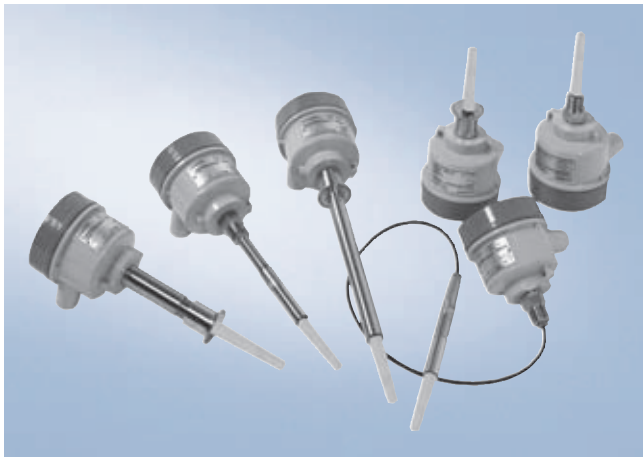


SITRANS L Level instruments

Point level measurement

Pointek CLS 200

Overview



The Pointek® CLS 200 is a versatile capacitance switch with a high level of chemical resistance. It is ideal for level detection of interfaces, solids, liquids, slurries, and foam, and for simple pump control.

Benefits

- Potted construction protects signal circuit from shock, vibration, humidity and/or condensation
- High chemical resistance
- Level detection independent of tank wall/pipe
- High/low gain switch covers wide range of applications/materials
- Analog version: 3 LED indicators for adjustment control, output status and power
- Digital version: integral LCD display and PROFIBUS PA communication if required
- Rigid, cable and sanitary versions available
- Easy installation and maintenance
- High frequency oscillation (5.5 MHz)

Application

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

The analog version has 3 LED indicators with basic relay or solid state switch alarms.

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

The power supply is galvanically isolated and accepts a wide range of voltages (12 to 250 V AC/DC for analog version and 9 to 32 V DC for digital version). The stainless steel and PPS (PVDF optional) materials used in the probe construction provides a temperature rating up to 125 °C (257 °F) on the process wetted portion of the probe. The switch responds to any materials with a dielectric constant of 1.5 or more by detecting a change in oscillating frequency, and it can be set to detect before contact or on contact with the probe. The CLS 200 operates independently of the tank wall or pipe so it does not require an external reference electrode for level detection in a non-conductive vessel such as concrete or plastic.

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

Technical specifications

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

Mode of operation

- Measuring principle Capacitive level detection
- Measurement frequency 5.5 MHz

Input

- Measured variable High and low

Output

Output signal (CLS 200 Analog)

- Relay output 1 form C (SPDT) contact, rated 8 A at 250 V AC/ 5 A at 30 V DC, resistive load
- Transistor output 250 V AC/300 V DC @100 mA or 2 VA max
- Time delay (ON and/or OFF) 1 to 60 s
- Failsafe mode Min or Max

Output signal (CLS 200 Digital)

- Relay output optional with added pcb board (stand-alone digital version only)
- Transistor output 28 V AC/40 V DC, 100 mA or 2 VA max
- Time delay (ON and/or OFF) controlled by software
- Failsafe mode Min or Max

Accuracy

- Repeatability ±1% of measurement
- Hysteresis (CLS 200 Analog) max. 2 mm (0.08") @ $\epsilon_r = 1.5$
- Hysteresis (CLS 200 Digital) 100% adjustable, in 1 count increments on display

Rated operating conditions

Installation conditions

- Location Indoor/outdoor

Ambient conditions

- Ambient temperature -40 to +85 °C (-40 to +185°F)
- Installation category II
- Pollution degree 4

Medium conditions

- Dielectric constant ϵ_r Min. 1.5
- Temperature at process connection
 - standard -40 to 85 °C (-40 to 185 °F)
 - standard with temp. extension -40 to 125 °C (-40 to 257 °F)
 - slide coupling ambient temperature
- Pressure (standard version and versions with extension) 0 to 25 bar/365 psi gauge (nominal)
(Pressure rating of process seal is temperature dependent. Contact Siemens Milltronics for derating curves.)
- Pressure (cable version) 0 to 10 bar/150 psi gauge (nominal)
- Pressure (optional sliding coupling version) ambient pressure

Design

- Material
 - Enclosure Epoxy-coated aluminum with gasket
 - Optional thermal isolator 316 stainless steel (1.4401)
- Connection Removable terminal block, max. 2.5 mm²
- Degree of protection IP65/Type 4/NEMA 4 (optional IP68)
- Cable entry 2 x M20x1.5 thread (option: 2 x ½" NPT conduit entry including 1 plugged entry), digital version has optional PROFIBUS connector

Power supply (CLS 200 Analog) 12 to 250 V AC/DC, 50/60 Hz
max. 2 VA/2 W

Power supply (CLS 200 Digital)

- bus voltage standard: 9 to 32 V DC, max. 2 VA/2 W
Intrinsically Safe: 9 to 24 V DC, max. 2 VA/2 W
- current consumption 12.5 mA

Certificates and approvals

CE, CSA_{NRTL/C}, FM
ATEX II 3 G 3D (EEx nA II T6 to T4 T=100°C)
FM/CSA Class I, Div 2, Groups A to D T4, Class II, III, Div 1, Groups E to G T4
FM/CSA Class I, II, III, Div 1, Groups A to G T6 to T4
FM/CSA Class I, Div 1, Groups A to D T4
ATEX II 1 GD (EEx ia IIC T6 to T4)
ATEX II 2 D T=100°C
ATEX II 1/2 GD (EEx d [ia] IIC T6 to T4 T=100°C)
3A Sanitary
WHG overfill protection (Germany)
Lloyd's Register of Shipping, Categories ENV1, ENV2, and ENV5

- Communication (CLS 200 Digital)**
- PROFIBUS PA (IEC 61158 CPF3 CP3/2)
 - Bus physical layer: IEC 61158-2 MBP-(IS)
 - Device profile: PROFIBUS PA profile for Process Control Devices Version 3.0, Class B
 - FISCO field device

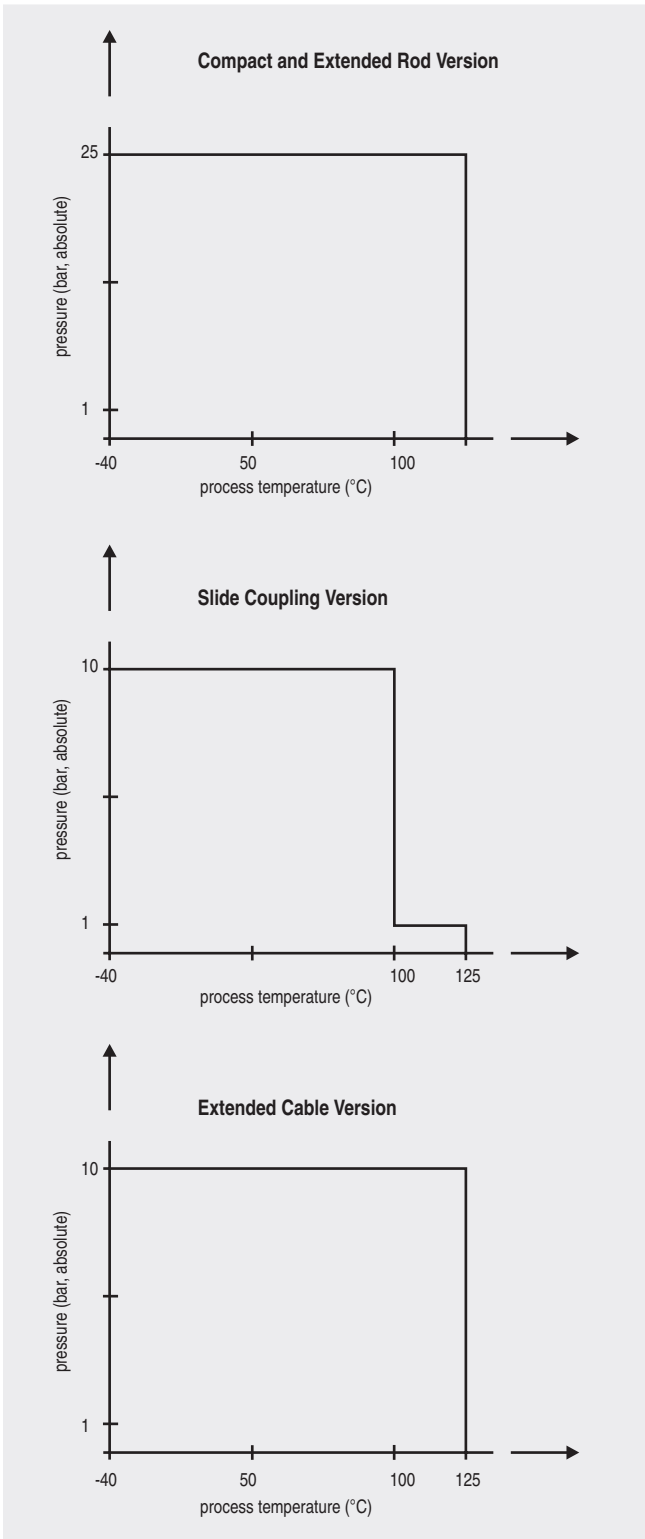
	Standard version	Sanitary version	Cable version
Max. length	5.5 m (18 ft)	5.5 m (18 ft)	35 m (114.8 ft) liquids and slurries 5 m (16.4 ft) solids (under loads)
Process Connection	¾", 1", 1¼", 1½" BSPT/NPT/JIS 316 stainless steel (1.4404)	1½"/2" sanitary fitting clamp compliant with 3A	¾", 1", 1¼", 1½" BSPT/NPT/JIS 316 stainless steel (1.4404)
Extension	316 stainless steel (1.4404)	316 stainless steel (1.4404)	Cable (stainless steel) with PVDF coating
Sensor	PPS (optional PVDF)	PPS (optional PVDF)	PPS (optional PVDF)
Thermal isolator	yes	yes	yes
Extension	yes	yes	Cable extension

SITRANS L Level instruments

Point level measurement

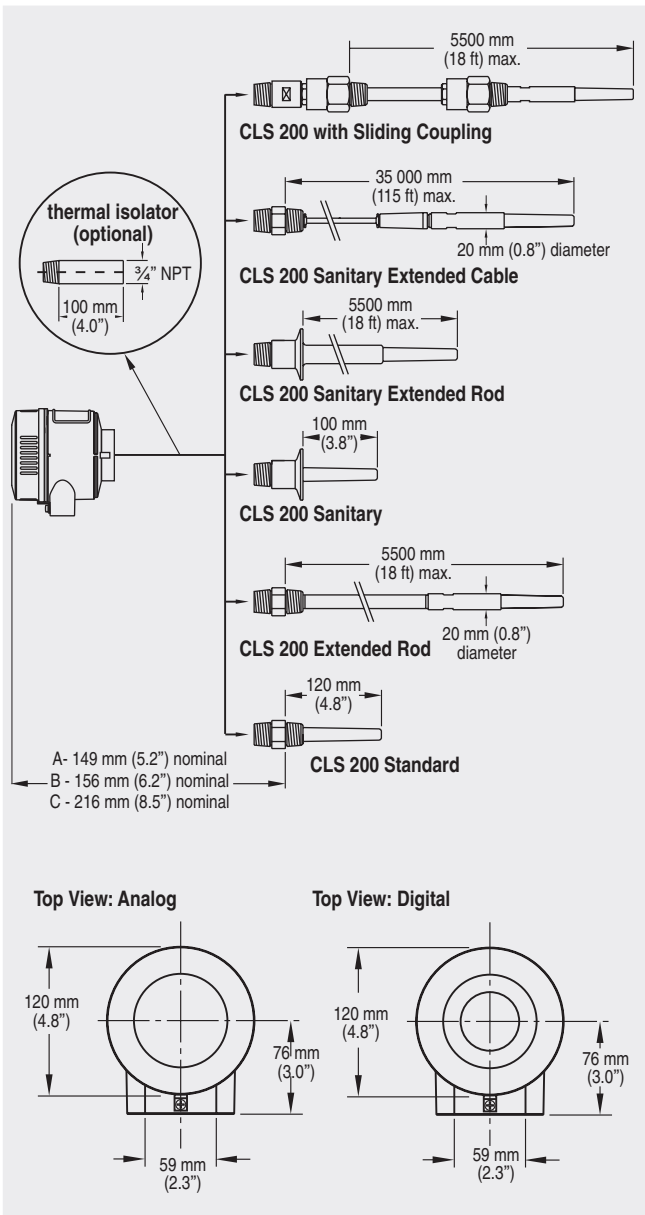
Pointek CLS 200

Characteristic curves



Pointek CLS 200 De18rating curves

Dimensional drawings

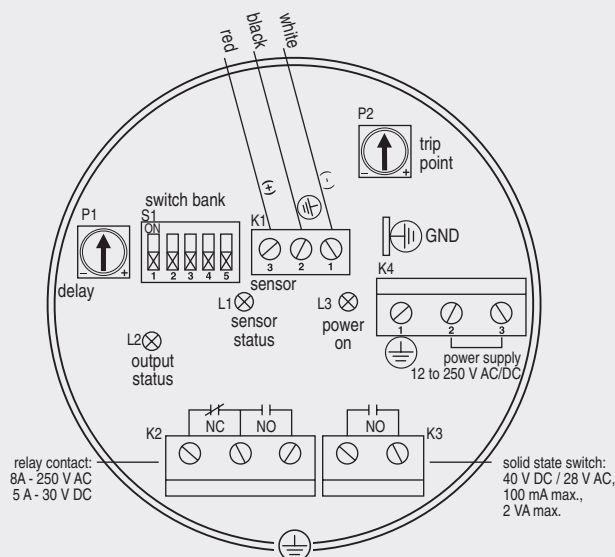


Pointek CLS 200 dimensions

5

Schematics

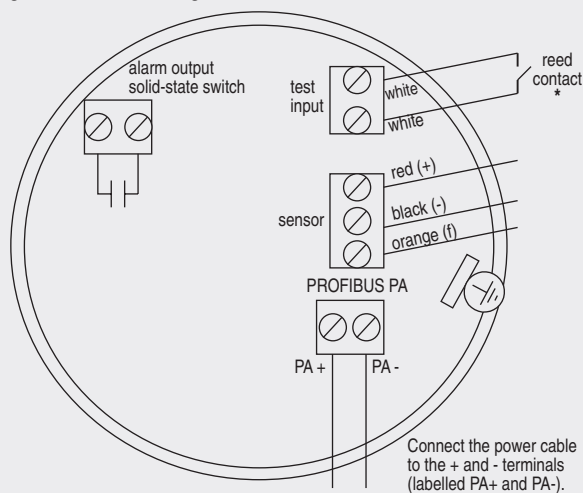
Wiring: Pointek CLS 200 Analog



Notes:

- Identification label is on underside of lid. Switch and Potentiometer settings are for illustration purposes only (Refer to Operation/Setup in manual).
- All field wiring must have insulation suitable for at least 250 V.
- Relay contact terminals are for use with equipment having no accessible live parts and wiring having insulation suitable for at least 250 V.
- Maximum working voltage between adjacent relay contacts shall be 250 V.
- Refer to the Instruction Manual or contact a Siemens Milltronics representative for detailed wiring information.

Wiring: Pointek CLS 200 Digital



Notes:

- All field wiring must have insulation suitable for at least 250 V.
- Relay contact terminals are for use with equipment having no accessible live parts and wiring having insulation suitable for at least 250 V.
- Maximum working voltage between adjacent relay contacts shall be 250 V.
- Refer to the Instruction Manual or contact a Siemens Milltronics representative for detailed wiring information.

*Magnet Activated Sensor Test

A magnet can be used to test the sensor without opening the lid of the Pointek CLS 200 Digital version. Bring the magnet close to the test area indicated on the enclosure. The sensor test starts and finishes automatically after 10 seconds. The Auxiliary reading will display either SENSOR TEST SUCCESSFUL or SENSOR TEST FAILED as rolling text.



SITRANS L Level instruments

Point level measurement

Pointek CLS 200

Ordering data	Order No.
Pointek CLS 200, threaded version	7ML5502-
With a high level of chemical resistance, Pointek CLS 200 is ideal for level detection of interfaces, solids, liquids, slurries and foam.	- 0
Note: To select Analog or Digital CLS 200 (with PROFIBUS PA option), see final place holder under Electronics/output.	
Probe version	
compact ¹⁾	0 X
extended rod, length 250 mm ²⁾	1 A
extended rod, length 350 mm ²⁾	1 B
extended rod, length 500 mm ²⁾	1 C
extended rod, length 750 mm ²⁾	1 D
extended rod, length 1000 mm ²⁾	1 E
Add order code Y01 and plain text: "Insertion length mm"	
- extended rod, length 200 to 999 mm ³⁾	1 F
- extended rod, length 1001 to 2000 mm ²⁾	1 G
- extended rod, length 2001 to 3000 mm ²⁾	1 H
- extended rod, length 3001 to 4000 mm ²⁾	1 J
- extended rod, length 4001 to 5000 mm ²⁾	1 K
- extended rod, length 5001 to 5500 mm ²⁾	1 L
extended cable, length 3000 mm, length adjustable by customer	2 A
extended cable, length 6000 mm, length adjustable by customer ¹⁾	2 B
Add order code Y01 and plain text: "Insertion length mm"	
- extended cable, length 500 to 4999 mm ¹⁾	2 C
- extended cable, length 5000 to 9999 mm ¹⁾	2 D
- extended cable, length 10000 to 14999 mm ¹⁾	2 E
- extended cable, length 15000 to 19999 mm ¹⁾	2 F
- extended cable, length 20000 to 24999 mm ¹⁾	2 G
- extended cable, length 25000 to 29999 mm ¹⁾	2 H
sanitary compact ¹⁾	3 A
Add order code Y01 and plain text: "Insertion length mm"	
- Sanitary extended, length 110 to 999 mm ¹⁾	3 B
- Sanitary extended, length 1001 to 2000 mm ¹⁾	3 C
- Sanitary extended, length 2001 to 3000 mm ¹⁾	3 D
- Sanitary extended, length 3001 to 4000 mm ¹⁾	3 E
- Sanitary extended, length 4001 to 5000 mm ¹⁾	3 F
- Sanitary extended, length 5001 to 5500 mm ¹⁾	3 G
Process connection	
¾" NPT thread	A
1" NPT thread	B
1½" NPT thread	C
¾" BSPT thread	D
1" BSPT thread	E
1½" BSPT thread	F
¾" JIS thread	G
1" JIS thread	H
1½" JIS thread	J
1¼" NPT thread	K
1" sanitary flange ⁴⁾	R
1½" sanitary flange ⁴⁾	S
2" sanitary flange ⁴⁾	T
2½" sanitary flange ⁴⁾	V
3" sanitary flange ⁴⁾	W
Approvals	
General Purpose	1
CSA/FM Class II and III Div. 1, Group E, F, G T4 ⁵⁾	2
FM Class I Div. 1, Group A, B, C, D T4 ⁵⁾	3
CSA Class I, Div. 1, Group A, B, C, D T4 ⁵⁾	4
ATEX II 1/2 D T 100 °C ⁵⁾	5
ATEX II 1/2 G EEx d [ia] IIC T6-T4 ⁵⁾	6
ATEX II 3G 2D / FM and CSA Class I, Div 2, Groups A, B, C, and D T4; Class II, III, Div 1, Groups E, F, and G T4 ⁶⁾	7

Ordering data	Order No.
Pointek CLS 200, threaded version	7ML5502-
With a high level of chemical resistance, Pointek CLS 200 is ideal for level detection of interfaces, solids, liquids, slurries and foam.	- 0
ATEX II 1G 1/2 D / FM and CSA Class I, II, Div 1, Groups A, B, C, D T4 ⁶⁾	8
ATEX II 1/2 GD / FM and CSA Class I, Div 1, Groups A, B, C, and D T4 ⁶⁾	0
Enclosure	
<u>Aluminum epoxy coated</u>	
• 2 x ½" NPT via adapter, cable entry, IP65	0
• 2 x M20x1.5 cable entry, IP65	1
• 2 x ½" NPT via adapter, cable entry, IP68	2
• 2 x M20x1.5 cable entry, IP68	3
Additional Options	
standard version	
with thermal isolator	A
with PVDF probe body	B
with thermal isolator and PVDF probe body	C
with sliding coupling	D
with thermal isolator and slide coupling	E
with sliding coupling and PVDF probe body	F
with thermal isolator, slide coupling and PVDF probe body	G
WHG approval, German overfill protection	
not required	
required (only available for electronics version 0)	A
Electronics/output	
standard analog version without display, 12 to 230 V AC/DC, solid state and relay output	0
digital version with display, 24 V DC, solid state output or PROFIBUS PA ⁷⁾	1
Further designs	
Please add "-Z" to Order No. and specify Order code(s).	
Total insertion length: enter the total insertion length in plain text description	Y01
Stainless steel tag (69 x 38 mm): enter the tag information in plain text description	Y15
Electrical connection/cable inlet: PROFIBUS connector M12 (IP67)	A01
Optional output (only in combination with Electronics version 2 and Approval option 1).	
• Relays output PCB (8A at 250 V AC/5A at 30 V DC)	A02
• Current output PCB (4/20 mA or NAMUR 0,6...1, 0/2,1...2,8 mA)	A03
Optional enclosure lid: Lid with glass window instead of closed lid without window ⁸⁾	A04
O-ring seal material (not FPM): FFPM	A22
Test Certificate: Acceptance test certificate B to DIN 500049 section 3.1 and EN 10204	C12
Remote Electronics	
• Remote mounted electronics with 2 m (79") cable and mounting bracket	A05
• Remote mounted electronics with 5 m (197") cable and mounting bracket	A06
Instruction Manual	See page 5/21
Note: The instruction manual should be ordered as a separate line on the order.	
Accessories	See page 5/21

- 1) available with additional options A to D only
- 2) available with additional options as A to H
- 3) lengths <350 mm available with additional options A to D only
- 4) available with version 3A and 3Z only.
- 5) available with electronics option 0 only.
- 6) available with electronics option 1 only.
- 7) an M12 PROFIBUS connector can be selected separately with wildcard option (A01).
- 8) Version with electronics option 1 has a standard closed lid without window; version with electronics option 2 has a standard lid with glass window.

SITRANS L Level instruments

Point level measurement

Pointek CLS 200

Ordering data	Order No.
Pointek CLS 200, welded flange With a high level of chemical resistance, Pointek CLS 200 is ideal for level detection of interfaces, solids, liquids, slurries and foam.	C) 7ML5504-
Note: To select Analog or Digital CLS 200 (with PROFIBUS PA option), see final place holder under Electronics/output.	
Probe version	
compact ¹⁾	0 X
extended rod, length 250 mm ²⁾	1 A
extended rod, length 350 mm ²⁾	1 B
extended rod, length 500 mm ²⁾	1 C
extended rod, length 750 mm ²⁾	1 D
extended rod, length 1000 mm ²⁾	1 E
<u>Add order code Y01 and plain text: "Insertion length mm"</u>	
- extended rod, length 200 to 999 mm ³⁾	1 F
- extended rod, length 1001 to 2000 mm ²⁾	1 G
- extended rod, length 2001 to 3000 mm ²⁾	1 H
- extended rod, length 3001 to 4000 mm ²⁾	1 J
- extended rod, length 4001 to 5000 mm ²⁾	1 K
- extended rod, length 5001 to 5500 mm ²⁾	1 L
extended cable, length 3000 mm, length adjustable by customer ¹⁾	2 A
extended cable, length 6000 mm, length adjustable by customer ¹⁾	2 B
<u>Add order code Y01 and plain text: "Insertion length mm"</u>	
- extended cable, length 500 to 4999 mm ¹⁾	2 C
- extended cable, length 5000 to 9999 mm ¹⁾	2 D
- extended cable, length 10000 to 14999 mm ¹⁾	2 E
- extended cable, length 15000 to 19999 mm ¹⁾	2 F
- extended cable, length 20000 to 24999 mm ¹⁾	2 G
- extended cable, length 25000 to 29999 mm ¹⁾	2 H
Process connection	
<u>AISI 316L stainless steel</u>	
1" ANSI, 150 lb	A 1
1" ANSI, 300 lb	A 2
1" ANSI, 600 lb	A 3
1½" ANSI, 150 lb	B 1
1½" ANSI, 300 lb	B 2
1½" ANSI, 600 lb	B 3
2" ANSI, 150 lb	C 1
2" ANSI, 300 lb	C 2
2" ANSI, 600 lb	C 3
3" ANSI, 150 lb	D 1
3" ANSI, 300 lb	D 2
3" ANSI, 600 lb	D 3
4" ANSI, 150 lb	E 1
4" ANSI, 300 lb	E 2
4" ANSI, 600 lb	E 3
<u>Welded, AISI 316L stainless steel</u>	
DN 25, PN 16	J 4
DN 25, PN 40	J 6
DN 40, PN 16	K 4
DN 40, PN 40	K 6
DN 50, PN 16	L 4
DN 50, PN 40	L 6
DN 80, PN 16	M 4
DN 80, PN 40	M 6
DN 100, PN 16	N 4
DN 100, PN 40 (Note: Flanges according to ANSI B16.5 style RF or DIN 2526 Form D)	N 6
Approvals	
General Purpose	1
FM and CSA Class II and III, Div 1, Group E, F, G T4 ⁵⁾	2
FM Class I, Div 1, Group A,B,C,D T4 ⁵⁾	3
CSA Class I, Div 1, Group A, B, C, D T4 ⁵⁾	4

Ordering data	Order No.
Pointek CLS 200, welded flange With a high level of chemical resistance, Pointek CLS 200 is ideal for level detection of interfaces, solids, liquids, slurries and foam.	C) 7ML5504-
ATEX II 1/2 D T 100 °C ⁵⁾	5
ATEX II 1/2 G EEx d [ia] IIC T6-T4 ⁵⁾	6
ATEX II 3G 2D / FM and CSA Class I, Div 2, Groups A, B, C and D T4; Class II, III, Div 1, Groups E, F and G T4 ⁶⁾	7
ATEX II 1G 1/2 D / FM and CSA Class I,II, Div 1, Groups A, B, C, D T4 ⁶⁾	8
ATEX II 1/2 GD / FM and CSA Class I Div I, Groups A, B, C and D T4 ⁶⁾	0
Enclosure	
<u>Aluminum epoxy coated</u>	
• 2 x ½" NPT via adapter - cable entry, IP65	0
• 2 x M20x1.5 cable entry, IP65	1
• 2 x ½" NPT via adapter - cable entry, IP68	2
• 2 x M20x1.5 cable entry, IP68	3
Additional Options	
standard version	A
with thermal isolator	B
with PVDF probe body	C
with thermal isolator and PVDF probe body	D
with sliding coupling	E
with thermal isolator and slide coupling	F
with sliding coupling and PVDF probe body	G
with thermal isolator, slide coupling and PVDF probe body	H
WHG approval, German overfill protection	
not required	A
required (only available for electronics version 0)	B
Electronics/output	
standard analog version without display, 12 to 230 V AC/DC, solid state and relay output	0
digital version with display, 24 V DC, solid state output or PROFIBUS PA ⁷⁾	1
Further designs	
Please add "-Z" to Order No. and specify Order code(s).	
Total insertion length: enter the total insertion length in plain text description	Y01
Stainless steel tag (69 x 38 mm): enter the tag information in plain text description	Y15
Electrical connection/cable inlet: PROFIBUS connector M12 (IP67)	A01
Optional output	
• Relays output PCB (8A at 250 V AC/5A at 30 V DC)	A02
• Current output PCB (4/20 mA or NAMUR 0,6...1, 0/2,1...2,8 mA)	A03
Optional enclosure lid: Lid with glass window instead of closed lid without window ⁸⁾	A04
O-ring seal (not FPM): FPM	A22
Test Certificate: Acceptance test certificate B to DIN 500049 section 3.1 and EN 10204	C12
Remote Electronics	
• Remote mounted electronics with 2 m (79") cable and mounting bracket	A05
• Remote mounted electronics with 5 m (197") cable and mounting bracket	A06
Instruction Manual	
Note: The instruction manual should be ordered as a separate line on the order.	See page 5/21
Accessories	
	See page 5/21

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

SITRANS L Level instruments

Point level measurement

Pointek CLS 200

Ordering data

Order No.

Pointek CLS 200, welded flange, PFA coated

7 M L 5 5 0 5 -

With a high level of chemical resistance, Pointek CLS 200 is ideal for level detection of interfaces, solids, liquids, slurries and foam.

Note: To select Analog or Digital CLS 200 (with PROFIBUS PA option), see final place holder under Electronics/output.

Probe version

compact¹⁾
 extended rod, length 250 mm²⁾
 extended rod, length 350 mm²⁾
 extended rod, length 500 mm²⁾
 extended rod, length 750 mm²⁾
 extended rod, length 1000 mm²⁾

0 X
 1 A
 1 B
 1 C
 1 D
 1 E

Add order code Y01 and plain text: "Insertion length mm"

- extended rod, length 200 to 999 mm³⁾
- extended rod, length 1001 to 2000 mm²⁾
- extended rod, length 2001 to 3000 mm²⁾
- extended rod, length 3001 to 4000 mm²⁾
- extended rod, length 4001 to 5000 mm²⁾
- extended rod, length 5001 to 5500 mm²⁾

1 F
 1 G
 1 H
 1 J
 1 K
 1 L

Process connection

AISI 316L stainless steel

1" ANSI, 150 lb
 1" ANSI, 300 lb
 1" ANSI, 600 lb
 1½" ANSI, 150 lb
 1½" ANSI, 300 lb
 1½" ANSI, 600 lb
 2" ANSI, 150 lb
 2" ANSI, 300 lb
 2" ANSI, 600 lb
 3" ANSI, 150 lb
 3" ANSI, 300 lb
 3" ANSI, 600 lb
 4" ANSI, 150 lb
 4" ANSI, 300 lb
 4" ANSI, 600 lb

A 1
 A 2
 A 3
 B 1
 B 2
 B 3
 C 1
 C 2
 C 3
 D 1
 D 2
 D 3
 E 1
 E 2
 E 3

Welded, AISI 316L stainless steel

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

J 4
 J 6
 K 4
 K 6
 L 4
 L 6
 M 4
 M 6
 N 4
 N 6

DN 100, PN 40 (Note: Flanges according to ANSI B16.5 style RF or DIN 2526 Form D)

Approvals

General Purpose
 FM and CSA Class II and III, Div 1, Group E, F, G T4⁵⁾
 FM Class I, Div 1, Group A,B,C,D T4⁵⁾
 CSA Class I, Div 1, Group A, B, C, D T4⁵⁾
 ATEX II 1/2 D T 100 °C⁵⁾
 ATEX II 1/2 G EEx d [ia] IIC T6-T4⁵⁾
 ATEX II 3G 2D / FM and CSA Class I, Div 2, Groups A, B, C and D T4; Class II, III, Div 1, Groups E, F and G T4⁶⁾
 ATEX II 1G 1/2 D / FM and CSA Class I,II, Div 1, Groups A, B, C, D T4⁶⁾
 ATEX II 1/2 GD / FM and CSA Class I Div I, Groups A, B, C and D T4⁶⁾

1
 2
 3
 4
 5
 6
 7
 8
 0

Ordering data

Order No.

Pointek CLS 200, welded flange, PFA coated

7 M L 5 5 0 5 -

With a high level of chemical resistance, Pointek CLS 200 is ideal for level detection of interfaces, solids, liquids, slurries and foam.

Enclosure

Aluminum epoxy coated

- 2 x ½" NPT via adapter - cable entry, IP65
- 2 x M20x1.5 cable entry, IP65
- 2 x ½" NPT via adapter - cable entry, IP68
- 2 x M20x1.5 cable entry, IP68

0
 1
 2
 3

Additional Options

standard version
 with thermal isolator
 with PVDF probe body
 with thermal isolator and PVDF probe body
 with sliding coupling
 with thermal isolator and slide coupling
 with sliding coupling and PVDF probe body
 with thermal isolator, slide coupling and PVDF probe body

A
 B
 C
 D
 E
 F
 G
 H

WHG approval, German overfill protection

not required
 required (only available for electronics version 0)

A
 B

Electronics/output

standard analog version without display, 12 to 230 V AC/DC, solid state and relay output
 digital version with display, 24 V DC, solid state output or PROFIBUS PA⁷⁾

0
 1

Further designs

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

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

Y01

Stainless steel tag (69 x 38 mm): enter the tag information in plain text description

Y15

Electrical connection/cable inlet: PROFIBUS connector M12 (IP67)

A01

Optional output

- Relays output PCB (8A at 250 V AC/5A at 30 V DC)
- Current output PCB (4/20 mA or NAMUR 0.6...1, 0/2,1...2,8 mA)

A02
 A03

Optional enclosure lid: Lid with glass window instead of closed lid without window⁸⁾

A04

O-ring seal (not FPM): FPM

A22

Test Certificate: Acceptance test certificate B to DIN 500049 section 3.1 and EN 10204

C12

Remote Electronics

• Remote mounted electronics with 2 m (79") cable and mounting bracket

A05

• Remote mounted electronics with 5 m (197") cable and mounting bracket

A06

Instruction Manual

See page 5/21

Note: The instruction manual should be ordered as a separate line on the order.

Accessories

See page 5/21

- 1) available with additional options A to D only
- 2) available with additional options A to H
- 3) lengths <350 mm available with additional options A to D only
- 4) available with version 3A and 3Z only.
- 5) available with electronics option 0 only.
- 6) available with electronics option 1 only.
- 7) an M12 PROFIBUS connector can be selected separately with wildcard option (A01).
- 8) Version with electronics option 1 has a standard closed lid without window; version with electronics option 2 has a standard lid with glass window.

Ordering data	Order No.
English	7ML1998-5AR02
French (for Analog version only)	7ML1998-5AR11
German	7ML1998-5AR31
Note: The instruction manual should be ordered as a separate line on the order.	
Additional Instruction Manual	
Quick Start manual, multi-language	C) 7ML1998-5QE81
Note: Due to ATEX regulations, one Quick Start manual is included with every product.	
Instruction manual for optional PCB boards (for additional info. option A02/A03)	7ML1998-5HW61
Accessories	
Sensguard 3/4" NPT (PPS) Only available for CLS 200 with 3/4" NPT thread	7ML1830-1DL
Sensguard 1" BSPT (PPS) Only available for CLS 200 with 3/4" NPT thread	7ML1830-1DM
1/2" Cable gland ATEX 1D (General Purpose and Dust ignition proof)	7ML1830-1JA
1/2" Cable gland ATEX 1G (Explosion Proof)	7ML1830-1JB
M20x1.5 Cable gland ATEX 1D (General Purpose and Dust ignition proof)	7ML1830-1JC
M20x1.5 Cable gland ATEX 1G (Explosion Proof)	7ML1830-1JD
Spare Parts	
Test magnet	7ML1830-1JE
Amplifier / Power Supply, Analog version	7ML1830-1DJ
Amplifier / Power Supply, Digital version	7ML1830-1JF
LCD display	7ML1830-1JK

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