

Overview



Pointek CLS300 (digital version) is an inverse frequency shift capacitance level and material detection switch with optional rod/cable choices and configurable output. It is ideal for detecting liquids, solids, slurries, foam, and interfaces in demanding conditions where high pressure and temperatures are present 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

- Active-Shield technology so measurement is unaffected by material buildup or nozzle interference in active shield section
- Performs in extremely abrasive conditions because of solid rod construction
- Push-button calibration, full-function diagnostics
- 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 CLS300 digital version provides an integral LCD display for stand-alone use, with PROFIBUS PA communication (Profile version 3.0, Class B) when required. Solid-state switch alarm is standard.

The robust design of CLS300 makes it specifically applicable for heavy solids applications where abrasive materials occur as in the mining industry.

The fully potted electronics are unaffected by condensation, dust or vibration.

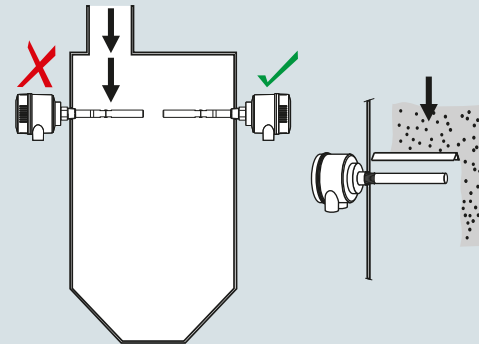
Wetted parts are made of stainless steel with a PFA shield for high chemical resistance, and of ceramic and stainless steel for high temperature version. Materials with low or high dielectric constants can be accurately detected. The unique Active Shield suppresses interference from material buildup or long installation nozzles.

The unique modular design of the Pointek CLS300 provides a wide range of configurations, process connections, extensions and approvals to meet the temperature and pressure requirements of specific applications. The modular design makes ordering easier and reduces stocking requirements. A wide range of probe configurations are available, including rod and cable versions.

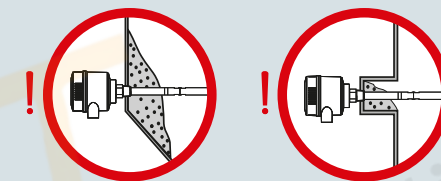
- Key Applications: liquids, slurries, bulk solids, relatively high pressure and temperature, hazardous areas, milling and mining applications

Configuration

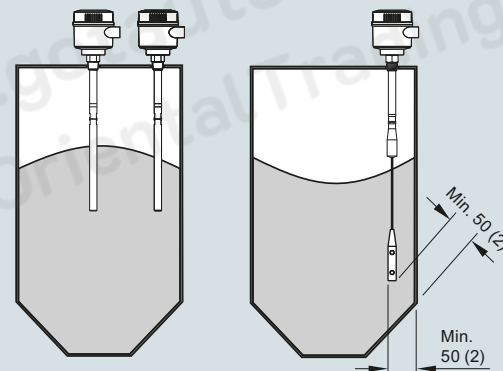
Installation



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



Build up of material in active shield area does not affect switch operation.



Install probe at least 50 (2) from tank wall.
Note angle of repose and adjust accordingly.

Pointek CLS300 installation, dimensions in mm (inch)

Level measurement

Point level measurement

RF Capacitance switches

Pointek CLS300 - Digital

Technical specifications

Mode of operation		Power supply	
Measuring principle	Inverse frequency shift capacitive level detection	Bus voltage (at process connection)	<ul style="list-style-type: none"> Standard: 12 ... 30 V DC Intrinsically Safe: 12 ... 24 V DC
Input		Current consumption	12.5 mA
Measured variable	Change in picroFarad (pF)	Certificates and approvals	
Output		General Purpose	CSA, FM, CE, RCM
Solid-state output	Galvanically isolated Against reversed polarity (bipolar)	Dust Ignition Proof	ATEX II 1/2 D, 2 D IP6X T100 °C
<ul style="list-style-type: none"> Output Protection Max. switching voltage 		Flameproof Enclosure With IS Probe	ATEX II 1/2 G EEx d[ia] IIC T6 ... T4 ATEX II 1/2 D T100 °C
<ul style="list-style-type: none"> Max. load current Voltage drop Time delay (pre or post switching) 	<ul style="list-style-type: none"> 30 V (DC) 30 V peak (AC) 	Dust Ignition Proof With IS Probe	CSA/FM Class II, Div. 1, Groups E, F, G CSA/FM Class III T4
Fail-safe mode	< 1 V, typical at 50 mA	Intrinsically Safe ⁴⁾	ATEX II 1 G EEx ia IIC T6 ... T4 ATEX II 1/2 D, 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
Connection	Programmable by user (0 ... 100 s)	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
Accuracy		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
Resolution	1 % change in actual capacitance	Marine	Lloyds Register of Shipping, Categories ENV1, ENV2, and ENV5
<ul style="list-style-type: none"> Min. sensitivity (pF) Max. temperature error 	0.2 % of actual capacitance value	Others	Pattern Approval (China)
Rated operating conditions¹⁾		Communication	
Installation conditions	Indoor/outdoor	PROFIBUS PA (IEC 61158 CPF3 CP3/2)	FISCO field device
<ul style="list-style-type: none"> Location 		<ul style="list-style-type: none"> Relative dielectric constant ϵ_r Process temperature - Rod/Cable version - High Temperature version Process pressure³⁾ 	
Ambient conditions	-40 ... +85 °C (-40 ... +185 °F) ²⁾	<ol style="list-style-type: none"> When operation is in areas classified as hazardous, observe restrictions according to relevant certificate. See also Pressure/Temperature curves starting on page 5/57. 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 starting on page 5/57. Barrier or Intrinsically Safe power supply required for Intrinsically Safe protection 	
<ul style="list-style-type: none"> Ambient temperature Storage temperature 	-40 ... +85 °C (-40 ... +185 °F)		
Medium conditions	Liquids, bulk solids, slurries, interfaces, and applications with viscous materials		
<ul style="list-style-type: none"> Min. 1.5 	Min. 1.5		
Design			
Material (enclosure)	Powder-coated aluminum with gasket		
Degree of protection	Standard: Type 4/NEMA 4/IP65 Optional: Type 4/NEMA 4/IP68		
Cable inlet	2 x M20 x 1.5 thread (option: 2 x ½" NPT conduit entry including 1 plugged entry)		
Controls and displays			
Local display	LCD		
Configuration	<ul style="list-style-type: none"> Locally, using 3 button keypad (for standalone operation) Remotely, using SIMATIC PDM (for installation on a network) 		

Design: Probe

	Rod version	High Temperature version	Cable version
Length	Min. 250 mm (9.8 inch), max. 1 000 mm (40 inch)	Min. 250 mm (9.8 inch), max. 1 000 mm (40 inch)	Min. 1 000 mm (40 inch), max. 25 000 mm (984 inch)
Sensor wetted parts	PFA (no insulation on active probe), 316L stainless steel, PEEK isolators	Ceramic (ZrO ₂ ¹⁾ isolators (no insulation on active probe), 316L stainless steel	316 stainless steel, optional PFA, PEEK isolators
O-ring seal material	FKM (optional FFKM) ²⁾	Graphite ²⁾	FKM (optional FFKM) ²⁾
Thermal isolator	Optional	Standard	Optional
Extension	User selectable length	User selectable length	User selectable cable length

¹⁾ Zirconium Oxide

²⁾ For caustic materials, consult a local sales person for alternative O-rings. For more information, please visit <http://www.usa.siemens.com/level>.

Level measurement
Point level measurement
RF Capacitance switches

Pointek CLS300 - Digital

Selection and ordering data	Article No.	Article No.
<p>Pointek CLS300 RF Capacitance point level switch, digital, rod design.</p> <p>Detects level and interface in aggressive liquids, solids, slurries, and foam. Adjustable, 1 m (3.28 ft), insertion, adaptable sensitivity, and active shield to tune out build-up on probe. With display and digital communications.</p> <p>➤ Click on the Article No. for the online configuration in the PIA Life Cycle Portal.</p> <p>Process connection</p> <p>Threaded, 316L stainless steel</p> <p>¾" NPT [(Taper), ANSI/ASME B1.20.1] 0 A</p> <p>1" NPT [(Taper), ANSI/ASME B1.20.1] 0 B</p> <p>1¼" NPT [(Taper), ANSI/ASME B1.20.1] 0 C</p> <p>1½" NPT [(Taper), ANSI/ASME B1.20.1] 0 D</p> <p>R ¾" [(BSPT), EN 10226/PT (JIS-T), JIS B 0203] 1 A</p> <p>R 1" [(BSPT), EN 10226/PT (JIS-T), JIS B 0203] 1 B</p> <p>R 1½" [(BSPT), EN 10226/PT (JIS-T), JIS B 0203] 1 D</p> <p>G ¾" [(BSPP), EN ISO 228-1/PF (JIS-P), JIS B 0202] 3 A</p> <p>G 1" [(BSPP), EN ISO 228-1/PF (JIS-P), JIS B 0202] 3 B</p> <p>G 1½" [(BSPP), EN ISO 228-1/PF (JIS-P), JIS B 0202] 3 D</p> <p><u>Welded flange, 316L stainless steel, raised face</u></p> <p>1" ASME, 150 lb 5 A</p> <p>1" ASME, 300 lb 5 B</p> <p>1" ASME, 600 lb 5 C</p> <p>1½" ASME, 150 lb 5 D</p> <p>1½" ASME, 300 lb 5 E</p> <p>1½" ASME, 600 lb 5 F</p> <p>2" ASME, 150 lb 5 G</p> <p>2" ASME, 300 lb 5 H</p> <p>2" ASME, 600 lb 5 J</p> <p>3" ASME, 150 lb 5 K</p> <p>3" ASME, 300 lb 5 L</p> <p>3" ASME, 600 lb 5 M</p> <p>4" ASME, 150 lb 5 N</p> <p>4" ASME, 300 lb 5 P</p> <p>4" ASME, 600 lb 5 Q</p> <p><u>Welded flange, 316L stainless steel, Type A flat faced</u></p> <p>DN 25, PN 16 6 A</p> <p>DN 25, PN 40 6 B</p> <p>DN 40, PN 16 6 C</p> <p>DN 40, PN 40 6 D</p> <p>DN 50, PN 16 6 E</p> <p>DN 50, PN 40 6 F</p> <p>DN 80, PN 16 6 G</p> <p>DN 80, PN 40 6 H</p> <p>DN 100, PN 16 6 J</p> <p>DN 100, PN 40 6 K</p> <p>(Note: Flange bolting patterns and facings dimensionally correspond to the applicable ASME B16.5 or EN 1092-1 standard.)</p> <p>Probe length</p> <p>(length from flange face)</p> <p>(threaded lengths include process thread)</p> <p>Note: No Y01 needed in Order code for standard lengths</p> <p>Standard version, rod 350 mm (13.78 inch) A</p> <p>Extended rod, length 500 mm (19.69 inch) B</p> <p>Extended rod, length 750 mm (29.53 inch) C</p> <p>Extended rod, length 1 000 mm (39.37 inch) D</p>	<p>7ML5660-</p>	<p>Pointek CLS300 RF Capacitance point level switch, digital, rod design.</p> <p>Detects level and interface in aggressive liquids, solids, slurries, and foam. Adjustable, 1 m (3.28 ft), insertion, adaptable sensitivity, and active shield to tune out build-up on probe. With display and digital communications.</p> <p>Add Order code Y01 and plain text: "Insertion length ... mm"</p> <p>Extended rod, factory adjusted length 250 ... 499 mm (9.8 ... 19.65 inch) E</p> <p>Extended rod, factory adjusted length 500 ... 749 mm (19.69 ... 29.49 inch) F</p> <p>Extended rod, factory adjusted length 750 ... 999 mm (29.53 ... 39.3 inch) G</p> <p>Thermal isolator</p> <p>Without thermal isolator 0</p> <p>With thermal isolator [for process connection temperatures over 85 °C (185 °F)] 1</p> <p>Wetted seals</p> <p>FKM 0</p> <p>FFKM [for process temperatures above -20 °C (-4 °F)] 1</p> <p>Probe material</p> <p>316L stainless steel with PFA lining and PEEK isolators 0</p> <p>Approvals</p> <p>Dust Ignition Proof:</p> <p>CE, RCM, ATEX II ½ D, 2 D IP6X T100 °C B</p> <p>Intrinsically Safe¹⁾ CE, RCM, ATEX II 1 G EEx ia IIC T6 ... T4, ATEX II ½ D, 2 D IP6X T100 °C C</p> <p>Flameproof Enclosure with IS Probe: CE, RCM, ATEX II ½ G EEx d[ia] IIC T6 ... T4, ATEX II ½ D T100 °C D</p> <p>Dust Ignition Proof with IS Probe: CSA/FM Class II, Div. 1, Groups E, F, G CSA/FM Class III T4 E</p> <p>Intrinsically Safe¹⁾ 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 F</p> <p>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</p> <p>General Purpose (CSA, FM) H</p> <p>General Purpose (CSA, FM, CE, RCM) J</p> <p>Enclosure and Lid</p> <p>Aluminum epoxy coated</p> <p>2 x ½" NPT via adapter - cable inlet, IP65 A</p> <p>2 x M20 x 1.5 cable inlet, IP65 B</p> <p>2 x ½" NPT via adapter - cable inlet, IP68 C</p> <p>2 x M20 x 1.5 cable inlet, IP68 D</p> <p>Active shield length</p> <p>Standard length - (125 mm threaded, 105 mm flanged) 0</p> <p>Extended shield - (250 mm threaded, 230 mm flanged)²⁾ 1</p> <p>Extended shield - (400 mm threaded, 380 mm flanged)³⁾ 2</p>

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Level measurement

Point level measurement
RF Capacitance switches

Pointek CLS300 - Digital

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Selection and ordering data	Order code		Article No.
<p>Further designs</p> <p>Please add "-Z" to Article No. and specify Order code(s).</p> <p>Total insertion length: enter the total insertion length in plain text description</p> <p>Stainless steel tag [70 x 13 mm (2.75 x 0.5 inch)]: Measuring-point number/identification (max. 27 characters) specify in plain text</p> <p>Manufacturer's test certificate: M to DIN 55350, Part 18 and to ISO 9000</p> <p>Material inspection Certificate Type 3.1 per EN 10204</p> <p>INMETRO¹⁾</p>	<p>Y01</p> <p>Y15</p> <p>C11</p> <p>C12</p> <p>E34</p>	<p>Pointek CLS300 RF Capacitance point level switch, digital, cable design.</p> <p>Detects level and interface in aggressive liquids, solids, slurries, and foam. Cable extension options to 25 m (82.02 ft), adaptable sensitivity, with active shield to tune out build-up on probe. With display and digital communications.</p> <p>➔ Click on the Article No. for the online configuration in the PIA Life Cycle Portal.</p>	<p>7ML561-</p>
<p>Operating Instructions</p> <p>All literature is available to download for free, in a range of languages, at</p> <p>http://www.siemens.com/processinstrumentation/documentation.</p>	<p>See page 4/69</p>	<p>Process connection</p> <p><u>Threaded, 316L stainless steel</u></p> <p>1¼" NPT [(Taper), ANSI/ASME B1.20.1]</p> <p>1½" NPT [(Taper), ANSI/ASME B1.20.1]</p> <p>R 1½" [(BSPT), EN 10226/PT (JIS-T), JIS B 0203]</p> <p>G 1½" [(BSPP), EN ISO 228-1/PF (JIS-P), JIS B 0202]</p> <p><u>Welded flange, 316L stainless steel, raised face</u></p> <p>1½" ASME, 150 lb</p> <p>1½" ASME, 300 lb</p> <p>1½" ASME, 600 lb</p> <p>2" ASME, 150 lb</p> <p>2" ASME, 300 lb</p> <p>2" ASME, 600 lb</p> <p>3" ASME, 150 lb</p> <p>3" ASME, 300 lb</p> <p>3" ASME, 600 lb</p> <p>4" ASME, 150 lb</p> <p>4" ASME, 300 lb</p> <p>4" ASME, 600 lb</p>	<p>0 C</p> <p>0 D</p> <p>1 D</p> <p>3 D</p> <p>5 D</p> <p>5 E</p> <p>5 F</p> <p>5 G</p> <p>5 H</p> <p>5 J</p> <p>5 K</p> <p>5 L</p> <p>5 M</p> <p>5 N</p> <p>5 P</p> <p>5 Q</p>
<p>Accessories</p> <p>¹⁾ Available only with Approvals options B and D.</p>	<p>See page 4/69</p>	<p><u>Welded flange, 316L stainless steel, Type A flat faced</u></p> <p>DN 40, PN 16</p> <p>DN 40, PN 40</p> <p>DN 50, PN 16</p> <p>DN 50, PN 40</p> <p>DN 80, PN 16</p> <p>DN 80, PN 40</p> <p>DN 100, PN 16</p> <p>DN 100, PN 40</p> <p>(Note: Flange bolting patterns and facings dimensionally correspond to the applicable ASME B16.5 or EN 1092-1 standard.)</p>	<p>6 C</p> <p>6 D</p> <p>6 E</p> <p>6 F</p> <p>6 G</p> <p>6 H</p> <p>6 J</p> <p>6 K</p>
		<p>Probe length</p> <p>(length from flange face) (threaded lengths include process thread)</p> <p>Note: No Y01 needed in Order code for standard lengths</p> <p>Extended cable, 3 000 mm (118.11 inch), length can be shortened by customer</p> <p>Extended cable, 6 000 mm (236.22 inch), length can be shortened by customer</p> <p>Add Order code Y01 and plain text: <u>"Insertion length ... mm"</u></p> <p>Extended cable, 500 ... 1 000 mm (19.69 ... 39.37 inch)</p> <p>Extended cable, 1 001 ... 5 000 mm (39.41 ... 196.85 inch)</p> <p>Extended cable, 5 001 ... 10 000 mm (196.89 ... 393.70 inch)</p> <p>Extended cable, 10 001 ... 15 000 mm (393.74 ... 590.55 inch)</p> <p>Extended cable, 15 001 ... 20 000 mm (590.59 ... 787.40 inch)</p> <p>Extended cable, 20 001 ... 25 000 mm (787.44 ... 984.25 inch)</p>	<p>A</p> <p>B</p> <p>E</p> <p>F</p> <p>G</p> <p>H</p> <p>J</p> <p>K</p>

Level measurement
Point level measurement
RF Capacitance switches

Pointek CLS300 - Digital

Selection and ordering data	Article No.	Order code
<p>Pointek CLS300 RF Capacitance point level switch, digital, cable design. Detects level and interface in aggressive liquids, solids, slurries, and foam. Cable extension options to 25 m (82.02 ft), adaptable sensitivity, with active shield to tune out build-up on probe. With display and digital communications.</p>	<p>7ML5661- -</p>	<p><i>Further designs</i> Please add "Z" to Article No. and specify Order code(s).</p>
<p>Thermal isolator Without thermal isolator With thermal isolator [for process connection temperatures over 85 °C (185 °F)]</p>	<p>0 1</p>	<p>Total insertion length: enter the total insertion length in plain text description Y01</p>
<p>Wetted seals FKM FFKM [for process temperatures above -20 °C (-4 °F)]</p>	<p>0 1</p>	<p>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</p>
<p>Probe material Bare 316L stainless steel cable, PEEK isolators and 316L stainless steel cable weight PFA coated cable, PEEK isolators and 316L stainless steel cable weight</p>	<p>0 1</p>	<p>Manufacturer's test certificate: M to DIN 55350, Part 18 and to ISO 9000 C11 Material inspection Certificate Type 3.1 per EN 10204 C12 INMETRO¹⁾ E34</p>
<p>Approvals Dust Ignition Proof: CE, RCM, ATEX II ½ D, 2 D IP6X T100 °C Intrinsically Safe¹⁾ CE, RCM, ATEX II 1 G EEx ia IIC T6 ... T4, ATEX II ½ D, 2 D IP6X T100 °C Flameproof Enclosure with IS Probe: CE, RCM, ATEX II ½ G EEx d[ia] IIC T6 ... T4, ATEX II ½ D T100 °C Intrinsically Safe¹⁾ 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 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 (CSA, FM, CE, RCM)</p>	<p>B C D F G H J</p>	<p><i>Operating Instructions</i> All literature is available to download for free, in a range of languages, at http://www.siemens.com/processinstrumentation/documentation. <i>Accessories</i> See page 4/69</p>
<p>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</p>	<p>A B C D</p>	<p>¹⁾ Available only with Approvals options B and D.</p>
<p>Active shield length Standard length - (125 mm threaded, 105 mm flanged) Extended shield - (250 mm threaded, 230 mm flanged) Extended shield - (400 mm threaded, 380 mm flanged)²⁾</p>	<p>0 1 2</p>	

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

²⁾ Available with Probe version options A, B, F... K, only [≥ 1 000 mm (39.7 inch)].

Level measurement

Point level measurement
RF Capacitance switches

Pointek CLS300 - Digital

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Selection and ordering data

Article No.

Article No.

Pointek CLS300 RF Capacitance point level switch, digital, high temperature design.

Detects level and interface in aggressive liquids, solids, slurries, and foam. Adjustable, 1 m (3.28 ft), insertion, adaptable sensitivity, with active shield to tune out build-up on probe. With display and digital communications.

➤ 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

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

- Standard version rod, 350 mm (13.78 inch) **A**
- Extended rod, length 500 mm (19.69 inch) **B**
- Extended rod, length 750 mm (29.53 inch) **C**
- Extended rod, length 1 000 mm (39.37 inch) **D**

7ML562-

0 -

Pointek CLS300 RF Capacitance point level switch, digital, high temperature design.

Detects level and interface in aggressive liquids, solids, slurries, and foam. Adjustable, 1 m (3.28 ft), insertion, adaptable sensitivity, with active shield to tune out build-up on probe. With display and digital communications.

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

Extended rod, factory adjusted length 250 ... 499 mm (9.8 ... 19.65 inch) **E**

Extended rod, factory adjusted length 500 ... 749 mm (19.69 ... 29.49 inch) **F**

Extended rod, factory adjusted length 750 ... 999 mm (29.53 ... 39.3 inch) **G**

Wetted seals

Graphite **0**

Probe material

316L stainless steel with ceramic (ZrO₂)isolators **0**

Approvals

Dust Ignition Proof
CE, RCM, ATEX II 1/2 D, 2 D IP6X T100 °C
Intrinsically Safe¹⁾
CE, RCM, ATEX II 1 G EEx ia IIC T6 ... T4, ATEX II 1/2 D, 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

Intrinsically Safe¹⁾
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 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 (CSA, FM, CE, RCM) **B**
C
D
F
G

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**

Active shield length

Standard length - **0**
(125 mm threaded, 105 mm flanged)
Extended shield - **1**
(250 mm threaded, 230 mm flanged)²⁾
Extended shield - **2**
(400 mm threaded, 380 mm flanged)³⁾

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

²⁾ Available with Probe version options B ... D, F, G only [≥ 500 mm (19.69 inch)].

³⁾ Available with Probe version options C, D, and G only [≥ 750 mm (29.53 inch)].

Level measurement

Point level measurement

RF Capacitance switches

Pointek CLS300 - Digital

Selection and ordering data	Order code	Article No.
<p>Further designs</p> <p>Please add "-Z" to Article No. and specify Order code(s).</p> <p>Total insertion length: enter the total insertion length in plain text description</p> <p>Stainless steel tag [70 x 13 mm (2.75 x 0.5 inch)]: Measuring-point number/identification (max. 27 characters) specify in plain text</p> <p>Manufacturer's test certificate: M to DIN 55350, Part 18 and to ISO 9000</p> <p>Material Inspection Certificate Type 3.1 per EN 10204</p> <p>INMETRO¹⁾</p> <p>Operating Instructions</p> <p>All literature is available to download for free, in a range of languages, at http://www.siemens.com/processinstrumentation/documentation.</p> <p>Accessories</p> <p>¹⁾ Available only with Approvals options B and D.</p>	<p>Y01</p> <p>Y15</p> <p>C11</p> <p>C12</p> <p>E34</p> <p>See page 4/69</p>	<p>Accessories</p> <p>One metallic cable gland M20 x 1.5, -40 ... +80 °C (-40 ... +176 °F) with integrated shield connection (available for PROFIBUS PA)</p> <p>General Purpose</p> <p>½" NPT General Purpose Cable Entry IP68/IP69K NEMA 6, -40 ... +80 °C (-40 ... +176 °F), Dust Ignition Proof, cable size 6 ... 12 mm (0.236 ... 0.472 inch)</p> <p>M20 x 1.5 General Purpose Cable Entry IP68/IP69K NEMA 6, -40 ... +80 °C (-40 ... +176 °F), Dust Ignition Proof, cable size 7 ... 12 mm (0.275 ... 0.472 inch)</p> <p>Hazardous Locations</p> <p>½" 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)</p> <p>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)</p> <p>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.usa.siemens.com/level.</p>
		<p>7ML1930-1AQ</p> <p>7ML1830-1JA</p> <p>7ML1830-1JC</p> <p>7ML1830-1JB</p> <p>7ML1830-1JD</p>

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