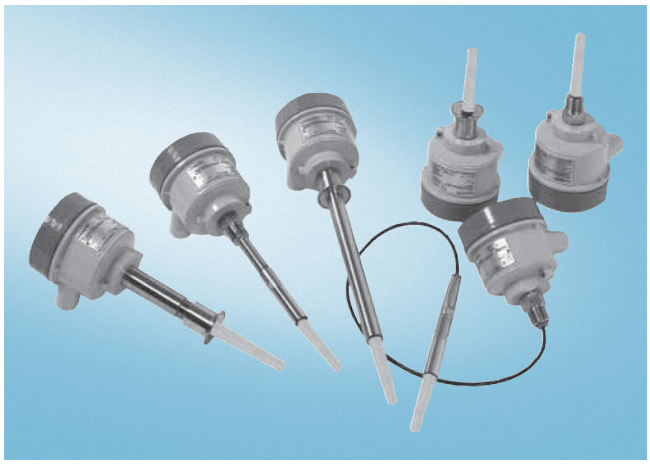
Pointek CLS 200

Overview



Pointek CLS 200 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 (with optional PROFIBUS PA) includes a display and provides additional 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 (5.5 MHz)
- High sensitivity allows installation in a wide range of liquids, solids or slurry applications
- Integral LCD display allows for easy setup of CLS 200 when you can configure switching threshold, even under the most demanding process conditions.
- Extended rod, cable and sanitary versions available
- Standard version: 3 LED indicators for adjustment control, output status and power
- Digital version: integral LCD display, and optional PROFIBUS PA communication

Application

The Pointek CLS 200 is offered in standard and digital versions.

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

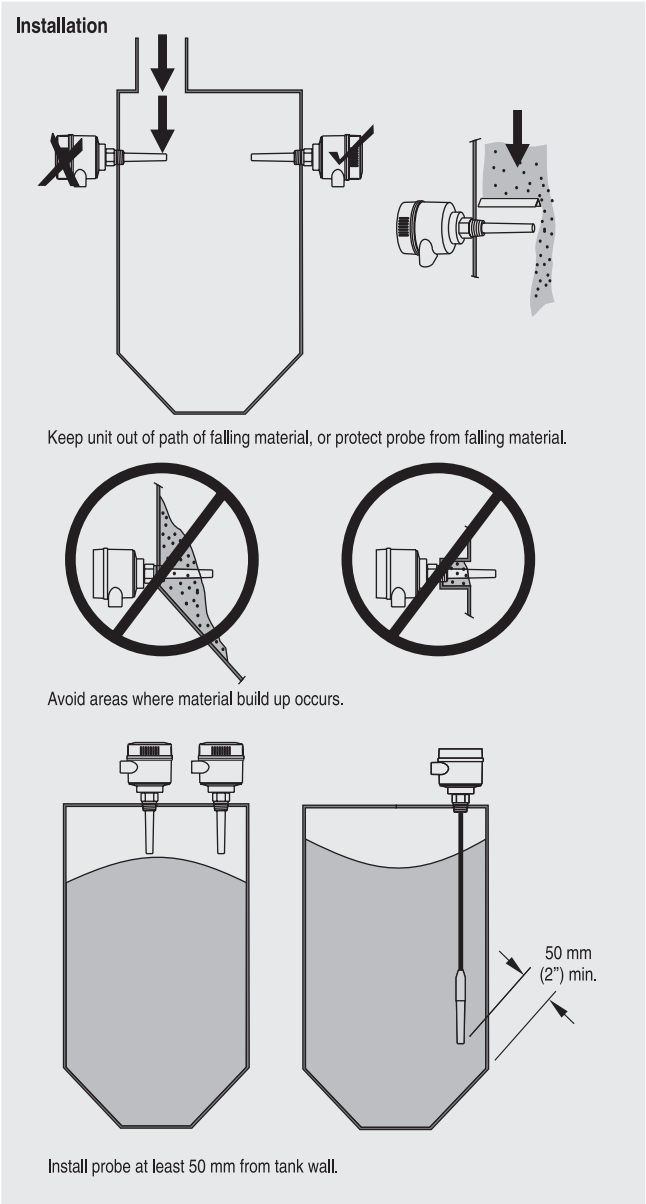
The digital version provides an integral LCD display for standalone use, and provides PROFIBUS PA communication (profile version 3.0, Class B) when required.

The power supply is galvanically isolated and accepts a wide range of voltages (12 to 250 V AC/DC for standard version and 9 to 32 V DC for digital version). The stainless steel and PPS (PVDF optional) materials used in the probe construction provides 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 CLS 200 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.

Modular design and construction provide a wide choice of configurations, including rod, cable and sanitary versions. When used with a SensGuard protection cover, the CLS 200 is protected from shearing, impact and abrasion in tough primary processes.

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

Configuration



Pointek CLS 200 installation

Technical specifications

(Note: all specifications listed below apply to Standard and Digital versions unless otherwise noted)

Mode of operation	
Measuring principle	Inverse frequency shift capacitive level detection
Input	
Measured variable	Change in picoFarad (pF)
Output	
Output signal (CLS 200 Standard)	
• Relay output	1 SPDT Form C contact, rated 8 A at 250 V AC/5 A at 30 V DC, resistive load
• Solid-state output	28 V AC/40 V DC, 100 mA or 2 VA max.
• Time delay (ON and/or OFF)	1 to 60 s
• Fail-safe mode	Min. or max.
Output signal (CLS 200 Digital)	
Solid-state output	28 V AC/40 V DC, 100 mA or 2 VA max.
Time delay (ON and/or OFF)	Programmable by user
Fail-safe mode	Min. or max.
Rated operating conditions	
Installation conditions	
• Location	Indoor/outdoor
Ambient conditions	
• Ambient temperature	-40 to +85 °C (-40 to +185°F)
• Installation category	II
• Pollution degree	4
Medium conditions	Liquids, bulk solids, slurries and interfaces
• Dielectric constant εr	Min. 1.5
• Temperature at process connection	
- Standard	-40 to +85 °C (-40 to +185 °F)
- Standard with thermal isolator	-40 to +125 °C (-40 to +257 °F)
- Sliding coupling	Ambient temperature
• Pressure (standard version and versions with extension) (Pressure rating of process seal is temperature dependent. Contact Siemens Milltronics for derating curves.)	-1 to 25 bar g/365 psi g (nominal)
• Pressure (cable version)	-1 to 10 bar g/150 psi g (nominal)
• Pressure (optional sliding coupling version)	-1 to 10 bar g/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 ½" NPT conduit entry including 1 plugged entry), digital version has optional PROFIBUS connector
Power supply (CLS 200 Standard)	12 to 250 V AC/DC, 50/60 Hz max. 2 VA/2 W
Power supply (CLS 200 Digital)	
• Bus voltage	Standard: 9 to 32 V DC, max. 2 VA/2 W Intrinsically Safe: 9 to 24 V DC, max. 2 VA/2 W
• Current consumption	12.5 mA
Certificates and approvals (CLS 200 Standard)	
• General Purpose	CE, CSA, FM
• Hazardous	CSA/FM Class II and III, Div. 1, Groups E, F, G T4 CSA/FM Class I, Div. 1, Groups A, B, C, D T4 ATEX II 1/2 D T 100 °C ATEX II 1/2 G EExd [ia] IIC T6 to T4
• Marine	Lloyd's Register of Shipping, Categories ENV1, ENV2 and ENV5
• Overfill Protection	WHG (Germany)
Certificates and approvals (CLS 200 Digital)	
• General Purpose	CE, CSA, FM
• Hazardous	ATEX II 3G 2D/FM and CSA Class I, Div. 2, Groups A, B, C, D T4, Class II and III, Div. 1, Groups E, F, G T4 ATEX II 1G 1/2 D/FM and CSA Class I and II, Div. 1, Groups A, B, C, D T4 ATEX II 1/2 GD/FM and CSA Class I, Div. 1, Groups A, B, C, D T4
• Marine	Lloyd's Register of Shipping, Categories ENV1, ENV2 and ENV5
Communication (CLS 200 Digital)	• 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

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Pointek CLS 200

	Standard version	Sanitary version	Cable version
Max. length	5.5 m (18 ft)	5.5 m (18 ft)	35 m (114.8 ft) liquids and slurries 5 m (16.4 ft) solids (under loads)
Process Connection	¾", 1", 1¼", 1½" BSPT/NPT/JIS 316L stainless steel	1½", 2" sanitary fitting clamp 316L stainless steel	¾", 1", 1¼", 1½" BSPT/NPT/JIS 316L stainless steel
Extension material	316L stainless steel	316L stainless steel	Fluoroethylene propylene (FEP) cable with stainless steel core
Sensor	PPS (optional PVDF)	PPS (optional PVDF)	PPS (optional PVDF)
Thermal isolator	Optional	Optional	Optional
Extension	User selected length	User selected length	Cable extension

Selection and Ordering data	Order No.
Pointek CLS 200, threaded version 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	7ML5502 - ■■■■ - 0■■
Note: To select Standard or Digital CLS 200 (with PROFIBUS PA option), see final place holder under Electronics/output.	
Probe version	
(Threaded lengths include process thread.)	
Compact,120 mm (4.72")[1]	0 X
Extended rod, 250 mm (9.84")[2]	1 A
Extended rod, 350 mm (13.78")[2]	1 B
Extended rod, 500 mm (19.69")[2]	1 C
Extended rod, 750 mm (29.53")[2]	1 D
Extended rod, 1000 mm (39.37")[2]	1 E
Add order code Y01 and plain text: "Insertion length ... mm"	
- Extended rod, 200 to 999 mm (7.87 to 39.33")[3]	1 F
- Extended rod, 1001 to 2000 mm (39.41 to 78.74")[2]	1 G
- Extended rod, 2001 to 3000 mm (78.78 to 118.11")[2] *	1 H
- Extended rod, 3001 to 4000 mm (118.15 to 157.48")[2]	1 J
- Extended rod, 4001 to 5000 mm (157.52 to 196.85")[2]	1 K
- Extended rod, 5001 to 5500 mm (196.89 to 216.53")[2]	1 L
Extended cable, 3000 mm (118.11"), length adjustable by customer[1]	2 A
Extended cable, 6000 mm (236.22"), length adjustable by customer[1]	2 B
Add order code Y01 and plain text: "Insertion length ... mm"	
- Extended cable, 500 to 4999 mm (19.69 to 196.81")[1]	2 C
- Extended cable, 5000 to 9999 mm (196.85 to 393.66")[1]	2 D
- Extended cable, 10000 to 14999 mm (393.7 to 590.5")[1]	2 E
- Extended cable, 15000 to 19999 mm (590.6 to 787.4")[1]	2 F
- Extended cable, 20000 to 24999 mm (787.4 to 894.3")[1]	2 G
- Extended cable, 25000 to 29999 mm (984.3 to 1181.1")[1]	2 H
Sanitary compact, 98 mm (3.8")[1]	3 A
Add order code Y01 and plain text: "Insertion length ... mm"	
- Sanitary extended, 110 to 999 mm (4.3 to 39.3")[1]	3 B
- Sanitary extended, 1001 to 2000 mm (39.4 to 78.7")[1]	3 C
- Sanitary extended, 2001 to 3000 mm (78.8 to 118.1")[1]	3 D
- Sanitary extended, 3001 to 4000 mm (118.1 to 157.5")[1]	3 E
- Sanitary extended, 4001 to 5000 mm (157.5 to 196.9")[1]	3 F
- Sanitary extended, 5001 to 5500 mm (196.9 to 216.5")[1]	3 G

Selection and Ordering data	Order No.
Pointek CLS 200, threaded version 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	7ML5502 - ■■■■ - 0■■
Process connection	
¾" NPT (ANSI/ASME B1.20.1)	A
1" NPT (ANSI/ASME B1.20.1)	B
1½" NPT (ANSI/ASME B1.20.1)	C
¾" BSPT (EN 10226-1)	D
1" BSPT (EN 10226-1)	E
1½" BSPT (EN 10226-1)	F
¾" JIS (B 0202)	G
1" JIS (B 0202)	H
1½" JIS (B 0202)	J
1¼" NPT (ANSI/ASME B1.20.1)	K
1" sanitary fitting clamp[4]	R
1½" sanitary fitting clamp[4]	S
2" sanitary fitting clamp[4]	T
2½" sanitary fitting clamp[4]	V
3" sanitary fitting clamp[4]	W
Approvals	
General Purpose	1
CSA/FM Class II and III Div. 1, Groups E, F, G T4[5]	2
FM Class I Div. 1, Groups A, B, C, D T4[5]	3
CSA Class I, Div. 1, Groups A, B, C, D T4[5]	4
ATEX II 1/2 D T 100 °C [5]	5
ATEX II 1/2 G EEx d [ia] IIC T6-T4[5]	6
ATEX II 3G 2D/FM and CSA Class I, Div 2, Groups A, B, C, and D T4; Class II, III, Div 1, Groups E, F and G T4[6]	7
ATEX II 1G 1/2 D/FM and CSA Class I, II, Div 1, Groups A, B, C, D T4[6]	8
ATEX II 1/2 GD/FM and CSA Class I, Div 1, Groups A, B, C and D T4[6]	0
Enclosure	
Aluminum epoxy coated	
• 2 x ½" NPT via adapter, cable inlet, IP65	0
• 2 x M20x1.5 cable inlet, IP65	1
• 2 x ½" NPT via adapter, cable inlet, IP68	2
• 2 x M20x1.5 cable inlet, IP68	3
Additional options	
Standard version	A
With thermal isolator	B
With PVDF probe body	C
With thermal isolator and PVDF probe body	D
With sliding coupling	E
With thermal isolator and sliding coupling	F
With sliding coupling and PVDF probe body	G
With thermal isolator, sliding coupling and PVDF probe body	H
WHG approval, German overfill protection	
Not required	A
Required[5]	B
Electronics/output	
Standard version without display, 12 to 230 V AC/DC, solid-state and relay output[8]	0
Digital version with display, 24 V DC, solid-state output and PROFIBUS PA[7] and 8)	1

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Pointek CLS 200

Selection and Ordering data	Order No.
Pointek CLS 200, threaded version 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	**7ML5502 -** ■■■■■ **- 0** ■■■
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 38 mm (2.7 x 1.5")]: Measuring-point number/identification (max. 20 characters) specify in plain text	**Y15**
Electrical connection/cable inlet: PROFIBUS connector M12 (IP67)	**A01**
Optional enclosure lid: Lid with glass window instead of closed lid without window[8)]	**A04**
O-ring seal material (not FKM): FFKM	**A22**
Inspection Certificate Type 3.1 per EN 10204	**C12**
Remote Electronics • Remote mounted electronics with 2 m (79") cable • Remote mounted electronics with 5 m (197") cable • Mounting bracket (including mounting kit) for remote electronics	 **A05** **A06** **A09**
Instruction manual Note: The instruction manual should be ordered as a separate line on the order. This device is shipped with the Siemens Milltronics manual CD containing the complete instruction manual library.	**See page 5/19**
Accessories	**See page 5/19**

1) Available with additional options A to D only

2) Available with additional options A to H

3) Lengths <350 mm available with additional options A to D only

4) Available with version 3A to 3G only

5) Available with electronics option 0 only

6) Available with electronics option 1 only

7) An M12 PROFIBUS connector can be selected separately with wildcard option (A01).

8) Version with electronics option 0 has a closed lid without window; version with electronics option 1 has a lid with glass window.

* Lengths above 2.4 m (94.5") require custom shipping methods. Contact factory for more details.

Selection and Ordering data		Order No.
Pointek CLS 200, welded flange 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.	C)	**7ML5504-**
Note: To select Standard or Digital CLS 200 (with PROFIBUS PA option), see final place holder under Electronics/output.		
Probe version		
Compact, 98 mm (3.86")		**0X**
Extended rod, 250 mm (9.84")		**1A**
Extended rod, 350 mm (13.78")		**1B**
Extended rod, 500 mm (19.69")		**1C**
Extended rod, 750 mm (29.53")		**1D**
Extended rod, 1000 mm (39.37")		**1E**
Add order code Y01 and plain text: "Insertion length ... mm"		
- Extended rod, 200 to 999 mm (7.87 to 39.33")		**1F**
- Extended rod, 1001 to 2000 mm (39.41 to 78.74")		**1G**
- Extended rod, 2001 to 3000 mm (78.78 to 118.11")*		**1H**
- Extended rod, 3001 to 4000 mm (118.15 to 157.48")*		**1J**
- Extended rod, 4001 to 5000 mm (157.52 to 196.85")*		**1K**
- Extended rod, 5001 to 5500 mm (196.89 to 216.53")*		**1L**
Extended cable, 3000 mm (118.1"), length adjustable by customer		**2A**
Extended cable, 6000 mm (236.2"), length adjustable by customer		**2B**
Add order code Y01 and plain text: "Insertion length ... mm"		
- Extended cable, 500 to 4999 mm (19.69 to 196.81")		**2C**
- Extended cable, 5000 to 9999 mm (196.85 to 393.66")		**2D**
- Extended cable, 10000 to 14999 mm (393.7 to 590.5")		**2E**
- Extended cable, 15000 to 19999 mm (590.6 to 787.4")		**2F**
- Extended cable, 20000 to 24999 mm (787.4 to 894.3")		**2G**
- Extended cable, 25000 to 29999 mm (984.3 to 1181.1")		**2H**
Process connection		
Welded flange, 316L stainless steel, raised face		
1" ASME, 150 lb		**A1**
1" ASME, 300 lb		**A2**
1" ASME, 600 lb		**A3**
1½" ASME, 150 lb		**B1**
1½" ASME, 300 lb		**B2**
1½" ASME, 600 lb		**B3**
2" ASME, 150 lb		**C1**
2" ASME, 300 lb		**C2**
2" ASME, 600 lb		**C3**
3" ASME, 150 lb		**D1**
3" ASME, 300 lb		**D2**
3" ASME, 600 lb		**D3**
4" ASME, 150 lb		**E1**
4" ASME, 300 lb		**E2**
4" ASME, 600 lb		**E3**
Welded flange, 316L stainless steel, Type A flat faced		
DN 25, PN 16		**J4**
DN 25, PN 40		**J6**
DN 40, PN 16		**K4**
DN 40, PN 40		**K6**
DN 50, PN 16		**L4**
DN 50, PN 40		**L6**
DN 80, PN 16		**M4**
DN 80, PN 40		**M6**
DN 100, PN 16		**N4**
DN 100, PN 40		**N6**
(Note: Flange bolting patterns and facings dimensionally correspond to the applicable ASME B16.5, or EN 1092-1, or JIS B 2238 standard.)		

Selection and Ordering data		Order No.
Pointek CLS 200, welded flange 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.	C)	**7ML5504-**
Approvals		
General Purpose		**1**
FM and CSA Class II and III, Div 1, Groups E, F, G T4[1]		**2**
FM Class I, Div 1, Groups A,B,C,D T4[1]		**3**
CSA Class I, Div 1, Groups A, B, C, D T4[1]		**4**
ATEX II 1/2 D T 100 °C[1]		**5**
ATEX II 1/2 G EEx d [ia] IIC T6-T4[1]		**6**
ATEX II 3G 2D/FM and CSA Class I, Div 2, Groups A, B, C and D T4; Class II, III, Div 1, Groups E, F and G T4[2]		**7**
ATEX II 1G 1/2 D/FM and CSA Class I,II, Div 1, Groups A, B, C, D T4[2]		**8**
ATEX II 1/2 GD/FM and CSA Class I Div I, Groups A, B, C and D T4[2]		**0**
Enclosure		
Aluminum epoxy coated		
• 2 x ½" NPT via adapter - cable inlet, IP65		**0**
• 2 x M20x1.5 cable inlet, IP65		**1**
• 2 x ½" NPT via adapter - cable inlet, IP68		**2**
• 2 x M20x1.5 cable inlet, IP68		**3**
Additional options		
Standard version		**A**
With thermal isolator		**B**
With PVDF probe body		**C**
With thermal isolator and PVDF probe body		**D**
WHG approval, German overfill protection		
Not required		**A**
Required[1]		**B**
Electronics/output		
Standard version without display, 12 to 230 V AC/DC, solid-state and relay output[4]		**0**
Digital version with display, 24 V DC, solid-state output and PROFIBUS PA[3] and 4)		**1**
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 38 mm (2.7 x 1.5"]: Measuring-point number/identification (max. 20 characters) specify in plain text		**Y15**
Electrical connection/cable inlet: PROFIBUS connector M12 (IP67)		**A01**
Optional enclosure lid: Lid with glass window instead of closed lid without window[4]		**A04**
O-ring seal (not FKM): FFKM		**A22**
Inspection Certificate Type 3.1 per EN 10204		**C12**
Remote Electronics		
• Remote mounted electronics with 2 m (79") cable		**A05**
• Remote mounted electronics with 5 m (197") cable		**A06**
Instruction manual Note: The instruction manual should be ordered as a separate line on the order. This device is shipped with the Siemens Milltronics manual CD containing the complete instruction manual library.		**See page 5/19**
Accessories		**See page 5/19**

1) Available with electronics option 0 only

2) Available with electronics option 1 only

3) An M12 PROFIBUS connector can be selected separately with wildcard option (A01).

4) Version with electronics option 0 has a standard closed lid without window; version with electronics option 1 has a standard lid with glass window.

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

* Lengths above 2.4 m (94.5") require custom shipping methods. Contact factory for more details.

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Pointek CLS 200

Selection and Ordering data	Order No.
Pointek CLS 200, welded flange, PFA coated 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.	**7ML5505-**
Note: To select Standard or Digital CLS 200 (with PROFIBUS PA option), see final place holder under Electronics/output.	
Probe version	
Compact, 98 mm (3.86")	**0X**
Extended rod, 250 mm (9.84")	**1A**
Extended rod, 350 mm (13.78")	**1B**
Extended rod, 500 mm (19.69")	**1C**
Extended rod, 750 mm (29.53")	**1D**
Extended rod, 1000 mm (39.37")	**1E**
Add order code Y01 and plain text: "Insertion length ... mm"	
- Extended rod, 200 to 999 mm (7.87 to 39.33")	**1F**
- Extended rod, 1001 to 2000 mm (39.41 to 78.74")	**1G**
- Extended rod, 2001 to 3000 mm (78.78 to 118.11") *	**1H**
- Extended rod, 3001 to 4000 mm (118.15 to 157.48") *	**1J**
- Extended rod, 4001 to 5000 mm (157.52 to 196.85") *	**1K**
- Extended rod, 5001 to 5500 mm (196.89 to 216.53") *	**1L**
Process connection	
Welded flange, 316L stainless steel, raised face	
1" ASME, 150 lb	**A1**
1" ASME, 300 lb	**A2**
1" ASME, 600 lb	**A3**
1½" ASME, 150 lb	**B1**
1½" ASME, 300 lb	**B2**
1½" ASME, 600 lb	**B3**
2" ASME, 150 lb	**C1**
2" ASME, 300 lb	**C2**
2" ASME, 600 lb	**C3**
3" ASME, 150 lb	**D1**
3" ASME, 300 lb	**D2**
3" ASME, 600 lb	**D3**
4" ASME, 150 lb	**E1**
4" ASME, 300 lb	**E2**
4" ASME, 600 lb	**E3**
Welded flange, 316L stainless steel, Type A flat faced	
DN 25, PN 16	**J4**
DN 25, PN 40	**J6**
DN 40, PN 16	**K4**
DN 40, PN 40	**K6**
DN 50, PN 16	**L4**
DN 50, PN 40	**L6**
DN 80, PN 16	**M4**
DN 80, PN 40	**M6**
DN 100, PN 16	**N4**
DN 100, PN 40 (Note: Flange bolting patterns and facings dimensionally correspond to the applicable ASME B16.5 or EN 1092-1, or JIS B 2238 standard.)	**N6**
Approvals	
General Purpose	**1**
CSA/FM Class II and III, Div 1, Groups E, F, G T4[1]	**2**
FM Class I, Div 1, Groups A,B,C,D T4[1]	**3**
CSA Class I, Div 1, Groups A, B, C, D T4[1]	**4**
ATEX II 1/2 D T 100 °C[1]	**5**
ATEX II 1/2 G EEx d [ia] IIC T6-T4[1]	**6**

Selection and Ordering data	Order No.
Pointek CLS 200, welded flange, PFA coated 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.	**7ML5505-**
ATEX II 3G 2D/FM and CSA Class I, Div 2, Groups A, B, C and D T4; Class II, III, Div 1, Groups E, F and G T4[2]	**7**
ATEX II 1G 1/2 D/FM and CSA Class I,II, Div 1, Groups A, B, C, D T4[2]	**8**
ATEX II 1/2 GD/FM and CSA Class I Div I, Groups A, B, C and D T4[2]	**0**
Enclosure	
Aluminum epoxy coated	
• 2 x ½" NPT via adapter - cable inlet, IP65	**0**
• 2 x M20x1.5 cable inlet, IP65	**1**
• 2 x ½" NPT via adapter - cable inlet, IP68	**2**
• 2 x M20x1.5 cable inlet, IP68	**3**
Additional options	
Standard version	**A**
With thermal isolator	**B**
With PVDF probe body	**C**
With thermal isolator and PVDF probe body	**D**
WHG approval, German overfill protection	
Not required	**A**
Required[1]	**B**
Electronics/output	
Standard version without display, 12 to 230 V AC/DC, solid-state and relay output[4]	**0**
Digital version with display, 24 V DC, solid-state output and PROFIBUS PA[3] and 4)	**1**
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 38 mm (2.7 x 1.5")]: Measuring-point number/identification (max. 20 characters) specify in plain text	**Y15**
Electrical connection/cable inlet: PROFIBUS connector M12 (IP67)	**A01**
Optional enclosure lid: Lid with glass window instead of closed lid without window[4]	**A04**
O-ring seal (not FKM): FFKM	**A22**
Inspection Certificate Type 3.1 per EN 10204	**C12**
Remote Electronics	
• Remote mounted electronics with 2 m (79") cable	**A05**
• Remote mounted electronics with 5 m (197") cable	**A06**
Instruction manual	**See page 5/19**
Note: The instruction manual should be ordered as a separate line on the order.	
This device is shipped with the Siemens Milltronics manual CD containing the complete instruction manual library.	
Accessories	**See page 5/19**

1) Available with electronics option 0 only

2) Available with electronics option 1 only

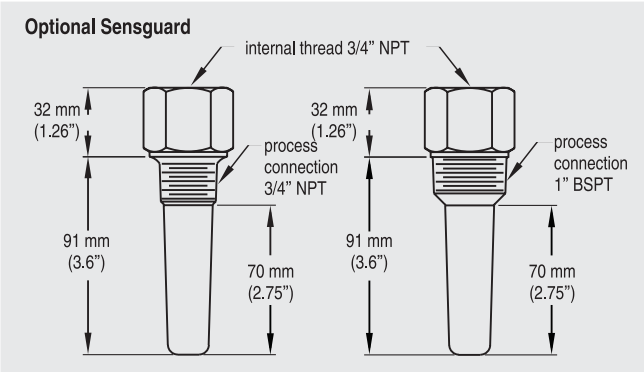
3) An M12 PROFIBUS connector can be selected separately with wildcard option (A01).

4) Version with electronics option 0 has a standard closed lid without window; version with electronics option 1 has a standard lid with glass window.

* Lengths above 2.4 m (94.5") require custom shipping methods. Contact factory for more details.

Selection and Ordering data	Order No.
Instruction manual	
English	**7ML1998-5AR02**
French	**7ML1998-5AR11**
German Note: The instruction manual should be ordered as a separate line on the order.	**7ML1998-5AR32**
Additional instruction manual	
Quick Start manual, multi-language Note: Due to ATEX regulations, one Quick Start manual is included with every product. This device is shipped with the Siemens Milltronics manual CD containing the complete instruction manual library.	**7ML1998-5QE81**
Accessories	
Sensguard, 3/4" NPT (PPS) Only available for CLS 200 with 3/4" NPT thread	**7ML1830-1DL**
Sensguard, 1" BSPT (PPS) Only available for CLS 200 with 3/4" NPT thread	**7ML1830-1DM**
½" NPT Cable gland ATEX 1D, fits cable diameter 6.1 to 15.9 mm (General Purpose and Dust Ignition Proof)	**7ML1830-1JA**
½" NPT Cable gland ATEX 1G, fits cable diameter 6.1 to 15.9 mm (Explosion Proof)	**7ML1830-1JB**
M20x1.5 Cable gland ATEX 1D, fits cable diameter 6.1 to 15.9 mm (General Purpose and Dust Ignition Proof)	**7ML1830-1JC**
M20x1.5 Cable gland ATEX 1G, fits cable diameter 6.1 to 15.9 mm (Explosion Proof)	**7ML1830-1JD**
Blind threaded flanges are available. Please contact nacc.smpi@siemens.com with a completed application data sheet found on page 7.	
Spare parts	
Test magnet (digital version)	**7ML1830-1JE**
Amplifier/power supply, standard version	**7ML1830-1DJ**
Amplifier/power supply, digital version	**7ML1830-1JF**
LCD display (digital version)	**7ML1830-1JK**

Options

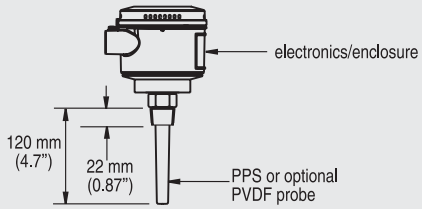


Optional Sensguard dimensions

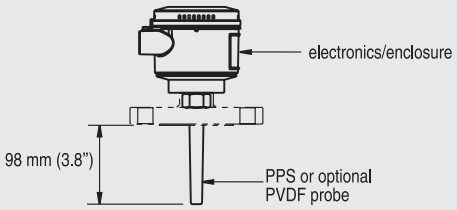
Pointek CLS 200

Dimensional drawings

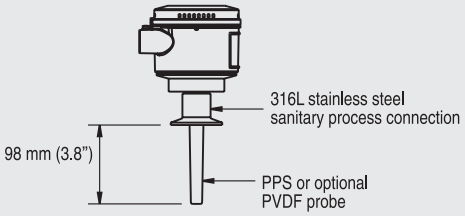
Compact version
Threaded (7ML5502)

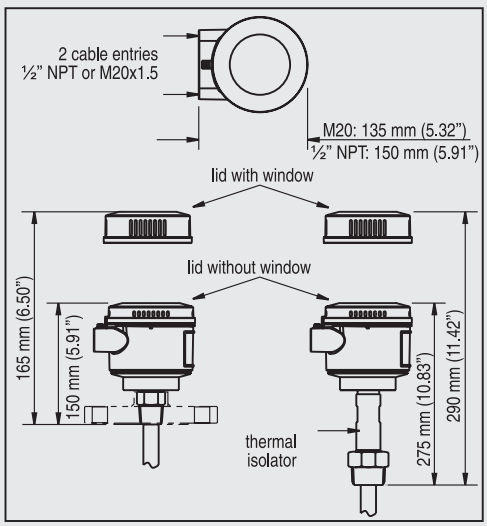


Compact version
Welded flange (7ML5504)
Welded flange, PFA coated (7ML5505)

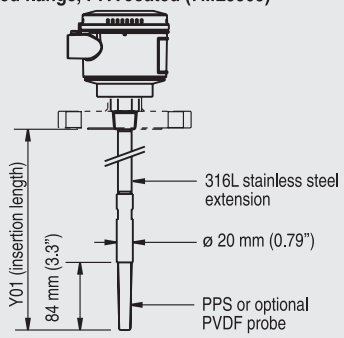


Sanitary compact version
Sanitary fitting (7ML5502)



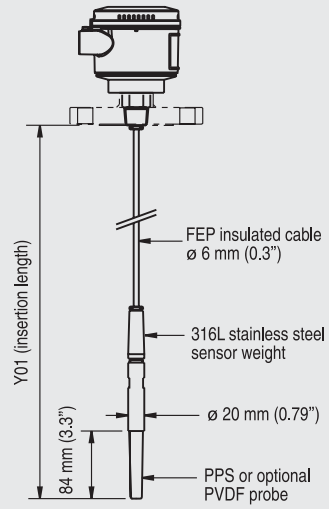


Extended rod version
Threaded (7ML5502)
Welded flange (7ML5504)
Welded flange, PFA coated (7ML5505)



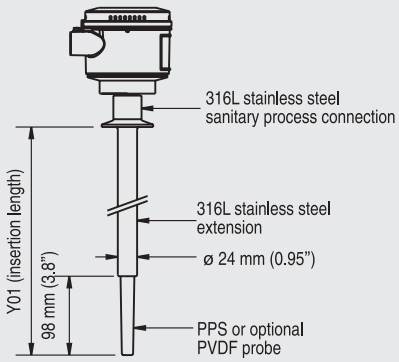
Max. insertion length = 5500 mm (216")

Extended cable version
Threaded (7ML5502)
Welded flange (7ML5504)



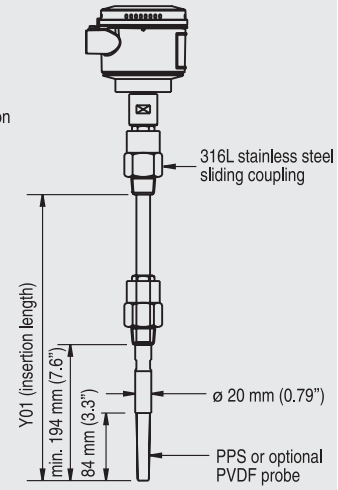
Max. insertion length = 35000 mm (1378")
Applicable for liquids and solids applications.
Cable can be shortened on site.

Sanitary extended version
Sanitary fitting (7ML5502)



Max. insertion length = 5500 mm (216")

Sliding coupling version
Threaded (7ML5502)

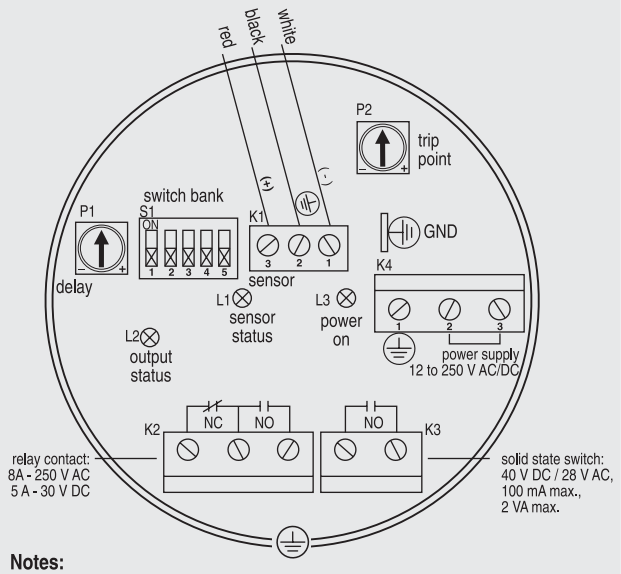


Max. insertion length = 5500 mm (216")

Pointek CLS 200 dimensions

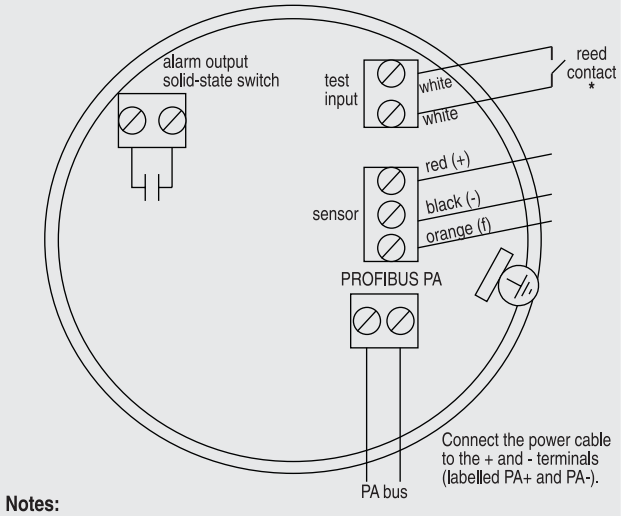
Schematics

Wiring: Pointek CLS 200 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 a Siemens Milltronics representative for detailed wiring information.

Wiring: Pointek CLS 200 Digital



Notes:
- 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 Milltronics 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 CLS 200 Digital version. Bring the magnet close to the test area indicated on the enclosure. The sensor test starts and finishes automatically after 10 seconds. The Auxiliary reading will display either SENSOR TEST SUCCESSFUL or SENSOR TEST FAILED as rolling text.

Pointek CLS 200 connections