Optional
Extension	User selected length	User selected length	Cable extension	User selected length

1) PFA coating (7ML5634 and 7ML5644) has 120 micron thickness.

2) For Caustic Materials please contact nacc.smpi@siemens.com for alternative O-Rings

3) Thermal isolator is used if process connection temperature exceeds +85 °C (+185 °F).

Options



Optional Sensguard dimensions

Level instruments

Point level measurement - Capacitance switches

Pointek CLS200 - Standard

Selection and Ordering data

Order No.

Pointek CLS200 - Standard - Rod Version with Threaded or Flanged process connection C) 7ML5630-0

Versatile inverse frequency shift capacitance level switch with optional rod/cable choices and configurable output, ideal for detection of liquids, solids, slurries, foam and interfaces

Process Connection

Threaded, 316L stainless steel

¾" NPT [(Taper), ANSI/ASME B1.20.1] **0A**
 1" NPT [(Taper), ANSI/ASME B1.20.1] **0B**
 1¼" NPT [(Taper), ANSI/ASME B1.20.1] **0C**
 1½" NPT [(Taper), ANSI/ASME B1.20.1] **0D**
 R ¾" [(BSPT), EN 10226/PT (JIS-T), JIS B 0203] **1A**
 R 1" [(BSPT), EN 10226/PT (JIS-T), JIS B 0203] **1B**
 R 1½" [(BSPT), EN 10226/PT (JIS-T), JIS B 0203] **1D**
 G ¾" [(BSPP), EN ISO 228-1/PF (JIS-P), JIS B 0202] **3A**
 G 1" [(BSPP), EN ISO 228-1/PF (JIS-P), JIS B 0202] **3B**
 G 1½" [(BSPP), EN ISO 228-1/PF (JIS-P), JIS B 0202] **3D**

Welded flange, 316L stainless steel, raised face

1" ASME, 150 lb **5A**
 1" ASME, 300 lb **5B**
 1" ASME, 600 lb **5C**
 1½" ASME, 150 lb **5D**
 1½" ASME, 300 lb **5E**
 1½" ASME, 600 lb **5F**
 2" ASME, 150 lb **5G**
 2" ASME, 300 lb **5H**
 2" ASME, 600 lb **5J**
 3" ASME, 150 lb **5K**
 3" ASME, 300 lb **5L**
 3" ASME, 600 lb **5M**
 4" ASME, 150 lb **5N**
 4" ASME, 300 lb **5P**
 4" ASME, 600 lb **5Q**

Welded flange, 316L stainless steel, Type A flat faced

DN 25, PN 16 **6A**
 DN 25, PN 40 **6B**
 DN 40, PN 16 **6C**
 DN 40, PN 40 **6D**
 DN 50, PN 16 **6E**
 DN 50, PN 40 **6F**
 DN 80, PN 16 **6G**
 DN 80, PN 40 **6H**
 DN 100, PN 16 **6J**
 DN 100, PN 40 **6K**

(Note: Flange bolting patterns and facings dimensionally correspond to the applicable ASME B16.5 or EN 1092-1 standard.)

Probe length (length from flange face) (threaded lengths include process thread)

Note: No Y01 needed in order code for standard lengths

Compact [threaded 120 mm (4.72")], Flanged 98 mm (3.86") **A**
 Extended rod, 250 mm (9.84") **B**
 Extended rod, 350 mm (13.78") **C**
 Extended rod, 500 mm (19.69") **D**
 Extended rod, 750 mm (29.53") **E**
 Extended rod, 1000 mm (39.37") **F**
 Extended rod, 1250 mm (49.21") **G**
 Extended rod, 1350 mm (53.15") **H**
 Extended rod, 1500 mm (59.06") **J**
 Extended rod, 1750 mm (68.90") **K**
 Extended rod, 2000 mm (78.74") **L**

Selection and Ordering data

Order No.

Pointek CLS200 - Standard - Rod Version with Threaded or Flanged process connection C) 7ML5630-0

Versatile inverse frequency shift capacitance level switch with optional rod/cable choices and configurable output, ideal for detection of liquids, solids, slurries, foam and interfaces

Add order code Y01 and plain text: "Insertion length ... mm"

Extended rod, 200 to 1000 mm (7.87 to 39.37") **M**
 Extended rod, 1001 to 2000 mm (39.41 to 78.74") **N**
 Extended rod, 2001 to 3000 mm (78.78 to 118.11") **P**
 Extended rod, 3001 to 4000 mm (118.15 to 157.48") **Q**
 Extended rod, 4001 to 5000 mm (157.52 to 196.85") **R**
 Extended rod, 5001 to 5500 mm (196.89 to 216.53") **S**

Thermal Isolator

Without thermal isolator **0**
 With thermal isolator [for process connection temperatures over +85 °C (+185 °F)] **1**

Remote mount electronics and mounting bracket

With 2 m (79") of cable **2**
 With 5 m (197") of cable **3**

Wetted Seals

FKM **0**
 FFKM [for process temperatures above -20 °C (-4 °F)] **1**

Probe Material

316L Stainless Steel with PPS probe body **0**
 316L Stainless Steel with PVDF probe body **1**

Approvals

Dust Ignition Proof: CE, C-TICK, ATEX II 1/2 D T100 °C **C**

Flameproof Enclosure with IS Probe: CE, C-TICK, ATEX II 1 G EEx d[ia] IIC T6...T4, ATEX II 1/2 D T100 °C **D**

Flameproof Enclosure with IS Probe, with WHG approval: CE, C-TICK, ATEX II 1/2 G EEx d[ia] IIC T6...T4, ATEX II 1/2 D T100 °C **E**

Dust Ignition Proof with IS Probe: CSA/FM Class II, Div. 1, Gr. E, F, G **F**
 CSA/FM Class III T4

Explosion Proof Enclosure with IS Probe: CSA/FM Class I, Div. 1, Gr. A, B, C, D **G**
 CSA/FM Class II, Div. 1, Gr. E, F, G
 CSA/FM Class III T4

General Purpose (CSA, FM) **H**

General Purpose (CE, C-TICK) **J**

General Purpose (CSA, FM, CE, C-TICK) with WHG approval **K**

Enclosure and Lid

Aluminum epoxy coated

2 x ½" NPT via adapter - cable inlet, IP65 **A**
 2 x M20 x 1.5 cable inlet IP65 **B**

2 x ½" NPT via adapter - cable inlet, IP68 **C**
 2 x M20 x 1.5 cable inlet IP68 **D**

Further designs

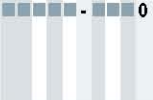
Please add "L-Z" to Order No. and specify Order code(s).

Total insertion length: enter the total insertion length in plain text description **Y01**

Stainless steel tag [69 x 50 mm (2.71 x 1.97")]: Measuring-point number/identification (max. 16 characters) specify in plain text **Y15**

Acceptance test certificate: Manufacturer's test certificate M to DIN 55350, Part 18 and ISO 9000 **C11**

Inspection Certificate Type 3.1 per EN 10204 **C12**

Selection and Ordering data	Order No.
<p>Pointek CLS200 - Standard - Rod Version with Threaded or Flanged process connection</p> <p>Versatile inverse frequency shift capacitance level switch with optional rod/cable choices and configurable output, ideal for detection of liquids, solids, slurries, foam and interfaces</p>	<p>C) 7ML5630-0</p> 
<p>Operating Instructions</p> <p>Note: The Operating Instructions should be ordered as a separate line on the order.</p> <p>This device is shipped with the Siemens Milltronics manual CD containing the complete ATEX Quick Start and manual library.</p>	<p>See page 5/33</p>
<p>Accessories</p>	<p>See page 5/33</p>

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

Level instruments

Point level measurement - Capacitance switches

Pointek CLS200 - Standard

Selection and Ordering data	Order No.
Pointek CLS200 - Standard - Cable Version with Threaded or Flanged process connection	7ML5631-0
Versatile inverse frequency shift capacitance level switch with optional process connection choices and configurable output, ideal for detection of liquids, solids, slurries, foam and interfaces	
Process Connection	
<u>Threaded, 316L stainless steel</u>	
¾" NPT [(Taper), ANSI/ASME B1.20.1]	0A
1" NPT [(Taper), ANSI/ASME B1.20.1]	0B
1¼" NPT [(Taper), ANSI/ASME B1.20.1]	0C
1½" NPT [(Taper), ANSI/ASME B1.20.1]	0D
R ¾" [(BSPT), EN 10226/PT (JIS-T), JIS B 0203]	1A
R 1" [(BSPT), EN 10226/PT (JIS-T), JIS B 0203]	1B
R 1½" [(BSPT), EN 10226/PT (JIS-T), JIS B 0203]	1D
G ¾" [(BSPP), EN ISO 228-1/PF (JIS-P), JIS B 0202]	3A
G 1" [(BSPP), EN ISO 228-1/PF (JIS-P), JIS B 0202]	3B
G 1½" [(BSPP), EN ISO 228-1/PF (JIS-P), JIS B 0202]	3D
<u>Welded flange, 316L stainless steel, raised face</u>	
1" ASME, 150 lb	5A
1" ASME, 300 lb	5B
1" ASME, 600 lb	5C
1½" ASME, 150 lb	5D
1½" ASME, 300 lb	5E
1½" ASME, 600 lb	5F
2" ASME, 150 lb	5G
2" ASME, 300 lb	5H
2" ASME, 600 lb	5J
3" ASME, 150 lb	5K
3" ASME, 300 lb	5L
3" ASME, 600 lb	5M
4" ASME, 150 lb	5N
4" ASME, 300 lb	5P
4" ASME, 600 lb	5Q
<u>Welded flange, 316L stainless steel, Type A flat faced</u>	
DN 25, PN 16	6A
DN 25, PN 40	6B
DN 40, PN 16	6C
DN 40, PN 40	6D
DN 50, PN 16	6E
DN 50, PN 40	6F
DN 80, PN 16	6G
DN 80, PN 40	6H
DN 100, PN 16	6J
DN 100, PN 40	6K
(Note: Flange bolting patterns and facings dimensionally correspond to the applicable ASME B16.5 or EN 1092-1 standard.)	
Probe length (length from flange face) (threaded lengths include process thread)	
<u>Note: No Y01 needed in order code for standard lengths</u>	
Extended cable, 3000 mm (118.11"), length can be determined by customer on assembly	A
Extended cable, 6000 mm (236.22"), length can be determined by customer on assembly	B
<u>Add order code Y01 and plain text: "Insertion length... mm"</u>	
Extended cable, 500 to 5000 mm (19.69 to 196.85")	C
Extended cable, 5001 to 10000 mm (196.89 to 393.70")	D
Extended cable, 10001 to 15000 mm (393.74 to 590.55")	E
Extended cable, 15001 to 20000 mm (590.59 to 787.4")	F
Extended cable, 20001 to 25000 mm (787.44 to 984.25")	G
Extended cable, 25001 to 30000 mm (984.29 to 1181.1")	H

Selection and Ordering data	Order No.
Pointek CLS200 - Standard - Cable Version with Threaded or Flanged process connection	7ML5631-0
Versatile inverse frequency shift capacitance level switch with optional process connection choices and configurable output, ideal for detection of liquids, solids, slurries, foam and interfaces	
Thermal Isolator	
Without thermal isolator	0
With thermal isolator [for process connection temperatures over +85 °C (+185 °F)]	1
Remote mount electronics and mounting bracket	
With 2 m (79") of cable	2
With 5 m (197") of cable	3
Wetted Seals	
FKM and PTFE	0
FFKM and PTFE [for process temperatures above -20 °C (-4 °F)]	1
Probe Material	
FEP jacketed cable with PPS probe body	0
FEP jacketed cable with PVDF probe body	1
Approvals	
Dust Ignition Proof: CE, C-TICK, ATEX II 1/2 D T100 °C	C
Flameproof Enclosure with IS Probe: CE, C-TICK, ATEX II 1 G EEx d[ia] IIC T6...T4, ATEX II 1/2 D T100 °C	D
Flameproof Enclosure with IS Probe, with WHG approval: CE, C-TICK, ATEX II 1/2 G EEx d[ia] IIC T6...T4, ATEX II 1/2 D T100 °C	E
Dust Ignition Proof with IS Probe: CSA/FM Class II, Div. 1, Gr. E, F, G CSA/FM Class III T4	F
Explosion Proof Enclosure with IS Probe: CSA/FM Class I, Div. 1, Gr. A, B, C, D CSA/FM Class II, Div. 1, Gr. E, F, G CSA/FM Class III T4	G
General Purpose (CSA, FM)	H
General Purpose (CE, C-TICK)	J
General Purpose (CSA, FM, CE, C-TICK) with WHG approval	K
Enclosure and Lid	
Aluminum epoxy coated	
2 x ½" NPT via adapter - cable inlet, IP65	A
2 x M20x1.5 cable inlet, IP65	B
2 x ½" NPT via adapter - cable inlet, IP68	C
2 x M20x1.5 cable inlet, IP68	D
Further designs	Order code
Please add " Z " to Order No. and specify Order code(s).	
Total insertion length: enter the total insertion length in plain text description	Y01
Stainless steel tag [69 x 50 mm (2.71 x 1.97")]: Measuring-point number/identification (max. 16 characters) specify in plain text	Y15
Acceptance test certificate: Manufacturer's test certificate M to DIN 55350, Part 18 and ISO 9000	C11
Inspection Certificate Type 3.1 per EN 10204	C12
Operating Instructions	See page 5/33
Note: The Operating Instructions should be ordered as a separate line on the order.	
This device is shipped with the Siemens Milltronics manual CD containing the complete ATEX Quick Start and Operating Instructions library.	
Accessories	See page 5/33

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

Level instruments

Point level measurement - Capacitance switches

Pointek CLS200 - Standard

Selection and Ordering data	Order No.
Pointek CLS200 - Standard - Rod with Sanitary process connection Versatile inverse frequency shift capacitance level switch with optional process connection choices and configurable output, ideal for detection of liquids, solids, slurries, foam and interfaces	C) 7ML 5 6 3 2 - 0
Process Connection Sanitary 316L stainless steel 1" sanitary fitting clamp 1½" sanitary fitting clamp 2" sanitary fitting clamp 2½" sanitary fitting clamp 3" sanitary fitting clamp (Note: Sanitary connection dimensionally corresponds to the applicable ISO 2852 standard)	8 A 8 B 8 C 8 D 8 E
Probe length (length from process connection face) <u>Note: No Y01 needed in order code for standard lengths</u> Compact 98 mm (3.86") Extended rod, 250 mm (9.84") Extended rod, 350 mm (13.78") Extended rod, 500 mm (19.69") Extended rod, 750 mm (29.53") Extended rod, 1000 mm (39.37") Extended rod, 1250 mm (49.21") Extended rod, 1350 mm (53.15") Extended rod, 1500 mm (59.06") Extended rod, 1750 mm (68.90") Extended rod, 2000 mm (78.74") Add order code Y01 and plain text: "Insertion length ... mm" Extended rod, 110 to 350 mm (4.3 to 13.78") Extended rod, 351 to 1000 mm (13.82 to 39.33") Extended rod, 1001 to 2000 mm (39.41 to 78.74") Extended rod, 2001 to 3000 mm (78.78 to 118.11") Extended rod, 3001 to 4000 mm (118.15 to 157.48") Extended rod, 4001 to 5000 mm (157.52 to 196.85") Extended rod, 5001 to 5500 mm (196.89 to 216.53")	A B C D E F G H J K L M N P Q R S T
Thermal Isolator Without thermal isolator With thermal isolator [for process connection temperatures over +85 °C (+185 °F)]	0 1
Remote mount electronics and mounting bracket Remote mount electronics with 2 m (79") of cable Remote mount electronics with 5 m (197") of cable	2 3
Wetted Seals FKM FFKM [for process temperatures above -20°C (-4°F)]	0 1
Probe Material 316L Stainless Steel with PPS probe body 316L Stainless Steel with PVDF probe body	0 1

Selection and Ordering data	Order No.
Pointek CLS200 - Standard - Rod with Sanitary process connection Versatile inverse frequency shift capacitance level switch with optional process connection choices and configurable output, ideal for detection of liquids, solids, slurries, foam and interfaces	C) 7ML 5 6 3 2 - 0
Approvals Dust Ignition Proof: CE, C-TICK, ATEX II 1/2 D T100 °C Flameproof Enclosure with IS Probe: CE, C-TICK, ATEX II 1 G EEx d[ia] IIC T6...T4, ATEX II 1/2 D T100 °C Flameproof Enclosure with IS Probe, with WHG approval: CE, C-TICK, ATEX II 1/2 G EEx d[ia] IIC T6...T4, ATEX II 1/2 D T100 °C Dust Ignition Proof with IS Probe: CSA/FM Class II, Div. 1, Gr. E, F, G CSA/FM Class III T4 Explosion Proof Enclosure with IS Probe: CSA/FM Class I, Div. 1, Gr. A, B, C, D CSA/FM Class II, Div. 1, Gr. E, F, G CSA/FM Class III T4 General Purpose (CSA, FM) General Purpose (CE, C-TICK) General Purpose (CSA, FM, CE, C-TICK) with WHG approval	C D E F G H J K
Enclosure and Lid <u>Aluminum epoxy coated</u> 2 x ½" NPT via adapter - cable inlet, IP65 2 x M20x1.5 cable inlet, IP65 2 x ½" NPT via adapter - cable inlet, IP68 2 x M20x1.5 cable inlet, IP68	A B C D
Further designs Please add "-Z" to Order No. and specify Order code(s). Total insertion length: enter the total insertion length in plain text description Stainless steel tag [69 x 50 mm (2.71 x 1.97")]: Measuring-point number/identification (max. 16 characters) specify in plain text Acceptance test certificate: Manufacturer's test certificate M to DIN 55350, Part 18 and ISO 9000 Inspection Certificate Type 3.1 per EN 10204	Order code Y01 Y15 C11 C12
Operating Instructions Note: The Operating Instructions should be ordered as a separate line on the order. This device is shipped with the Siemens Milltronics manual CD containing the complete ATEX Quick Start and Operating Instructions library.	See page 5/33
Accessories	See page 5/33
C) Subject to export regulations AL: N, ECCN: EAR99	

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Level instruments

Point level measurement - Capacitance switches

Pointek CLS200 - Standard

Selection and Ordering data	Order No.
Pointek CLS200 - Standard - Sliding Coupling with Threaded process connection	C) 7ML5633-0
Versatile inverse frequency shift capacitance level switch with optional process connection choices and configurable output, ideal for detection of liquids, solids, slurries, foam and interfaces	
Process Connection <u>Threaded, 316L stainless steel</u>	
¾" NPT [(Taper), ANSI/ASME B1.20.1]	0A
1" NPT [(Taper), ANSI/ASME B1.20.1]	0B
1¼" NPT [(Taper), ANSI/ASME B1.20.1]	0C
1½" NPT [(Taper), ANSI/ASME B1.20.1]	0D
R ¾" [(BSPT), EN 10226/PT (JIS-T), JIS B 0203]	1A
R 1" [(BSPT), EN 10226/PT (JIS-T), JIS B 0203]	1B
R 1½" [(BSPT), EN 10226/PT (JIS-T), JIS B 0203]	1D
G ¾" [(BSPP), EN ISO 228-1/PF (JIS-P), JIS B 0202]	3A
G 1" [(BSPP), EN ISO 228-1/PF (JIS-P), JIS B 0202]	3B
G 1½" [(BSPP), EN ISO 228-1/PF (JIS-P), JIS B 0202]	3D
Probe length (length from flange face) (threaded lengths include process thread)	
<u>Note: No Y01 needed in order code for standard lengths</u>	
Extended rod, 350 mm (13.78")	C
Extended rod, 500 mm (19.69")	D
Extended rod, 750 mm (29.53")	E
Extended rod, 1000 mm (39.37")	F
Extended rod, 1250 mm (49.21")	G
Extended rod, 1350 mm (53.15")	H
Extended rod, 1500 mm (59.06")	J
Extended rod, 1750 mm (68.90")	K
Extended rod, 2000 mm (78.74")	L
Add order code Y01 and plain text: "Insertion length ... mm"	
Extended rod, 350 to 1000 mm (13.82 to 39.33")	M
Extended rod, 1001 to 2000 mm (39.41 to 78.74")	N
Extended rod, 2001 to 3000 mm (78.78 to 118.11")	P
Extended rod, 3001 to 4000 mm (118.15 to 157.48")	Q
Extended rod, 4001 to 5000 mm (157.52 to 196.85")	R
Extended rod, 5001 to 5500 mm (196.89 to 216.53")	S
Thermal Isolator Without thermal isolator	0
With thermal isolator [for process connection temperatures over +85 °C (+185 °F)]	1
Remote mount electronics and mounting bracket	
With 2 m (79") of cable	2
With 5 m (197") of cable	3
Wetted Seals FKM and PTFE	0
FFKM and PTFE [for process temperatures above -20 °C (-4 °F)]	1
Probe Material 316L Stainless Steel with PPS probe body	0
316L Stainless Steel with PVDF probe body	1

Selection and Ordering data	Order No.
Pointek CLS200 - Standard - Sliding Coupling with Threaded process connection	C) 7ML5633-0
Versatile inverse frequency shift capacitance level switch with optional process connection choices and configurable output, ideal for detection of liquids, solids, slurries, foam and interfaces	
Approvals	
Dust Ignition Proof: CE, C-TICK, ATEX II 1/2 D T100 °C	C
Flameproof Enclosure with IS Probe: CE, C-TICK, ATEX II 1 G EEx d[ia] IIC T6...T4, ATEX II 1/2 D T100 °C	D
Flameproof Enclosure with IS Probe, with WHG approval: CE, C-TICK, ATEX II 1/2 G EEx d[ia] IIC T6...T4, ATEX II 1/2 D T100 °C	E
Dust Ignition Proof with IS Probe: CSA/FM Class II, Div. 1, Gr. E, F, G CSA/FM Class III T4	F
Explosion Proof Enclosure with IS Probe: CSA/FM Class I, Div. 1, Gr. A, B, C, D CSA/FM Class II, Div. 1, Gr. E, F, G CSA/FM Class III T4	G
General Purpose (CSA, FM)	H
General Purpose (CE, C-TICK)	J
General Purpose (CSA, FM, CE, C-TICK) with WHG approval	K
Enclosure and Lid <u>Aluminum epoxy coated</u>	
2 x ½" NPT via adapter - cable inlet, IP65	A
2 x M20x1.5 cable inlet, IP65	B
2 x ½" NPT via adapter - cable inlet, IP68	C
2 x M20x1.5 cable inlet, IP68	D
Further designs	Order code
Please add "-Z" to Order No. and specify Order code(s).	
Total insertion length: enter the total insertion length in plain text description	Y01
Stainless steel tag [69 x 50 mm (2.71 x 1.97")]: Measuring-point number/identification (max. 16 characters) specify in plain text	Y15
Acceptance test certificate: Manufacturer's test certificate M to DIN 55350, Part 18 and ISO 9000	C11
Inspection Certificate Type 3.1 per EN 10204	C12
Operating Instructions Note: The Operating Instructions should be ordered as a separate line on the order.	See page 5/33
This device is shipped with the Siemens Milltronics manual CD containing the complete ATEX Quick Start and Operating Instructions library.	
Accessories	See page 5/33
C) Subject to export regulations AL: N, ECCN: EAR99	

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Level instruments

Point level measurement - Capacitance switches

Pointek CLS200 - Standard

Selection and Ordering data	Order No.
Pointek CLS200 - Standard - PFA Coated Rod with PFA Coated Flanged process connection	C) 7ML5634-0
Versatile inverse frequency shift capacitance level switch with optional rod/cable choices and configurable output, ideal for detection of liquids, solids, slurries, foam and interfaces	
Process Connection	
<u>Welded flange, 316L stainless steel, raised face</u>	
1" ASME, 150 lb	5 A
1" ASME, 300 lb	5 B
1" ASME, 600 lb	5 C
1½" ASME, 150 lb	5 D
1½" ASME, 300 lb	5 E
1½" ASME, 600 lb	5 F
2" ASME, 150 lb	5 G
2" ASME, 300 lb	5 H
2" ASME, 600 lb	5 J
3" ASME, 150 lb	5 K
3" ASME, 300 lb	5 L
3" ASME, 600 lb	5 M
4" ASME, 150 lb	5 N
4" ASME, 300 lb	5 P
4" ASME, 600 lb	5 Q
<u>Welded flange, 316L stainless steel, Type A flat faced</u>	
DN 25, PN 16	6 A
DN 25, PN 40	6 B
DN 40, PN 16	6 C
DN 40, PN 40	6 D
DN 50, PN 16	6 E
DN 50, PN 40	6 F
DN 80, PN 16	6 G
DN 80, PN 40	6 H
DN 100, PN 16	6 J
DN 100, PN 40	6 K
(Note: Flange bolting patterns and facings dimensionally correspond to the applicable ASME B16.5 or EN 1092-1 standard.)	
Probe length (length from flange face) (threaded lengths include process thread)	
<u>Note: No Y01 needed in order code for standard lengths</u>	
Compact (Threaded 98 mm (3.86"))	A
Extended rod, 250 mm (9.84")	B
Extended rod, 350 mm (13.78")	C
Extended rod, 500 mm (19.69")	D
Extended rod, 750 mm (29.53")	E
Extended rod, 1000 mm (39.37")	F
Extended rod, 1250 mm (49.21")	G
Extended rod, 1350 mm (53.15")	H
Extended rod, 1500 mm (59.06")	J
Extended rod, 1750 mm (68.90")	K
Extended rod, 2000 mm (78.74")	L
<u>Add order code Y01 and plain text: "Insertion length ... mm"</u>	
Extended rod, 200 to 1000 mm (7.87 to 39.37")	M
Extended rod, 1001 to 2000 mm (39.41 to 78.74")	N
Extended rod, 2001 to 3000 mm (78.78 to 118.11")	P
Extended rod, 3001 to 4000 mm (118.15 to 157.48")	Q
Extended rod, 4001 to 5000 mm (157.52 to 196.85")	R
Extended rod, 5001 to 5500 mm (196.89 to 216.53")	S

Selection and Ordering data	Order No.
Pointek CLS200 - Standard - PFA Coated Rod with PFA Coated Flanged process connection	C) 7ML5634-0
Versatile inverse frequency shift capacitance level switch with optional rod/cable choices and configurable output, ideal for detection of liquids, solids, slurries, foam and interfaces	
Thermal Isolator	
Without thermal isolator	0
With thermal isolator [for process connection temperatures over +85 °C (+185 °F)]	1
Remote mount electronics and mounting bracket	
With 2 m (79") of cable	2
With 5 m (197") of cable	3
Wetted Seals	
FKM	0
FFKM [for process temperatures above -20°C (-4°F)]	1
Probe Material	
PFA Coated 316L Stainless Steel with PPS probe body	0
PFA Coated 316L Stainless Steel with PVDF probe body	1
Approvals	
Dust Ignition Proof with IS Probe: CSA/FM Class II, Div. 1, Gr. E, F, G CSA/FM Class III T4	F
Explosion Proof Enclosure with IS Probe: CSA/FM Class I, Div. 1, Gr. A, B, C, D CSA/FM Class II, Div. 1, Gr. E, F, G CSA/FM Class III T4	G
General Purpose (CSA, FM)	H
Enclosure and Lid	
<u>Aluminum epoxy coated</u>	
2 x ½" NPT via adapter - cable inlet, IP65	A
2 x M20x1.5 cable inlet, IP65	B
2 x ½" NPT via adapter - cable inlet, IP68	C
2 x M20x1.5 cable inlet, IP68	D
Further designs	Order code
Please add " Z " to Order No. and specify Order code(s).	
Total insertion length: enter the total insertion length in plain text description	Y01
Stainless steel tag [69 x 50 mm (2.71 x 1.97")]: Measuring-point number/identification (max. 16 characters) specify in plain text	Y15
Acceptance test certificate: Manufacturer's test certificate M to DIN 55350, Part 18 and ISO 9000	C11
Inspection Certificate Type 3.1 per EN 10204	C12
Operating Instructions	See page 5/33
Note: The Operating Instructions should be ordered as a separate line on the order.	
This device is shipped with the Siemens Milltronics manual CD containing the complete ATEX Quick Start and Operating Instructions library.	
Accessories	See page 5/33

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

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Level instruments

Point level measurement - Capacitance switches

Pointek CLS200 - Digital

Overview



Pointek CLS200 (digital version) is a versatile inverse frequency shift capacitance level switch with optional rod/cable choices and configurable output, ideal for detection of liquids, solids, slurries, foam and interfaces. The digital version includes PROFIBUS PA, an LCD display, and advanced diagnostic features.

Benefits

- Potted construction protects signal circuit from shock, vibration, humidity and/or condensation
- High chemical resistance
- Level detection independent of tank or pipe earth reference
- Insensitive to product buildup due to high frequency oscillation
- High sensitivity allows installation in a wide range of liquids, solids or slurry applications
- Integral LCD display allows for easy menu-driven setup
- PROFIBUS PA communication (SIMATIC PDM compatible)

Application

Pointek CLS200 digital version provides an integral LCD display for stand-alone use, and also provides PROFIBUS PA communication (Profile version 3.0, Class B) for connection to a network.

The power supply is galvanically isolated and accepts a wide range of voltages (12 to 30 V DC). When used with thermal isolator, the stainless steel and PPS (PVDF optional) materials used in the probe construction provide a temperature rating up to +125 °C (+257 °F) on the process wetted portion of the probe. The switch responds to any material with a dielectric constant of 1.5 or more by detecting a change in oscillating frequency, and it can be set to detect before contact or on contact with the probe. The menu-driven setup allows precise control of the switch point signal damping and alarm functions.

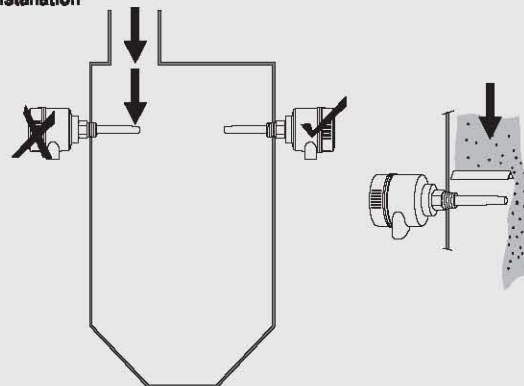
When connected to the PROFIBUS network, advanced diagnostics and set up using SIMATIC PDM are possible.

The CLS200 operates independently of the tank wall or pipe so it does not require an external reference electrode for level detection in a non-conductive vessel such as concrete or plastic (EMC regulations applicable in some regions).

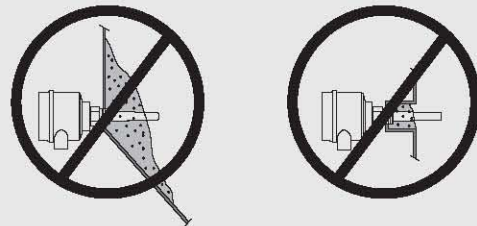
- Key Applications: liquids, slurries, powders, granules, pressurized applications, hazardous areas

Configuration

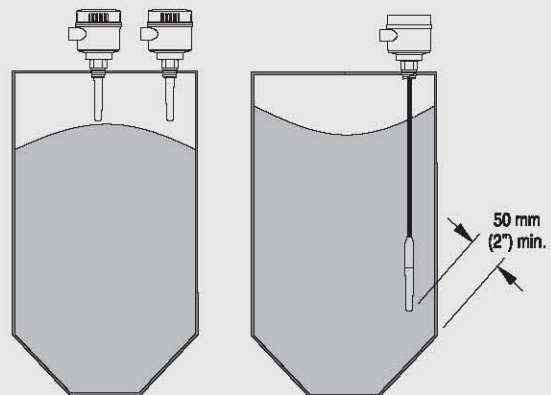
Installation



Keep unit out of path of falling material, or protect probe from falling material.



Avoid areas where material build up occurs.



Install probe at least 50 mm from tank wall.

Pointek CLS200 installation

Level instruments

Point level measurement - Capacitance switches

Pointek CLS200 - Digital

Technical specifications

Mode of operation	
Measuring principle	Inverse frequency shift capacitive level detection
Input	
Measured variable	Change in picoFarad (pF)
Output	
<u>Output signal</u>	
• Solid-state output	
- Output	Galvanically isolated
- Protection	Against reversed polarity (bipolar)
- Max. switching voltage	• 30 V (DC) • 30 V peak (AC)
- Max. load current	82 mA
- Voltage drop	< 1 V, typical at 50 mA
- Time delay (ON and/or OFF)	Programmable by user (0 to 100 s)
• Fail-safe mode	Min. or max.
• Connection	Removable terminal block
Rated operating conditions ¹⁾	
<u>Installation conditions</u>	
• Location	Indoor/outdoor
<u>Ambient conditions</u>	
• Ambient temperature	-40 to +85 °C (-40 to +185 °F) ²⁾
• Installation category	II
• Pollution degree	4
<u>Medium conditions</u>	
	Liquids, bulk solids, slurries and interfaces
• Relative dielectric constant ϵ_r	Min. 1.5
• Process temperature	
- Without thermal isolator	-40 to +85 °C (-40 to +185 °F) ²⁾
- With thermal isolator	-40 to +125 °C (-40 to +257 °F)
• Process pressure (rod version)	-1 to +25 bar g (-14.6 to +365 psi g) (nominal)
• Process pressure (cable version) ³⁾	-1 to +10 bar g (-14.6 to +150 psi g) (nominal)
• Process pressure (sliding coupling version)	-1 to +10 bar g (-14.6 to +150 psi g) (nominal)
Design	
Material	
- Enclosure	Epoxy-coated aluminum with gasket
- Optional thermal isolator	316L stainless steel
• Connection	Removable terminal block, max. 2.5 mm ²
• Degree of protection	IP65/Type 4/NEMA 4 (optional IP68)
• Cable inlet	2 x M20x1.5 thread (option: 2 x 1/2" NPT conduit entry including 1 plugged entry)
<u>Electromagnetic Compatibility</u>	
To comply with CE EMC regulations (where applicable); the CLS200 should only be used under these conditions:	
- Installed in a metallic vessel	
- Wired with shielded cable	
- Cable shields are terminated in suitable EMC rated cable glands at the device cable entry point.	

Power supply	
• Bus voltage	Standard: 12 to 30 V DC Intrinsically Safe: 12 to 24 V DC
• Current consumption	12.5 mA
Certificates and approvals	
• General Purpose	CSA, FM, CE, C-TICK
• Dust Ignition Proof	ATEX II 1/2 D T100 °C
• Dust Ignition Proof with IS Probe	CSA/FM Class II, Div. 1, Gr. E, F, G CSA/FM Class III T4
• Flameproof Enclosure with IS Probe	ATEX II 1/2 G EEx d[ia] IIC T6...T4 ATEX II 1/2 D T100 °C
• Explosion Proof with IS Probe	CSA/FM Class I, Div. 1, Gr. A, B, C, D CSA/FM Class II, Div. 1, Gr. E, F, G CSA/FM Class III T4
• Intrinsically Safe	ATEX II 1 G EEx ia IIC T6...T4) ATEX II 1/2 D IP6X T100 °C CSA/FM Class I, Div. 1, Gr. A, B, C, D CSA/FM Class II, Div. 1, Gr. E, F, G CSA/FM Class III T4
• Non-incendive	CSA/FM Class I, Div. 2, Gr. A, B, C, D CSA/FM Class II, Div. 2, Gr. F, G CSA/FM Class III T4 or T6
• Non-Sparking	ATEX II 3 G Ex nA II T6...T4 ATEX II 2 D IP6X T100 °C
• Marine	Lloyds Register of Shipping, Categories ENV1, ENV2 and ENV5
• Others	Pattern Approval (China)
Communication	
PROFIBUS PA (IEC 61158 CPF3 CP3/2)	
Bus physical layer: IEC 61158-2 MBP (IS)	
Device profile: PROFIBUS PA profile for Process Control Devices Version 3.0, Class B	
FISCO field device	

¹⁾ When operation is in areas classified as hazardous, observe restrictions according to relevant certificate. See also Pressure/Temperature curves on page 5/34.

²⁾ Thermal isolator is used if process connection temperature exceeds +85 °C (+185 °F)

³⁾ Pressure rating of process seal is temperature dependent. See Pressure/Temperature curves on page 5/34.

Level instruments

Point level measurement - Capacitance switches

Pointek CLS200 - Digital

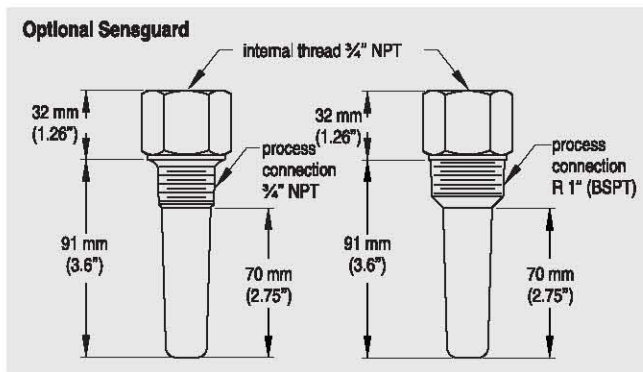
Design: Probe				
	Rod version	Sanitary version	Cable version	Sliding Coupling version
Max. length	5500 mm (216.53")	5500 mm (216.53")	30000 mm (1181.1") liquids and slurries 5000 mm (196.85") solids (under loads)	5500 mm (216.53")
Process connection	R ¾", 1", 1¼", 1½" [(BSPT), EN 10226/PT (JIS-T), JIS B 0203] ¾", 1", 1¼", 1½" NPT [(Taper), ANSI/ASME B1.20.1] G ¾", 1", 1½" [(BSPP), EN ISO 228-1/PF (JIS-P), JIS B 0202] 316L stainless steel ASME/EN flange	1½", 2" sanitary fitting clamp 316L stainless steel	R ¾", 1", 1¼", 1½" [(BSPT), EN 10226/PT (JIS-T), JIS B 0203] ¾", 1", 1¼", 1½" NPT [(Taper), ANSI/ASME B1.20.1] G ¾", 1", 1½" [(BSPP), EN ISO 228-1/PF (JIS-P), JIS B 0202] 316L stainless steel ASME/EN flange	R ¾", 1", 1¼", 1½" [(BSPT), EN 10226/PT (JIS-T), JIS B 0203] ¾", 1", 1¼", 1½" NPT [(Taper), ANSI/ASME B1.20.1] G ¾", 1", 1½" [(BSPP), EN ISO 228-1/PF (JIS-P), JIS B 0202]
Extension material	316L stainless steel optional PFA coated ¹⁾	316L stainless steel	Fluoroethylene propylene (FEP) cable with stainless steel core	316L stainless steel
Sensor wetted parts	PPS (optional PVDF)	PPS (optional PVDF)	PPS (optional PVDF)	PPS (optional PVDF)
O-ring seal material	FKM (optional FFKM) ²⁾	FKM (optional FFKM) ²⁾	FKM (optional FFKM) ²⁾	FKM (optional FFKM) ²⁾
Thermal isolator ³⁾	Optional	Optional	Optional	Optional
Extension	User selected length	User selected length	Cable extension	User selected length

1) PFA coating (7ML5634 and 7ML5644) has 120 micron thickness

2) For Caustic Materials please contact nacc.smpi@siemens.com for alternative O-Rings

3) Thermal isolator is used if process connection temperature exceeds +85 °C (+185 °F).

Options



Sensguard dimensions

Level instruments

Point level measurement - Capacitance switches

Pointek CLS200 - Digital

Selection and Ordering data	Order No.
Pointek CLS200 - Digital - Rod with Threaded or Flanged process connection	7ML5640-
Versatile inverse frequency shift capacitance level switch with optional process connection choices and configurable output, ideal for detection of liquids, solids, slurries, foam and interfaces	■ ■ ■ ■ ■ - ■ ■ ■ 0
Process Connection	
<u>Threaded, 316L stainless steel</u>	
¾" NPT [(Taper), ANSI/ASME B1.20.1]	0A
1" NPT [(Taper), ANSI/ASME B1.20.1]	0B
1¼" NPT [(Taper), ANSI/ASME B1.20.1]	0C
1½" NPT [(Taper), ANSI/ASME B1.20.1]	0D
R ¾" [(BSPT), EN 10226/PT (JIS-T), JIS B 0203]	1A
R 1" [(BSPT), EN 10226/PT (JIS-T), JIS B 0203]	1B
R 1½" [(BSPT), EN 10226/PT (JIS-T), JIS B 0203]	1D
G ¾" [(BSPP), EN ISO 228-1/PF (JIS-P), JIS B 0202]	3A
G 1" [(BSPP), EN ISO 228-1/PF (JIS-P), JIS B 0202]	3B
G 1½" [(BSPP), EN ISO 228-1/PF (JIS-P), JIS B 0202]	3D
<u>Welded flange, 316L stainless steel, raised face</u>	
1" ASME, 150 lb	5A
1" ASME, 300 lb	5B
1" ASME, 600 lb	5C
1½" ASME, 150 lb	5D
1½" ASME, 300 lb	5E
1½" ASME, 600 lb	5F
2" ASME, 150 lb	5G
2" ASME, 300 lb	5H
2" ASME, 600 lb	5J
3" ASME, 150 lb	5K
3" ASME, 300 lb	5L
3" ASME, 600 lb	5M
4" ASME, 150 lb	5N
4" ASME, 300 lb	5P
4" ASME, 600 lb	5Q
<u>Welded flange, 316L stainless steel, Type A flat faced</u>	
DN 25, PN 16	6A
DN 25, PN 40	6B
DN 40, PN 16	6C
DN 40, PN 40	6D
DN 50, PN 16	6E
DN 50, PN 40	6F
DN 80, PN 16	6G
DN 80, PN 40	6H
DN 100, PN 16	6J
DN 100, PN 40	6K
(Note: Flange bolting patterns and facings dimensionally correspond to the applicable ASME B16.5 or EN 1092-1 standard.)	
Probe length (length from flange face) (threaded lengths include process thread)	
<u>Note: No Y01 needed in order code for standard lengths</u>	
Compact [threaded 120 mm (4.72"), Flanged 98 mm (3.86")]	A
Extended rod, 250 mm (9.84")	B
Extended rod, 350 mm (13.78")	C
Extended rod, 500 mm (19.69")	D
Extended rod, 750 mm (29.53")	E
Extended rod, 1000 mm (39.37")	F
Extended rod, 1250 mm (49.21")	G
Extended rod, 1350 mm (53.15")	H
Extended rod, 1500 mm (59.06")	J
Extended rod, 1750 mm (68.90")	K
Extended rod, 2000 mm (78.74")	L

Selection and Ordering data	Order No.
Pointek CLS200 - Digital - Rod with Threaded or Flanged process connection	7ML5640-
Versatile inverse frequency shift capacitance level switch with optional process connection choices and configurable output, ideal for detection of liquids, solids, slurries, foam and interfaces	■ ■ ■ ■ ■ - ■ ■ ■ 0
Add order code Y01 and plain text: "Insertion length ... mm"	
Extended rod, 200 to 1000 mm (7.87 to 39.37")	M
Extended rod, 1001 to 2000 mm (39.41 to 78.74")	N
Extended rod, 2001 to 3000 mm (78.78 to 118.11")	P
Extended rod, 3001 to 4000 mm (118.15 to 157.48")	Q
Extended rod, 4001 to 5000 mm (157.52 to 196.85")	R
Extended rod, 5001 to 5500 mm (196.89 to 216.53")	S
Thermal Isolator	
Without thermal isolator	0
With thermal isolator [for process connection temperatures over +85 °C (+185 °F)]	1
Remote mount electronics and mounting bracket	
With 2 m (79") of cable	2
With 5 m (197") of cable	3
Wetted Seals	
FKM	0
FFKM [for process temperatures above -20 °C (-4 °F)]	1
Probe Material	
316L Stainless Steel with PPS probe body	0
316L Stainless Steel with PVDF probe body	1
Approvals	
Non-Sparking:	
CE, C-TICK, ATEX II 3 G Ex nA II T6...T4, ATEX II 2 D IP6X T100 °C	B
Dust Ignition Proof:	
CE, C-TICK, ATEX II 1/2 D T100 °C	C
Intrinsically Safe: ¹⁾	
CE, C-TICK, ATEX II 1 G EEx ia IIC T6...T4, ATEX II 1/2 D IP6X T100 °C	D
Flameproof Enclosure with IS Probe:	
CE, C-TICK, ATEX II 1/2 G EEx d[ia] IIC T6...T4, ATEX II 1/2 D T100 °C	E
Non-incendive:	
CSA/FM Class I, Div. 2, Gr. A, B, C, D	F
CSA/FM Class II, Div. 2, Gr. F, G	
CSA/FM Class III T4 or T6	
Dust Ignition Proof with IS Probe:	
CSA/FM Class II, Div. 1, Gr. E, F, G	G
CSA/FM Class III T4	
Intrinsically Safe: ¹⁾	
CSA/FM Class I, Div. 1, Gr. A, B, C, D	H
CSA/FM Class II, Div. 1, Gr. E, F, G	
CSA/FM Class III T4	
Explosion Proof with IS Probe:	
CSA/FM Class I, Div. 1, Gr. A, B, C, D	J
CSA/FM Class II, Div. 1, Gr. E, F, G	
CSA/FM Class III T4	
General Purpose (CSA, FM)	K
General Purpose (CE, C-TICK)	L
Enclosure and Lid	
<u>Aluminum epoxy coated</u>	
2 x ½" NPT via adapter - cable inlet, IP65	A
2 x M20x1.5 cable inlet, IP65	B
2 x ½" NPT via adapter - cable inlet, IP68	C
2 x M20x1.5 cable inlet, IP68	D

5

Level instruments

Point level measurement - Capacitance switches

Pointek CLS200 - Digital

Selection and Ordering data

Order No.

Pointek CLS200 - Digital - Rod with Threaded or Flanged process connection C) 7ML5640-0

Versatile inverse frequency shift capacitance level switch with optional process connection choices and configurable output, ideal for detection of liquids, solids, slurries, foam and interfaces

Further designs

Order code

Please add **"-Z"** to Order No. and specify Order code(s).

Total insertion length: enter the total insertion length in plain text description

Y01

Stainless steel tag [69 x 50 mm (2.71 x 1.97")]: Measuring-point number/identification (max. 16 characters) specify in plain text

Y15

Acceptance test certificate: Manufacturer's test certificate M to DIN 55350, Part 18 and ISO 9000

C11

Inspection Certificate Type 3.1 per EN 10204

C12

Operating Instructions

See page 5/33

Note: The Operating Instructions should be ordered as a separate line on the order.

Accessories

See page 5/33

1) Barrier or Intrinsically safe power supply required for Intrinsically Safe protection

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

Selection and Ordering data

Order No.

Pointek CLS200 - Digital - Cable with Threaded or Flanged process connection C) 7ML5641-0

Versatile inverse frequency shift capacitance level switch with optional process connection choices and configurable output, ideal for detection of liquids, solids, slurries, foam and interfaces

Process Connection

Threaded, 316L stainless steel

¾" NPT [(Taper), ANSI/ASME B1.20.1]

0A

1" NPT [(Taper), ANSI/ASME B1.20.1]

0B

1¼" NPT [(Taper), ANSI/ASME B1.20.1]

0C

1½" NPT [(Taper), ANSI/ASME B1.20.1]

0D

R ¾" [(BSPT), EN 10226/PT (JIS-T), JIS B 0203]

1A

R 1" [(BSPT), EN 10226/PT (JIS-T), JIS B 0203]

1B

R 1½" [(BSPT), EN 10226/PT (JIS-T), JIS B 0203]

1D

G ¾" [(BSPP), EN ISO 228-1/PF (JIS-P), JIS B 0202]

3A

G 1" [(BSPP), EN ISO 228-1/PF (JIS-P), JIS B 0202]

3B

G 1½" [(BSPP), EN ISO 228-1/PF (JIS-P), JIS B 0202]

3D

Welded flange, 316L stainless steel, raised face

1" ASME, 150 lb

5A

1" ASME, 300 lb

5B

1" ASME, 600 lb

5C

1½" ASME, 150 lb

5D

1½" ASME, 300 lb

5E

1½" ASME, 600 lb

5F

2" ASME, 150 lb

5G

2" ASME, 300 lb

5H

2" ASME, 600 lb

5J

3" ASME, 150 lb

5K

3" ASME, 300 lb

5L

3" ASME, 600 lb

5M

4" ASME, 150 lb

5N

4" ASME, 300 lb

5P

4" ASME, 600 lb

5Q

Welded flange, 316L stainless steel, Type A flat faced

DN 25, PN 16

6A

DN 25, PN 40

6B

DN 40, PN 16

6C

DN 40, PN 40

6D

DN 50, PN 16

6E

DN 50, PN 40

6F

DN 80, PN 16

6G

DN 80, PN 40

6H

DN 100, PN 16

6J

DN 100, PN 40

6K

(Note: Flange bolting patterns and facings dimensionally correspond to the applicable ASME B16.5 or EN 1092-1 standard.)

Probe length (length from flange face)

(threaded lengths include process thread)

Note: No Y01 needed in order code for standard lengths

Extended cable, 3000 mm (118.11"), length can be determined by customer on assembly

A

Extended cable, 6000 mm (236.22"), length can be determined by customer on assembly

B

Add order code Y01 and plain text: "Insertion length ... mm"

Extended cable, 500 to 5000 mm (19.69 to 196.85")

C

Extended cable, 5001 to 10000 mm

D

(196.89 to 393.70")

Extended cable, 10001 to 15000 mm

E

(393.74 to 590.55")

Extended cable, 15001 to 20000 mm

F

(590.59 to 787.4")

Extended cable, 20001 to 25000 mm

G

(787.44 to 984.25")

Extended cable, 25001 to 30000 mm

H

(984.29 to 1181.1")

Level instruments

Point level measurement - Capacitance switches

Pointek CLS200 - Digital

Selection and Ordering data	Order No.
Pointek CLS200 - Digital - Cable with Threaded or Flanged process connection	7 ML 5 6 4 1 - 0
Versatile inverse frequency shift capacitance level switch with optional process connection choices and configurable output, ideal for detection of liquids, solids, slurries, foam and interfaces	
Thermal Isolator	
Without thermal isolator	0
With thermal isolator [for process connection temperatures over +85 °C (+185 °F)]	1
Remote mount electronics and mounting bracket	
With 2 m (79") of cable	2
With 5 m (197") of cable	3
Wetted Seals	
FKM and PTFE	0
FFKM and PTFE [for process temperatures above -20°C (-4°F)]	1
Probe Material	
FEP jacketed cable with PPS probe body	0
FEP jacketed cable with PVDF probe body	1
Approvals	
Non-Sparking:	B
CE, C-TICK, ATEX II 3 G Ex nA II T6...T4, ATEX II 2 D IP6X T100 °C	
Dust Ignition Proof:	C
CE, C-TICK, ATEX II 1/2 D T100 °C	
Intrinsically Safe: ¹⁾	D
CE, C-TICK, ATEX II 1 G EEx ia IIC T6...T4, ATEX II 1/2 D IP6X T100 °C	
Flameproof Enclosure with IS Probe:	E
CE, C-TICK, ATEX II 1/2 G EEx d[ia] IIC T6...T4, ATEX II 1/2 D T100 °C	
Non-incendive:	F
CSA/FM Class I, Div. 2, Gr. A, B, C, D	
CSA/FM Class II, Div. 2, Gr. F, G	
CSA/FM Class III T4 or T6	
Dust Ignition Proof with IS Probe:	G
CSA/FM Class II, Div. 1, Gr. E, F, G	
CSA/FM Class III T4	
Intrinsically Safe: ¹⁾	H
CSA/FM Class I, Div. 1, Gr. A, B, C, D	
CSA/FM Class II, Div. 1, Gr. E, F, G	
CSA/FM Class III T4	
Explosion Proof with IS Probe:	J
CSA/FM Class I, Div. 1, Gr. A, B, C, D	
CSA/FM Class II, Div. 1, Gr. E, F, G	
CSA/FM Class III T4	
General Purpose (CSA, FM)	K
General Purpose (CE, C-TICK)	L
Enclosure and Lid	
Aluminum epoxy coated	
2 x ½" NPT via adapter - cable inlet, IP65	A
2 x M20x1.5 cable inlet, IP65	B
2 x ½" NPT via adapter - cable inlet, IP68	C
2 x M20x1.5 cable inlet, IP68	D

Selection and Ordering data	Order No.
Pointek CLS200 - Digital - Cable with Threaded or Flanged process connection	7 ML 5 6 4 1 - 0
Versatile inverse frequency shift capacitance level switch with optional process connection choices and configurable output, ideal for detection of liquids, solids, slurries, foam and interfaces	
Further designs	Order code
Please add "-Z" to Order No. and specify Order code(s).	
Total insertion length: enter the total insertion length in plain text description	Y01
Stainless steel tag [69 x 50 mm (2.71 x 1.97")]: Measuring-point number/identification (max. 16 characters) specify in plain text	Y15
Acceptance test certificate: Manufacturer's test certificate M to DIN 55350, Part 18 and ISO 9000	C11
Inspection Certificate Type 3.1 per EN 10204	C12
Operating Instructions	See page 5/33
Note: The Operating Instructions should be ordered as a separate line on the order.	
This device is shipped with the Siemens Milltronics manual CD containing the complete ATEX Quick Start and Operating Instructions library.	
Accessories	See page 5/33

¹⁾ Barrier or Intrinsically safe power supply required for Intrinsically Safe protection

^{C)} Subject to export regulations AL: N, ECCN: EAR99

5

Level instruments

Point level measurement - Capacitance switches

Pointek CLS200 - Digital

Selection and Ordering data	Order No.
Pointek CLS200 - Digital - Rod with Sanitary process connection	C) 7 ML 5 6 4 2 - 0
Versatile inverse frequency shift capacitance level switch with optional process connection choices and configurable output, ideal for detection of liquids, solids, slurries, foam and interfaces	
Process Connection	
Sanitary 316L stainless steel	
1" sanitary fitting clamp	8 A
1½" sanitary fitting clamp	8 B
2" sanitary fitting clamp	8 C
2½" sanitary fitting clamp	8 D
3" sanitary fitting clamp	8 E
(Note: Sanitary connection dimensionally corresponds to the applicable ISO 2852 standard)	
Probe length (length from process connection face)	
Note: No Y01 needed in order code for standard lengths	
Compact 98 mm (3.86")	A
Extended rod, 250 mm (9.84")	B
Extended rod, 350 mm (13.78")	C
Extended rod, 500 mm (19.69")	D
Extended rod, 750 mm (29.53")	E
Extended rod, 1000 mm (39.37")	F
Extended rod, 1250 mm (49.21")	G
Extended rod, 1350 mm (53.15")	H
Extended rod, 1500 mm (59.06")	J
Extended rod, 1750 mm (68.90")	K
Extended rod, 2000 mm (78.74")	L
Add order code Y01 and plain text: "Insertion length ... mm"	
Extended rod, 110 to 350 mm (4.3 to 13.78")	M
Extended rod, 351 to 1000 mm (13.82 to 39.33")	N
Extended rod, 1001 to 2000 mm (39.41 to 78.74")	P
Extended rod, 2001 to 3000 mm (78.78 to 118.11")	Q
Extended rod, 3001 to 4000 mm (118.15 to 157.48")	R
Extended rod, 4001 to 5000 mm (157.52 to 196.85")	S
Extended rod, 5001 to 5500 mm (196.89 to 216.53")	T
Thermal Isolator	
Without thermal isolator	0
With thermal isolator [for process connection temperatures over +85 °C (+185 °F)]	1
Remote mount electronics and mounting bracket	
With 2 m (79") of cable	2
With 5 m (197") of cable	3
Wetted Seals	
FKM	0
FFKM [for process temperatures above -20°C (-4°F)]	1
Probe Material	
316L Stainless Steel with PPS probe body	0
316L Stainless Steel with PVDF probe body	1
Approvals	
Non-Sparking:	
CE, C-TICK, ATEX II 3 G Ex nA II T6...T4, ATEX II 2 D IP6X T100 °C	B
Dust Ignition Proof:	
CE, C-TICK, ATEX II 1/2 D T100 °C	C
Intrinsically Safe: ¹⁾	
CE, C-TICK, ATEX II 1 G EEx ia IIC T6...T4, ATEX II 1/2 D IP6X T100 °C	D
Flameproof Enclosure with IS Probe:	
CE, C-TICK, ATEX II 1/2 G EEx d[ia] IIC T6...T4, ATEX II 1/2 D T100 °C	E
Non-incendive:	
CSA/FM Class I, Div. 2, Gr. A, B, C, D	F
CSA/FM Class II, Div. 2, Gr. F, G	
CSA/FM Class III T4 or T6	

Selection and Ordering data	Order No.
Pointek CLS200 - Digital - Rod with Sanitary process connection	C) 7 ML 5 6 4 2 - 0
Versatile inverse frequency shift capacitance level switch with optional process connection choices and configurable output, ideal for detection of liquids, solids, slurries, foam and interfaces	
Dust Ignition Proof with IS Probe:	G
CSA/FM Class II, Div. 1, Gr. E, F, G	
CSA/FM Class III T4	
Intrinsically Safe: ¹⁾	H
CSA/FM Class I, Div. 1, Gr. A, B, C, D	
CSA/FM Class II, Div. 1, Gr. E, F, G	
CSA/FM Class III T4	
Explosion Proof with IS Probe:	J
CSA/FM Class I, Div. 1, Gr. A, B, C, D	
CSA/FM Class II, Div. 1, Gr. E, F, G	
CSA/FM Class III T4	
General Purpose (CSA, FM)	K
General Purpose (CE, C-TICK)	L
Enclosure and Lid	
Aluminum epoxy coated	
2 x ½" NPT via adapter - cable inlet, IP65	A
2 x M20x1.5 cable inlet, IP65	B
2 x ½" NPT via adapter - cable inlet, IP68	C
2 x M20x1.5 cable inlet, IP68	D
Further designs	Order code
Please add "-Z" to Order No. and specify Order code(s).	
Total insertion length: enter the total insertion length in plain text description	Y01
Stainless steel tag [69 x 50 mm (2.71 x 1.97")]: Measuring-point number/identification (max. 16 characters) specify in plain text	Y15
Acceptance test certificate: Manufacturer's test certificate M to DIN 55350, Part 18 and ISO 9000	C11
Inspection Certificate Type 3.1 per EN 10204	C12
Accessories	See page 5/33

¹⁾ Barrier or Intrinsically safe power supply required for Intrinsically Safe protection

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

Level instruments

Point level measurement - Capacitance switches

Pointek CLS200 - Digital

Selection and Ordering data	Order No.
Pointek CLS200 - Digital - Rod with Sliding coupling with Threaded process connection	C) 7ML5643-0
Versatile inverse frequency shift capacitance level switch with optional process connection choices and configurable output, ideal for detection of liquids, solids, slurries, foam and interfaces	
Process Connection Threaded, 316L stainless steel	
¾" NPT [(Taper), ANSI/ASME B1.20.1]	0A
1" NPT [(Taper), ANSI/ASME B1.20.1]	0B
1¼" NPT [(Taper), ANSI/ASME B1.20.1]	0C
1½" NPT [(Taper), ANSI/ASME B1.20.1]	0D
R ¾" [(BSPT), EN 10226/PT (JIS-T), JIS B 0203]	1A
R 1" [(BSPT), EN 10226/PT (JIS-T), JIS B 0203]	1B
R 1½" [(BSPT), EN 10226/PT (JIS-T), JIS B 0203]	1D
G ¾" [(BSPP), EN ISO 228-1/PF (JIS-P), JIS B 0202]	3A
G 1" [(BSPP), EN ISO 228-1/PF (JIS-P), JIS B 0202]	3B
G 1½" [(BSPP), EN ISO 228-1/PF (JIS-P), JIS B 0202]	3D
Probe length (length from flange face) (threaded lengths include process thread)	
<u>Note: No Y01 needed in order code for standard lengths</u>	
Extended rod, 350 mm (13.78")	C
Extended rod, 500 mm (19.69")	D
Extended rod, 750 mm (29.53")	E
Extended rod, 1000 mm (39.37")	F
Extended rod, 1250 mm (49.21")	G
Extended rod, 1350 mm (53.15")	H
Extended rod, 1500 mm (59.06")	J
Extended rod, 1750 mm (68.90")	K
Extended rod, 2000 mm (78.74")	L
Add order code Y01 and plain text: "Insertion length ... mm"	
Extended rod, 350 to 1000 mm (13.82 to 39.33")	M
Extended rod, 1001 to 2000 mm (39.41 to 78.74")	N
Extended rod, 2001 to 3000 mm (78.78 to 118.11")	P
Extended rod, 3001 to 4000 mm (118.15 to 157.48")	Q
Extended rod, 4001 to 5000 mm (157.52 to 196.85")	R
Extended rod, 5001 to 5500 mm (196.89 to 216.53")	S
Thermal Isolator Without thermal isolator	0
With thermal isolator [for process connection temperatures over +85 °C (+185 °F)]	1
Remote mount electronics and mounting bracket With 2 m (79") of cable	2
With 5 m (197") of cable	3
Wetted Seals FKM and PTFE	0
FFKM and PTFE [for process temperatures above -20°C (-4°F)]	1
Probe Material 316L Stainless Steel with PPS probe body	0
316L Stainless Steel with PVDF probe body	1
Approvals Non-Sparking: CE, C-TICK, ATEX II 3 G Ex nA II T6...T4, ATEX II 2 D IP6X T100 °C	B
Dust Ignition Proof: CE, C-TICK, ATEX II 1/2 D T100 °C	C
Intrinsically Safe: ¹⁾ CE, C-TICK, ATEX II 1 G EEx ia IIC T6...T4, ATEX II 1/2 D IP6X T100 °C	D
Flameproof Enclosure with IS Probe: CE, C-TICK, ATEX II 1/2 G EEx d[ia] IIC T6...T4, ATEX II 1/2 D T100 °C	E
Non-incendive: CSA/FM Class I, Div. 2, Gr. A, B, C, D CSA/FM Class II, Div. 2, Gr. F, G CSA/FM Class III T4 or T6	F

Selection and Ordering data	Order No.
Pointek CLS200 - Digital - Rod with Sliding coupling with Threaded process connection	C) 7ML5643-0
Versatile inverse frequency shift capacitance level switch with optional process connection choices and configurable output, ideal for detection of liquids, solids, slurries, foam and interfaces	
Dust Ignition Proof with IS Probe: CSA/FM Class II, Div. 1, Gr. E, F, G CSA/FM Class III T4	G
Intrinsically Safe: ¹⁾ CSA/FM Class I, Div. 1, Gr. A, B, C, D CSA/FM Class II, Div. 1, Gr. E, F, G CSA/FM Class III T4	H
Explosion Proof with IS Probe: CSA/FM Class I, Div. 1, Gr. A, B, C, D CSA/FM Class II, Div. 1, Gr. E, F, G CSA/FM Class III T4	J
General Purpose (CSA, FM)	K
General Purpose (CE, C-TICK)	L
Enclosure and Lid Aluminum epoxy coated	
2 x ½" NPT via adapter - cable inlet, IP65	A
2 x M20x1.5 cable inlet, IP65	B
2 x ½" NPT via adapter - cable inlet, IP68	C
2 x M20x1.5 cable inlet, IP68	D
Further designs	Order code
Please add "-Z" to Order No. and specify Order code(s).	
Total insertion length: enter the total insertion length in plain text description	Y01
Stainless steel tag [69 x 50 mm (2.71 x 1.97")]: Measuring-point number/identification (max. 16 characters) specify in plain text	Y15
Acceptance test certificate: Manufacturer's test certificate M to DIN 55350, Part 18 and ISO 9000	C11
Inspection Certificate Type 3.1 per EN 10204	C12
Operating Instructions Note: The Operating Instructions should be ordered as a separate line on the order.	See page 5/33
This device is shipped with the Siemens Milltronics manual CD containing the complete ATEX Quick Start and Operating Instructions library.	
Accessories	See page 5/33

¹⁾ Barrier or Intrinsically safe power supply required for Intrinsically Safe protection
C) Subject to export regulations AL: N, ECCN: EAR99

5

Level instruments

Point level measurement - Capacitance switches

Pointek CLS200 - Digital

Selection and Ordering data

Order No.

Pointek CLS200 - Digital - PFA Rod with PFA Flanged process connection C) 7ML5644-0

Versatile inverse frequency shift capacitance level switch with optional process connection choices and configurable output, ideal for detection of liquids, solids, slurries, foam and interfaces

Process Connection

Welded flange, PFA coated, 316L stainless steel, raised face

1" ASME, 150 lb
1" ASME, 300 lb
1" ASME, 600 lb

5A
5B
5C

1½" ASME, 150 lb
1½" ASME, 300 lb
1½" ASME, 600 lb

5D
5E
5F

2" ASME, 150 lb
2" ASME, 300 lb
2" ASME, 600 lb

5G
5H
5J

3" ASME, 150 lb
3" ASME, 300 lb
3" ASME, 600 lb

5K
5L
5M

4" ASME, 150 lb
4" ASME, 300 lb
4" ASME, 600 lb

5N
5P
5Q

Welded flange, PFA coated, 316L stainless steel, Type A flat faced

DN 25, PN 16
DN 25, PN 40
DN 40, PN 16

6A
6B
6C

DN 40, PN 40
DN 50, PN 16
DN 50, PN 40

6D
6E
6F

DN 80, PN 16
DN 80, PN 40

6G
6H

DN 100, PN 16
DN 100, PN 40

6J
6K

(Note: Flange bolting patterns and facings dimensionally correspond to the applicable ASME B16.5 or EN 1092-1 standard.)

Probe length (length from process connection face)

Note: No Y01 needed in order code for standard lengths

Compact (Threaded 98 mm (3.86"))
Extended rod, 250 mm (9.84")
Extended rod, 350 mm (13.78")

A
B
C

Extended rod, 500 mm (19.69")
Extended rod, 750 mm (29.53")
Extended rod, 1000 mm (39.37")

D
E
F

Extended rod, 1250 mm (49.21")
Extended rod, 1350 mm (53.15")
Extended rod, 1500 mm (59.06")

G
H
J

Extended rod, 1750 mm (68.90")
Extended rod, 2000 mm (78.74")

K
L

Add order code Y01 and plain text: "Insertion length ... mm"

Extended rod, 200 to 1000 mm (7.87 to 39.33")
Extended rod, 1001 to 2000 mm (39.41 to 78.74")
Extended rod, 2001 to 3000 mm (78.78 to 118.11")

M
N
P

Extended rod, 3001 to 4000 mm (118.15 to 157.48")
Extended rod, 4001 to 5000 mm (157.52 to 196.85")
Extended rod, 5001 to 5500 mm (196.89 to 216.53")

Q
R
S

Thermal Isolator

Without thermal isolator
With thermal isolator [for process connection temperatures over +85 °C (+185 °F)]

0
1

Remote mount electronics and mounting bracket

With 2 m (79") of cable
With 5 m (197") of cable

2
3

Selection and Ordering data

Order No.

Pointek CLS200 - Digital - PFA Rod with PFA Flanged process connection C) 7ML5644-0

Versatile inverse frequency shift capacitance level switch with optional process connection choices and configurable output, ideal for detection of liquids, solids, slurries, foam and interfaces

Wetted Seals

FKM
FFKM [for process temperatures above -20°C (-4°F)]

0
1

Probe Material

PFA Coated 316L Stainless Steel with PPS probe body
PFA Coated 316L Stainless Steel with PVDF probe body

0
1

Approvals

Non-incendive:
CSA/FM Class I, Div. 2, Gr. A, B, C, D
CSA/FM Class II, Div. 2, Gr. F, G
CSA/FM Class III T4 or T6

F

Dust Ignition Proof with IS Probe:
CSA/FM Class II, Div. 1, Gr. E, F, G
CSA/FM Class III T4

G

Intrinsically Safe:¹⁾
CSA/FM Class I, Div. 1, Gr. A, B, C, D
CSA/FM Class II, Div. 1, Gr. E, F, G
CSA/FM Class III T4

H

Explosion Proof with IS Probe:
CSA/FM Class I, Div. 1, Gr. A, B, C, D
CSA/FM Class II, Div. 1, Gr. E, F, G
CSA/FM Class III T4

J

General Purpose (CSA, FM)

K

Enclosure and Lid

Aluminum epoxy coated

2 x ½" NPT via adapter - cable inlet, IP65
2 x M20x1.5 cable inlet, IP65
2 x ½" NPT via adapter - cable inlet, IP68
2 x M20x1.5 cable inlet, IP68

A
B
C
D

Further designs

Please add "-Z" to Order No. and specify Order code(s).

Order code

Total insertion length: enter the total insertion length in plain text description

Y01

Stainless steel tag [69 x 50 mm (2.71 x 1.97")]:

Y15

Measuring-point number/identification (max. 16 characters) specify in plain text
Acceptance test certificate: Manufacturer's test certificate M to DIN 55350, Part 18 and ISO 9000

C11

Inspection Certificate Type 3.1 per EN 10204

C12

Operating Instructions

Note: The Operating Instructions should be ordered as a separate line on the order.

See page 5/33

This device is shipped with the Siemens Milltronics manual CD containing the complete ATEX Quick Start and Operating Instructions library.

Accessories

See page 5/33

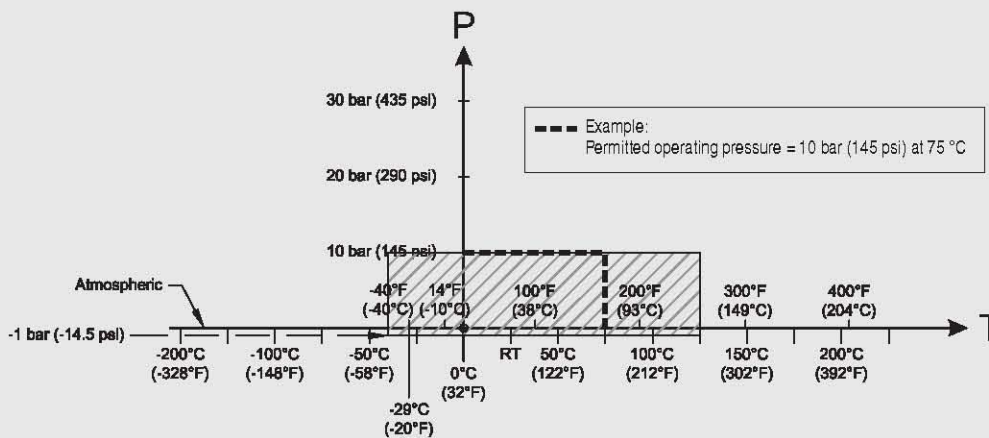
C) Subject to export regulations AL: N, ECCN: EAR99

Selection and Ordering data	Order No.
Operating Instructions - Standard	
English	C) 7ML1998-5JH02
German	C) 7ML1998-5JH32
Note: The Operating Instructions should be ordered as a separate line on the order.	
Quick Start manual, multi-language	C) 7ML1998-5QY82
This device is shipped with the Siemens Milltronics manual CD containing the complete ATEX Quick Start and Operating Instructions library.	
Operating Instructions - Digital	
English	C) 7ML1998-5JJ01
German	C) 7ML1998-5JJ31
Note: The Operating Instructions should be ordered as a separate line on the order.	
Quick Start manual, multi-language	C) 7ML1998-5XA81
This device is shipped with the Siemens Milltronics manual CD containing the complete ATEX Quick Start and Operating Instructions library.	
Accessories	
Sensguard, ¾" NPT (PPS)	7ML1830-1DL
Only available for CLS200 with ¾" NPT thread	
Sensguard, R 1" (BSPT) (PPS)	7ML1830-1DM
Only available for CLS200 with ¾" NPT thread	
One metallic cable gland M20x1.5, -40 to +80 °C (-40 to +176 °F) with integrated shield connection (available for PROFIBUS PA)	7ML1930-1AQ
General Purpose	
1/2" NPT General Purpose Cable Entry IP68/IP69K NEMA6, -40 ... -100 °C (-40 ... -212 °F), cable size 6 ... 12 mm (0.236 ... 0.472")	A5E03252530
M20x1.5 General Purpose Cable Entry IP68/IP69K NEMA6, -40 ... -100 °C (-40 ... -212 °F), cable size 7 ... 12 mm (0.275 ... 0.472")	A5E03252531
Hazardous Locations	
1/2" NPT EMC rated Cable Gland: Dust Ignition Proof, Flameproof Exd, and Increased Safety ATEX II 2 GD ExtD A21 (Zone 1, Zone 2, Zone 21, Zone 22, and in Gas Groups IIA, IIB and IIC) -60 ... +80 °C IP66, IP67, IP68, NEMA4X, cable sizes 5.5 ... 12 mm (0.216 ... 0.472")	A5E03252527
M20 EMC rated Cable Gland: Dust Ignition Proof, Flameproof Exd, and Increased Safety ATEX II 2 GD ExtD A21 (Zone 1, Zone 2, Zone 21, Zone 22 and in Gas Groups IIA, IIB and IIC) -60 ... +80 °C IP66, IP67, IP68, NEMA4X, cable sizes 5.5 ... 12 mm (0.216 ... 0.472")	A5E03252528
Blind threaded flanges are available. Please contact nacc.smpi@siemens.com with a completed application data sheet on page 5/9	
Spare parts	See page 5/76

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

L) Subject to export regulations AL: N, ECCN: 3A991X

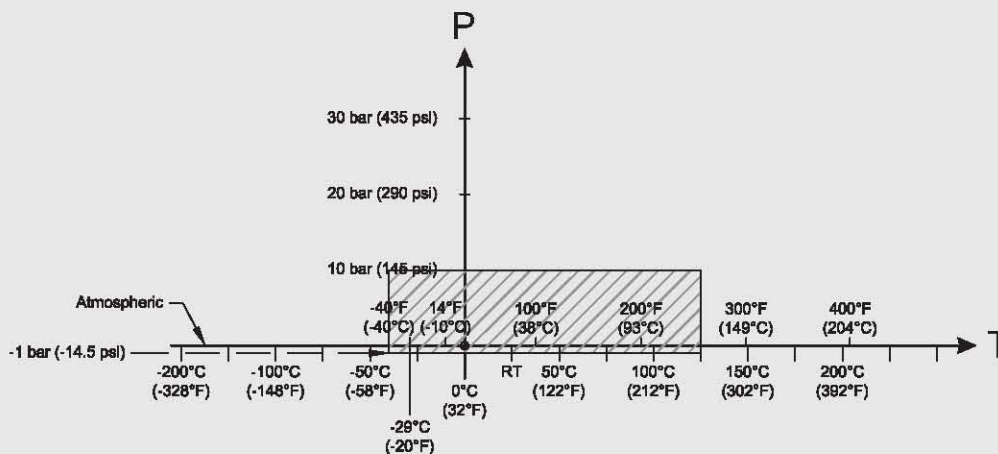
Characteristic curves



Pressure/Temperature Curve CLS200 Sliding Coupling Threaded Process Connections (7ML5633 and 7ML5643)

P = Permitted Operating Pressures
T = Permitted Operating Temperature

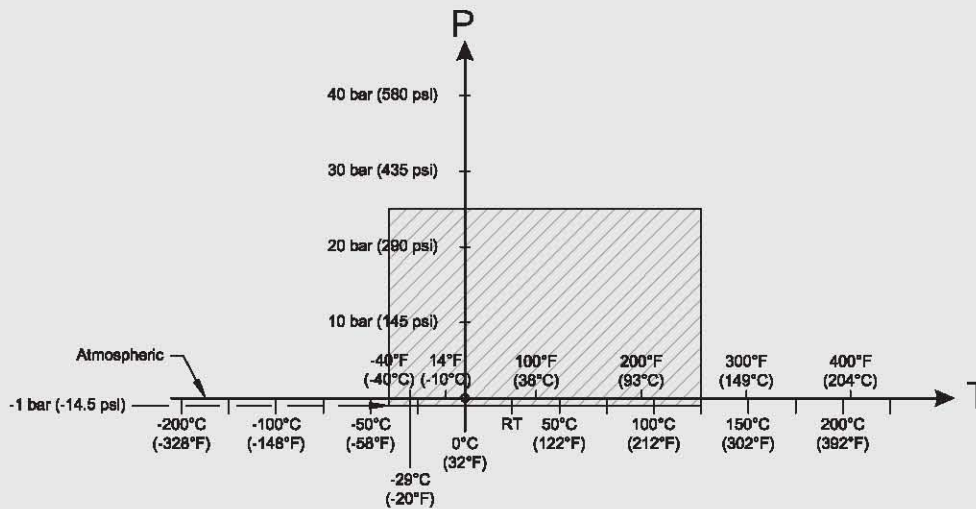
Pointek CLS200 Process Pressure/Temperature derating curves (7ML5633 and 7ML5643)



Pressure/Temperature Curve CLS200 Cable Threaded Process Connections (7ML5631 and 7ML5641)

P = Permitted Operating Pressures
T = Permitted Operating Temperature

Pointek CLS200 Process Pressure/Temperature derating curves (7ML5631 and 7ML5641)

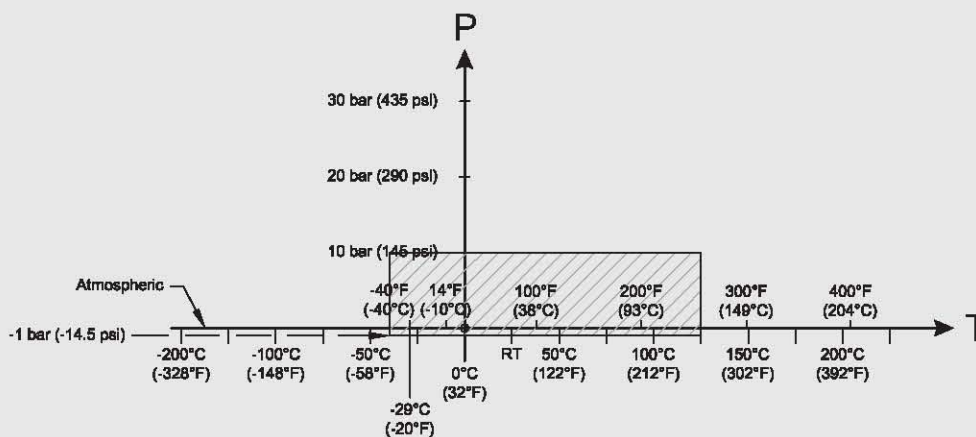


**Pressure/Temperature Curve
CLS200 Compact and Extended Rod
Threaded Process Connections
(7ML5630 and 7ML5640)**

P = Permitted Operating Pressures
T = Permitted Operating Temperature

5

Pointek CLS200 Process Pressure/Temperature derating curves (7ML5630 or 7ML5640)



**Pressure/Temperature Curve
CLS200 Compact and Extended Sanitary Type
Sanitary Process Connections
(7ML5632 and 7ML5642)**

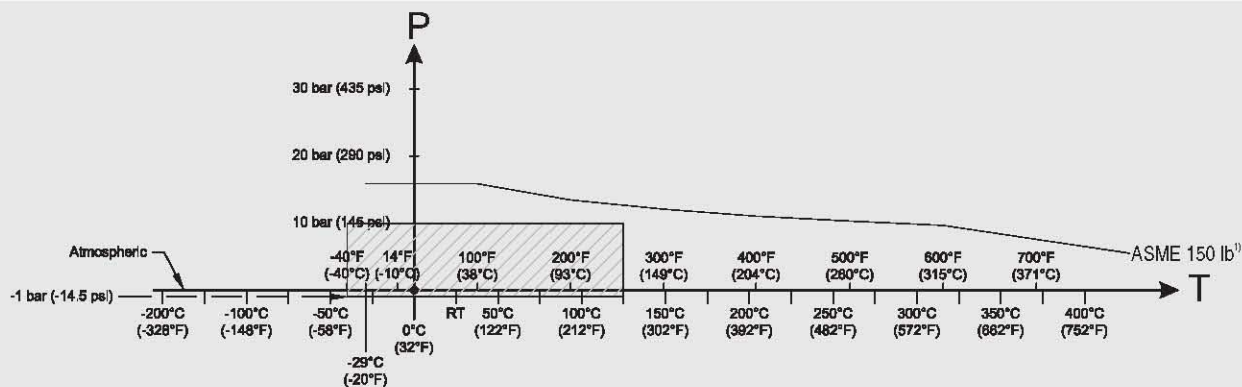
P = Permitted Operating Pressures
T = Permitted Operating Temperature

Pointek CLS200 Process Pressure/Temperature derating curves (7ML5632 and 7ML5642)

Level instruments

Point level measurement - Capacitance switches

Pointek CLS200

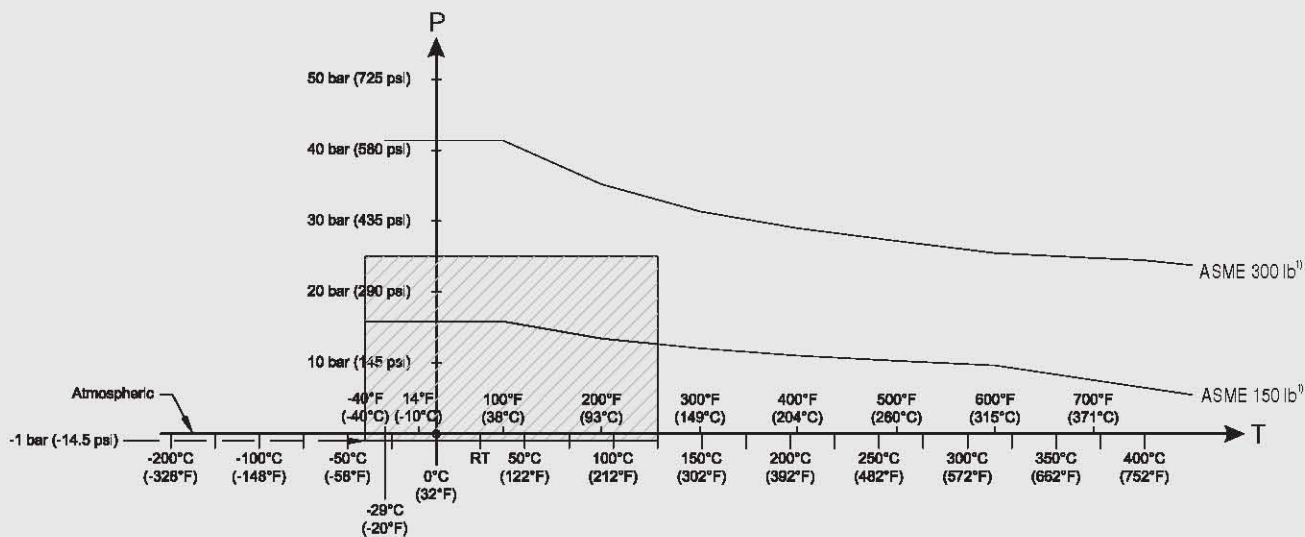


Pressure/Temperature Curve CLS200 Cable ASME Flanged Process Connections (7ML5631 and 7ML5641)

P = Permitted Operating Pressures
T = Permitted Operating Temperature

1) The curve denotes the minimum allowable flange class for the shaded area below.

Pointek CLS200 Process Pressure/Temperature derating curves (7ML5631 and 7ML5641)

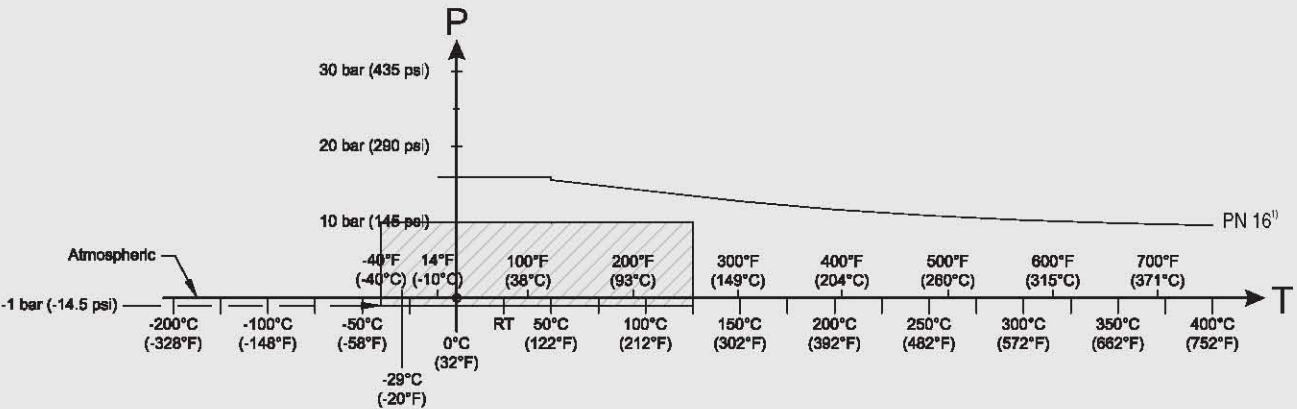


Pressure/Temperature Curve CLS200 Compact and Extended Rod ASME Flanged Process Connections (7ML5630 and 7ML5640)

P = Permitted Operating Pressures
T = Permitted Operating Temperature

1) The curve denotes the minimum allowable flange class for the shaded area below.

Pointek CLS200 Process Pressure/Temperature derating curves (7ML5630 and 7ML5640)

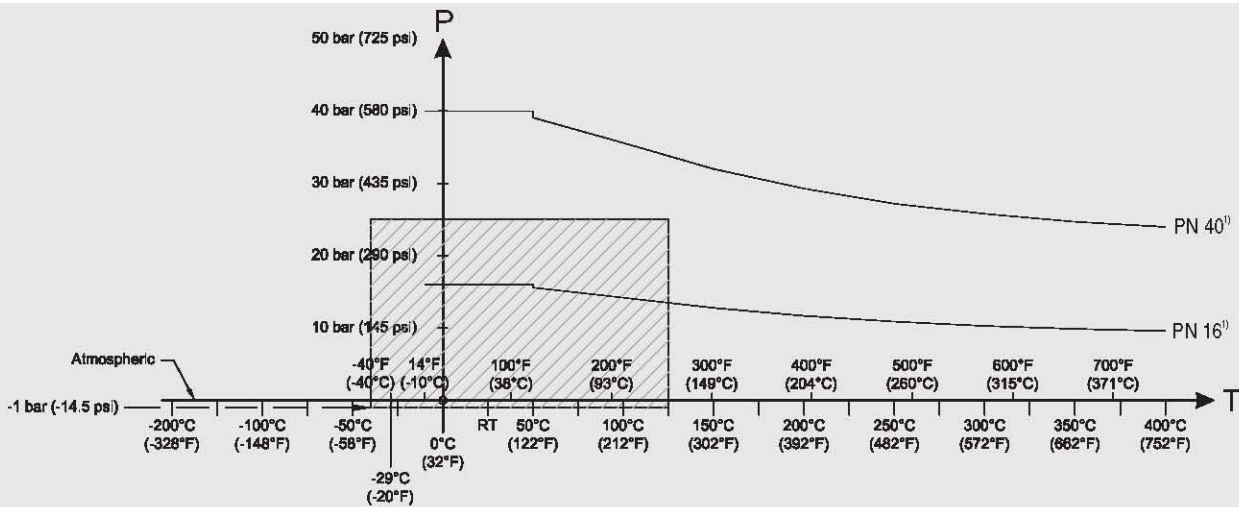


**Pressure/Temperature Curve
CLS200 Cable
EN Flanged Process Connections
(7ML5631 and 7ML5641)**

P = Permitted Operating Pressures
T = Permitted Operating Temperature

1) The curve denotes the minimum allowable flange class for the shaded area below.

Pointek CLS200 Process Pressure/Temperature derating curves (7ML5631 and 7ML5641)



**Pressure/Temperature Curve
CLS200 Compact and Extended Rod
EN Flanged Process Connections (7ML5630 and 7ML5640)**

P = Permitted Operating Pressures
T = Permitted Operating Temperature

1) The curve denotes the minimum allowable flange class for the shaded area below.

Pointek CLS200 Process Pressure/Temperature derating curves (7ML5630 and 7ML5640)

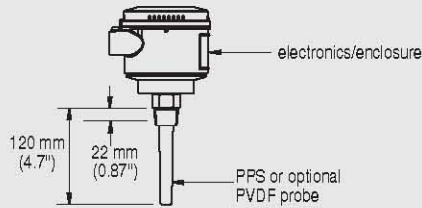
Level instruments

Point level measurement - Capacitance switches

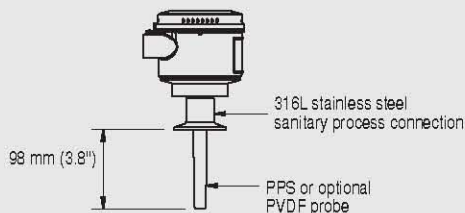
Pointek CLS200

Dimensional drawings

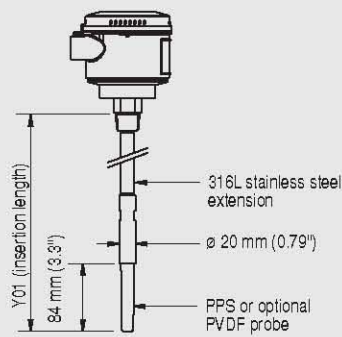
**Compact version
Threaded
(7ML5630 and 7ML5640)**



**Sanitary compact version
Sanitary fitting (7ML5632 and 7ML5642)**

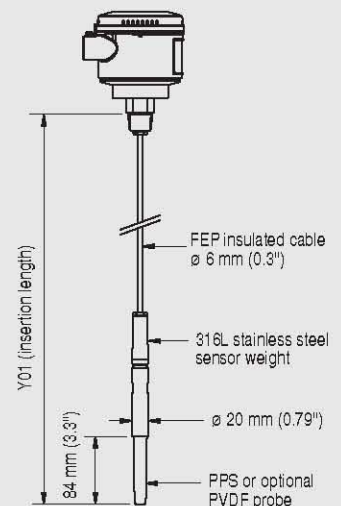


**Extended rod version
Threaded
(7ML5630 and 7ML5640)**

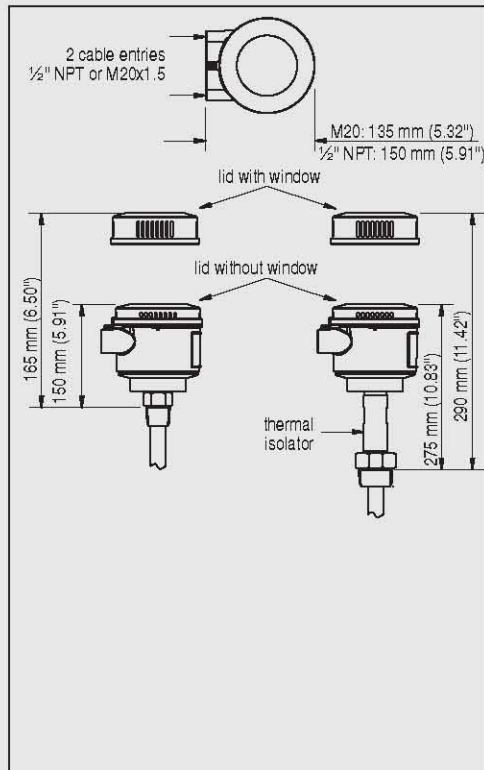


Min. insertion length = 200 mm (7.87")
Max. insertion length = 5500 mm (216")

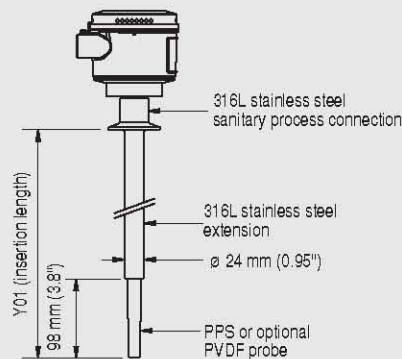
**Extended cable version
Threaded
(7ML5631 and 7ML5641)**



Min. insertion length = 500 mm (19.69")
Max. insertion length = 30000 mm (1181")
Applicable for liquids and solids applications.
Cable can be shortened on site.

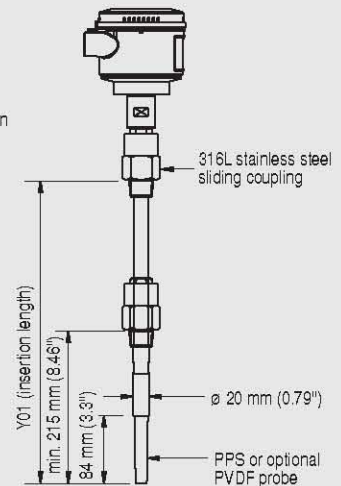


**Sanitary extended version
Sanitary fitting (7ML5632 and 7ML5642)**



Min. insertion length = 110 mm (4.3")
Max. insertion length = 5500 mm (216")

**Sliding coupling version
Threaded (7ML5633 and 7ML5643)**



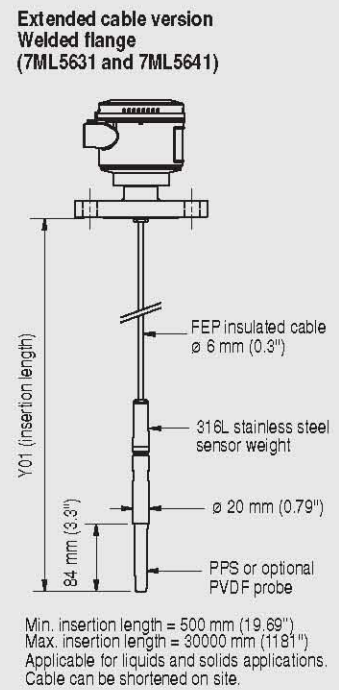
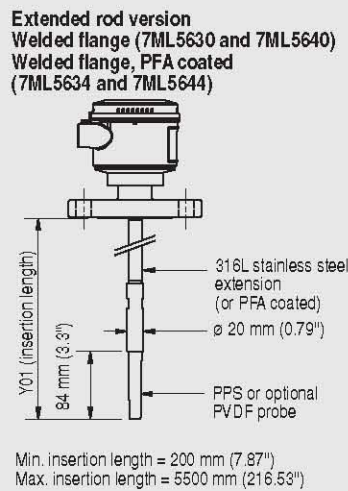
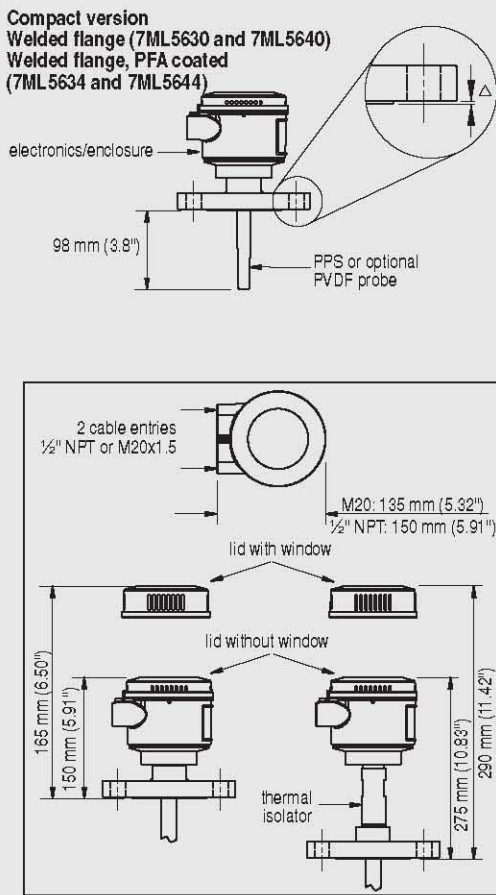
Min. insertion length = 350 mm (13.82")
Max. insertion length = 5500 mm (216")

Pointek CLS200 dimensions - Threaded/Sanitary Process Connections

Level instruments

Point level measurement - Capacitance switches

Pointek CLS200



Flange Facing (raised face)		
	Flange Class	Facing thickness
△	ASME 150/300	2 mm (0.08")
△	ASME 600/900	7 mm (0.28")
△	PN16/40	2 mm (0.08")

Insertion length does not include any raised face/gasket face dimension (see Flange Facing table above).

Pointek CLS200 dimensions - Flanged Process Connections

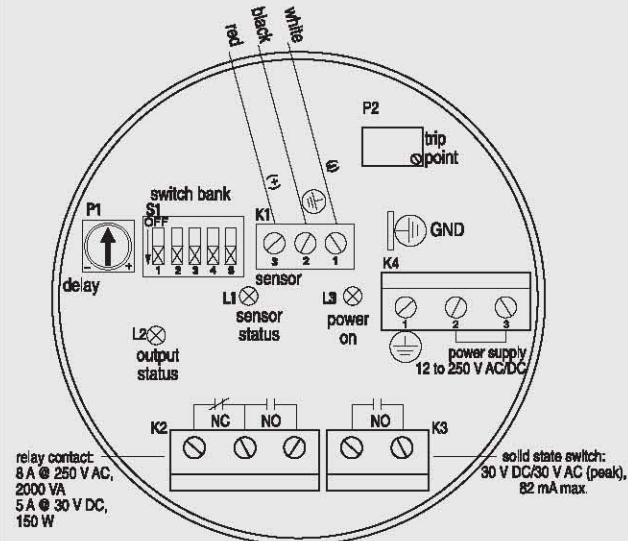
Level instruments

Point level measurement - Capacitance switches

Pointek CLS200

Schematics

Wiring: Pointek CLS200 Standard



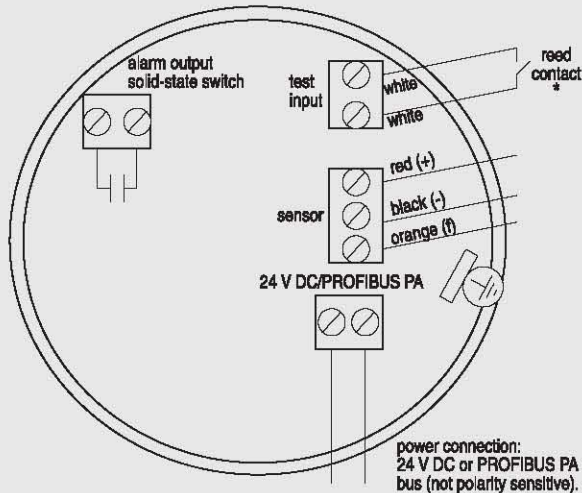
relay contact:
8 A @ 250 V AC,
2000 VA
5 A @ 30 V DC,
150 W

solid state switch:
30 V DC/30 V AC (peak),
82 mA max.

Notes:

- Identification label is on underside of lid. Switch and Potentiometer settings are for illustration purposes only (Refer to Operation/Setup in manual).
- All field wiring must have insulation suitable for at least 250 V.
- Relay contact terminals are for use with equipment having no accessible live parts and wiring having insulation suitable for at least 250 V.
- Maximum working voltage between adjacent relay contacts shall be 250 V.
- Refer to the Instruction Manual or contact a Siemens representative for detailed wiring information.

Wiring: Pointek CLS200 Digital



Notes:

Refer to the Instruction Manual or contact a Siemens representative for detailed wiring information.

*Magnet Activated Sensor Test

A magnet can be used to test the sensor without opening the lid of the Pointek CLS200 Digital version. Bring the magnet close to the test area indicated on the enclosure. The sensor test starts and finishes automatically after 10 seconds.

