Pointek CLS200 – Standard

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

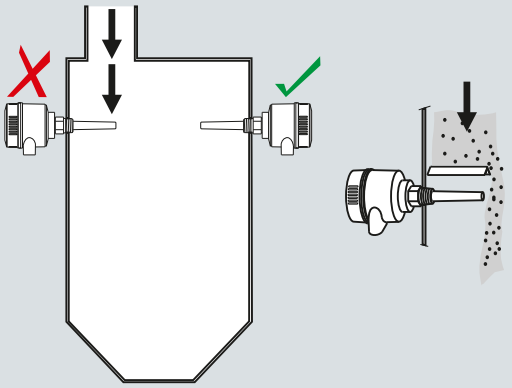
Pointek CLS200 standard version has 3 LED indicators with basic relay, and solid-state switch alarms.

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

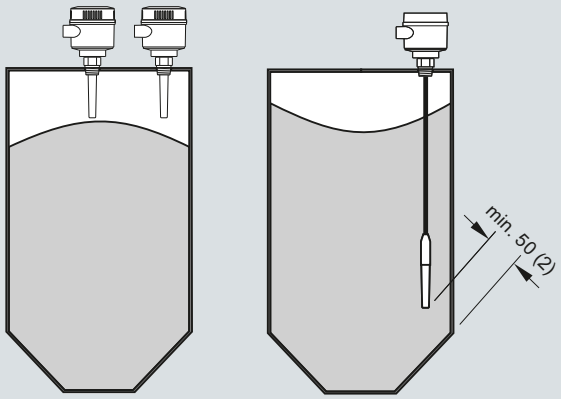
Configuration

Installation



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

Avoid areas where material build up occurs.



Install probe at least 50 (2) from tank wall.

Pointek CLS200 installation, dimensions in mm (inch)

Technical specifications

Mode of operation	
Measuring principle	Inverse frequency shift capacitive level detection
Input	
Measured variable	Change in picoFarad (pF)
Output	
Output signal	
• 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 conditions[1]	
Installation conditions	
• Location	Indoor/outdoor
Ambient conditions	
• Ambient temperature	-40 ... +85 °C (-40 ... +185 °F)[2]
• Installation category	II
• Pollution degree	4
Medium conditions	Liquids, bulk solids, slurries and interfaces
• Relative dielectric constant ε_r	Min. 1.5
• Process temperature	
- Without thermal isolator	-40 ... +85 °C (-40 ... +185 °F)[2]
- With thermal isolator	-40 ... +125 °C (-40 ... +257 °F)
• Process pressure (rod version)	-1 ... +25 bar g (-14.6 ... +365 psi g) (nominal)
• Process pressure (cable version)[3]	-1 ... +10 bar g (-14.6 ... +150 psi g) (nominal)
• Process pressure (sliding coupling version)	-1 ... +10 bar g (-14.6 ... +150 psi g) (nominal)
Electromagnetic Compatibility	To comply with CE EMC regulations (where applicable); the CLS200 should be installed per the instruction manual.

Design	
Material	
• Enclosure	Epoxy-coated aluminum with gasket
• Optional thermal isolator	316L stainless steel
Connection	Removable terminal block, max. 2.5 mm²
Degree of protection	IP65/Type 4/NEMA 4 (optional IP68)
Cable inlet	2 x M20x1.5 thread (option: 2 x ½" NPT conduit entry including 1 plugged entry)
Power supply	12 to 250 V AC/DC, 0 ... 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)

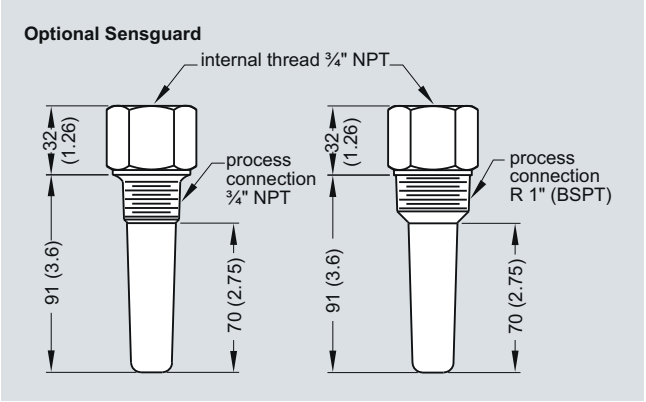
1) When operation is in areas classified as hazardous, observe restrictions according to relevant certificate.
See also Pressure/Temperature curves on page 5/35.
2) Thermal isolator is used if process connection temperature exceeds +85 °C (+185 °F).
3) Pressure rating of process seal is temperature dependent.
See Pressure/Temperature curves on page 5/35.

Pointek CLS200 – Standard

Design: Probe				
	Rod version	**Sanitary version**	**Cable version**	**Sliding Coupling version**
Max. length	5500 mm (216.53 inch)	5500 mm (216.53 inch)	30000 mm (1181.1 inch) liquids and slurries 5000 mm (196.85 inch) solids (under loads)	5500 mm (216.53 inch)
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 ceg.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 in mm (inch)

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]		**0 A**
1" NPT [(Taper), ANSI/ASME B1.20.1]		**0 B**
1¼" NPT [(Taper), ANSI/ASME B1.20.1]		**0 C**
1½" NPT [(Taper), ANSI/ASME B1.20.1]		**0 D**
R ¾" [(BSPT), EN 10226/PT (JIS-T), JIS B 0203]		**1 A**
R 1" [(BSPT), EN 10226/PT (JIS-T), JIS B 0203]		**1 B**
R 1½" [(BSPT), EN 10226/PT (JIS-T), JIS B 0203]		**1 D**
G ¾" [(BSPP), EN ISO 228-1/PF (JIS-P), JIS B 0202]		**3 A**
G 1" [(BSPP), EN ISO 228-1/PF (JIS-P), JIS B 0202]		**3 B**
G 1½" [(BSPP), EN ISO 228-1/PF (JIS-P), JIS B 0202]		**3 D**
Welded flange, 316L stainless steel, raised face		
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**
Welded flange, 316L stainless steel, Type A flat faced		
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)		
Note: No Y01 needed in order code for standard lengths		
Compact [threaded 120 mm (4.72 inch), Flanged 98 mm (3.86 inch)]		**A**
Extended rod, 250 mm (9.84 inch)		**B**
Extended rod, 350 mm (13.78 inch)		**C**
Extended rod, 500 mm (19.69 inch)		**D**
Extended rod, 750 mm (29.53 inch)		**E**
Extended rod, 1000 mm (39.37 inch)		**F**
Extended rod, 1250 mm (49.21 inch)		**G**
Extended rod, 1350 mm (53.15 inch)		**H**
Extended rod, 1500 mm (59.06 inch)		**J**
Extended rod, 1750 mm (68.90 inch)		**K**
Extended rod, 2000 mm (78.74 inch)		**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, 210 ... 1000 mm (8.27 ... 39.37 inch)		**M**
Extended rod, 1001 ... 2000 mm (39.41 ... 78.74 inch)		**N**
Extended rod, 2001 ... 3000 mm (78.78 ... 118.11 inch)		**P**
Extended rod, 3001 ... 4000 mm (118.15 ... 157.48 inch)		**Q**
Extended rod, 4001 ... 5000 mm (157.52 ... 196.85 inch)		**R**
Extended rod, 5001 ... 5500 mm (196.89 ... 216.53 inch)		**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 inch) of cable[1)]		**2**
With 5 m (197 inch) of cable[1)]		**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 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 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**

[1)] Available with Approvals options F to H and K only

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

Pointek CLS200 – Standard

Selection and Ordering data	Order code
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	**Y01**
Stainless steel tag [69 x 50 mm (2.71 x 1.97 inch)]: 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. This device is shipped with the Siemens Milltronics manual CD containing the complete ATEX Quick Start and manual library.	**See page 5/34**
Accessories	**See page 5/34**

Selection and Ordering data	Order No.
Pointek CLS200 - Standard - Cable Version with Threaded or Flanged process connection C) 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	**7ML5631-** ■■■■■ - ■■■ **0**
Process connection	
Threaded, 316L stainless steel	
¾" NPT [(Taper), ANSI/ASME B1.20.1]	**0 A**
1" NPT [(Taper), ANSI/ASME B1.20.1]	**0 B**
1¼" NPT [(Taper), ANSI/ASME B1.20.1]	**0 C**
1½" NPT [(Taper), ANSI/ASME B1.20.1]	**0 D**
R ¾" [(BSPT), EN 10226/PT (JIS-T), JIS B 0203]	**1 A**
R 1" [(BSPT), EN 10226/PT (JIS-T), JIS B 0203]	**1 B**
R 1½" [(BSPT), EN 10226/PT (JIS-T), JIS B 0203]	**1 D**
G ¾" [(BSPP), EN ISO 228-1/PF (JIS-P), JIS B 0202]	**3 A**
G 1" [(BSPP), EN ISO 228-1/PF (JIS-P), JIS B 0202]	**3 B**
G 1½" [(BSPP), EN ISO 228-1/PF (JIS-P), JIS B 0202]	**3 D**
Welded flange, 316L stainless steel, raised face	
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**
Welded flange, 316L stainless steel, Type A flat faced	
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 (Note: Flange bolting patterns and facings dimensionally correspond to the applicable ASME B16.5 or EN 1092-1 standard.)	**6 K**
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 inch), length can be determined by customer on assembly	**A**
Extended cable, 6000 mm (236.22 inch), length can be determined by customer on assembly	**B**
Add order code Y01 and plain text: "Insertion length ... mm"	
Extended cable, 500 ... 5000 mm (19.69 ... 196.85 inch)	**C**
Extended cable, 5001 ... 10000 mm (196.89 ... 393.70 inch)	**D**
Extended cable, 10001 ... 15000 mm (393.74 ... 590.55 inch)	**E**
Extended cable, 15001 ... 20000 mm (590.59 ... 787.4 inch)	**F**
Extended cable, 20001 ... 25000 mm (787.44 ... 984.25 inch)	**G**
Extended cable, 25001 ... 30000 mm (984.29 ... 1181.1 inch)	**H**

Selection and Ordering data	Order No.
Pointek CLS200 - Standard - Cable Version with Threaded or Flanged process connection C) 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	**7ML5631-** ■■■■■ - ■■■ **0**
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 inch) of cable[1]	**2**
With 5 m (197 inch) of cable[1]	**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**

[1] Available with Approvals options F to H and K only

Selection and Ordering data	Order code
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	**Y01**
Stainless steel tag [69 x 50 mm (2.71 x 1.97 inch)]: 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. This device is shipped with the Siemens Milltronics manual CD containing the complete ATEX Quick Start and manual library.	**See page 5/34**
Accessories	**See page 5/34**

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

Point level measurement – Capacitance switches

Pointek CLS200 – Standard

Selection and Ordering data		Order No.
Pointek CLS200 - Standard - Rod with Sanitary process connection	C)	**7ML5632-** ■■■■■ - ■■■ **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 inch)		**A**
Extended rod, 250 mm (9.84 inch)		**B**
Extended rod, 350 mm (13.78 inch)		**C**
Extended rod, 500 mm (19.69 inch)		**D**
Extended rod, 750 mm (29.53 inch)		**E**
Extended rod, 1000 mm (39.37 inch)		**F**
Extended rod, 1250 mm (49.21 inch)		**G**
Extended rod, 1350 mm (53.15 inch)		**H**
Extended rod, 1500 mm (59.06 inch)		**J**
Extended rod, 1750 mm (68.90 inch)		**K**
Extended rod, 2000 mm (78.74 inch)		**L**
Add order code Y01 and plain text: "Insertion length ... mm"		
Extended rod, 110 ... 350 mm (4.3 ... 13.78 inch)		**M**
Extended rod, 351 ... 1000 mm (13.82 ... 39.33 inch)		**N**
Extended rod, 1001 ... 2000 mm (39.41 ... 78.74 inch)		**P**
Extended rod, 2001 ... 3000 mm (78.78 ... 118.11 inch)		**Q**
Extended rod, 3001 ... 4000 mm (118.15 ... 157.48 inch)		**R**
Extended rod, 4001 ... 5000 mm (157.52 ... 196.85 inch)		**S**
Extended rod, 5001 ... 5500 mm (196.89 ... 216.53 inch)		**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		
Remote mount electronics with 2 m (79 inch) of cable[1)]		**2**
Remote mount electronics with 5 m (197 inch) of cable[1)]		**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**

Selection and Ordering data		Order No.
Pointek CLS200 - Standard - Rod with Sanitary process connection	C)	**7ML5632-** ■■■■■ - ■■■ **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		
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**

[1)] Available with Approvals options F to H and K only

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

Selection and Ordering data	Order code
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	**Y01**
Stainless steel tag [69 x 50 mm (2.71 x 1.97 inch)]: 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. This device is shipped with the Siemens Milltronics manual CD containing the complete ATEX Quick Start and manual library.	**See page 5/34**
Accessories	**See page 5/34**

Selection and Ordering data		Order No.
Pointek CLS200 - Standard - Sliding Coupling with Threaded 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)	**7ML5633-** ■■■■■ - ■■■ **0**
Process connection Threaded, 316L stainless steel		
¾" NPT [(Taper), ANSI/ASME B1.20.1]		**0 A**
1" NPT [(Taper), ANSI/ASME B1.20.1]		**0 B**
1¼" NPT [(Taper), ANSI/ASME B1.20.1]		**0 C**
1½" NPT [(Taper), ANSI/ASME B1.20.1]		**0 D**
R ¾" [(BSPT), EN 10226/PT (JIS-T), JIS B 0203]		**1 A**
R 1" [(BSPT), EN 10226/PT (JIS-T), JIS B 0203]		**1 B**
R 1½" [(BSPT), EN 10226/PT (JIS-T), JIS B 0203]		**1 D**
G ¾" [(BSPP), EN ISO 228-1/PF (JIS-P), JIS B 0202]		**3 A**
G 1" [(BSPP), EN ISO 228-1/PF (JIS-P), JIS B 0202]		**3 B**
G 1½" [(BSPP), EN ISO 228-1/PF (JIS-P), JIS B 0202]		**3 D**
Probe length (length from flange face) (threaded lengths include process thread) Note: No Y01 needed in order code for standard lengths		
Extended rod, 350 mm (13.78 inch)		**C**
Extended rod, 500 mm (19.69 inch)		**D**
Extended rod, 750 mm (29.53 inch)		**E**
Extended rod, 1000 mm (39.37 inch)		**F**
Extended rod, 1250 mm (49.21 inch)		**G**
Extended rod, 1350 mm (53.15 inch)		**H**
Extended rod, 1500 mm (59.06 inch)		**J**
Extended rod, 1750 mm (68.90 inch)		**K**
Extended rod, 2000 mm (78.74 inch)		**L**
Add order code Y01 and plain text: "Insertion length ... mm"		
Extended rod, 350 ... 1000 mm (13.82 ... 39.33 inch)		**M**
Extended rod, 1001 ... 2000 mm (39.41 ... 78.74 inch)		**N**
Extended rod, 2001 ... 3000 mm (78.78 ... 118.11 inch)		**P**
Extended rod, 3001 ... 4000 mm (118.15 ... 157.48 inch)		**Q**
Extended rod, 4001 ... 5000 mm (157.52 ... 196.85 inch)		**R**
Extended rod, 5001 ... 5500 mm (196.89 ... 216.53 inch)		**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 inch) of cable[1]		**2**
With 5 m (197 inch) of cable[1]		**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 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)	**7ML5633-** ■■■■■ - ■■■ **0**
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**

1) Available with Approvals options F to H and K only

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

Selection and Ordering data	Order code
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	**Y01**
Stainless steel tag [69 x 50 mm (2.71 x 1.97 inch)]: 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. This device is shipped with the Siemens Milltronics manual CD containing the complete ATEX Quick Start and manual library.	**See page 5/34**
Accessories	**See page 5/34**

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	
Welded flange, 316L stainless steel, raised face	
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**
Welded flange, 316L stainless steel, Type A flat faced	
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)	
Note: No Y01 needed in order code for standard lengths	
Compact (Threaded 98 mm (3.86 inch))	**A**
Extended rod, 250 mm (9.84 inch)	**B**
Extended rod, 350 mm (13.78 inch)	**C**
Extended rod, 500 mm (19.69 inch)	**D**
Extended rod, 750 mm (29.53 inch)	**E**
Extended rod, 1000 mm (39.37 inch)	**F**
Extended rod, 1250 mm (49.21 inch)	**G**
Extended rod, 1350 mm (53.15 inch)	**H**
Extended rod, 1500 mm (59.06 inch)	**J**
Extended rod, 1750 mm (68.90 inch)	**K**
Extended rod, 2000 mm (78.74 inch)	**L**
Add order code Y01 and plain text: "Insertion length ... mm"	
Extended rod, 200 ... 1000 mm (7.87 ... 39.33 inch)	**M**
Extended rod, 1001 ... 2000 mm (39.41 ... 78.74 inch)	**N**
Extended rod, 2001 ... 3000 mm (78.78 ... 118.11 inch)	**P**
Extended rod, 3001 ... 4000 mm (118.15 ... 157.48 inch)	**Q**
Extended rod, 4001 ... 5000 mm (157.52 ... 196.85 inch)	**R**
Extended rod, 5001 ... 5500 mm (196.89 ... 216.53 inch)	**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 inch) of cable	**2**
With 5 m (197 inch) 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 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**

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

Selection and Ordering data	Order code
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	**Y01**
Stainless steel tag [69 x 50 mm (2.71 x 1.97 inch)]: 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. This device is shipped with the Siemens Milltronics manual CD containing the complete ATEX Quick Start and manual library.	**See page 5/34**
Accessories	**See page 5/34**

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.

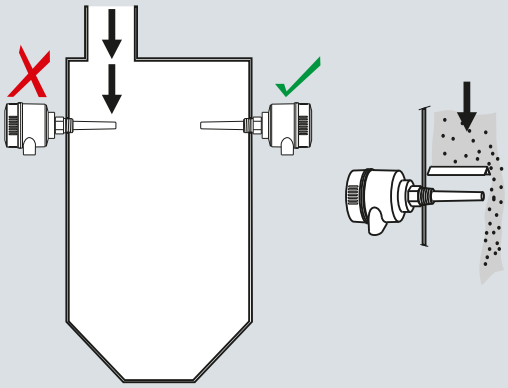
When connected to the PROFIBUS network, advanced diagnostics and set up using SIMATIC PDM are possible.

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

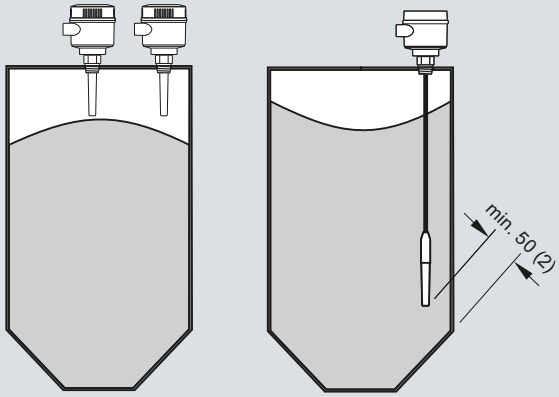
Configuration

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 (2) from tank wall.

Pointek CLS200 installation, dimensions in mm (inch)

5

Pointek CLS200 – Digital

Technical specifications

Mode of operation	
Measuring principle	Inverse frequency shift capacitive level detection
Input	
Measured variable	Change in picoFarad (pF)
Output	
Output signal	
• 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]	
Installation conditions	
• Location	Indoor/outdoor
Ambient conditions	
• Ambient temperature	-40 ... +85 °C (-40 ... +185 °F)[2]
• Installation category	II
• Pollution degree	4
Medium conditions	Liquids, bulk solids, slurries and interfaces
• Relative dielectric constant ε_r	Min. 1.5
• Process temperature	
- Without thermal isolator	-40 ... +85 °C (-40 ... +185 °F) [2]
- With thermal isolator	-40 ... +125 °C (-40 ... +257 °F)
• Process pressure (rod version)	-1 ... +25 bar g (-14.6 ... +365 psi g) (nominal)
• Process pressure (cable version)[3]	-1 ... +10 bar g (-14.6 ... +150 psi g) (nominal)
• Process pressure (sliding coupling version)	-1 ... +10 bar g (-14.6 ... +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 mm²
Degree of protection	IP65/Type 4/NEMA 4 (optional IP68)
Cable inlet	2 x M20x1.5 thread (option: 2 x ½" NPT conduit entry including 1 plugged entry)
Electromagnetic Compatibility	To comply with CE EMC regulations (where applicable); the CLS200 should be installed per the instruction manual.

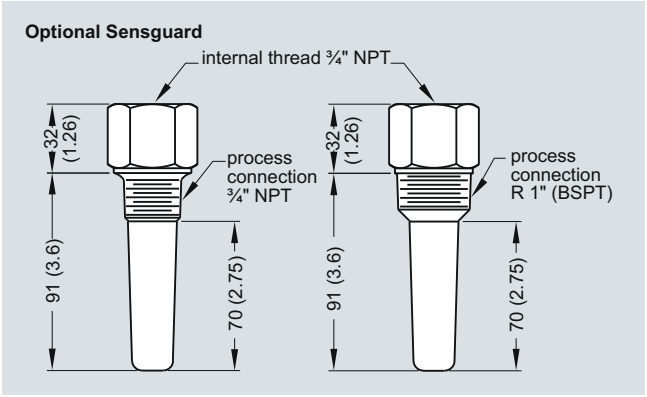
Power supply	
Bus voltage	Standard: 12 ... 30 V DC Intrinsically Safe: 12 ... 24 V DC
Current consumption	12.5 mA
Certificates and approvals	
General Purpose	CSA, FM, CE, C-TICK
Dust Ignition Proof	ATEX II 1/2 D T100 °C
Dust Ignition Proof with IS Probe	CSA/FM Class II, Div. 1, Gr. E, F, G CSA/FM Class 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[4]	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 5/35.
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 5/35.
4) Barrier or Intrinsically Safe power supply required for Intrinsically Safe protection

Design: Probe				
	Rod version	**Sanitary version**	**Cable version**	**Sliding Coupling version**
Max. length	5500 mm (216.53 inch)	5500 mm (216.53 inch)	30000 mm (1181.1 inch) liquids and slurries 5000 mm (196.85 inch) solids (under loads)	5500 mm (216.53 inch)
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 ceg.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 in mm (inch)

Pointek CLS200 – Digital

Selection and Ordering data		Order No.
Pointek CLS200 - Digital - Rod with Threaded or Flanged process connection	L)	**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		
Process connection		
Threaded, 316L stainless steel		
¾" NPT [(Taper), ANSI/ASME B1.20.1]		**0 A**
1" NPT [(Taper), ANSI/ASME B1.20.1]		**0 B**
1¼" NPT [(Taper), ANSI/ASME B1.20.1]		**0 C**
1½" NPT [(Taper), ANSI/ASME B1.20.1]		**0 D**
R ¾" [(BSPT), EN 10226/PT (JIS-T), JIS B 0203]		**1 A**
R 1" [(BSPT), EN 10226/PT (JIS-T), JIS B 0203]		**1 B**
R 1½" [(BSPT), EN 10226/PT (JIS-T), JIS B 0203]		**1 D**
G ¾" [(BSPP), EN ISO 228-1/PF (JIS-P), JIS B 0202]		**3 A**
G 1" [(BSPP), EN ISO 228-1/PF (JIS-P), JIS B 0202]		**3 B**
G 1½" [(BSPP), EN ISO 228-1/PF (JIS-P), JIS B 0202]		**3 D**
Welded flange, 316L stainless steel, raised face		
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**
Welded flange, 316L stainless steel, Type A flat faced		
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)		
Note: No Y01 needed in order code for standard lengths		
Compact [threaded 120 mm (4.72 inch), Flanged 98 mm (3.86 inch)]		**A**
Extended rod, 250 mm (9.84 inch)		**B**
Extended rod, 350 mm (13.78 inch)		**C**
Extended rod, 500 mm (19.69 inch)		**D**
Extended rod, 750 mm (29.53 inch)		**E**
Extended rod, 1000 mm (39.37 inch)		**F**
Extended rod, 1250 mm (49.21 inch)		**G**
Extended rod, 1350 mm (53.15 inch)		**H**
Extended rod, 1500 mm (59.06 inch)		**J**
Extended rod, 1750 mm (68.90 inch)		**K**
Extended rod, 2000 mm (78.74 inch)		**L**

Selection and Ordering data		Order No.
Pointek CLS200 - Digital - Rod with Threaded or Flanged process connection	L)	**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		
Add order code Y01 and plain text: "Insertion length ... mm"		
Extended rod, 210 ... 1000 mm (8.27 ... 39.37 inch)		**M**
Extended rod, 1001 ... 2000 mm (39.41 ... 78.74 inch)		**N**
Extended rod, 2001 ... 3000 mm (78.78 ... 118.11 inch)		**P**
Extended rod, 3001 ... 4000 mm (118.15 ... 157.48 inch)		**Q**
Extended rod, 4001 ... 5000 mm (157.52 ... 196.85 inch)		**R**
Extended rod, 5001 ... 5500 mm (196.89 ... 216.53 inch)		**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 inch) of cable		**2**
With 5 m (197 inch) 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 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**
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**

[1] Barrier or Intrinsically Safe power supply required for Intrinsically Safe protection

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

Selection and Ordering data	Order code
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	**Y01**
Stainless steel tag [69 x 50 mm (2.71 x 1.97 inch)]: 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. This device is shipped with the Siemens Milltronics manual CD containing the complete ATEX Quick Start and manual library.	**See page 5/34**
Accessories	**See page 5/34**

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]		**0 A**
1" NPT [(Taper), ANSI/ASME B1.20.1]		**0 B**
1¼" NPT [(Taper), ANSI/ASME B1.20.1]		**0 C**
1½" NPT [(Taper), ANSI/ASME B1.20.1]		**0 D**
R ¾" [(BSPT), EN 10226/PT (JIS-T), JIS B 0203]		**1 A**
R 1" [(BSPT), EN 10226/PT (JIS-T), JIS B 0203]		**1 B**
R 1½" [(BSPT), EN 10226/PT (JIS-T), JIS B 0203]		**1 D**
G ¾" [(BSPP), EN ISO 228-1/PF (JIS-P), JIS B 0202]		**3 A**
G 1" [(BSPP), EN ISO 228-1/PF (JIS-P), JIS B 0202]		**3 B**
G 1½" [(BSPP), EN ISO 228-1/PF (JIS-P), JIS B 0202]		**3 D**
Welded flange, 316L stainless steel, raised face		
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**
Welded flange, 316L stainless steel, Type A flat faced		
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)		
Note: No Y01 needed in order code for standard lengths		
Extended cable, 3000 mm (118.11 inch), length can be determined by customer on assembly		**A**
Extended cable, 6000 mm (236.22 inch), length can be determinded by customer on assembly		**B**
Add order code Y01 and plain text: "Insertion length ... mm"		
Extended cable, 500 ... 5000 mm (19.69 ... 196.85 inch)		**C**
Extended cable, 5001 ... 10000 mm (196.89 ... 393.70 inch)		**D**
Extended cable, 10001 ... 15000 mm (393.74 ... 590.55 inch)		**E**
Extended cable, 15001 ... 20000 mm (590.59 ... 787.4 inch)		**F**
Extended cable, 20001 ... 25000 mm (787.44 ... 984.25 inch)		**G**
Extended cable, 25001 ... 30000 mm (984.29 ... 1181.1 inch)		**H**

Pointek CLS200 – Digital

Selection and Ordering data		Order No.
Pointek CLS200 - Digital - Cable with Threaded or Flanged 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)	**7ML5641-** ■■■■ - ■■■ **0**
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 inch) of cable		**2**
With 5 m (197 inch) 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: 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**
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**

[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 code
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	**Y01**
Stainless steel tag [69 x 50 mm (2.71 x 1.97 inch)]: 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. This device is shipped with the Siemens Milltronics manual CD containing the complete ATEX Quick Start and manual library.	**See page 5/34**
Accessories	**See page 5/34**

Selection and Ordering data		Order No.
Pointek CLS200 - Digital - 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)	**7ML5642-** ■■■■■ - ■■■ **0**
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 inch)		**A**
Extended rod, 250 mm (9.84 inch)		**B**
Extended rod, 350 mm (13.78 inch)		**C**
Extended rod, 500 mm (19.69 inch)		**D**
Extended rod, 750 mm (29.53 inch)		**E**
Extended rod, 1000 mm (39.37 inch)		**F**
Extended rod, 1250 mm (49.21 inch)		**G**
Extended rod, 1350 mm (53.15 inch)		**H**
Extended rod, 1500 mm (59.06 inch)		**J**
Extended rod, 1750 mm (68.90 inch)		**K**
Extended rod, 2000 mm (78.74 inch)		**L**
Add order code Y01 and plain text: "Insertion length ... mm"		
Extended rod, 110 ... 350 mm (4.3 ... 13.78 inch)		**M**
Extended rod, 351 ... 1000 mm (13.82 ... 39.33 inch)		**N**
Extended rod, 1001 ... 2000 mm (39.41 ... 78.74 inch)		**P**
Extended rod, 2001 ... 3000 mm (78.78 ... 118.11 inch)		**Q**
Extended rod, 3001 ... 4000 mm (118.15 ... 157.48 inch)		**R**
Extended rod, 4001 ... 5000 mm (157.52 ... 196.85 inch)		**S**
Extended rod, 5001 ... 5500 mm (196.89 ... 216.53 inch)		**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 inch) of cable		**2**
With 5 m (197 inch) 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 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**
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**

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 code
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	**Y01**
Stainless steel tag [69 x 50 mm (2.71 x 1.97 inch)]: 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. This device is shipped with the Siemens Milltronics manual CD containing the complete ATEX Quick Start and manual library.	**See page 5/34**
Accessories	**See page 5/34**

Pointek CLS200 – Digital

Selection and Ordering data		Order No.
Pointek CLS200 - Digital - Rod with Sliding coupling with Threaded 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)	**7ML56343-** ■■■■■ - ■■■ **0**
Process connection Threaded, 316L stainless steel		
¾" NPT [(Taper), ANSI/ASME B1.20.1]		**0 A**
1" NPT [(Taper), ANSI/ASME B1.20.1]		**0 B**
1¼" NPT [(Taper), ANSI/ASME B1.20.1]		**0 C**
1½" NPT [(Taper), ANSI/ASME B1.20.1]		**0 D**
R ¾" [(BSPT), EN 10226/PT (JIS-T), JIS B 0203]		**1 A**
R 1" [(BSPT), EN 10226/PT (JIS-T), JIS B 0203]		**1 B**
R 1½" [(BSPT), EN 10226/PT (JIS-T), JIS B 0203]		**1 D**
G ¾" [(BSPP), EN ISO 228-1/PF (JIS-P), JIS B 0202]		**3 A**
G 1" [(BSPP), EN ISO 228-1/PF (JIS-P), JIS B 0202]		**3 B**
G 1½" [(BSPP), EN ISO 228-1/PF (JIS-P), JIS B 0202]		**3 D**
Probe length (length from flange face) (threaded lengths include process thread) Note: No Y01 needed in order code for standard lengths		
Extended rod, 350 mm (13.78 inch)		**C**
Extended rod, 500 mm (19.69 inch)		**D**
Extended rod, 750 mm (29.53 inch)		**E**
Extended rod, 1000 mm (39.37 inch)		**F**
Extended rod, 1250 mm (49.21 inch)		**G**
Extended rod, 1350 mm (53.15 inch)		**H**
Extended rod, 1500 mm (59.06 inch)		**J**
Extended rod, 1750 mm (68.90 inch)		**K**
Extended rod, 2000 mm (78.74 inch)		**L**
Add order code Y01 and plain text: "Insertion length ... mm"		
Extended rod, 350 ... 1000 mm (13.82 ... 39.33 inch)		**M**
Extended rod, 1001 ... 2000 mm (39.41 ... 78.74 inch)		**N**
Extended rod, 2001 ... 3000 mm (78.78 ... 118.11 inch)		**P**
Extended rod, 3001 ... 4000 mm (118.15 ... 157.48 inch)		**Q**
Extended rod, 4001 ... 5000 mm (157.52 ... 196.85 inch)		**R**
Extended rod, 5001 ... 5500 mm (196.89 ... 216.53 inch)		**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 inch) of cable		**2**
With 5 m (197 inch) 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**

Selection and Ordering data		Order No.
Pointek CLS200 - Digital - Rod with Sliding coupling with Threaded 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)	**7ML56343-** ■■■■■ - ■■■ **0**
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**
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**

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 code
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	**Y01**
Stainless steel tag [69 x 50 mm (2.71 x 1.97 inch)]: 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. This device is shipped with the Siemens Milltronics manual CD containing the complete ATEX Quick Start and manual library.	**See page 5/34**
Accessories	**See page 5/34**

Selection and Ordering data		Order No.
Pointek CLS200 - Digital - PFA Rod with PFA Flanged 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)	**7ML5644-** ■■■■■ - ■■■ **0**
Process connection		
Welded flange, PFA coated, 316L stainless steel, raised face		
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**
Welded flange, PFA coated, 316L stainless steel, Type A flat faced		
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 process connection face)		
Note: No Y01 needed in order code for standard lengths		
Compact (Threaded 98 mm (3.86 inch))		**A**
Extended rod, 250 mm (9.84 inch)		**B**
Extended rod, 350 mm (13.78 inch)		**C**
Extended rod, 500 mm (19.69 inch)		**D**
Extended rod, 750 mm (29.53 inch)		**E**
Extended rod, 1000 mm (39.37 inch)		**F**
Extended rod, 1250 mm (49.21 inch)		**G**
Extended rod, 1350 mm (53.15 inch)		**H**
Extended rod, 1500 mm (59.06 inch)		**J**
Extended rod, 1750 mm (68.90 inch)		**K**
Extended rod, 2000 mm (78.74 inch)		**L**
Add order code Y01 and plain text: "Insertion length ... mm"		
Extended rod, 200 ... 1000 mm (7.87 ... 39.33 inch)		**M**
Extended rod, 1001 ... 2000 mm (39.41 ... 78.74 inch)		**N**
Extended rod, 2001 ... 3000 mm (78.78 ... 118.11 inch)		**P**
Extended rod, 3001 ... 4000 mm (118.15 ... 157.48 inch)		**Q**
Extended rod, 4001 ... 5000 mm (157.52 ... 196.85 inch)		**R**
Extended rod, 5001 ... 5500 mm (196.89 ... 216.53 inch)		**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 inch) of cable		**2**
With 5 m (197 inch) of cable		**3**

Selection and Ordering data		Order No.
Pointek CLS200 - Digital - PFA Rod with PFA Flanged 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)	**7ML5644-** ■■■■■ - ■■■ **0**
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		
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		**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**

1) Barrier or Intrinsically Safe power supply required for Intrinsically Safe pro-tection

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

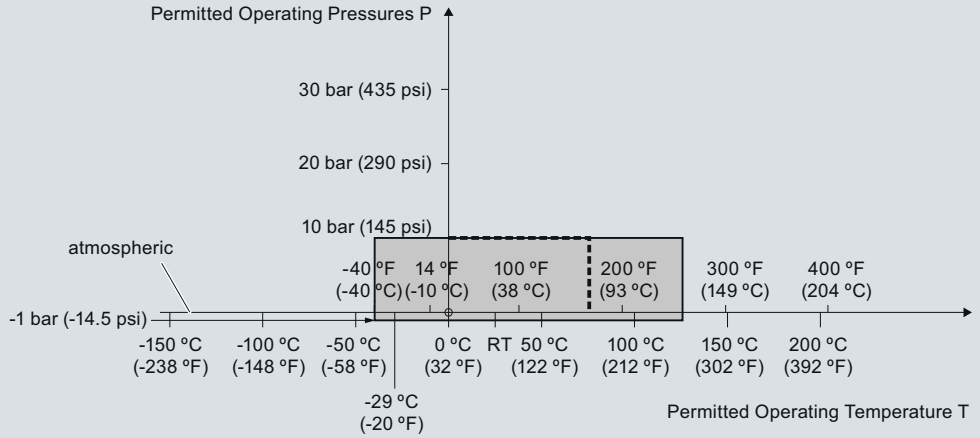
Selection and Ordering data	Order code
Further designs	
Please add "**-Z**" to Order No. and specify Order code(s).	
Total insertion length: enter the total insertion length in plain text description	**Y01**
Stainless steel tag [69 x 50 mm (2.71 x 1.97 inch)]: Measuring-point number/identification (max. 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. This device is shipped with the Siemens Milltronics manual CD containing the complete ATEX Quick Start and manual library.	**See page 5/34**
Accessories	**See page 5/34**

Pointek CLS200 - Standard and Digital

Selection and Ordering data		Order code
Operating Instructions - Standard		
English	C)	**7ML1998-5JH03**
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)	**7ML1998-5JJ03**
German	C)	**7ML1998-5JJ34**
Note: The Operating Instructions should be ordered as a separate line on the order.		
Quick Start manual, multi-language	C)	**7ML1998-5XA83**
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) Only available for CLS200 with ¾" NPT thread		**7ML1830-1DL**
Sensguard, R 1" (BSPT) (PPS) Only available for CLS200 with ¾" NPT thread		**7ML1830-1DM**
One metallic cable gland M20x1.5, -40 ... +80 °C (-40 ... +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 inch)	C)	**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 inch)	C)	**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 inch)		**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 inch)		**A5E03252528**
Blind threaded flanges are available. Please contact ceg.smpi@siemens.com **with a completed application data sheet on page 5/9**		
Pointek Specials		**See page 5/79**

Characteristic curves

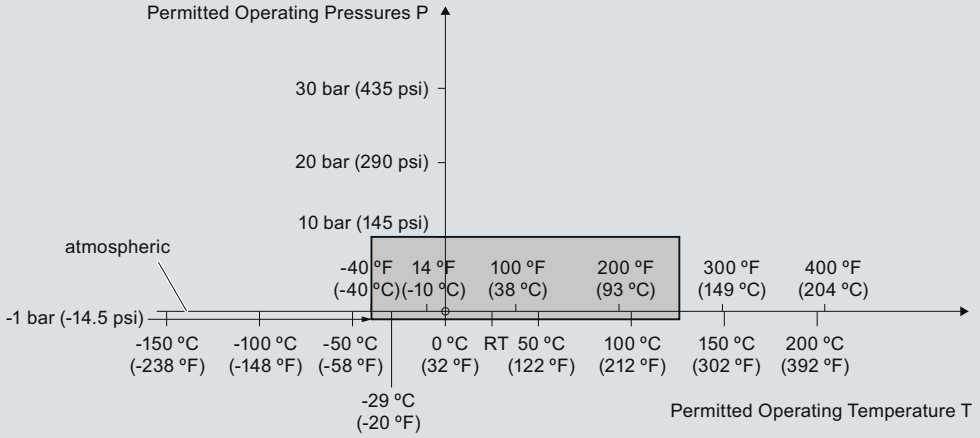
Pressure/Temperature Curve
CLS200 Sliding Coupling
Threaded Process Connections
(7ML5633 and 7ML5643)



---- Example:
Permitted operating pressure = 10 bar (145 psi) at 75 °C

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

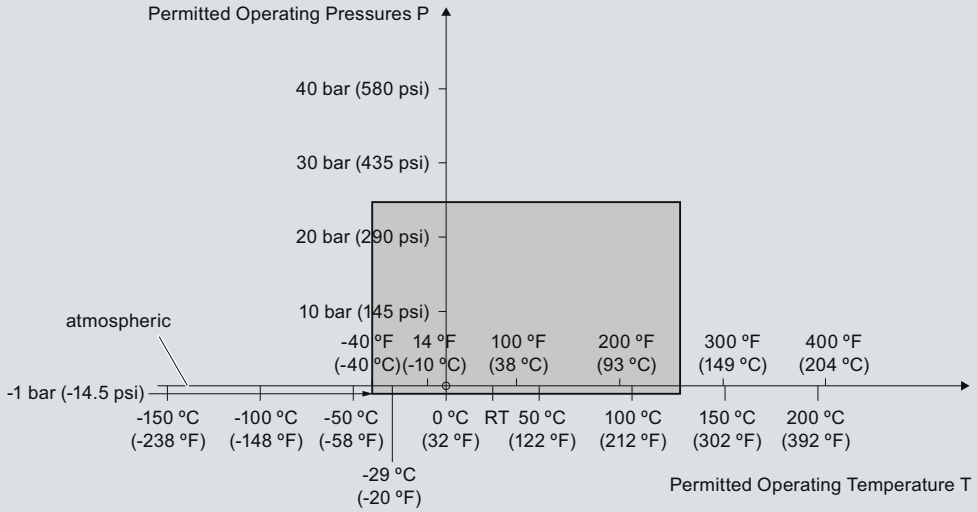
Pressure/Temperature Curve
CLS200 Cable
Threaded Process Connections
(7ML5631 and 7ML5641)



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

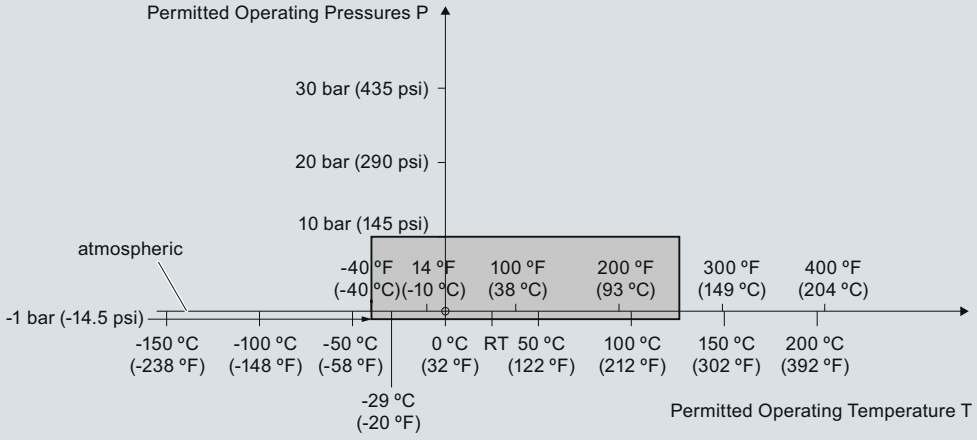
Pointek CLS200 - Standard and Digital

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



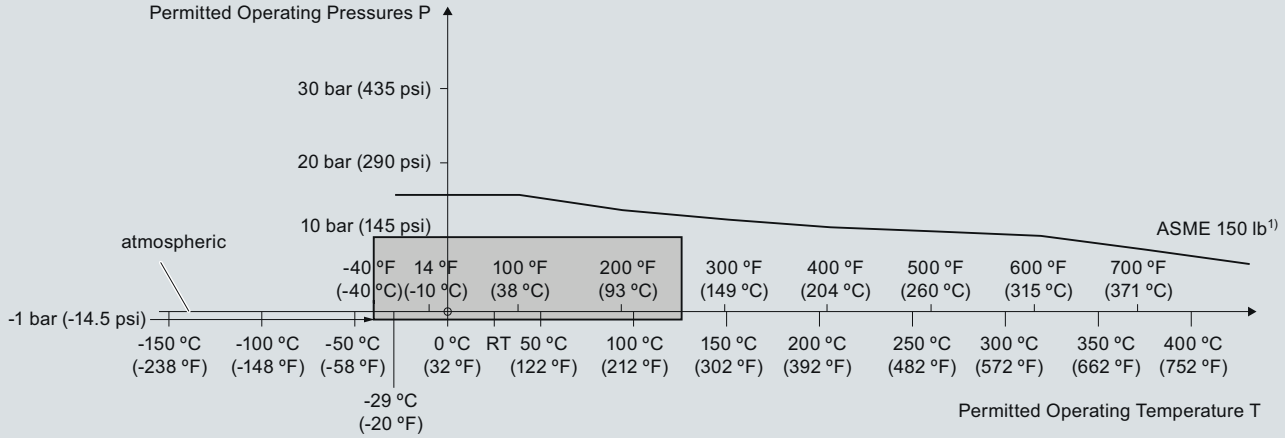
Pointek CLS200 Process Pressure/Temperature derating curves (7ML5630 or 7ML5640)

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



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

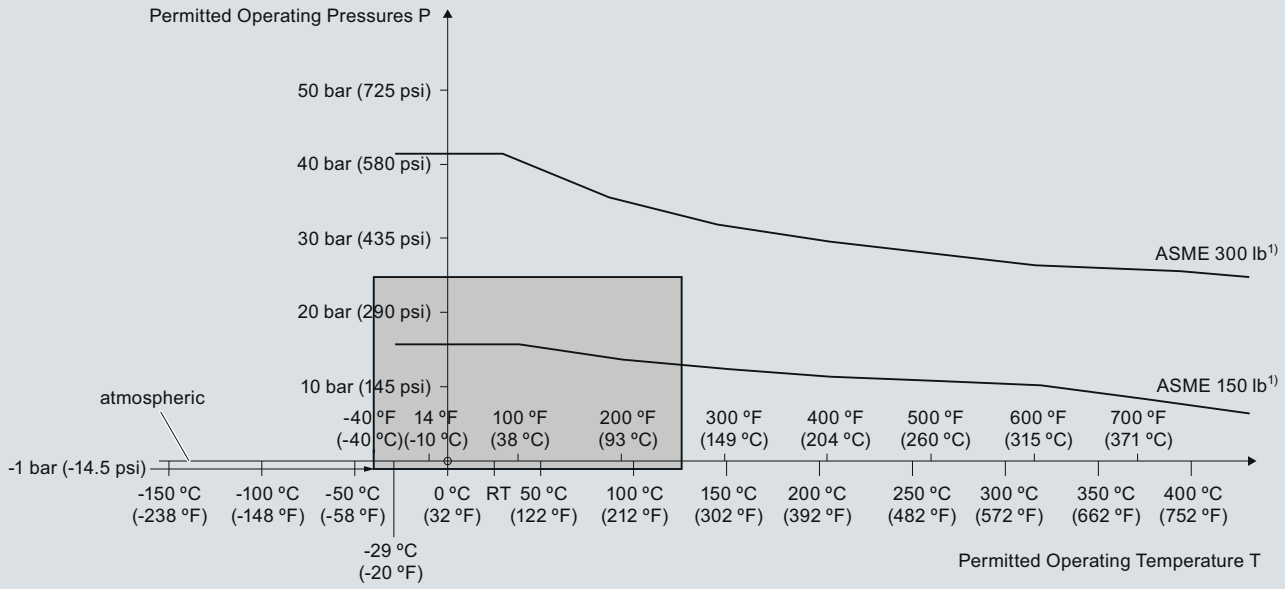
Pressure/Temperature Curve
CLS200 Cable
ASME Flanged Process Connections
(7ML5631 and 7ML5641)



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)

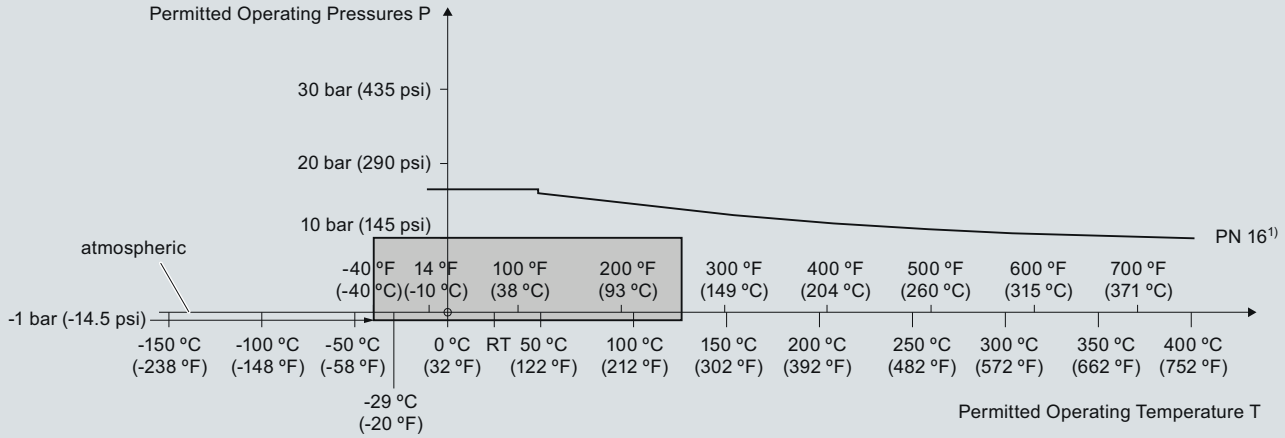


1) The curve denotes the minimum allowable flange class for the shaded area below.

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

Pointek CLS200 - Standard and Digital

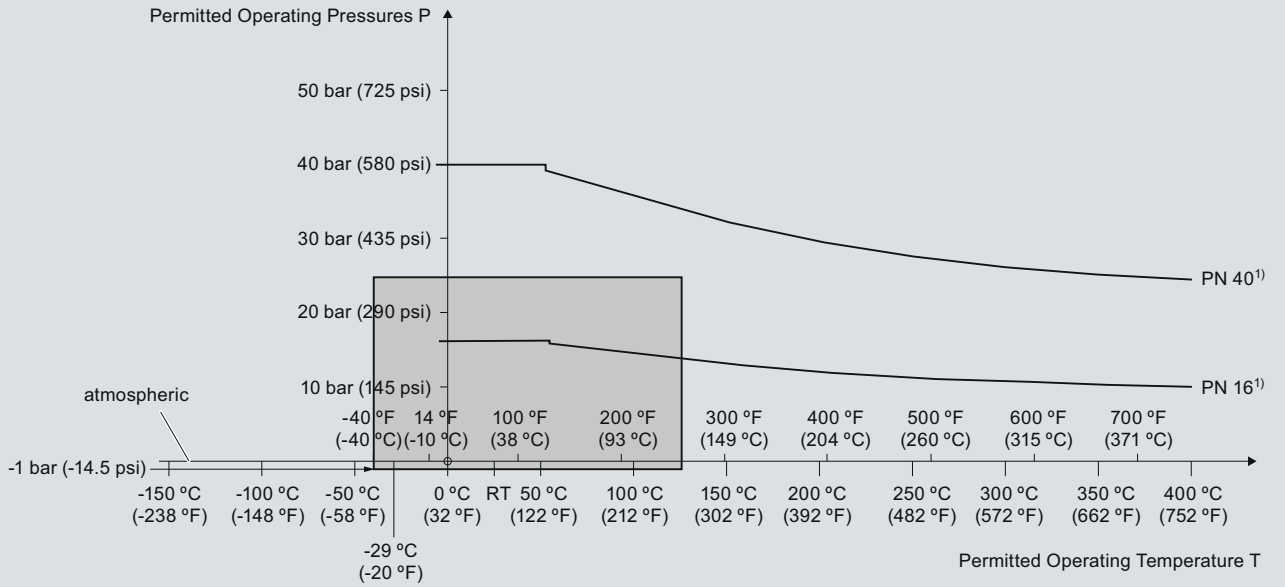
Pressure/Temperature Curve
CLS200 Cable
EN Flanged Process Connections
(7ML5631 and 7ML5641)



[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)

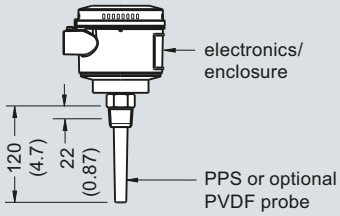


[1)] The curve denotes the minimum allowable flange class for the shaded area below.

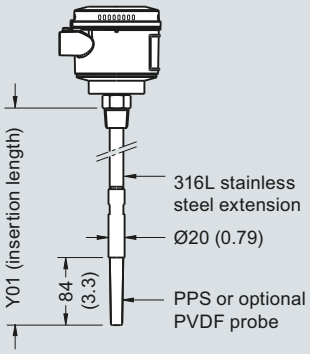
Pointek CLS200 Process Pressure/Temperature derating curves (7ML5630 and 7ML5640)

Dimensional drawings

Compact version
Threaded
(7ML5630 and 7ML5640)

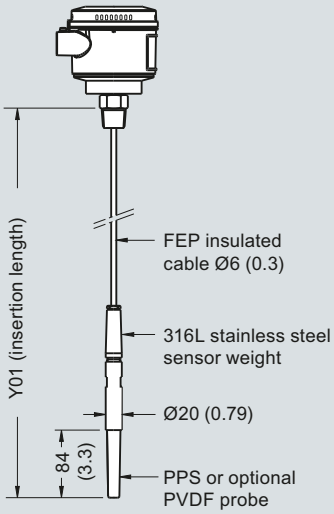


Extended rod version
Threaded
(7ML5630 and 7ML5640)



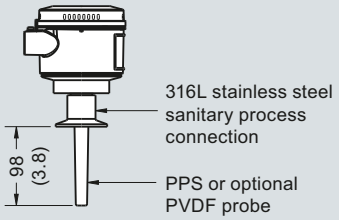
Min. insertion length = 200 (7.87)
Max. insertion length = 5500 (216)

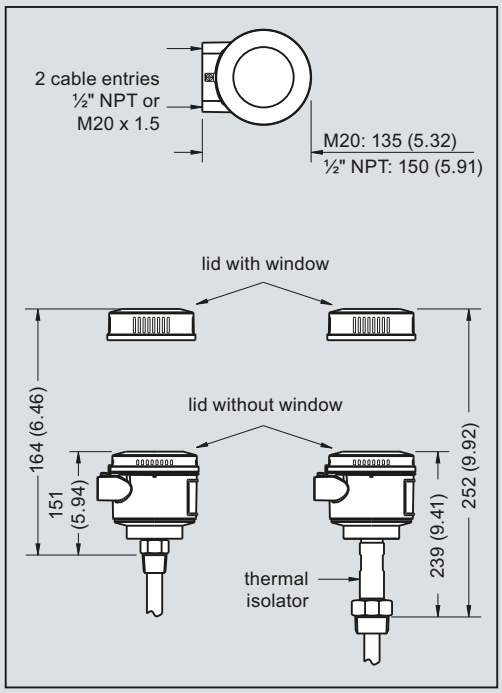
Extended cable version
Threaded
(7ML5631 and 7ML5641)



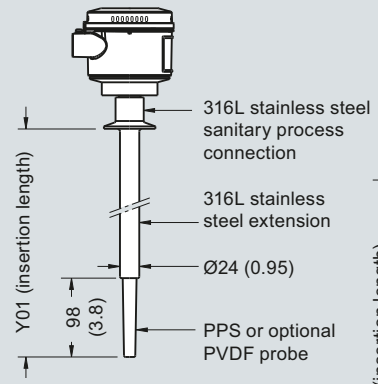
Min. insertion length = 500 (19.69)
Max. insertion length = 30000 (1181)
Applicable for liquids and solids applications. Cable can be shortened on site.

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



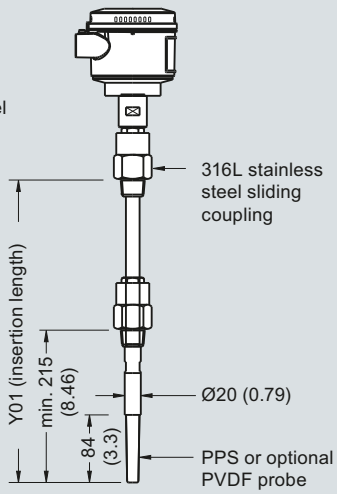


Sanitary extended version
Sanitary fitting
(7ML5632 and 7ML5642)



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

Sliding coupling version
Threaded
(7ML5633 and 7ML5643)

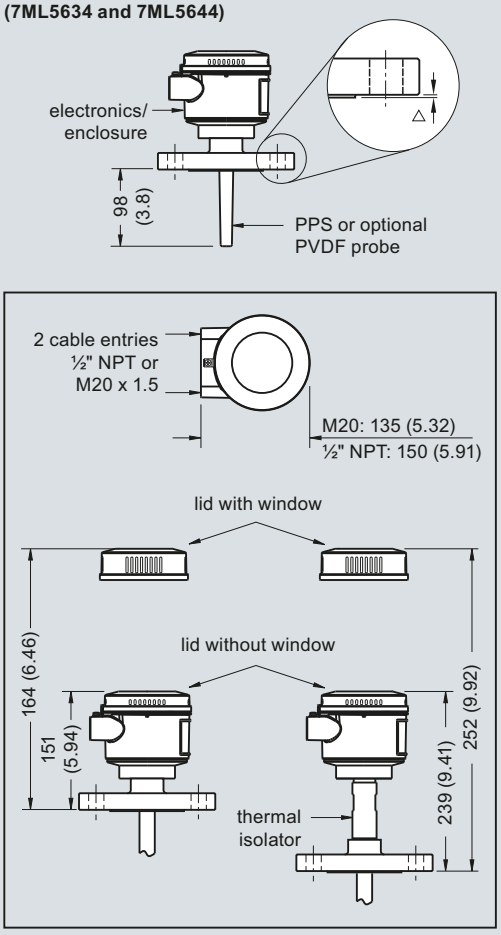


Min. insertion length = 350 (13.82)
Max. insertion length = 5500 (216)

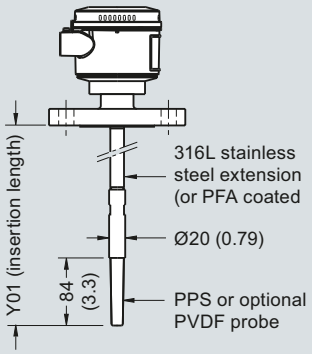
Pointek CLS200 dimensions - Threaded/Sanitary Process connections, dimensions in mm (inch)

Pointek CLS200 - Standard and Digital

Compact version
Welded Flange (7ML5630 and 7ML5640)
Welded Flange, PFA coated
(7ML5634 and 7ML5644)

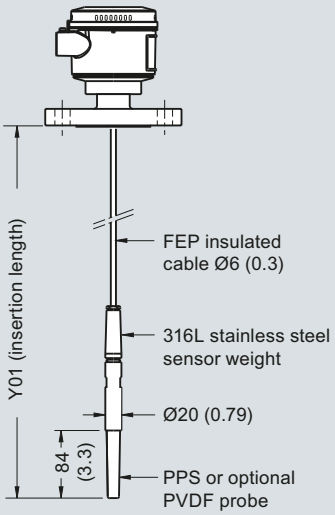


Extended rod version
Welded Flange (7ML5630 and 7ML5640)
Welded Flange, PFA coated
(7ML5634 and 7ML5644)



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

Extended cable version
Welded Flange
(7ML5631 and 7ML5641)



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

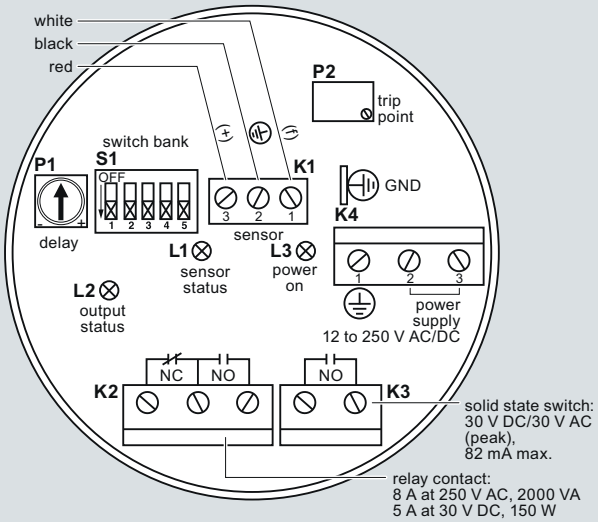
Flange Facing (raised face)	
Flange Class	**Facing thickness**
△ ASME 150/300	2 (0.08)
△ ASME 600/900	7 (0.28)
△ PN16/40	2 (0.08)

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

Pointek CLS200 dimensions - Flanged Process connections, dimensions in mm (inch)

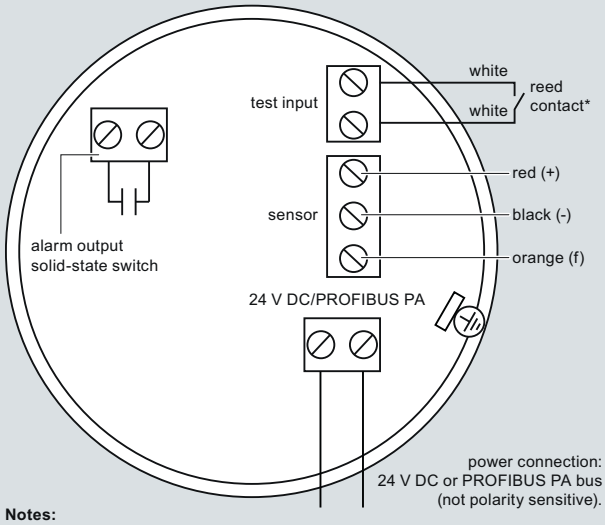
Schematics

Wiring: Pointek CLS200 Standard



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 Siemens representative for detailed wiring information.

Wiring: Pointek CLS200 Digital

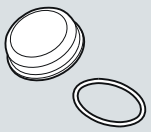
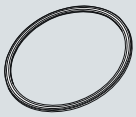
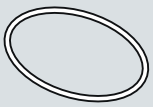
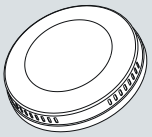
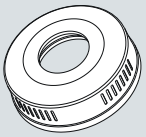


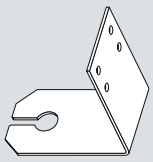
Notes:
Refer to the Instruction Manual or contact a Siemens representative for detailed wiring information.

***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.

Pointek CLS200 connections

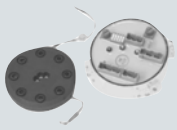
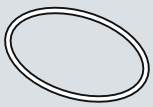
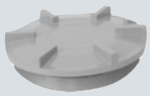
Selection and ordering data

Pointek Specials. See note 1.		Order No.
CLS100 Polycarbonate Lid and Gasket, FKM		
Kit, Lid and gasket, CLS100 enclosure version	F)	**A5E01163671**
CLS100 Miscellaneous Parts		
Custom length of cable is available only for 7ML5501-xxx1x and 7ML5501-xxx5x		**See note 2**
CLS200 Gasket (IP65), Synprene		
Spare gasket, enclosure version (IP65 versions only)	F)	**A5E01163672**
CLS200 Gasket (IP68), Silicone		
Spare gasket, enclosure version (IP68 versions)	F)	**A5E01163673**
CLS200 Blind Lid		
Spare aluminum blind lid (for standard versions only)		**A5E01163674**
CLS200 Lid with window		
Spare aluminum lid with window		**A5E01163676**
CLS200 Sensor Kit for cable units		
Kit, Sensor for cable units, PPS, Standard, FKM	C)	**A5E01163677**

Pointek Specials. See note 1.		
Kit, Sensor for cable units, PPS, Digital, FKM	C)	**A5E01163678**
Kit, Sensor for cable units, PPS, Standard, FFKM	C)	**A5E01163679**
Kit, Sensor for cable units, PPS, Digital, FFKM	C)	**A5E01163680**
Kit, Sensor for cable units, PVDF, Standard, FKM	C)	**A5E01163681**
Kit, Sensor for cable units, PVDF, Digital, FKM	C)	**A5E01163682**
Kit, Sensor for cable units, PVDF, Standard, FFKM	C)	**A5E01163683**
Kit, Sensor for cable units, PVDF, Digital, FFKM	C)	**A5E01163684**
CLS200 Mounting Bracket, 316L stainless steel		
Spare mounting bracket		**A5E01163685**
CLS200 PROFIBUS Connector (IP65)		
Spare, PROFIBUS connector (IP65 versions only)		**A5E01163686**
CLS200 Miscellaneous Parts		
CLS200 with FFKM O-rings (any version)		**See note 2**
CLS200 Electronics		
Test magnet, digital version		**7ML1830-1JE**
Amplifier/power supply kit, standard version	C)	**A5E03251681**
Amplifier/power supply, digital version	L)	**7ML1830-1JF**
LCD display, digital version		**7ML1830-1JK**
CLS300 Cable Extensions, 316L stainless steel		
Kit, Stainless steel cable extension, 1 m, adjustable by customer		**A5E01163688**
Kit, Stainless steel cable extension, 3 m, adjustable by customer		**A5E01163689**
Kit, Stainless steel cable extension, 5 m, adjustable by customer		**A5E01163690**
Kit, Stainless steel cable extension, 10 m, adjustable by customer		**A5E01163691**
Kit, Stainless steel cable extension, 15 m, adjustable by customer		**A5E01163693**
Kit, Stainless steel cable extension, 20 m, adjustable by customer		**A5E01163695**

Pontek CLS Specials

Pointek Specials. See note 1.		
CLS300 Cable Extensions, 316 stainless steel with PFA coating		
Kit, PFA cable extension, 1 m, adjustable by customer		**A5E01163697**
Kit, PFA cable extension, 3 m, adjustable by customer		**A5E01163698**
Kit, PFA cable extension, 5 m, adjustable by customer		**A5E01163699**
Kit, PFA cable extension, 10 m, adjustable by customer		**A5E01163700**
Kit, PFA cable extension, 15 m, adjustable by customer		**A5E01163701**
Kit, PFA cable extension, 20 m, adjustable by customer		**A5E01163702**
CLS300 Rod Kits, 316L stainless steel		
Kit, Stainless steel rod 180 mm (7.09 inch) to be used with CLS300 units only (with standard active shield). Insertion length after installation is 350 mm (13.78 inch).		**A5E01163719**
Kit, Stainless steel rod 330 mm (12.99 inch) to be used with CLS300 units only (with standard active shield). Insertion length after installation is 500 mm (19.69 inch).		**A5E01163720**
Kit, Stainless steel rod 580 mm (22.83 inch) to be used with CLS300 units only (with standard active shield). Insertion length after installation is 750 mm (29.53 inch).		**A5E01163721**
Kit, Stainless steel rod 830 mm (32.68 inch) to be used with CLS300 units only (with standard active shield). Insertion length after installation is 1000 mm (39.37 inch).		**A5E01163722**
Kit, Stainless steel rod 1330 mm (52.36 inch) to be used with CLS300 units only (with standard active shield). Insertion length after installation is 1500 mm (59.06 inch).		**See note 2**
Kit, Stainless steel rod 1830 mm (72.05 inch) to be used with CLS300 units only (with standard active shield). Insertion length after installation is 2000 mm (78.74 inch).		**See note 2**
Kit, Stainless steel rod customized length up to 1 m		**See note 2**
Kit, Stainless steel rod customized length up to 2 m		**See note 2**
CLS300 Electronics Kits with drivers (for rod or cable versions)		
Kit, Electronics with driver, standard CLS300. To be used in rod or cable versions with length less than 5 m. See notes 3 and 4.	C)	**A5E01163723**
Kit, Electronics with driver, digital CLS300. To be used in rod or cable versions with length less than 5 m. See notes 3 and 4.	C)	**A5E01163725**

Pointek Specials. See note 1.		
CLS300 Electronics Kits with drivers (for cable versions)		
Kit, Electronics with driver, standard CLS300. To be used in cable versions with length greater than 5 m. See notes3 and 4.	C)	**A5E01163724**
Kit, Electronics with driver, digital CLS300. To be used in cable versions with length greater than 5 m. See notes 3 and 4.	C)	**A5E01163726**
CLS300 Electronics		
Test magnet, digital version		**7ML1830-1JE**
Amplifier/power supply kit, standard version	C)	**A5E03251683**
Amplifier/power supply, digital version	L)	**7ML1830-1JF**
LCD display, digital version		**7ML1830-1JK**
CLS300 Weight Kit, 316L stainless steel		
Kit, Spare stainless steel weight. To be used in any cable version of CLS300		**A5E01163727**
CLS500 Gasket (IP65), Silicone		
Spare gasket, CLS500 enclosure version, IP65		**A5E01163728**
CLS500 Blind Lid		
Spare CLS500 aluminum blind lid		**A5E01163729**
CLS500 Electronics Kit		
Transmitter, MSP 2002-1, 330 PF	L)	**7ML1830-1JP**

Note 1: Special flange sizes and facings are available. Please contact ceg.smpi@siemens.com for part number and pricing. Submit Application Questionnaire found on page 5/9.
Note 2: Please contact ceg.smpi@siemens.com for part number and pricing.
Note 3: For General Purpose approvals only.
Note 4: To maintain approvals, qualified trained Siemens personnel required for part replacement.
Please contact ceg.smpi@siemens.com for special requests.

C) Subject to export regulations AL: N, ECCN: EAR99.
F) Subject to export regulations AL: 91999, ECCN: N.
J) Subject to export regulations AL: 91999, ECCN: EAR99.
L) Subject to export regulations AL: N, ECCN: 3A991X.