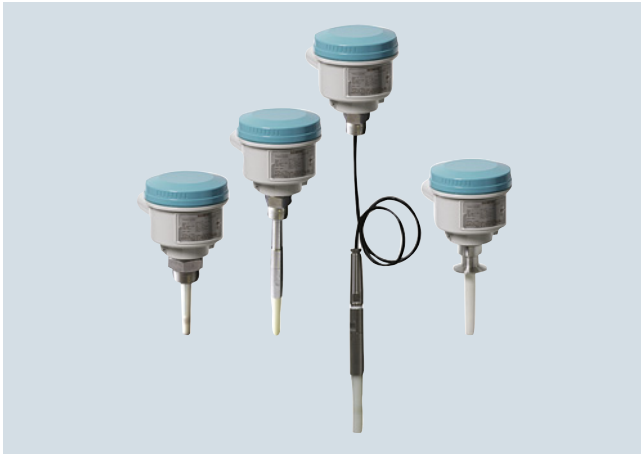


Level Measurement

Point level measurement - RF Capacitance switches

Pointek CLS200 - Standard

Overview



Pointek CLS200 (standard version) is a versatile inverse frequency shift capacitance level and material detection switch with optional rod/cable choices and configurable output. CLS200 is ideal for detection of liquids, solids, slurries, foam, and interfaces and has the ability to tune out buildup on the probe.

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
- Suitable for API 2350

Application

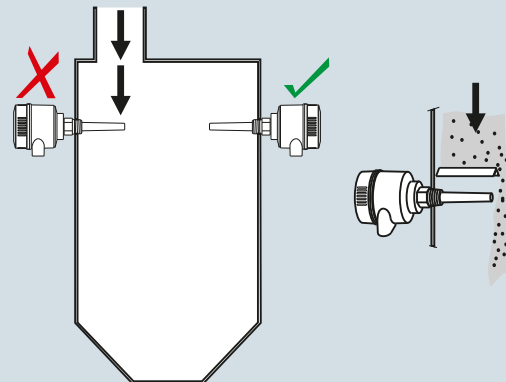
Pointek CLS200 standard version has 3 LED indicators with basic relay and solid-state switch alarms. Universal switch for solids/liquids and interface.

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

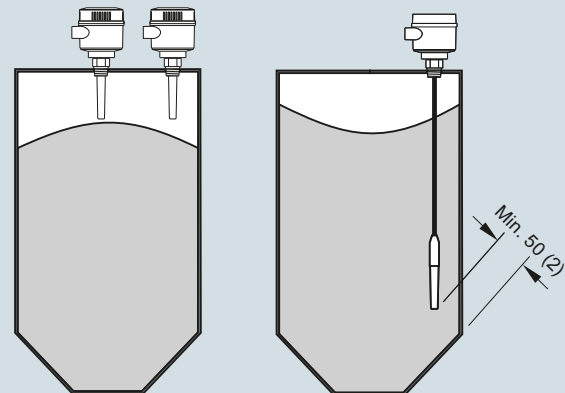
Installation



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)

Level Measurement

Point level measurement - RF Capacitance switches

Pointek CLS200 - Standard

Technical specifications

Mode of operation	
Measuring principle	Inverse frequency shift capacitive level detection
Input	
Measured variable	Change in 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 • 2 000 VA AC
- Time delay (ON and/or OFF)	1 ... 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 ... 60 s
Rated operating conditions¹⁾	
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	Epoxy-coated aluminum with gasket
• Enclosure	316L stainless steel
• Optional thermal isolator	
Connection	Removable terminal block, max. 2.5 mm ²
Degree of protection	IP65/Type 4/NEMA 4 (optional IP68)
Cable inlet	2 x M20 x 1.5 thread (option: 2 x ½" NPT conduit entry including 1 plugged entry)
Power supply	
	12 ... 250 V AC/DC, 0 ... 60 Hz max. 2 W
Certificates and approvals	
General Purpose	CSA, FM, CE, RCM
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, Groups E, F, G CSA/FM Class III T4
Explosion Proof Enclosure With IS Probe	CSA/FM Class I, Div. 1, Groups A, B, C, D CSA/FM Class II, Div. 1, Groups 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), SIL

- When operation is in areas classified as hazardous, observe restrictions according to relevant certificate. See also Pressure/Temperature curves on page 4/35.
- Thermal isolator is used if process connection temperature exceeds 85 °C (185 °F)
- Pressure rating of process seal is temperature dependent. See Pressure/Temperature curves on page 4/35.

Level Measurement

Point level measurement - RF Capacitance switches

Pointek CLS200 - Standard

Design: Probe				
	Rod version	Sanitary version	Cable version	Sliding Coupling version
Max. length	5 500 mm (216.53 inch)	5 500 mm (216.53 inch)	<ul style="list-style-type: none"> • 30 000 mm (1 181.1 inch) liquids and slurries • 5 000 mm (196.85 inch) solids (under loads) 	5 500 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, consult a local sales person for alternative O-rings. For more information, please visit http://www.automation.siemens.com/aspa_app.

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

Level Measurement

Point level measurement - RF Capacitance switches

Pointek CLS200 - Standard

Selection and Ordering data	Article No.	Selection and Ordering data	Article No.
Pointek CLS200 - Standard - Rod Version with Threaded or Flanged process connection Versatile inverse frequency shift capacitance level and material detection switch with optional rod/cable choices and configurable output. CLS200 is ideal for detection of liquids, solids, slurries, foam, and interfaces, and has the ability to tune out buildup on the probe. ↗ Click on the Article No. for the online configuration in the PIA Life Cycle Portal.	7ML5630- - - - - 0	Pointek CLS200 - Standard - Rod Version with Threaded or Flanged process connection Versatile inverse frequency shift capacitance level and material detection switch with optional rod/cable choices and configurable output. CLS200 is ideal for detection of liquids, solids, slurries, foam, and interfaces, and has the ability to tune out buildup on the probe. Add Order code Y01 and plain text: "Insertion length ... mm"	7ML5630- - - - - 0
Process connection <u>Threaded, 316L stainless steel</u> 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		Extended rod, 210 ... 1 000 mm (8.27 ... 39.37 inch) ● M Extended rod, 1 001 ... 2 000 mm (39.41 ... 78.74 inch) ● N Extended rod, 2 001 ... 3 000 mm (78.78 ... 118.11 inch) ● P Extended rod, 3 001 ... 4 000 mm (118.15 ... 157.48 inch) ● Q Extended rod, 4 001 ... 5 000 mm (157.52 ... 196.85 inch) ● R Extended rod, 5 001 ... 5 500 mm (196.89 ... 216.53 inch) ● S	
<u>Welded flange, 316L stainless steel, raised face</u> 1" ASME, 150 lb ● 5 A 1" ASME, 300 lb ● 5 B 1" ASME, 600 lb ● 5 C 1½" ASME, 150 lb ● 5 D 1½" ASME, 300 lb ● 5 E 1½" ASME, 600 lb ● 5 F 2" ASME, 150 lb ● 5 G 2" ASME, 300 lb ● 5 H 2" ASME, 600 lb ● 5 J 3" ASME, 150 lb ● 5 K 3" ASME, 300 lb ● 5 L 3" ASME, 600 lb ● 5 M 4" ASME, 150 lb ● 5 N 4" ASME, 300 lb ● 5 P 4" ASME, 600 lb ● 5 Q		Thermal isolator Without thermal isolator ● 0 With thermal isolator [for process connection temperatures over 85 °C (185 °F)] ● 1	
<u>Welded flange, 316L stainless steel, Type A flat faced</u> DN 25, PN 16 ● 6 A DN 25, PN 40 ● 6 B DN 40, PN 16 ● 6 C DN 40, PN 40 ● 6 D DN 50, PN 16 ● 6 E DN 50, PN 40 ● 6 F DN 80, PN 16 ● 6 G DN 80, PN 40 ● 6 H DN 100, PN 16 ● 6 J DN 100, PN 40 ● 6 K		Remote mount electronics and mounting bracket With 2 m (79 inch) of cable ¹⁾²⁾ ● 2 With 5 m (197 inch) of cable ¹⁾²⁾ ● 3	
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, 1 000 mm (39.37 inch) ● F Extended rod, 1 250 mm (49.21 inch) ● G Extended rod, 1 350 mm (53.15 inch) ● H Extended rod, 1 500 mm (59.06 inch) ● J Extended rod, 1 750 mm (68.90 inch) ● K Extended rod, 2 000 mm (78.74 inch) ● L		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, RCM, ATEX II 1/2 D T100 °C ● C Flameproof Enclosure with IS Probe: CE, RCM, 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, RCM, 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, Groups E, F, G CSA/FM Class III T4 ● F Explosion Proof Enclosure with IS Probe: CSA/FM Class I, Div. 1, Groups A, B, C, D CSA/FM Class II, Div. 1, Groups E, F, G CSA/FM Class III T4 ● G General Purpose (CSA, FM) ● H General Purpose (CE, RCM) ● J General Purpose (CSA, FM, CE, RCM) 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) Barrier or Intrinsically Safe power supply required for Intrinsically Safe protection 2) Available with approval options F, G, and H ● We can offer shorter delivery times for configurations designated with the Quick Ship Symbol ●. For details see page 10/11 in the appendix.	

Level Measurement

Point level measurement - RF Capacitance switches

Pointek CLS200 - Standard

Selection and Ordering data	Order code	Selection and Ordering data	Article No.
Further designs		Pointek CLS200 - Standard - Cable Version with Threaded or Flanged process connection	7ML5631-
Please add "-Z" to Article No. and specify Order code(s).		Versatile inverse frequency shift capacitance level and material detection switch with optional rod/cable choices and configurable output. CLS200 is ideal for detection of liquids, solids, slurries, foam, and interfaces, and has the ability to tune out buildup on the probe.	0
Total insertion length: enter the total insertion length in plain text description	Y01	Click on the Article No. for the online configuration in the PIA Life Cycle Portal.	
Stainless steel tag [69 x 50 mm (2.71 x 1.97 inch)]: Measuring-point number/identification (max. 27 characters) specify in plain text	Y15	Process connection	
Manufacturer's test certificate: M to DIN 55350, Part 18 and ISO 9000	C11	Threaded, 316L stainless steel	
Material inspection Certificate Type 3.1 per EN 10204	C12	¾" NPT [(Taper), ANSI/ASME B1.20.1]	0 A
SIL/IEC 61508 Declaration of Conformity [SIL 2 (overspill)]	C20	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
Operating Instructions		<u>Welded flange, 316L stainless steel, raised face</u>	
All literature is available to download for free, in a range of languages, at http://www.siemens.com/processinstrumentation/documentation	See page 4/34	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
Accessories		<u>Welded flange, 316L stainless steel, Type A flat faced</u>	
We can offer shorter delivery times for configurations designated with the Quick Ship Symbol. For details see page 10/11 in the appendix.		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, 3 000 mm (118.11 inch), length can be determined by customer on assembly ¹⁾	A
		Extended cable, 6 000 mm (236.22 inch), length can be determined by customer on assembly ¹⁾	B
		Add Order code Y01 and plain text: "Insertion length ... mm"	
		Extended cable, 500 ... 5 000 mm (19.69 ... 196.85 inch)	C
		Extended cable, 5 001 ... 10 000 mm (196.89 ... 393.70 inch)	D
		Extended cable, 10 001 ... 15 000 mm (393.74 ... 590.55 inch)	E
		Extended cable, 15 001 ... 20 000 mm (590.59 ... 787.4 inch)	F
		Extended cable, 20 001 ... 25 000 mm (787.44 ... 984.25 inch)	G
		Extended cable, 25 001 ... 30 000 mm (984.29 ... 1 181.1 inch)	H

Selection and Ordering data	Article No.	Selection and Ordering data	Order code
Pointek CLS200 - Standard - Cable Version with Threaded or Flanged process connection Versatile inverse frequency shift capacitance level and material detection switch with optional rod/cable choices and configurable output. CLS200 is ideal for detection of liquids, solids, slurries, foam, and interfaces, and has the ability to tune out buildup on the probe.	7ML5631- 	Further designs Please add "-Z" to Article No. and specify Order code(s). Total insertion length: enter the total insertion length in plain text description	
Thermal isolator Without thermal isolator	0	Stainless steel tag [69 x 50 mm (2.71 x 1.97 inch)]: Measuring-point number/identification (max. 27 characters) specify in plain text	Y01
With thermal isolator [for process connection temperatures over 85 °C (185 °F)]	1	Manufacturer's test certificate: M to DIN 55350, Part 18 and ISO 9000	C11
Remote mount electronics and mounting bracket With 2 m (79 inch) of cable ²⁾	2	Material inspection Certificate Type 3.1 per EN 10204	C12
With 5 m (197 inch) of cable ²⁾	3	SIL/IEC 61508 Declaration of Conformity [SIL 2 (overspill)]	C20
Wetted seals FKM and PTFE	0	Operating Instructions All literature is available to download for free, in a range of languages, at http://www.siemens.com/processinstrumentation/documentation	
FFKM and PTFE [for process temperatures above -20 °C (-4 °F)]	1	Accessories We can offer shorter delivery times for configurations designated with the Quick Ship Symbol . For details see page 10/11 in the appendix.	See page 4/34
Probe material FEP jacketed cable with PPS probe body	0		
FEP jacketed cable with PVDF probe body	1		
Approvals Dust Ignition Proof: CE, RCM, ATEX II 1/2 D T100 °C			C
Flameproof Enclosure with IS Probe: CE, RCM, 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, RCM, 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, Groups E, F, G CSA/FM Class III T4			F
Explosion Proof Enclosure with IS Probe: CSA/FM Class I, Div. 1, Groups A, B, C, D CSA/FM Class II, Div. 1, Groups E, F, G CSA/FM Class III T4			G
General Purpose (CSA, FM)			H
General Purpose (CE, RCM)			J
General Purpose (CSA, FM, CE, RCM) with WHG approval			K
Enclosure and lid Aluminum epoxy coated			
2 x 1/2" NPT via adapter - cable inlet, IP65			A
2 x M20 x 1.5 cable inlet, IP65			B
2 x 1/2" NPT via adapter - cable inlet, IP68			C
2 x M20 x 1.5 cable inlet, IP68			D

1) Sensor detached to allow customer to set desired cable length

2) Available with Approvals options F ... H

We can offer shorter delivery times for configurations designated with the Quick Ship Symbol . For details see page 10/11 in the appendix.

Level Measurement

Point level measurement - RF Capacitance switches

Pointek CLS200 - Standard

Selection and Ordering data

Article No.

Pointek CLS200 - Standard - Rod with Sanitary process connection

7ML5632-

Versatile inverse frequency shift capacitance level and material detection switch with optional rod/cable choices and configurable output. CLS200 is ideal for detection of liquids, solids, slurries, foam, and interfaces, and has the ability to tune out buildup on the probe.

➤ Click on the Article No. for the online configuration in the PIA Life Cycle Portal.

Process connection

Sanitary 316L stainless steel

1" sanitary fitting clamp
1½" sanitary fitting clamp
2" sanitary fitting clamp

2½" sanitary fitting clamp
3" sanitary fitting clamp

(Note: Sanitary connection dimensionally corresponds to the applicable ISO 2852 standard)

Probe length

(length from process connection face)

Note: No Y01 needed in Order code for standard lengths

Compact, 98 mm (3.86 inch)

Extended rod, 250 mm (9.84 inch)

Extended rod, 350 mm (13.78 inch)

Extended rod, 500 mm (19.69 inch)

Extended rod, 750 mm (29.53 inch)

Extended rod, 1 000 mm (39.37 inch)

Extended rod, 1 250 mm (49.21 inch)

Extended rod, 1 350 mm (53.15 inch)

Extended rod, 1 500 mm (59.06 inch)

Extended rod, 1 750 mm (68.90 inch)

Extended rod, 2 000 mm (78.74 inch)

Add Order code Y01 and plain text:

"Insertion length ... mm"

Extended rod, 110 ... 350 mm (4.3 ... 13.78 inch)

Extended rod, 351 ... 1 000 mm (13.78 ... 39.37 inch)

Extended rod, 1 001 ... 2 000 mm (39.41 ... 78.74 inch)

Extended rod, 2 001 ... 3 000 mm (78.78 ... 118.11 inch)

Extended rod, 3 001 ... 4 000 mm (118.15 ... 157.48 inch)

Extended rod, 4 001 ... 5 000 mm (157.52 ... 196.85 inch)

Extended rod, 5 001 ... 5 500 mm (196.89 ... 216.53 inch)

Thermal isolator

Without thermal isolator

With thermal isolator [for process connection temperatures over 85 °C (185 °F)]

Remote mount electronics and mounting bracket

Remote mount electronics with 2 m (79 inch) of cable

Remote mount electronics with 5 m (197 inch) of cable

Wetted seals

FKM

FFKM

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

Probe material

316L stainless steel with PPS probe body

316L stainless steel with PVDF probe body

Selection and Ordering data

Article No.

Pointek CLS200 - Standard - Rod with Sanitary process connection

7ML5632-

Versatile inverse frequency shift capacitance level and material detection switch with optional rod/cable choices and configurable output. CLS200 is ideal for detection of liquids, solids, slurries, foam, and interfaces, and has the ability to tune out buildup on the probe.

Approvals

Dust Ignition Proof:
CE, RCM, ATEX II 1/2 D T100 °C

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

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

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

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

General Purpose (CSA, FM)

General Purpose (CE, RCM)

General Purpose (CSA, FM, CE, RCM)
with WHG approval

Enclosure and lid

Aluminum epoxy coated

2 x ½" NPT via adapter - cable inlet, IP65

2 x M20 x 1.5 cable inlet, IP65

2 x ½" NPT via adapter - cable inlet, IP68

2 x M20 x 1.5 cable inlet, IP68

Selection and Ordering data

Order code

Further designs

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

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

Stainless steel tag [69 x 50 mm (2.71 x 1.97 inch)]:
Measuring-point number/identification
(max. 27 characters) specify in plain text

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

Material inspection Certificate Type 3.1 per
EN 10204

SIL/IEC 61508 Declaration of Conformity
[SIL 2 (overspill)]

Operating Instructions

All literature is available to download for free, in a range of languages, at <http://www.siemens.com/processinstrumentation/documentation>

Accessories

See page 4/34

◆ We can offer shorter delivery times for configurations designated with the Quick Ship Symbol ◆. For details see page 10/11 in the appendix.

Selection and Ordering data	Article No.	Selection and Ordering data	Article No.
Pointek CLS200 - Standard - Sliding Coupling with Threaded process connection Versatile inverse frequency shift capacitance level and material detection switch with optional rod/cable choices and configurable output. CLS200 is ideal for detection of liquids, solids, slurries, foam, and interfaces, and has the ability to tune out buildup on the probe. ↗ Click on the Article No. for the online configuration in the PIA Life Cycle Portal.	7ML5633- 0	Pointek CLS200 - Standard - Sliding Coupling with Threaded process connection Versatile inverse frequency shift capacitance level and material detection switch with optional rod/cable choices and configurable output. CLS200 is ideal for detection of liquids, solids, slurries, foam, and interfaces, and has the ability to tune out buildup on the probe.	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		Approvals Dust Ignition Proof: CE, RCM, ATEX II 1/2 D T100 °C Flameproof Enclosure with IS Probe: CE, RCM, ATEX II 1 G EEx d[ia] IIC T6 ... T4, ATEX II 1/2 D T100 °C Flameproof Enclosure with IS Probe, with WHG approval: CE, RCM, ATEX II 1/2 G EEx d[ia] IIC T6 ... T4, ATEX II 1/2 D T100 °C Dust Ignition Proof with IS Probe: CSA/FM Class II, Div. 1, Groups E, F, G CSA/FM Class III T4 Explosion Proof Enclosure with IS Probe: CSA/FM Class I, Div. 1, Groups A, B, C, D CSA/FM Class II, Div. 1, Groups E, F, G CSA/FM Class III T4 General Purpose (CSA, FM) General Purpose (CE, RCM) General Purpose (CSA, FM, CE, RCM) with WHG approval	
Probe length (length from flange face) (threaded lengths include process thread) <u>Note: No Y01 needed in Order code for standard lengths</u> Extended rod, 350 mm (13.78 inch) C Extended rod, 500 mm (19.69 inch) D Extended rod, 750 mm (29.53 inch) E Extended rod, 1 000 mm (39.37 inch) F Extended rod, 1 250 mm (49.21 inch) G Extended rod, 1 350 mm (53.15 inch) H Extended rod, 1 500 mm (59.06 inch) J Extended rod, 1 750 mm (68.90 inch) K Extended rod, 2 000 mm (78.74 inch) L Add Order code Y01 and plain text: "Insertion length ... mm" Extended rod, 350 ... 1 000 mm (13.78 ... 39.37 inch) M Extended rod, 1 001 ... 2 000 mm (39.41 ... 78.74 inch) N Extended rod, 2 001 ... 3 000 mm (78.78 ... 118.11 inch) P Extended rod, 3 001 ... 4 000 mm (118.15 ... 157.48 inch) Q Extended rod, 4 001 ... 5 000 mm (157.52 ... 196.85 inch) R Extended rod, 5 001 ... 5 500 mm (196.89 ... 216.53 inch) S		Enclosure and lid Aluminum epoxy coated 2 x ½" NPT via adapter - cable inlet, IP65 2 x M20 x 1.5 cable inlet, IP65 2 x ½" NPT via adapter - cable inlet, IP68 2 x M20 x 1.5 cable inlet, IP68 1) Available with Approvals options F ... H We can offer shorter delivery times for configurations designated with the Quick Ship Symbol ●. For details see page 10/11 in the appendix.	
Thermal isolator Without thermal isolator 0 With thermal isolator [for process connection temperatures over 85 °C (185 °F)] 1		Operating Instructions All literature is available to download for free, in a range of languages, at http://www.siemens.com/processinstrumentation/documentation	
Remote mount electronics and mounting bracket With 2 m (79 inch) of cable ¹⁾ 2 With 5 m (197 inch) of cable ¹⁾ 3		Accessories See page 4/34	
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			

Level Measurement

Point level measurement - RF Capacitance switches

Pointek CLS200 - Standard

Selection and Ordering data

Article No.

Pointek CLS200 - Standard - PFA Coated Rod with PFA Coated Flanged process connection

7ML5634-
- - - - 0

Versatile inverse frequency shift capacitance level and material detection switch with optional rod/cable choices and configurable output. CLS200 is ideal for detection of liquids, solids, slurries, foam, and interfaces, and has the ability to tune out buildup on the probe.

➤ Click on the Article No. for the online configuration in the PIA Life Cycle Portal.

Process connection

Welded flange, 316L stainless steel, raised face

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

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

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

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

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

5 A
5 B
5 C

5 D
5 E
5 F

5 G
5 H
5 J

5 K
5 L
5 M

5 N
5 P
5 Q

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

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

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

DN 80, PN 16
DN 80, PN 40
DN 100, PN 16
DN 100, PN 40

6 A
6 B
6 C

6 D
6 E
6 F

6 G
6 H
6 J
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, 98 mm (3.86 inch)
Extended rod, 250 mm (9.84 inch)
Extended rod, 350 mm (13.78 inch)

Extended rod, 500 mm (19.69 inch)
Extended rod, 750 mm (29.53 inch)
Extended rod, 1 000 mm (39.37 inch)

Extended rod, 1 250 mm (49.21 inch)
Extended rod, 1 350 mm (53.15 inch)

Extended rod, 1 500 mm (59.06 inch)
Extended rod, 1 750 mm (68.90 inch)
Extended rod, 2 000 mm (78.74 inch)

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

Extended rod, 200 ... 1 000 mm
(7.87 ... 39.37 inch)
Extended rod, 1 001 ... 2 000 mm
(39.41 ... 78.74 inch)
Extended rod, 2 001 ... 3 000 mm
(78.78 ... 118.11 inch)

Extended rod, 3 001 ... 4 000 mm
(118.15 ... 157.48 inch)
Extended rod, 4 001 ... 5 000 mm
(157.52 ... 196.85 inch)
Extended rod, 5 001 ... 5 500 mm
(196.89 ... 216.53 inch)

A
B
C

D
E
F

G
H

J
K
L

M
N

P

Q

R
S

Selection and Ordering data

Article No.

Pointek CLS200 - Standard - PFA Coated Rod with PFA Coated Flanged process connection

7ML5634-
- - - - 0

Versatile inverse frequency shift capacitance level and material detection switch with optional rod/cable choices and configurable output. CLS200 is ideal for detection of liquids, solids, slurries, foam, and interfaces, and has the ability to tune out buildup on the probe.

Thermal isolator

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

0
1

Remote mount electronics and mounting bracket

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

2
3

Wetted seals

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

0
1

Probe material

PFA Coated 316L stainless steel with PPS probe body
PFA Coated 316L stainless steel with PVDF probe body

0
1

Approvals

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

F

Explosion Proof Enclosure with IS Probe:
CSA/FM Class I, Div. 1, Groups A, B, C, D
CSA/FM Class II, Div. 1, Groups 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
2 x M20 x 1.5 cable inlet, IP65
2 x ½" NPT via adapter - cable inlet, IP68
2 x M20 x 1.5 cable inlet, IP68

A
B
C
D

Selection and Ordering data

Order code

Further designs

Please add "-Z" to Article 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. 27 characters) specify in plain text

Y15

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

C11

Material inspection Certificate Type 3.1 per EN 10204

C12

SIL/IEC 61508 Declaration of Conformity [SIL 2 (overspill)]

C20

Operating Instructions

All literature is available to download for free, in a range of languages, at <http://www.siemens.com/processinstrumentation/documentation>

Accessories

See page 4/34

Overview



Pointek CLS200 (digital version) is a versatile inverse frequency shift capacitance level and material detection switch with optional rod/cable choices and configurable output. CLS200 is ideal for detection of liquids, solids, slurries, foam, and interfaces and has the ability to tune out buildup on the probe. 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.

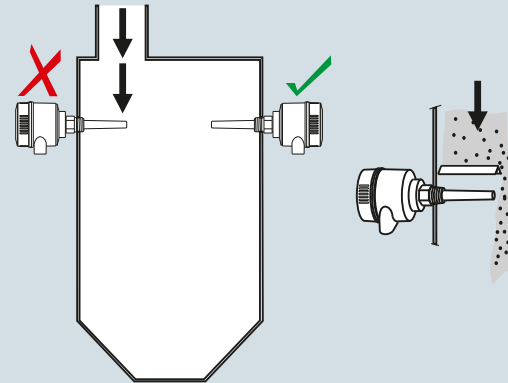
When connected to the PROFIBUS network, advanced diagnostics and set up using SIMATIC PDM are possible.

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

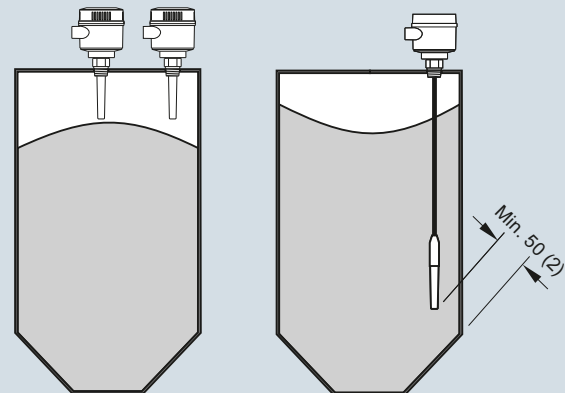
Installation



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)

Level Measurement

Point level measurement - RF Capacitance switches

Pointek CLS200 - Digital

Technical specifications

Mode of operation		Power supply	
Measuring principle	Inverse frequency shift capacitive level detection	Bus voltage	Standard: 12 ... 30 V DC Intrinsically Safe: 12 ... 24 V DC
Input		Current consumption	12.5 mA
Measured variable	Change in picoFarad (pF)	Certificates and approvals	
Output		General Purpose	CSA, FM, CE, RCM
Output signal		Dust Ignition Proof	ATEX II 1/2 D T100 °C
• Solid-state output		Dust Ignition Proof with IS Probe	CSA/FM Class II, Div. 1, Groups E, F, G CSA/FM Class III T4
- Output	Galvanically isolated	Flameproof Enclosure with IS Probe	ATEX II 1/2 G EEx d[ia] IIC T6 ... T4 ATEX II 1/2 D T100 °C
- Protection	Against reversed polarity (bipolar)	Explosion Proof with IS Probe	CSA/FM Class I, Div. 1, Groups A, B, C, D CSA/FM Class II, Div. 1, Groups E, F, G CSA/FM Class III T4
- Max. switching voltage	• 30 V (DC) • 30 V peak (AC)	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, Groups A, B, C, D CSA/FM Class II, Div. 1, Groups E, F, G CSA/FM Class III T4
- Max. load current	82 mA	Non-incendive	CSA/FM Class I, Div. 2, Groups A, B, C, D CSA/FM Class II, Div. 2, Groups F, G CSA/FM Class III T4 or T6
- Voltage drop	< 1 V, typical at 50 mA	Non-Sparking	ATEX II 3 G Ex nA II T6 ... T4 ATEX II 2 D IP6X T100 °C
- Time delay (ON and/or OFF)	Programmable by user (0 ... 100 s)	Marine	Lloyds Register of Shipping, Categories ENV1, ENV2, and ENV5
• Fail-safe mode	Min. or max.	Others	Pattern Approval (China)
• Connection	Removable terminal block	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
Rated operating conditions¹⁾			
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 mm ²		
Degree of protection	IP65/Type 4/NEMA 4 (optional IP68)		
Cable inlet	2 x M20 x 1.5 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.		

¹⁾ When operation is in areas classified as hazardous, observe restrictions according to relevant certificate. See also Pressure/Temperature curves on page 4/35.

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 4/35.

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	5 500 mm (216.53 inch)	5 500 mm (216.53 inch)	<ul style="list-style-type: none"> 30 000 mm (1 181.1 inch) liquids and slurries 5 000 mm (196.85 inch) solids (under loads) 	5 500 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, consult a local sales person for alternative O-rings. For more information, please visit http://www.automation.siemens.com/aspa_app.

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

Level Measurement

Point level measurement - RF Capacitance switches

Pointek CLS200 - Digital

Selection and Ordering data	Article No.
Pointek CLS200 - Digital - Rod with Threaded or Flanged process connection	7ML5640-
Versatile inverse frequency shift capacitance level and material detection switch with optional process connection choices and configurable output. CLS200 is ideal for detection of liquids, solids, slurries, foam, and interfaces, and has the ability to tune out buildup on the probe.	
➤ Click on the Article No. for the online configuration in the PIA Life Cycle Portal.	
Process connection	
Threaded, 316L stainless steel	
3/4" NPT [(Taper), ANSI/ASME B1.20.1]	0 A
1" NPT [(Taper), ANSI/ASME B1.20.1]	0 B
1 1/4" NPT [(Taper), ANSI/ASME B1.20.1]	0 C
1 1/2" NPT [(Taper), ANSI/ASME B1.20.1]	0 D
R 3/4" [(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 1 1/2" [(BSPT), EN 10226/PT (JIS-T), JIS B 0203]	1 D
G 3/4" [(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 1 1/2" [(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
1 1/2" ASME, 150 lb	5 D
1 1/2" ASME, 300 lb	5 E
1 1/2" 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, 1 000 mm (39.37 inch)	F
Extended rod, 1 250 mm (49.21 inch)	G
Extended rod, 1 350 mm (53.15 inch)	H
Extended rod, 1 500 mm (59.06 inch)	J
Extended rod, 1 750 mm (68.90 inch)	K
Extended rod, 2 000 mm (78.74 inch)	L

Selection and Ordering data	Article No.
Pointek CLS200 - Digital - Rod with Threaded or Flanged process connection	7ML5640-
Versatile inverse frequency shift capacitance level and material detection switch with optional process connection choices and configurable output. CLS200 is ideal for detection of liquids, solids, slurries, foam, and interfaces, and has the ability to tune out buildup on the probe.	
Add Order code Y01 and plain text: "Insertion length ... mm"	
Extended rod, 210 ... 1 000 mm (8.27 ... 39.37 inch)	M
Extended rod, 1 001 ... 2 000 mm (39.41 ... 78.74 inch)	N
Extended rod, 2 001 ... 3 000 mm (78.78 ... 118.11 inch)	P
Extended rod, 3 001 ... 4 000 mm (118.15 ... 157.48 inch)	Q
Extended rod, 4 001 ... 5 000 mm (157.52 ... 196.85 inch)	R
Extended rod, 5 001 ... 5 500 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⁾	2
With 5 m (197 inch) of cable ²⁾	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, RCM, ATEX II 3 G Ex nA II T6 ... T4, ATEX II 2 D IP6X T100 °C	B
Dust Ignition Proof:	
CE, RCM, ATEX II 1/2 D T100 °C	C
Intrinsically Safe: ¹⁾	
CE, RCM, ATEX II 1 G EEx ia IIC T6 ... T4, ATEX II 1/2 D IP6X T100 °C	D
Flameproof Enclosure with IS Probe:	
CE, RCM, 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, Groups A, B, C, D CSA/FM Class II, Div. 2, Groups F, G CSA/FM Class III T4 or T6	F
Dust Ignition Proof with IS Probe:	
CSA/FM Class II, Div. 1, Groups E, F, G CSA/FM Class III T4	G
Intrinsically Safe: ¹⁾	
CSA/FM Class I, Div. 1, Groups A, B, C, D CSA/FM Class II, Div. 1, Groups E, F, G CSA/FM Class III T4	H
Explosion Proof with IS Probe:	
CSA/FM Class I, Div. 1, Groups A, B, C, D CSA/FM Class II, Div. 1, Groups E, F, G CSA/FM Class III T4	J
General Purpose (CSA, FM)	K
General Purpose (CE, RCM)	L

4

Selection and Ordering data	Article No.	Selection and Ordering data	Article No.
Pointek CLS200 - Digital - Rod with Threaded or Flanged process connection Versatile inverse frequency shift capacitance level and material detection switch with optional process connection choices and configurable output. CLS200 is ideal for detection of liquids, solids, slurries, foam, and interfaces, and has the ability to tune out buildup on the probe.	7ML5640- 0	Pointek CLS200 - Digital - Cable with Threaded or Flanged process connection Versatile inverse frequency shift capacitance level and material detection switch with optional process connection choices and configurable output. CLS200 is ideal for detection of liquids, solids, slurries, foam, and interfaces, and has the ability to tune out buildup on the probe.	7ML5641- 0
Enclosure and lid Aluminum epoxy coated 2 x 1/2" NPT via adapter - cable inlet, IP65 2 x M20 x 1.5 cable inlet, IP65 2 x 1/2" NPT via adapter - cable inlet, IP68 2 x M20 x 1.5 cable inlet, IP68	A B C D	↗ Click on the Article No. for the online configuration in the PIA Life Cycle Portal. Process connection Threaded, 316L stainless steel 3/4" NPT [(Taper), ANSI/ASME B1.20.1] 1" NPT [(Taper), ANSI/ASME B1.20.1] 1 1/4" NPT [(Taper), ANSI/ASME B1.20.1] 1 1/2" NPT [(Taper), ANSI/ASME B1.20.1] R 3/4" [(BSPT), EN 10226/PT (JIS-T), JIS B 0203] R 1" [(BSPT), EN 10226/PT (JIS-T), JIS B 0203] R 1 1/2" [(BSPT), EN 10226/PT (JIS-T), JIS B 0203] G 3/4" [(BSPP), EN ISO 228-1/PF (JIS-P), JIS B 0202] G 1" [(BSPP), EN ISO 228-1/PF (JIS-P), JIS B 0202] G 1 1/2" [(BSPP), EN ISO 228-1/PF (JIS-P), JIS B 0202]	0 A 0 B 0 C 0 D 1 A 1 B 1 D 3 A 3 B 3 D
1) Barrier or Intrinsically Safe power supply required for Intrinsically Safe protection 2) Available with Approvals options F, G, H, J, and K ● We can offer shorter delivery times for configurations designated with the Quick Ship Symbol ●. For details see page 10/11 in the appendix.		Welded flange, 316L stainless steel, raised face 1" ASME, 150 lb 1" ASME, 300 lb 1" ASME, 600 lb 1 1/2" ASME, 150 lb 1 1/2" ASME, 300 lb 1 1/2" ASME, 600 lb 2" ASME, 150 lb 2" ASME, 300 lb 2" ASME, 600 lb 3" ASME, 150 lb 3" ASME, 300 lb 3" ASME, 600 lb 4" ASME, 150 lb 4" ASME, 300 lb 4" ASME, 600 lb Welded flange, 316L stainless steel, Type A flat faced DN 25, PN 16 DN 25, PN 40 DN 40, PN 16 DN 40, PN 40 DN 50, PN 16 DN 50, PN 40 DN 80, PN 16 DN 80, PN 40 DN 100, PN 16 DN 100, PN 40 (Note: flange bolting patterns and facings dimensionally correspond to the applicable ASME B16.5 or EN 1092-1 standard.)	5 A 5 B 5 C 5 D 5 E 5 F 5 G 5 H 5 J 5 K 5 L 5 M 5 N 5 P 5 Q 6 A 6 B 6 C 6 D 6 E 6 F 6 G 6 H 6 J 6 K
Selection and Ordering data Further designs Please add "-Z" to Article 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. 27 characters) specify in plain text ● Y15 Manufacturer's test certificate: M to DIN 55350, Part 18 and ISO 9000 ● C11 Material inspection Certificate Type 3.1 per EN 10204 ● C12	Order code		
Operating Instructions All literature is available to download for free, in a range of languages, at http://www.siemens.com/processinstrumentation/documentation			
Accessories ● We can offer shorter delivery times for configurations designated with the Quick Ship Symbol ●. For details see page 10/11 in the appendix.	See page 4/34		

Level Measurement

Point level measurement - RF Capacitance switches

Pointek CLS200 - Digital

4

Selection and Ordering data	Article No.
Pointek CLS200 - Digital - Rod with Sanitary process connection Versatile inverse frequency shift capacitance level and material detection switch with optional process connection choices and configurable output. CLS200 is ideal for detection of liquids, solids, slurries, foam, and interfaces, and has the ability to tune out buildup on the probe. ↗ Click on the Article No. for the online configuration in the PIA Life Cycle Portal.	7ML5642-0
Process connection Sanitary 316L stainless steel 1" sanitary fitting clamp 1½" sanitary fitting clamp 2" sanitary fitting clamp 2½" sanitary fitting clamp 3" sanitary fitting clamp (Note: Sanitary connection dimensionally corresponds to the applicable ISO 2852 standard.)	8 A 8 B 8 C 8 D 8 E
Probe length (length from process connection face) Note: No Y01 needed in Order code for standard lengths Compact, 98 mm (3.86 inch) Extended rod, 250 mm (9.84 inch) Extended rod, 350 mm (13.78 inch) Extended rod, 500 mm (19.69 inch) Extended rod, 750 mm (29.53 inch) Extended rod, 1 000 mm (39.37 inch) Extended rod, 1 250 mm (49.21 inch) Extended rod, 1 350 mm (53.15 inch) Extended rod, 1 500 mm (59.06 inch) Extended rod, 1 750 mm (68.90 inch) Extended rod, 2 000 mm (78.74 inch)	A B C D E F G H J K L
Add Order code Y01 and plain text: "Insertion length ... mm" Extended rod, 110 ... 350 mm (4.3 ... 13.78 inch) Extended rod, 351 ... 1 000 mm (13.82 ... 39.37 inch) Extended rod, 1 001 ... 2 000 mm (39.41 ... 78.74 inch) Extended rod, 2 001 ... 3 000 mm (78.78 ... 118.11 inch) Extended rod, 3 001 ... 4 000 mm (118.15 ... 157.48 inch) Extended rod, 4 001 ... 5 000 mm (157.52 ... 196.85 inch) Extended rod, 5 001 ... 5 500 mm (196.89 ... 216.53 inch)	M N P Q R S T
Thermal isolator Without thermal isolator With thermal isolator [for process connection temperatures over 85 °C (185 °F)]	0 1
Remote mount electronics and mounting bracket With 2 m (79 inch) of cable ²⁾ With 5 m (197 inch) of cable ²⁾	2 3
Wetted seals FKM FFKM [for process temperatures above -20 °C (-4 °F)]	0 1
Probe material 316L stainless steel with PPS probe body 316L stainless steel with PVDF probe body	0 1
Approvals Non-Sparking: CE, RCM, ATEX II 3 G Ex nA II T6 ... T4, ATEX II 2 D IP6X T100 °C Dust Ignition Proof: CE, RCM, ATEX II 1/2 D T100 °C Intrinsically Safe: ¹⁾ CE, RCM, ATEX II 1 G EEx ia IIC T6 ... T4, ATEX II 1/2 D IP6X T100 °C Flameproof Enclosure with IS Probe: CE, RCM, ATEX II 1/2 G EEx d[ia] IIC T6 ... T4, ATEX II 1/2 D T100 °C	B C D E

Selection and Ordering data	Article No.
Pointek CLS200 - Digital - Rod with Sanitary process connection Versatile inverse frequency shift capacitance level and material detection switch with optional process connection choices and configurable output. CLS200 is ideal for detection of liquids, solids, slurries, foam, and interfaces, and has the ability to tune out buildup on the probe.	7ML5642-0
Non-incendive: CSA/FM Class I, Div. 2, Groups A, B, C, D CSA/FM Class II, Div. 2, Groups F, G CSA/FM Class III T4 or T6 Dust Ignition Proof with IS Probe: CSA/FM Class II, Div. 1, Groups E, F, G CSA/FM Class III T4 Intrinsically Safe: ¹⁾ CSA/FM Class I, Div. 1, Groups A, B, C, D CSA/FM Class II, Div. 1, Groups E, F, G CSA/FM Class III T4 Explosion Proof with IS Probe: CSA/FM Class I, Div. 1, Groups A, B, C, D CSA/FM Class II, Div. 1, Groups E, F, G CSA/FM Class III T4 General Purpose (CSA, FM) General Purpose (CE, RCM)	F G H J K L
Enclosure and lid Aluminum epoxy coated 2 x ½" NPT via adapter - cable inlet, IP65 2 x M20 x 1.5 cable inlet, IP65 2 x ½" NPT via adapter - cable inlet, IP68 2 x M20 x 1.5 cable inlet, IP68	A B C D
1) Barrier or Intrinsically Safe power supply required for Intrinsically Safe protection 2) Available with Approvals options F, G, H, J, and K We can offer shorter delivery times for configurations designated with the Quick Ship Symbol ●. For details see page 10/11 in the appendix.	

Selection and Ordering data	Order code
Further designs Please add "-Z" to Article No. and specify Order code(s). Total insertion length: enter the total insertion length in plain text description Stainless steel tag [69 x 50 mm (2.71 x 1.97 inch)]: Measuring-point number/identification (max. 27 characters) specify in plain text Manufacturer's test certificate: M to DIN 55350, Part 18 and ISO 9000 Material inspection Certificate Type 3.1 per EN 10204	Y01 Y15 C11 C12
Operating Instructions All literature is available to download for free, in a range of languages, at http://www.siemens.com/processinstrumentation/documentation	
Accessories	See page 4/34
We can offer shorter delivery times for configurations designated with the Quick Ship Symbol ●. For details see page 10/11 in the appendix.	

Level Measurement

Point level measurement - RF Capacitance switches

Pointek CLS200 - Digital

Selection and Ordering data	Article No.
Pointek CLS200 - Digital - Rod with Sliding coupling with Threaded process connection	7ML5643-
Versatile inverse frequency shift capacitance level and material detection switch with optional process connection choices and configurable output. CLS200 is ideal for detection of liquids, solids, slurries, foam, and interfaces, and has the ability to tune out buildup on the probe.	
➤ Click on the Article No. for the online configuration in the PIA Life Cycle Portal.	
Process connection	
Threaded, 316L stainless steel	
3/4" NPT [(Taper), ANSI/ASME B1.20.1]	0 A
1" NPT [(Taper), ANSI/ASME B1.20.1]	0 B
1 1/4" NPT [(Taper), ANSI/ASME B1.20.1]	0 C
1 1/2" NPT [(Taper), ANSI/ASME B1.20.1]	0 D
R 3/4" [(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 1 1/2" [(BSPT), EN 10226/PT (JIS-T), JIS B 0203]	1 D
G 3/4" [(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 1 1/2" [(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, 1 000 mm (39.37 inch)	F
Extended rod, 1 250 mm (49.21 inch)	G
Extended rod, 1 350 mm (53.15 inch)	H
Extended rod, 1 500 mm (59.06 inch)	J
Extended rod, 1 750 mm (68.90 inch)	K
Extended rod, 2 000 mm (78.74 inch)	L
Add Order code Y01 and plain text: "Insertion length ... mm"	
Extended rod, 350 ... 1 000 mm (13.82 ... 39.37 inch)	M
Extended rod, 1 001 ... 2 000 mm (39.41 ... 78.74 inch)	N
Extended rod, 2 001 ... 3 000 mm (78.78 ... 118.11 inch)	P
Extended rod, 3 001 ... 4 000 mm (118.15 ... 157.48 inch)	Q
Extended rod, 4 001 ... 5 000 mm (157.52 ... 196.85 inch)	R
Extended rod, 5 001 ... 5 500 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⁾	2
With 5 m (197 inch) of cable ²⁾	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, RCM, ATEX II 3 G Ex nA II T6 ... T4, ATEX II 2 D IP6X T100 °C	B
Dust Ignition Proof: CE, RCM, ATEX II 1/2 D T100 °C	C
Intrinsically Safe: ¹⁾ CE, RCM, ATEX II 1 G EEx ia IIC T6 ... T4, ATEX II 1/2 D IP6X T100 °C	D

Selection and Ordering data	Article No.
Pointek CLS200 - Digital - Rod with Sliding coupling with Threaded process connection	7ML5643-
Versatile inverse frequency shift capacitance level and material detection switch with optional process connection choices and configurable output. CLS200 is ideal for detection of liquids, solids, slurries, foam, and interfaces, and has the ability to tune out buildup on the probe.	
Flameproof Enclosure with IS Probe: CE, RCM, 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, Groups A, B, C, D CSA/FM Class II, Div. 2, Groups F, G CSA/FM Class III T4 or T6	F
Dust Ignition Proof with IS Probe: CSA/FM Class II, Div. 1, Groups E, F, G CSA/FM Class III T4	G
Intrinsically Safe: ¹⁾ CSA/FM Class I, Div. 1, Groups A, B, C, D CSA/FM Class II, Div. 1, Groups E, F, G CSA/FM Class III T4	H
Explosion Proof with IS Probe: CSA/FM Class I, Div. 1, Groups A, B, C, D CSA/FM Class II, Div. 1, Groups E, F, G CSA/FM Class III T4	J
General Purpose (CSA, FM)	K
General Purpose (CE, RCM)	L
Enclosure and lid Aluminum epoxy coated	
2 x 1/2" NPT via adapter - cable inlet, IP65	A
2 x M20 x 1.5 cable inlet, IP65	B
2 x 1/2" NPT via adapter - cable inlet, IP68	C
2 x M20 x 1.5 cable inlet, IP68	D
1) Barrier or Intrinsically Safe power supply required for Intrinsically Safe protection	
2) Available with Approvals options F, G, H, J, and K	
➤ We can offer shorter delivery times for configurations designated with the Quick Ship Symbol. For details see page 10/11 in the appendix.	

Selection and Ordering data	Order code
Further designs	
Please add "-Z" to Article 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. 27 characters) specify in plain text	Y15
Manufacturer's test certificate: M to DIN 55350, Part 18 and ISO 9000	C11
Material inspection Certificate Type 3.1 per EN 10204	C12
Operating Instructions	
All literature is available to download for free, in a range of languages, at http://www.siemens.com/processinstrumentation/documentation	
Accessories	See page 4/34

➤ We can offer shorter delivery times for configurations designated with the Quick Ship Symbol. For details see page 10/11 in the appendix.

Selection and Ordering data	Article No.
Pointek CLS200 - Digital - PFA Rod with PFA Flanged process connection Versatile inverse frequency shift capacitance level and material detection switch with optional process connection choices and configurable output. CLS200 is ideal for detection of liquids, solids, slurries, foam, and interfaces, and has the ability to tune out buildup on the probe. ↗ Click on the Article No. for the online configuration in the PIA Life Cycle Portal.	7ML5644-
Process connection Welded flange, PFA coated, 316L stainless steel, raised face 1" ASME, 150 lb 1" ASME, 300 lb 1" ASME, 600 lb 1½" ASME, 150 lb 1½" ASME, 300 lb 1½" ASME, 600 lb 2" ASME, 150 lb 2" ASME, 300 lb 2" ASME, 600 lb 3" ASME, 150 lb 3" ASME, 300 lb 3" ASME, 600 lb 4" ASME, 150 lb 4" ASME, 300 lb 4" ASME, 600 lb Welded flange, PFA coated, 316L stainless steel, Type A flat faced DN 25, PN 16 DN 25, PN 40 DN 40, PN 16 DN 40, PN 40 DN 50, PN 16 DN 50, PN 40 DN 80, PN 16 DN 80, PN 40 DN 100, PN 16 DN 100, PN 40 (Note: flange bolting patterns and facings dimensionally correspond to the applicable ASME B16.5 or EN 1092-1 standard.)	5 A 5 B 5 C 5 D 5 E 5 F 5 G 5 H 5 J 5 K 5 L 5 M 5 N 5 P 5 Q 6 A 6 B 6 C 6 D 6 E 6 F 6 G 6 H 6 J 6 K
Probe length (length from process connection face) Note: No Y01 needed in Order code for standard lengths Compact, 98 mm (3.86 inch) Extended rod, 250 mm (9.84 inch) Extended rod, 350 mm (13.78 inch) Extended rod, 500 mm (19.69 inch) Extended rod, 750 mm (29.53 inch) Extended rod, 1 000 mm (39.37 inch) Extended rod, 1 250 mm (49.21 inch) Extended rod, 1 350 mm (53.15 inch) Extended rod, 1 500 mm (59.06 inch) Extended rod, 1 750 mm (68.90 inch) Extended rod, 2 000 mm (78.74 inch) Add Order code Y01 and plain text: "Insertion length ... mm" Extended rod, 200 ... 1 000 mm (7.87 ... 39.37 inch) Extended rod, 1 001 ... 2 000 mm (39.41 ... 78.74 inch) Extended rod, 2 001 ... 3 000 mm (78.78 ... 118.11 inch) Extended rod, 3 001 ... 4 000 mm (118.15 ... 157.48 inch) Extended rod, 4 001 ... 5 000 mm (157.52 ... 196.85 inch) Extended rod, 5 001 ... 5 500 mm (196.89 ... 216.53 inch)	A B C D E F G H J K L M N P Q R S
Thermal isolator Without thermal isolator With thermal isolator [for process connection temperatures over 85 °C (185 °F)]	0 1

Selection and Ordering data	Article No.
Pointek CLS200 - Digital - PFA Rod with PFA Flanged process connection Versatile inverse frequency shift capacitance level and material detection switch with optional process connection choices and configurable output. CLS200 is ideal for detection of liquids, solids, slurries, foam, and interfaces, and has the ability to tune out buildup on the probe.	7ML5644-
Remote mount electronics and mounting bracket With 2 m (79 inch) of cable With 5 m (197 inch) of cable	2 3 0 1
Wetted seals FKM FFKM [for process temperatures above -20 °C (-4 °F)]	0 1
Probe material PFA Coated 316L stainless steel with PPS probe body PFA Coated 316L stainless steel with PVDF probe body	0 1
Approvals Non-incendive: CSA/FM Class I, Div. 2, Groups A, B, C, D CSA/FM Class II, Div. 2, Groups F, G CSA/FM Class III T4 or T6 Dust Ignition Proof with IS Probe: CSA/FM Class II, Div. 1, Groups E, F, G CSA/FM Class III T4 Intrinsically Safe: ¹⁾ CSA/FM Class I, Div. 1, Groups A, B, C, D CSA/FM Class II, Div. 1, Groups E, F, G CSA/FM Class III T4 Explosion Proof with IS Probe: CSA/FM Class I, Div. 1, Groups A, B, C, D CSA/FM Class II, Div. 1, Groups E, F, G CSA/FM Class III T4 General Purpose (CSA, FM)	F G H J K
Enclosure and lid Aluminum epoxy coated 2 x ½" NPT via adapter - cable inlet, IP65 2 x M20 x 1.5 cable inlet, IP65 2 x ½" NPT via adapter - cable inlet, IP68 2 x M20 x 1.5 cable inlet, IP68	A B C D
¹⁾ Barrier or Intrinsically Safe power supply required for Intrinsically Safe protection	

Selection and Ordering data	Order code
Further designs Please add "-Z" to Article 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. 27 characters) specify in plain text	Y15
Manufacturer's test certificate: M to DIN 55350, Part 18 and ISO 9000	C11
Material inspection Certificate Type 3.1 per EN 10204	C12
Operating Instructions All literature is available to download for free, in a range of languages, at http://www.siemens.com/processinstrumentation/documentation	
Accessories	See page 4/34

Level Measurement

Point level measurement - RF Capacitance switches

Pointek CLS200 – Standard and Digital

Selection and Ordering data

Article No.

Accessories

SensGuard, 3/4" NPT (PPS)

Only available for CLS200 with 3/4" NPT thread

7ML1830-1DL

SensGuard, R 1" (BSPT) (PPS)

Only available for CLS200 with 3/4" NPT thread

7ML1830-1DM

One metallic cable gland M20 x 1.5, -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)

7ML1830-1JA

M20 x 1.5 General Purpose Cable Entry IP68/IP69K NEMA6, -40 ... -100 °C (-40 ... -212 °F), cable size 7 ... 12 mm (0.275 ... 0.472 inch)

7ML1830-1JC

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)

7ML1830-1JB

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)

7ML1830-1JD

Blind threaded flanges are available.

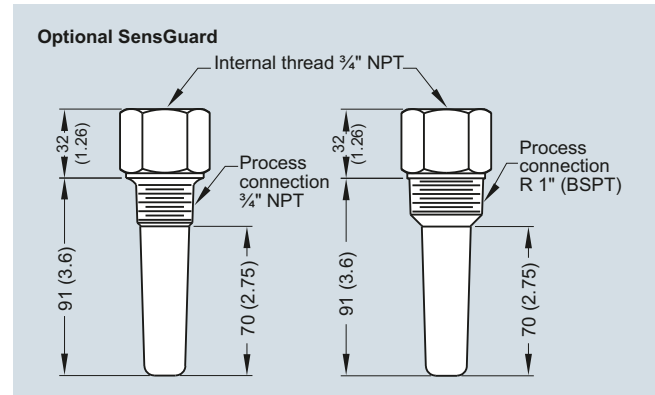
Customers interested in a custom designed device should consult a local sales person. For more information, please visit

http://www.automation.siemens.com/aspa_app.

Pointek Specials

See page 4/62

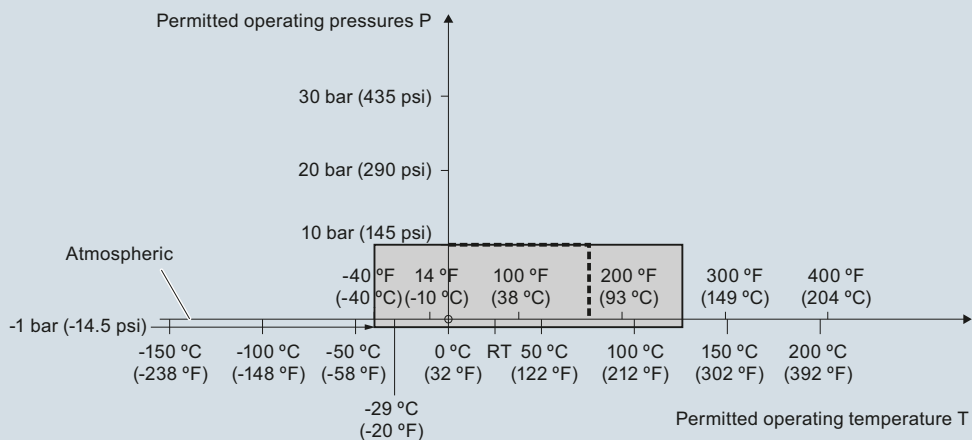
Options



Optional SensGuard, dimensions in mm (inch)

Characteristic curves

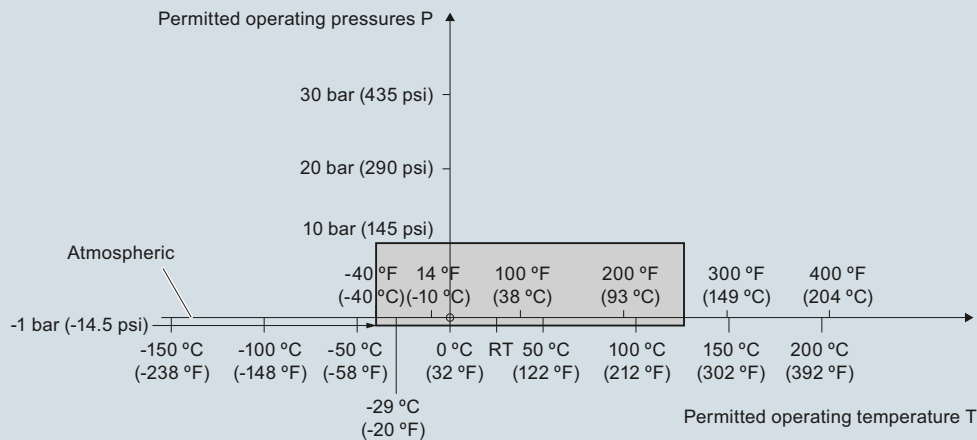
**Pressure/temperature curve
CLS200 sliding coupling
threaded process connections
(7ML5633 and 7ML5643)**



----- 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)**



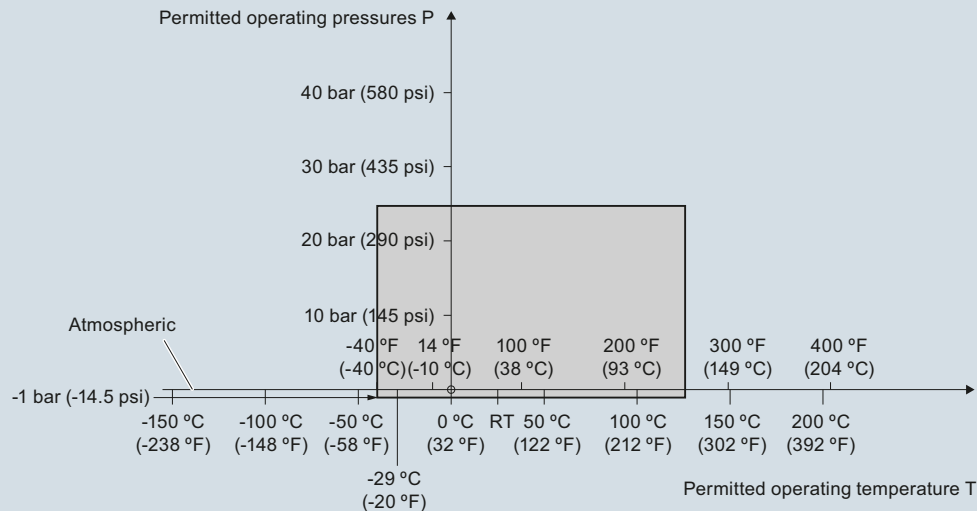
Pointek CLS200 process pressure/temperature derating curves (7ML5631 and 7ML5641)

Level Measurement

Point level measurement - RF Capacitance switches

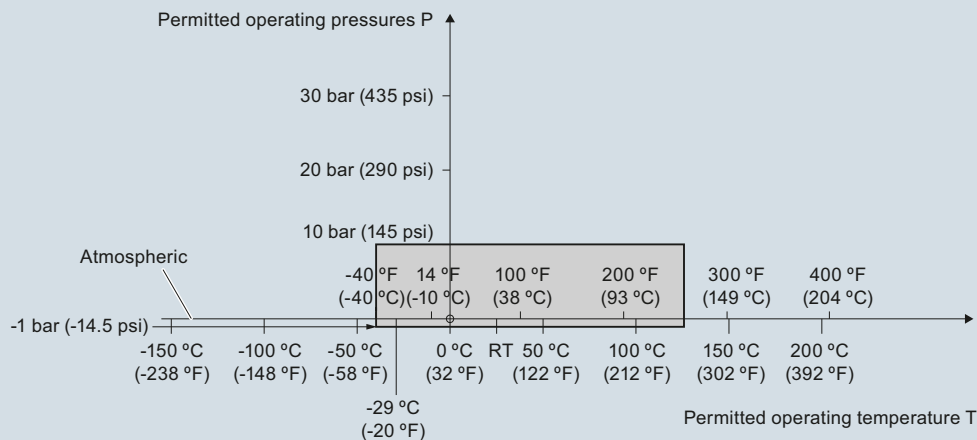
Pointek CLS200 Standard and Digital

Pressure/temperature curve
CLS200 compact and extended rod
Threaded process connections
(7ML5630 and 7ML5640)



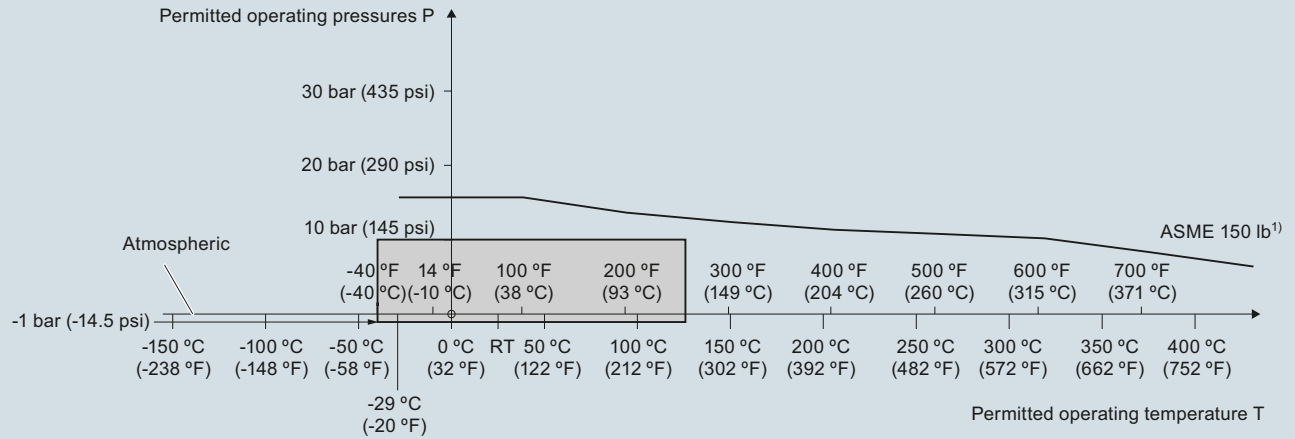
Pointek CLS200 process pressure/temperature derating curves (7ML5630 or 7ML5640)

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)

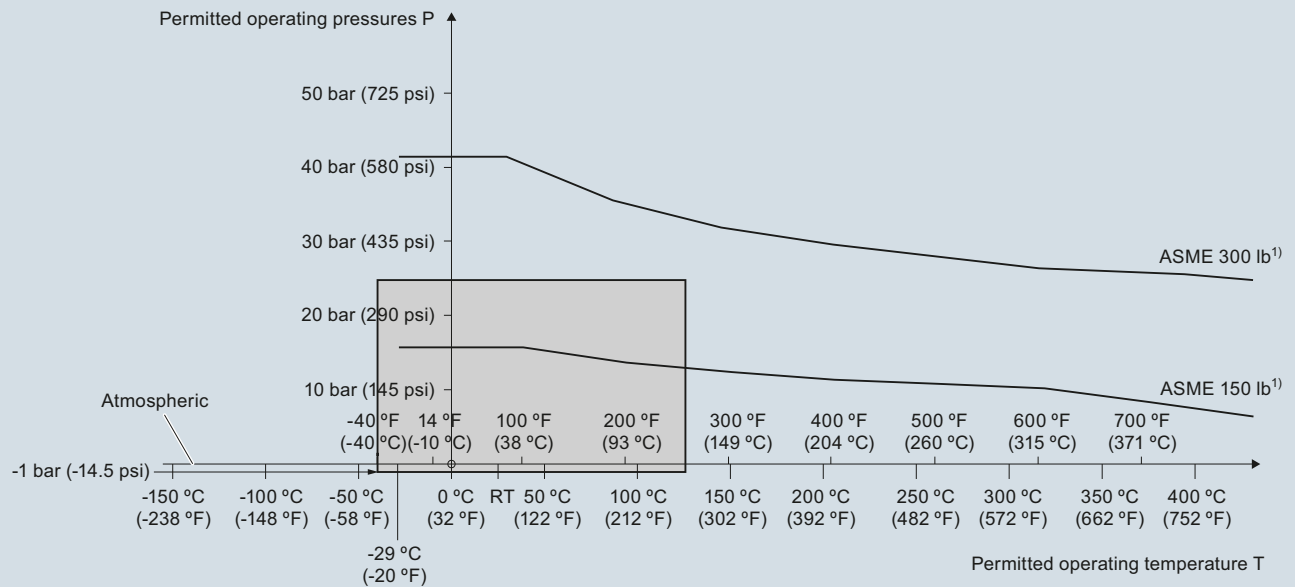
**Pressure/temperature curve
CLS200, cable
ASME flanged process connections
(7ML5631 and 7ML5641)**



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.

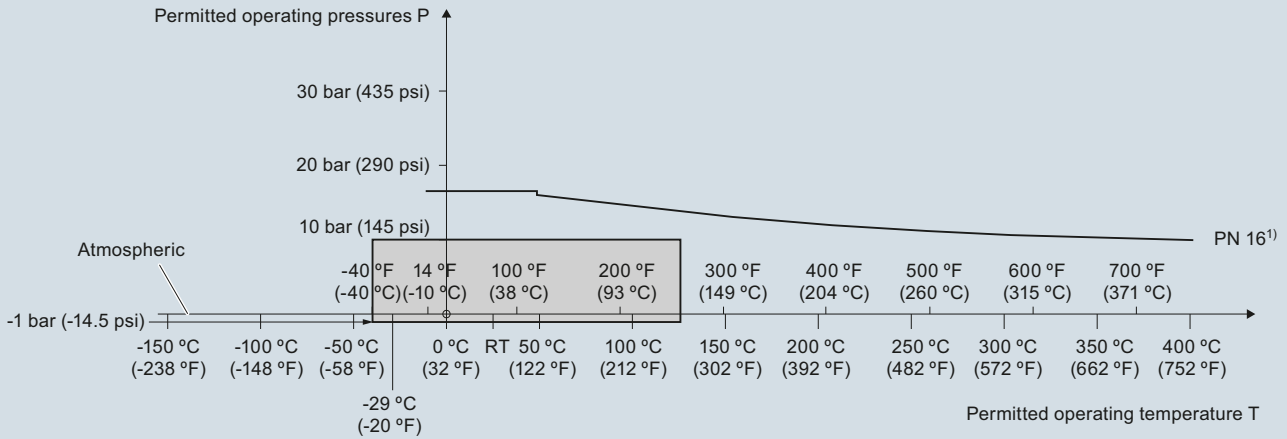
Pointek CLS200 process pressure/temperature derating curves (7ML5630 and 7ML5640)

Level Measurement

Point level measurement - RF Capacitance switches

Pointek CLS200 Standard and Digital

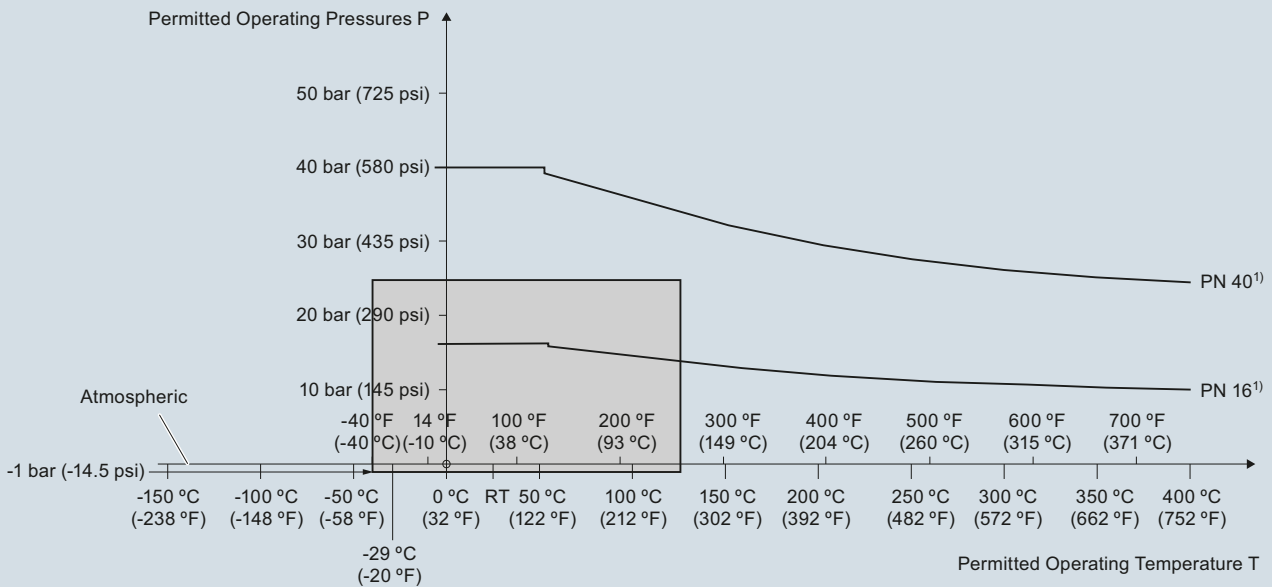
Pressure/temperature curve
CLS200 cable
EN flanged process connections
(7ML5631 and 7ML5641)



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)

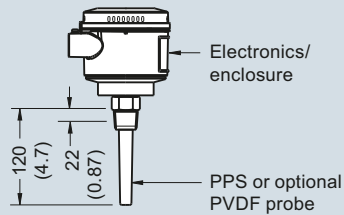


1) The curve denotes the minimum allowable flange class for the shaded area below.

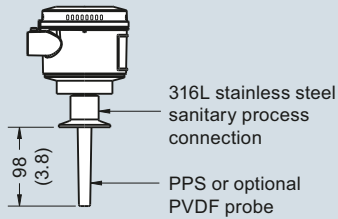
Pointek CLS200 process pressure/temperature derating curves (7ML5630 and 7ML5640)

Dimensional drawings

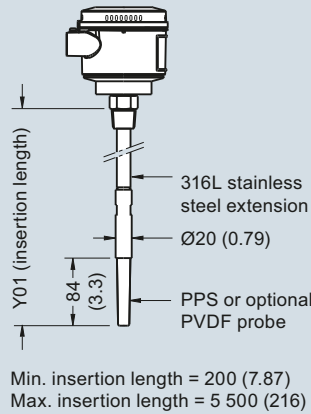
**Compact version
Threaded
(7ML5630 and 7ML5640)**



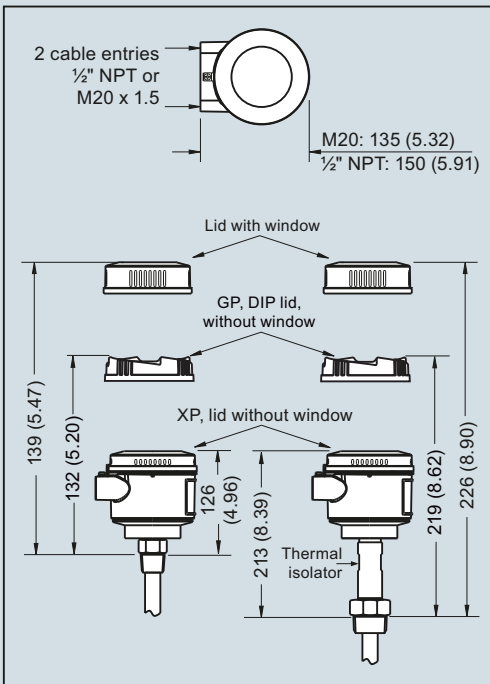
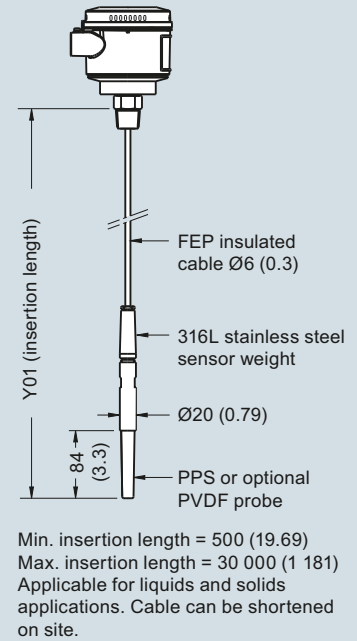
**Sanitary compact version
Sanitary fitting
(7ML5632 and 7ML5642)**



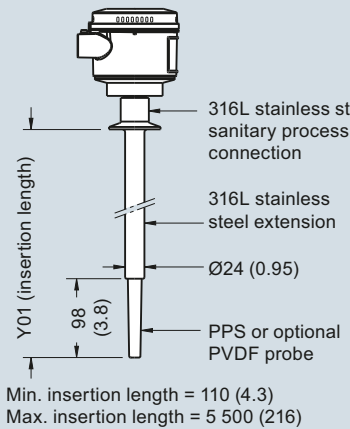
**Extended rod version
Threaded
(7ML5630 and 7ML5640)**



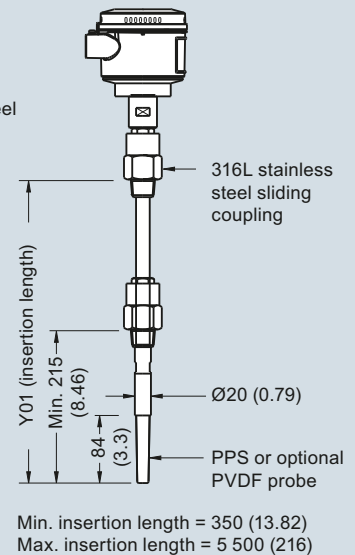
**Extended cable version
Threaded
(7ML5631 and 7ML5641)**



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



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



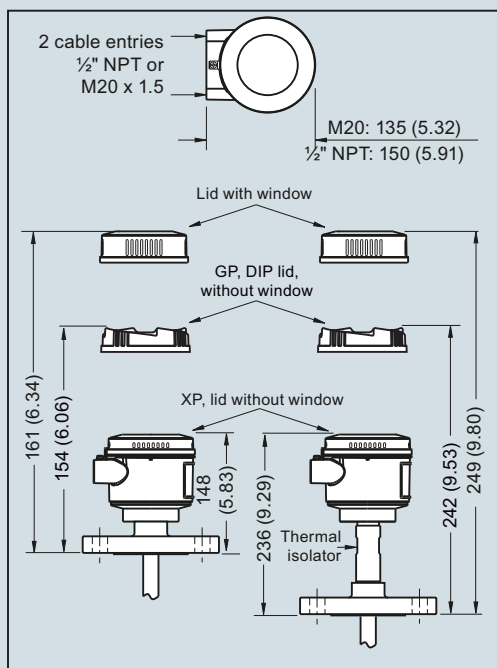
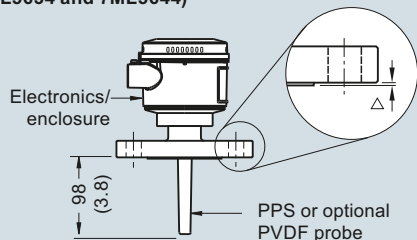
Pointek CLS200 threaded/sanitary process connections, dimensions in mm (inch)

Level Measurement

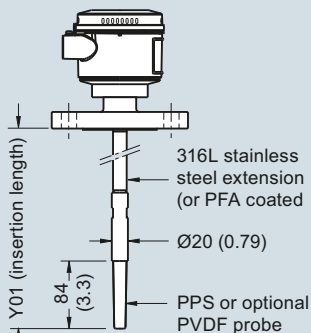
Point level measurement - RF Capacitance switches

Pointek CLS200 Standard and Digital

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

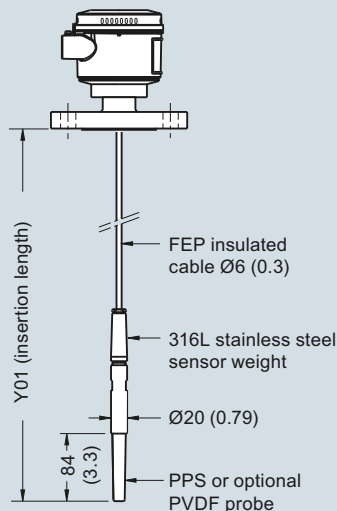


Extended rod version
Welded Flange (7ML5630 and 7ML5640)
Welded Flange, PFA coated
(7ML5634 and 7ML5644)



Min. insertion length = 200 (7.87)
 Max. insertion length = 5 500 (216)

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



Min. insertion length = 500 (19.69)
 Max. insertion length = 30 000 (1 181)
 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)

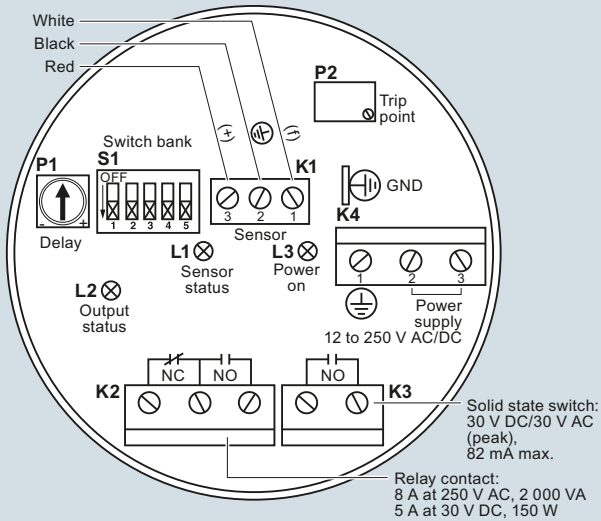
Insertion length does not include any raised face/gasket face dimension (see Flange Facing Table above)

Pointek CLS200 flanged process connections, dimensions in mm (inch)

4

Schematics

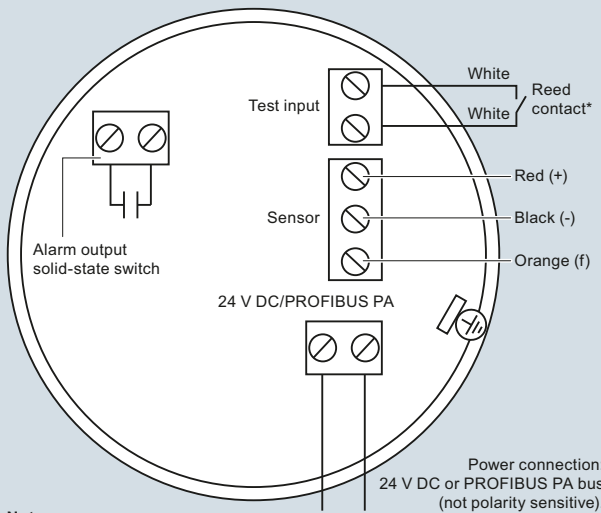
Wiring: Pointek CLS200 standard



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

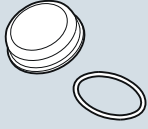
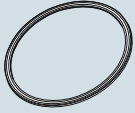
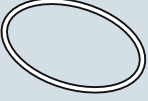
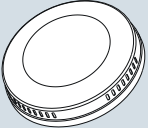
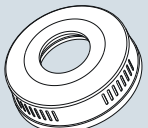

Level Measurement

Point level measurement - RF Capacitance switches

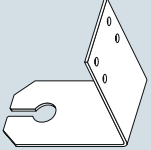


Pointek CLS Specials



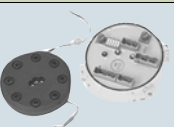

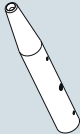
Selection and ordering data

Pointek Specials¹⁾

	Article No.
CLS100 Polycarbonate Lid and Gasket, FKM	
	
Kit, Lid and gasket, CLS100 enclosure version	A5E01163671
CLS100 Miscellaneous Parts	
Custom length of cable is available only for 7ML5501-xxx1x and 7ML5501-xxx5x ²⁾	
CLS200 Gasket (IP65), Synprene	
	
Spare gasket, enclosure version (IP65 versions only)	A5E01163672
CLS200 Gasket (IP68), Silicone	
	
Spare gasket, enclosure version (IP68 versions)	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	A5E01163677

Pointek Specials¹⁾

	Article No.
Kit, sensor for cable units, PPS, digital, FKM	A5E01163678
Kit, sensor for cable units, PPS, standard, FFKM	A5E01163679
Kit, sensor for cable units, PPS, digital, FFKM	A5E01163680
Kit, sensor for cable units, PVDF, standard, FKM	A5E01163681
Kit, sensor for cable units, PVDF, digital, FKM	A5E01163682
Kit, sensor for cable units, PVDF, standard, FFKM	A5E01163683
Kit, sensor for cable units, PVDF, digital, FFKM	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) ²⁾	
CLS200 Electronics	
Test magnet, digital version	7ML1830-1JE
Amplifier/power supply kit, standard version	A5E03251681
Amplifier/power supply, digital version	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

Pointek Specials ¹⁾	Article No.	Pointek Specials ¹⁾	Article No.
CLS300 Cable Extensions, 316 stainless steel with PFA coating		CLS300 Electronics Kits with drivers (for rod or cable versions)	
Kit, PFA cable extension, 1 m, adjustable by customer	A5E01163697	Kit, electronics with driver, standard CLS300. To be used in rod or cable versions with length less than 5 m. ³⁾⁴⁾	A5E01163723
Kit, PFA cable extension, 3 m, adjustable by customer	A5E01163698	Kit, electronics with driver, digital CLS300. To be used in rod or cable versions with length less than 5 m. ³⁾⁴⁾	A5E01163725
Kit, PFA cable extension, 5 m, adjustable by customer	A5E01163699	CLS300 Electronics Kits with drivers (for cable versions)	
Kit, PFA cable extension, 10 m, adjustable by customer	A5E01163700	Kit, electronics with driver, standard CLS300. To be used in cable versions with length greater than 5 m. ³⁾⁴⁾	A5E01163724
Kit, PFA cable extension, 15 m, adjustable by customer	A5E01163701	Kit, electronics with driver, digital CLS300. To be used in cable versions with length greater than 5 m. ³⁾⁴⁾	A5E01163726
Kit, PFA cable extension, 20 m, adjustable by customer	A5E01163702	CLS300 Electronics	
CLS300 Rod Kits, 316L stainless steel		Test magnet, digital version	7ML1830-1JE
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	Amplifier/power supply kit, standard version	A5E03251683
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	Amplifier/power supply, digital version	7ML1830-1JF
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	LCD display, digital version	7ML1830-1JK
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 1 000 mm (39.37 inch).	A5E01163722	CLS300 Weight Kit, 316L stainless steel	
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 1 000 mm (39.37 inch).	A5E01163722	Kit, spare stainless steel weight. To be used in any cable version of CLS300	A5E01163727
Kit, stainless steel rod 1 330 mm (52.36 inch) to be used with CLS300 units only (with standard active shield). Insertion length after installation is 1 500 mm (59.06 inch). ²⁾		<ol style="list-style-type: none"> 1) Special flange sizes and facings are available. Please consult a local sales person for details. 2) Please consult a local sales person for part number and pricing 3) For General Purpose approvals only 4) To maintain approvals, qualified trained Siemens personnel required for part replacement 	
Kit, stainless steel rod 1 830 mm (72.05 inch) to be used with CLS300 units only (with standard active shield). Insertion length after installation is 2 000 mm (78.74 inch). ²⁾		Customers interested in a custom designed device should consult a local sales person. For more information, please visit http://www.automation.siemens.com/aspa_app .	
Kit, stainless steel rod customized length up to 1 m ²⁾			
Kit, stainless steel rod customized length up to 2 m ²⁾			