

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

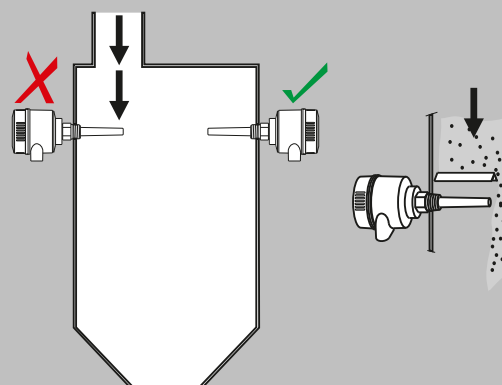
Pointek CLS200 standard version has 3 LED indicators with basic relay and solid-state switch alarms. Universal switch for solids/liquids and interface.

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).

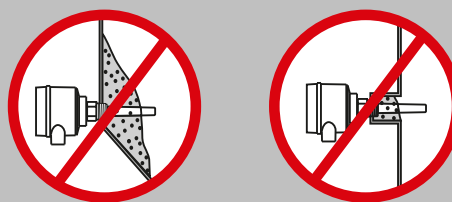
- Key Applications: liquids, slurries, powders, granules, pressurized applications, hazardous areas

Configuration

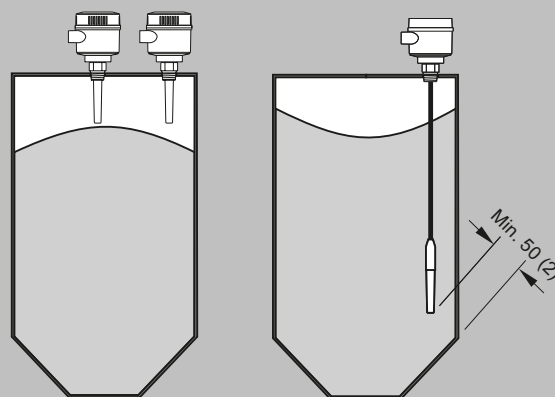
Installation



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)

Pointek CLS200 - Standard

Selection and ordering data

		Article No.										
Pointek CLS200 RF Capacitance point level switch, rod design Detects level and interface in liquids, solids, slurries, and foam. Adjustable, 5.5 m (18.04 ft), insertion, adaptable sensitivity, with the ability to tune out build-up on probe.		7	M	L	5	6	3	0	-	0	0	0
Click on the Article No. for the online configuration in the PIA Life Cycle Portal.												
Process connection												
<u>Threaded, 316L stainless steel</u>												
¾" NPT [(Taper), ASME B1.20.1]		0									A	
1" NPT [(Taper), ASME B1.20.1]		0									B	
1¼" NPT [(Taper), ASME B1.20.1]		0									C	
1½" NPT [(Taper), 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 SO 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	
<u>Welded flange, 316L stainless steel, raised face</u>												
1" ASME, 150 lb		5									A	
1" ASME, 300 lb		5									B	
1" ASME, 600 lb		5									C	
1½" ASME, 150 lb		5									D	
1½" ASME, 300 lb		5									E	
1½" ASME, 600 lb		5									F	
2" ASME, 150 lb		5									G	
2" ASME, 300 lb		5									H	
2" ASME, 600 lb		5									J	
3" ASME, 150 lb		5									K	
3" ASME, 300 lb		5									L	
3" ASME, 600 lb		5									M	
4" ASME, 150 lb		5									N	
4" ASME, 300 lb		5									P	
4" ASME, 600 lb		5									Q	
<u>Welded flange, 316L stainless steel, Type A flat faced</u>												
DN 25, PN 16		6									A	
DN 25, PN 40		6									B	
DN 40, PN 16		6									C	
DN 40, PN 40		6									D	
DN 50, PN 16		6									E	
DN 50, PN 40		6									F	
DN 80, PN 16		6									G	
DN 80, PN 40		6									H	
DN 100, PN 16		6									J	
DN 100, PN 40 (Note: Flange bolting patterns and facings dimensionally correspond to the applicable ASME B16.5 or EN 1092-1 standard.)		6									K	
Probe length (length from flange face) (threaded lengths include process thread)												
<u>Note: No Y01 needed in Order code for standard lengths</u>												
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 (continued)

Pointek CLS200 RF Capacitance point level switch, rod design Detects level and interface in liquids, solids, slurries, and foam. Adjustable, 5.5 m (18.04 ft), insertion, adaptable sensitivity, with the ability to tune out build-up on probe.	Article No. 7ML5630- ● ● ● ● ● - ● ● ● ● 0										
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 ¹⁾²⁾										2	
With 5 m (197 inch) of cable ¹⁾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											
Dust Ignition Proof: CE, UKCA, RCM, ATEX II 1/2 D Ex ia/tb [ia Da] IIIC TX Da/Db, ATEX II 2(1) D Ex ia tb [ia Da] IIIC TX Db, ATEX II 1 D Ex ia IIIC TX Da, ATEX II 1/2 D Ex ia IIIC TX Da/Db UKEX II 1/2 D Ex ia/tb [ia Da] IIIC TX Da/Db, UKEX II 2(1) D Ex ia tb [ia Da] IIIC TX Db, UKEX II 1 D Ex ia IIIC TX Da, UKEX II 1/2 D Ex ia IIIC TX Da/Db											C
Flameproof Enclosure with IS Probe: CE, UKCA, RCM, ATEX II 1/2 G Ex ia/db [ia Ga] IIC TX Ga/Gb, ATEX II 1/2 D Ex ia/tb [ia Da] IIIC TX Da/Db, ATEX II 2(1) G Ex db ia [ia Ga] IIC TX Gb, ATEX II 2(1) D Ex ia tb [ia Da] IIIC TX Db, ATEX II 1 G Ex ia IIC TX Ga, ATEX II 1 D Ex ia IIIC TX Da , ATEX II 1/2 D Ex ia IIIC TX Da/Db UKEX II 1/2 G Ex ia/db [ia Ga] IIC TX Ga/Gb, UKEX II 1/2 D Ex ia/tb [ia Da] IIIC TX Da/Db, UKEX II 2(1) G Ex db ia [ia Ga] IIC TX Gb, UKEX II 2(1) D Ex ia tb [ia Da] IIIC TX Db, UKEX II 1 G Ex ia IIC TX Ga, UKEX II 1 D Ex ia IIIC TX Da , UKEX II 1/2 D Ex ia IIIC TX Da/Db											D
Flameproof Enclosure with IS Probe, with Overfill Protection: CE, UKCA, RCM, WHG, ATEX II 1/2 G Ex ia/db [ia Ga] IIC TX Ga/Gb, ATEX II 1/2 D Ex ia/tb [ia Da] IIIC TX Da/Db, ATEX II 2(1) G Ex db ia [ia Ga] IIC TX Gb, ATEX II 2(1) D Ex ia tb [ia Da] IIIC TX Db, ATEX II 1 G Ex ia IIC TX Ga, ATEX II 1 D Ex ia IIIC TX Da , ATEX II 1/2 D Ex ia IIIC TX Da/Db UKEX II 1/2 G Ex ia/db [ia Ga] IIC TX Ga/Gb, UKEX II 1/2 D Ex ia/tb [ia Da] IIIC TX Da/Db, UKEX II 2(1) G Ex db ia [ia Ga] IIC TX Gb, UKEX II 2(1) D Ex ia tb [ia Da] IIIC TX Db, UKEX II 1 G Ex ia IIC TX Ga, UKEX II 1 D Ex ia IIIC TX Da , UKEX II 1/2 D Ex ia IIIC TX Da/Db											E
Dust Ignition Proof with IS Probe CSA/ FM Class II, III Div.1 Gr. E, F, G T4											F
Explosion Proof Enclosure with IS Probe CSA/ FM Class I, II, III Div.1 Gr.A, B, C, D, E, F, G T4											G
General Purpose (CSA, FM)											H
Ordinary Locations/General Purpose (Non-Ex): CE, UKCA, RCM											J
Ordinary Locations/General Purpose (Non-Ex) with Overfill Protection: CSA, FM, CE, UKCA, RCM, WHG											K

Pointek CLS200 - Standard

Selection and ordering data (continued)

Pointek CLS200 RF Capacitance point level switch, rod design Detects level and interface in liquids, solids, slurries, and foam. Adjustable, 5.5 m (18.04 ft), insertion, adaptable sensitivity, with the ability to tune out build-up on probe.		Article No.									
		7	M	L	5	6	3	1	-	0	0
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.

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 [70 x 13 mm (2.75 x 0.5 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)] INMETRO ¹⁾	C20 E34

Selection and Ordering data	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	See accessories shown following CLS200 Digital selection and ordering data.

- 1) Available only with Approvals options C, D, E.

Pointek CLS200 RF Capacitance point level switch, cable design Detects level and interface in liquids, solids, slurries, and foam. Cable extension options to 30 m (98.43 ft), adaptable sensitivity, with the ability to tune out build-up on probe.		Article No.									
		7	M	L	5	6	3	1	-	0	0
Click on the Article No. for the online configuration in the PIA Life Cycle Portal.											
Process connection											
Threaded, 316L stainless steel											
¾" NPT [(Taper), ASME B1.20.1]		0									A
1" NPT [(Taper), ASME B1.20.1]		0									B
1¼" NPT [(Taper), ASME B1.20.1]		0									C
1½" NPT [(Taper), ASME B1.20.1]		0									D
R ¾" [(BSPT), EN 10226/PT (JIS-T), JIS B 0203]		1									A
R 1" [(BSPT), EN 10226/PT (JIS-T), JIS B 0203]		1									B
R 1½" [(BSPT), EN 10226/PT (JIS-T), JIS B 0203]		1									D
G ¾" [(BSPP), EN ISO 228-1/PF (JIS-P), JIS B 0202]		3									A
G 1" [(BSPP), EN ISO 228-1/PF (JIS-P), JIS B 0202]		3									B
G 1½" [(BSPP), EN ISO 228-1/PF (JIS-P), JIS B 0202]		3									D
Welded flange, 316L stainless steel, raised face											
1" ASME, 150 lb		5									A
1" ASME, 300 lb		5									B
1" ASME, 600 lb		5									C
1½" ASME, 150 lb		5									D
1½" ASME, 300 lb		5									E
1½" ASME, 600 lb		5									F
2" ASME, 150 lb		5									G
2" ASME, 300 lb		5									H
2" ASME, 600 lb		5									J

Selection and ordering data (continued)

Selection and Ordering data	Order code
SIL/IEC 61508 Declaration of Conformity [SIL 2 (overspill)]	C20
INMETRO ¹⁾	E34
Operating Instructions	
All literature is available to download for free, in a range of languages, at http://www.siemens.com/processinstrumentation/documentation	

Selection and Ordering data	Order code
Accessories	See accessories shown following CLS200 Digital selection and ordering data.

¹⁾ Available only with Approvals options C, D, E.

Pointek CLS200 RF Capacitance point level switch, sanitary rod design Detects level and interface in liquids, solids, slurries, and foam. Adjustable, 5.5 m (18.04 ft), insertion, adaptable sensitivity, with the ability to tune out build-up on probe.	Article No.										
	7	M	L	5	6	3	2	-	0	0	0
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				8						A	
1½" sanitary fitting clamp				8						B	
2" sanitary fitting clamp				8						C	
2½" sanitary fitting clamp				8						D	
3" sanitary fitting clamp (Note: Sanitary connection dimensionally corresponds to the applicable ISO 2852 standard)				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)										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	
Add Order code Y01 and plain text: "Insertion length ... mm"											
Extended rod, 110 ... 350 mm (4.3 ... 13.78 inch)										M	
Extended rod, 351 ... 1 000 mm (13.78 ... 39.37 inch)										N	
Extended rod, 1 001 ... 2 000 mm (39.41 ... 78.74 inch)										P	
Extended rod, 2 001 ... 3 000 mm (78.78 ... 118.11 inch)										Q	
Extended rod, 3 001 ... 4 000 mm (118.15 ... 157.48 inch)										R	
Extended rod, 4 001 ... 5 000 mm (157.52 ... 196.85 inch)										S	
Extended rod, 5 001 ... 5 500 mm (196.89 ... 216.53 inch)										T	
Thermal isolator											
Thermal isolator										0	
With thermal isolator [for process connection temperatures over 85 °C (185 °F)]										1	
Remote mount electronics and mounting bracket											
Remote mount electronics and mounting bracket										2	
Remote mount electronics with 5 m (197 inch) of cable										3	
Wetted seals											
FKM										0	
FFKM [for process temperatures above -20 °C (-4 °F)]										1	
Probe material											
316L stainless steel with PPS probe body										0	
316L stainless steel with PVDF probe body										1	

Selection and ordering data (continued)

Selection and Ordering data	Order code
Operating Instructions All literature is available to download for free, in a range of languages, at http://www.siemens.com/processinstrumentation/documentation	

Selection and Ordering data	Order code
Accessories	See accessories shown following CLS200 Digital selection and ordering data.

¹⁾ Available only with Approvals options C, D, E.

Pointek CLS200 RF Capacitance point level switch, sliding coupling design Detects level and interface in liquids, solids, slurries, and foam. Adjustable, 5.5 m (18.04 ft), insertion, adaptable sensitivity, with the ability to tune out build-up on probe.		Article No.												
		7	M	L	5	6	3	-	0	0	0	0	0	0
Process connection														
<u>Threaded, 316L stainless steel</u>														
¾" NPT [(Taper), ASME B1.20.1]		0	A											
1" NPT [(Taper), ASME B1.20.1]		0	B											
1¼" NPT [(Taper), ASME B1.20.1]		0	C											
1½" NPT [(Taper), ASME B1.20.1]		0	D											
R ¾" [(BSPT), EN 10226/PT (JIS-T), JIS B 0203]		1	A											
R 1" [(BSPT), EN 10226/PT (JIS-T), JIS B 0203]		1	B											
R 1½" [(BSPT), EN 10226/PT (JIS-T), JIS B 0203]		1	D											
G ¾" [(BSPP), EN ISO 228-1/PF (JIS-P), JIS B 0202]		3	A											
G 1" [(BSPP), EN ISO 228-1/PF (JIS-P), JIS B 0202]		3	B											
G 1½" [(BSPP), EN ISO 228-1/PF (JIS-P), JIS B 0202]		3	D											
Probe length (length from flange face) (threaded lengths include process thread)														
<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	
<u>Add Order code Y01 and plain text: "Insertion length ... mm"</u>														
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	
Thermal isolator														
Without thermal isolator									0					
With thermal isolator [for process connection temperatures over 85 °C (185 °F)]									1					
Remote mount electronics and mounting bracket														
With 2 m (79 inch) of cable ¹⁾									2					
With 5 m (197 inch) of cable ¹⁾									3					
Wetted seals														
FKM and PTFE									0					
FKM 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	

Pointek CLS200 - Standard

Selection and ordering data (continued)

	Article No.
Pointek CLS200 RF Capacitance point level switch, sliding coupling design Detects level and interface in liquids, solids, slurries, and foam. Adjustable, 5.5 m (18.04 ft), insertion, adaptable sensitivity, with the ability to tune out build-up on probe.	7ML5633- ● ● ● ● ● - ● ● ● 0
Approvals	
Dust Ignition Proof: CE, UKCA, RCM, ATEX II 1/2 D Ex ia/tb [ia Da] IIIC TX Da/Db, ATEX II 2(1) D Ex ia tb [ia Da] IIIC TX Db, ATEX II 1 D Ex ia IIIC TX Da, ATEX II 1/2 D Ex ia IIIC TX Da/Db UKEX II 1/2 D Ex ia/tb [ia Da] IIIC TX Da/Db, UKEX II 2(1) D Ex ia tb [ia Da] IIIC TX Db, UKEX II 1 D Ex ia IIIC TX Da, UKEX II 1/2 D Ex ia IIIC TX Da/Db	C
Flameproof Enclosure with IS Probe: CE, UKCA, RCM, ATEX II 1/2 G Ex ia/db [ia Ga] IIC TX Ga/Gb, ATEX II 1/2 D Ex ia/tb [ia Da] IIIC TX Da/Db, ATEX II 2(1) G Ex db ia [ia Ga] IIC TX Gb, ATEX II 2(1) D Ex ia tb [ia Da] IIIC TX Db, ATEX II 1 G Ex ia IIC TX Ga, ATEX II 1 D Ex ia IIIC TX Da, ATEX II 1/2 D Ex ia IIIC TX Da/Db UKEX II 1/2 G Ex ia/db [ia Ga] IIC TX Ga/Gb, UKEX II 1/2 D Ex ia/tb [ia Da] IIIC TX Da/Db, UKEX II 2(1) G Ex db ia [ia Ga] IIC TX Gb, UKEX II 2(1) D Ex ia tb [ia Da] IIIC TX Db, UKEX II 1 G Ex ia IIC TX Ga, UKEX II 1 D Ex ia IIIC TX Da, UKEX II 1/2 D Ex ia IIIC TX Da/Db	D
Flameproof Enclosure with IS Probe, with Overfill Protection: CE, UKCA, RCM, WHG, ATEX II 1/2 G Ex ia/db [ia Ga] IIC TX Ga/Gb, ATEX II 1/2 D Ex ia/tb [ia Da] IIIC TX Da/Db, ATEX II 2(1) G Ex db ia [ia Ga] IIC TX Gb, ATEX II 2(1) D Ex ia tb [ia Da] IIIC TX Db, ATEX II 1 G Ex ia IIC TX Ga, ATEX II 1 D Ex ia IIIC TX Da, ATEX II 1/2 D Ex ia IIIC TX Da/Db UKEX II 1/2 G Ex ia/db [ia Ga] IIC TX Ga/Gb, UKEX II 1/2 D Ex ia/tb [ia Da] IIIC TX Da/Db, UKEX II 2(1) G Ex db ia [ia Ga] IIC TX Gb, UKEX II 2(1) D Ex ia tb [ia Da] IIIC TX Db, UKEX II 1 G Ex ia IIC TX Ga, UKEX II 1 D Ex ia IIIC TX Da, UKEX II 1/2 D Ex ia IIIC TX Da/Db	E
Dust Ignition Proof with IS Probe CSA/ FM Class II, III Div.1 Gr. E, F, G T4	F
Explosion Proof Enclosure with IS Probe CSA/ FM Class I, II, III Div.1 Gr.A, B, C, D, E, F, G T4	G
General Purpose (CSA, FM)	H
Ordinary Locations/General Purpose (Non-Ex): CE, UKCA, RCM	J
Ordinary Locations/General Purpose (Non-Ex) with Overfill Protection: CSA, FM, CE, UKCA, RCM, WHG	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) Available with Approvals options F ... H.

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

Selection and Ordering data	Order code
Stainless steel tag [70 x 13 mm (2.75 x 0.5 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

Selection and ordering data (continued)

Selection and Ordering data	Order code
SIL/IEC 61508 Declaration of Conformity [SIL 2 (overspill)]	C20
INMETRO ¹⁾	E34
Operating Instructions	
All literature is available to download for free, in a range of languages, at http://www.siemens.com/processinstrumentation/documentation	

Selection and Ordering data	Order code
Accessories	See accessories shown following CLS200 Digital selection and ordering data.

¹⁾ Available only with Approval options C, D, E.

Technical specifications

Pointek CLS200 - Standard	
Mode of operation	
Measuring principle	Inverse frequency shift capacitive level detection
Input	
Measured variable	Change in piconFarad (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⁾
• Storage temperature	-40 ... +85 °C (-40 ... +185 °F)
• Installation category	II
• Pollution degree	4
Medium conditions	
• 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)

Pointek CLS200 - Standard	
• Process pressure (sliding coupling version)	-1 ... +10 bar g (-14.6 ... +150 psi g) (nominal)
Electromagnetic compatibility	
To comply with CE and UKCA EMC regulations (where applicable); the CLS200 should be installed per the instruction manual.	
Design	
Material	
• Enclosure	Epoxy-coated aluminum with gasket
• Optional thermal isolator	316L stainless steel
Connection	Removable terminal block, max. 2.5mm 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	
Dust Ignition Proof	CSA, FM, CE, UKCA, RCM ATEX II 1/2 D Ex ia/tb [ia Da] IIIC TXDa/Db, ATEX III 2(1) D Ex ia tb [ia Da] IIIC TX Db UKEX II 1/2 D Ex ia/tb [ia Da] IIIC TXDa/Db, UKEX III 2(1) D Ex ia tb [ia Da] IIIC TX Db
Flameproof Enclosure With IS Probe	ATEX II 1/2 G Ex ia/db [ia Ga] IIC TX Ga/Gb, ATEX II 2(1) G Ex db ia [ia Ga] IIC TX Gb UKEX II 1/2 G Ex ia/db [ia Ga] IIC TX Ga/Gb, UKEX II 2(1) G Ex db ia [ia Ga] IIC TX Gb
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

¹⁾ When operation is in areas classified as hazardous, observe restrictions according to relevant certificate. See also CLS200 pressure/temperature curves.

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

³⁾ Pressure rating of process seal is temperature dependent. See also CLS200 pressure/temperature curves.

Pointek CLS200 - Standard

Technical specifications (continued)

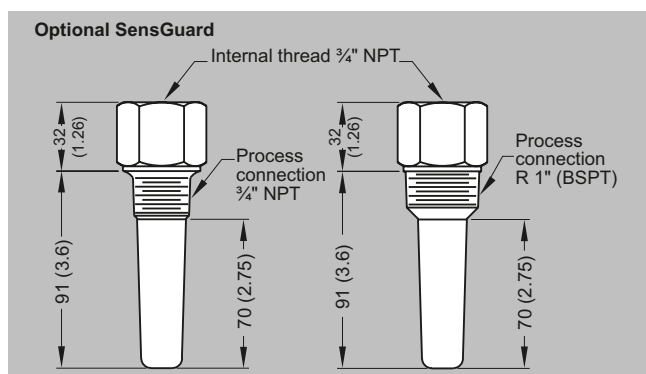
Design: Probe	Rod version	Sanitary version	Cable version	Sliding Coupling version
Max. length	5 500 mm (216.53 inch)	5 500 mm (216.53 inch)	<ul style="list-style-type: none"> 30 000 mm (1 181.1 inch) liquids and slurries 5 000 mm (196.85 inch) solids (under loads) 	5 500 mm (216.53 inch)
Process connection	R ¾", 1", 1¼", 1½" [(BSPT), EN 10226/PT (JIS-T), JIS B 0203] ¾", 1", 1¼", 1½" NPT [(Taper), 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), 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), 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)

Options



Optional SensGuard, dimensions in mm (inch)