

## Level Measurement

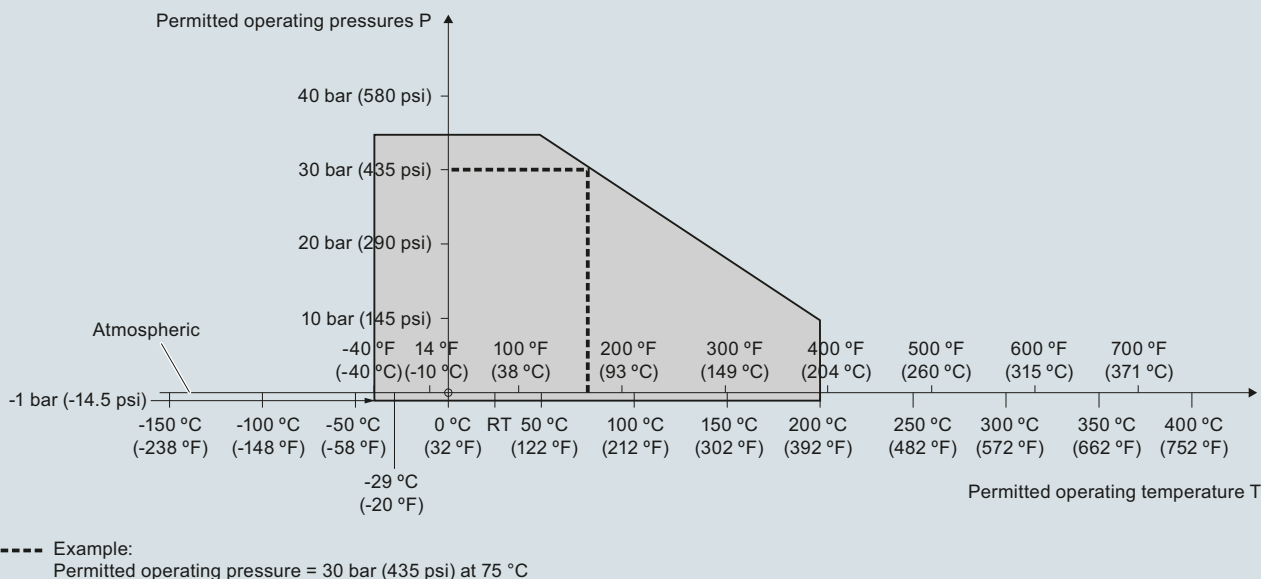
Point level measurement  
RF Capacitance switches

### Pointek CLS300 - Standard and Digital

Selection and Ordering data	Order code	Selection and Ordering data	Article No.
<p><b>Further designs</b></p> <p>Please add <b>"-Z"</b> to Article No. and specify Order code(s).</p>		<p><b>Accessories</b></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>	<b>7ML1930-1AQ</b>
<p>Total insertion length: enter the total insertion length in plain text description</p>	<b>Y01</b>	<p><u>General Purpose</u></p> <p>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)</p>	<b>7ML1830-1JA</b>
<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>	<b>Y15</b>	<p>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)</p>	<b>7ML1830-1JC</b>
<p>Manufacturer's test certificate: M to DIN 55350, Part 18 and to ISO 9000</p>	<b>C11</b>	<p><u>Hazardous Locations</u></p> <p>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)</p>	<b>7ML1830-1JB</b>
<p>Material Inspection Certificate Type 3.1 per EN 10204</p>	<b>C12</b>	<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>	<b>7ML1830-1JD</b>
<p><b>Operating Instructions</b></p> <p>All literature is available to download for free, in a range of languages, at <a href="http://www.siemens.com/processinstrumentation/documentation">http://www.siemens.com/processinstrumentation/documentation</a></p>		<p><b>Blind threaded flanges are available.</b> Customers interested in a custom designed device should consult a local sales person. For more information, please visit <a href="http://www.automation.siemens.com/aspa_app">http://www.automation.siemens.com/aspa_app</a>.</p>	
<p><b>Accessories</b></p>	<b>See page 4/54</b>	<p><b>Pointek Specials</b></p>	<b>See page 4/61</b>

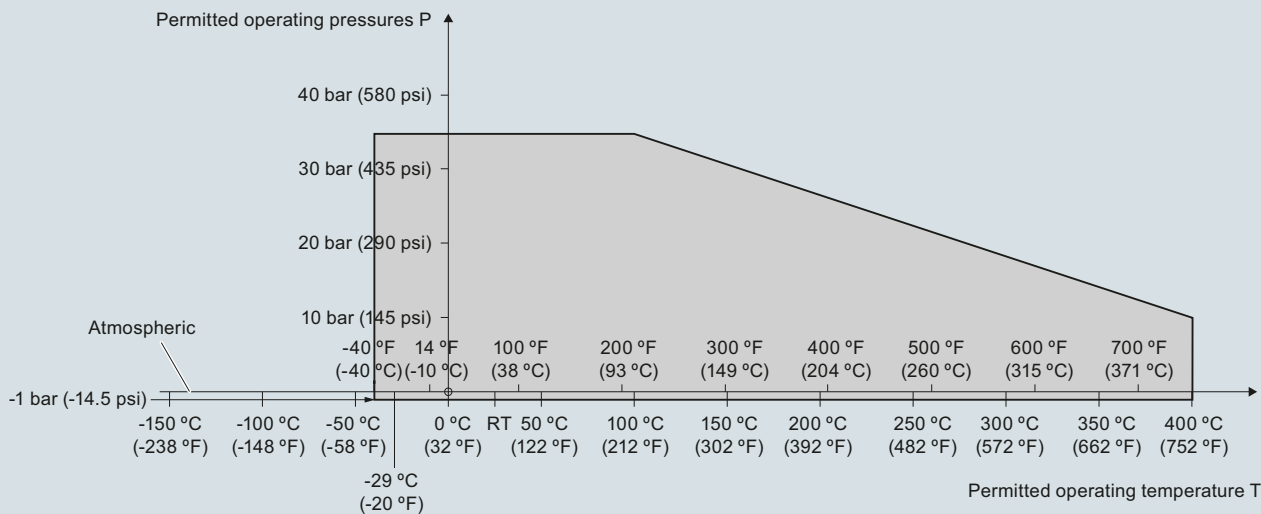
**Characteristic curves**

**Pressure/temperature curve**  
**CLS300 extended rod and cable probes**  
**Threaded process connections**  
**(7ML5650, 7ML5651, 7ML5660 and 7ML5661)**



Pointek CLS300 process pressure/temperature derating curves (7ML5650, 7ML5651, 7ML5660 and 7ML5661)

**Pressure/temperature curve**  
**CLS300 high temperature rod probes**  
**Threaded process connections**  
**(7ML5652 and 7ML5662)**



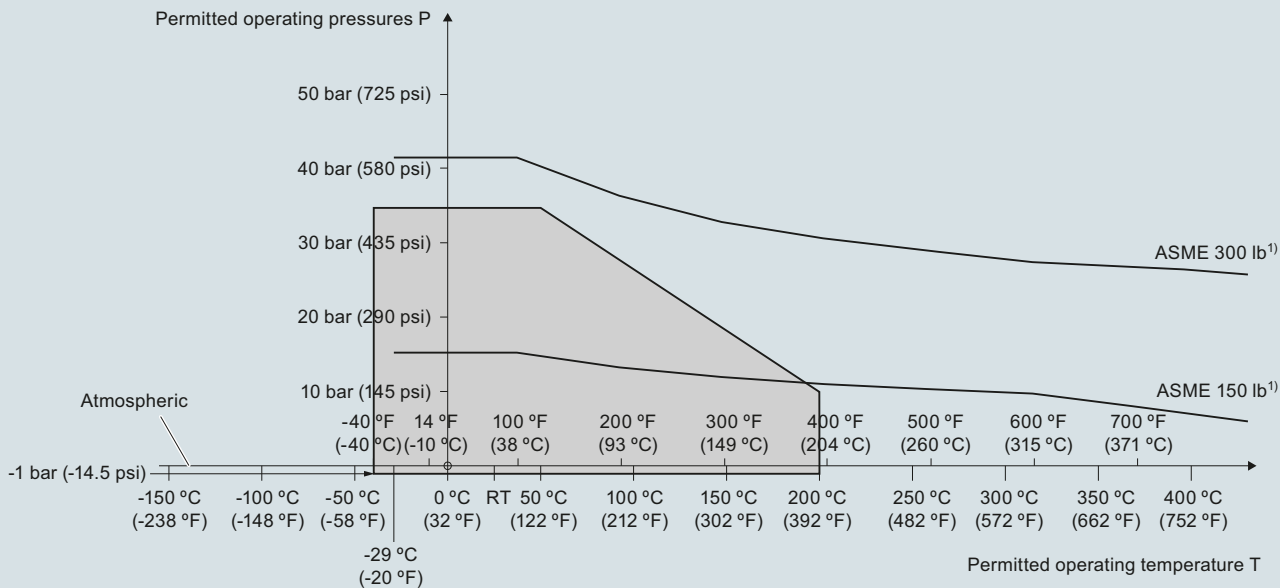
Pointek CLS300 process pressure/temperature derating curves (7ML5652 and 7ML5662)

# Level Measurement

Point level measurement  
RF Capacitance switches

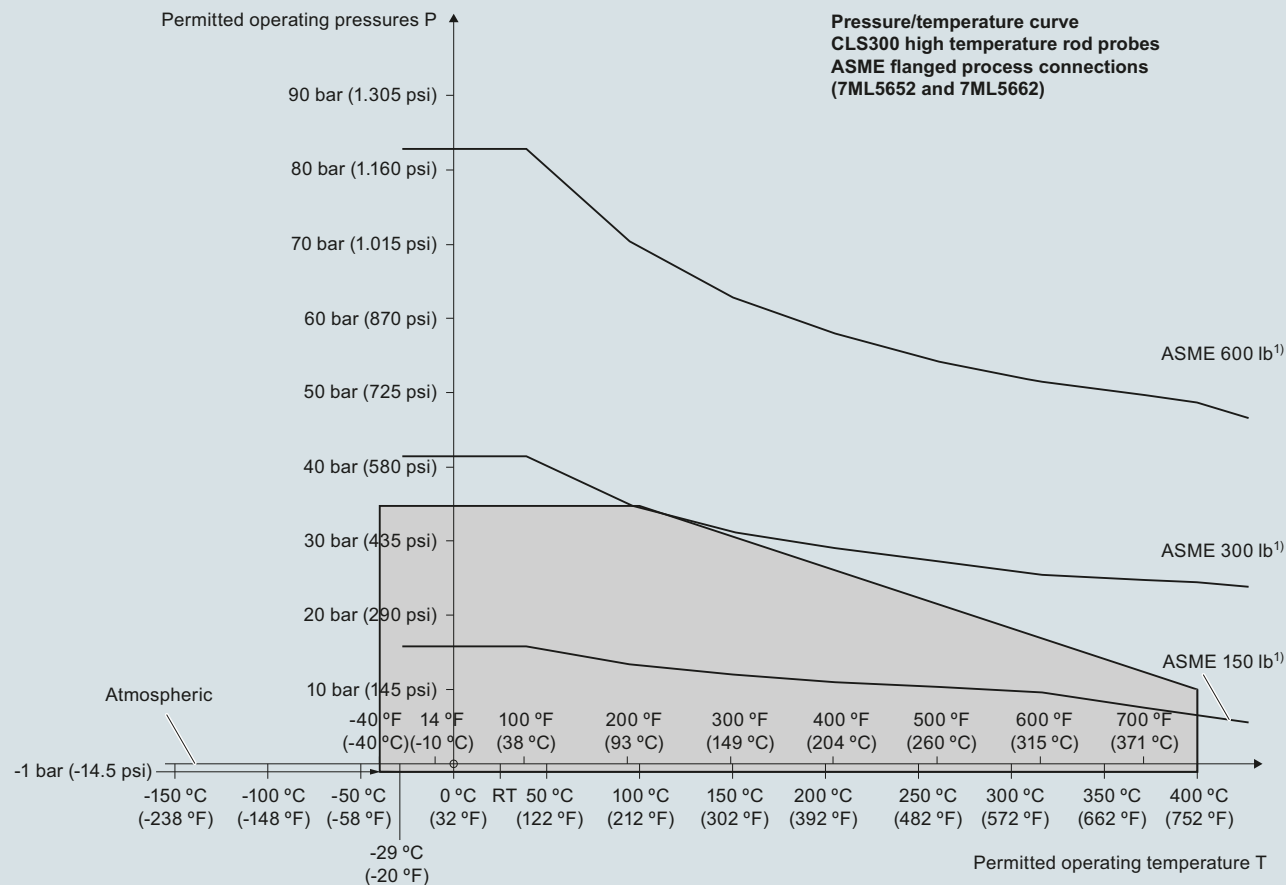
## Pointek CLS300 - Standard and Digital

**Pressure/temperature curve**  
CLS300 extended rod and cable probes  
ASME flanged process connections  
(7ML5650, 7ML5651, 7ML5660 and 7ML5661)



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

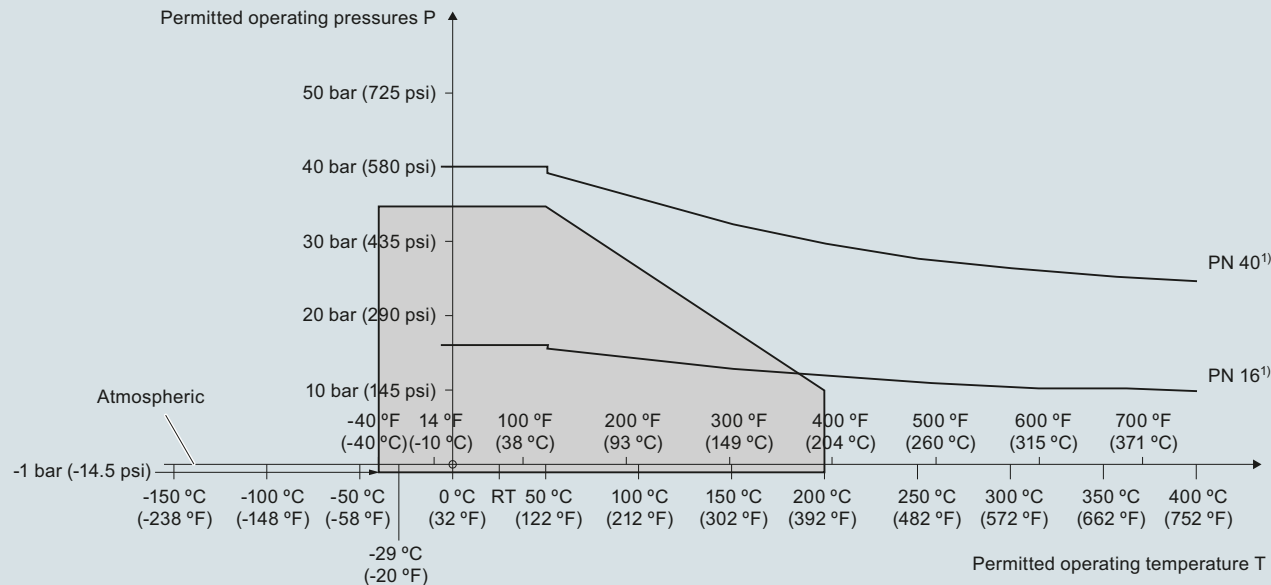
Pointek CLS300 process pressure/temperature derating curves (7ML5650, 7ML5651, 7ML5660, and 7ML5661)



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

Pointek CLS300 process pressure/temperature derating curves (7ML5652 and 7ML5662)

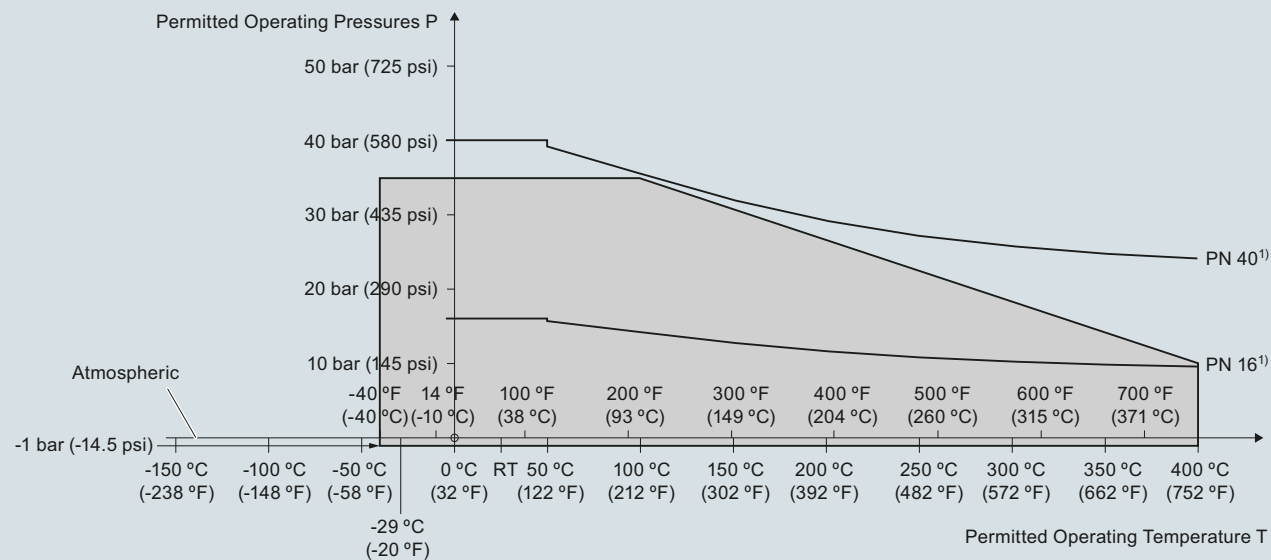
**Pressure/temperature curve**  
**CLS300 extended rod and cable probes**  
**EN flanged process connections**  
**(7ML5650, 7ML5651, 7ML5660 and 7ML5661)**



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

Pointek CLS300 process pressure/temperature derating curves (7ML5650, 7ML5651, 7ML5660 and 7ML5661)

**Pressure/Temperature Curve**  
**CLS300 High Temperature Rod Probes**  
**EN Flanged Process Connections (7ML5652 and 7ML5662)**



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

Pointek CLS300 process pressure/temperature derating curves (7ML5652 and 7ML5662)

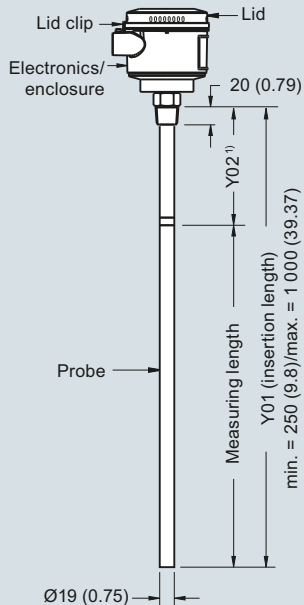
# Level Measurement

Point level measurement  
RF Capacitance switches

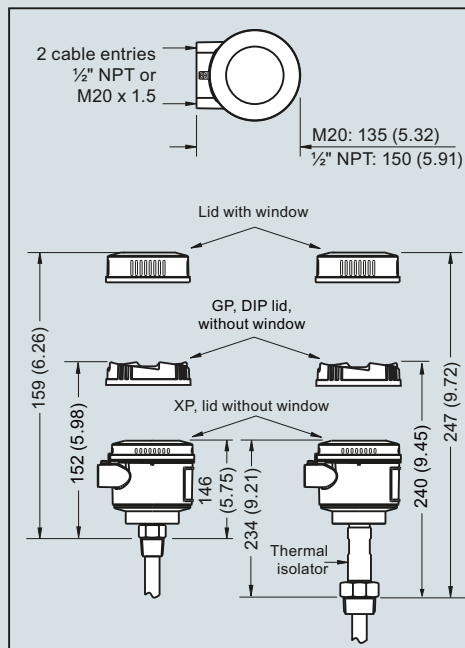
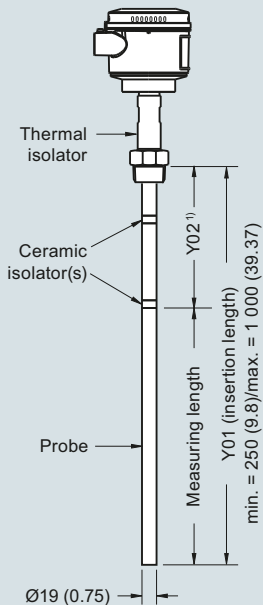
## Pointek CLS300 - Standard and Digital

### Dimensional drawings

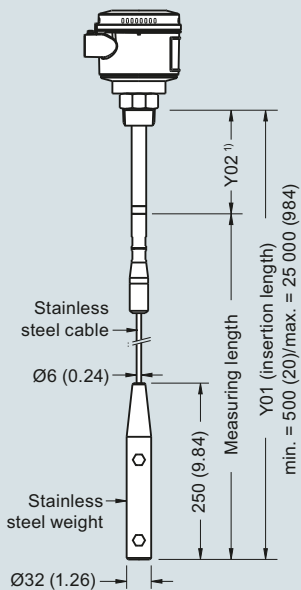
**Rod version  
Threaded (7ML5650 and 7ML5660)**



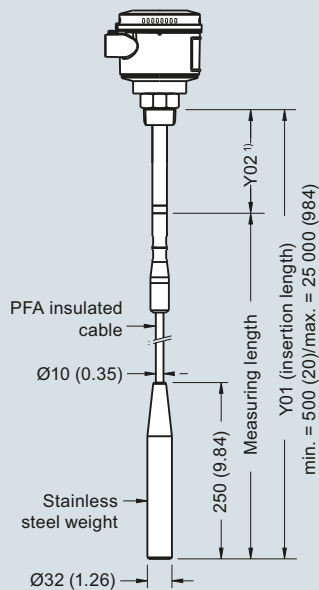
**High temperature rod version  
Threaded (7ML5652 and 7ML5662)**



**Cable version, non-insulated  
Threaded (7ML5651 and 7ML5661)**



**Cable version, insulated  
Threaded (7ML5651 and 7ML5661)**



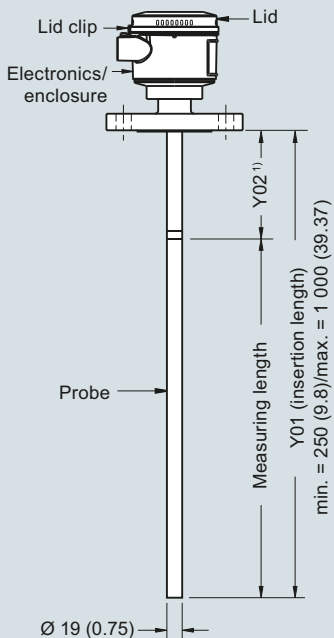
**Note:**

<sup>1)</sup> Extended Active Shield (Y02): standard length 125 (4.92). Optional active shield lengths: 250 (9.84) or 400 (15.75).

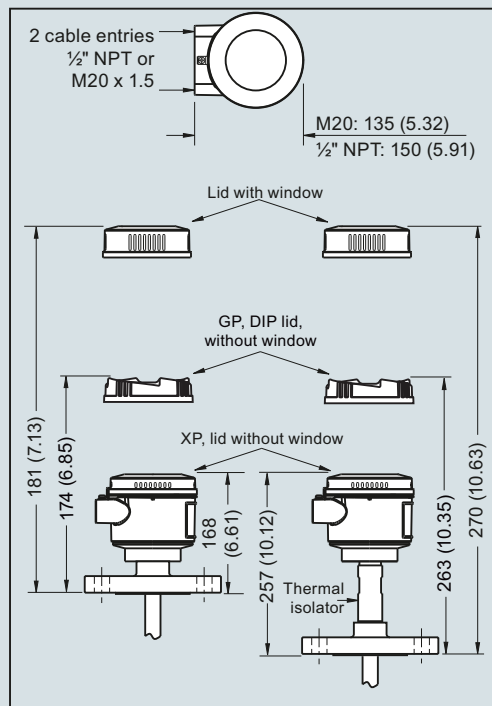
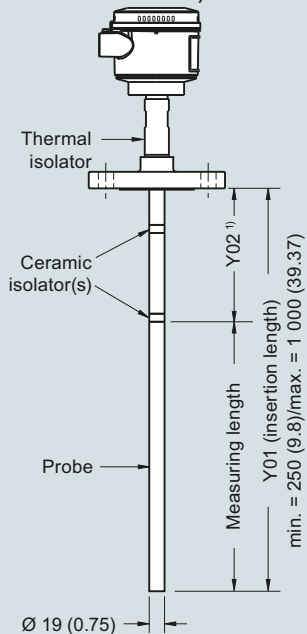
Pointek CLS300 threaded process connections, dimensions in mm (inch)

4

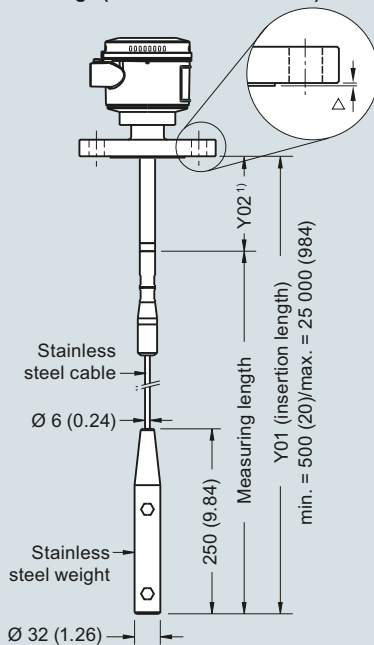
**Rod version  
Welded flange (7ML5650 and 7ML5660)**



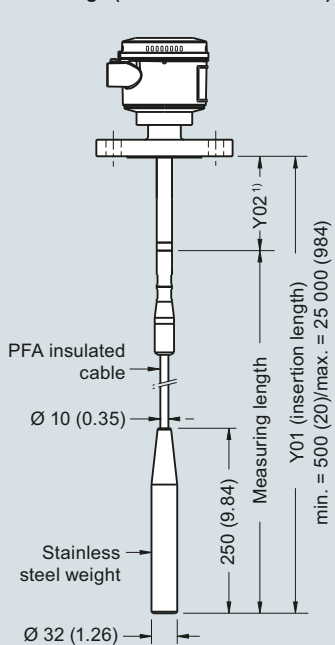
**High temperature rod version  
Welded flange (7ML5652 and 7ML5662)**



**Cable version, non-insulated  
Welded flange (7ML5651 and 7ML5661)**



**Cable version, insulated  
Welded flange (7ML5651 and 7ML5661)**



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)

**Note:**

<sup>1)</sup> Extended Active Shield (Y02): standard length 105 (4.13). Optional active shield lengths: 230 (9.06) or 380 (14.96). Insertion length does not include any raised face/gasket face dimension (see Flange Facing Table above)

Pointek CLS300 flanged process connections, dimensions in mm (inch)

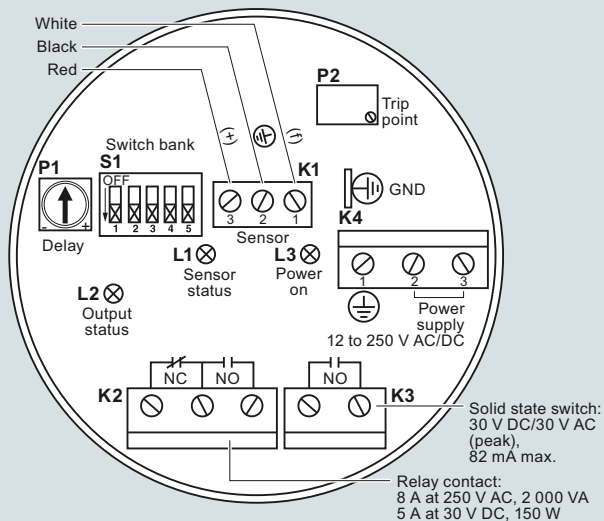
## Level Measurement

Point level measurement  
RF Capacitance switches

### Pointek CLS300 - Standard and Digital

#### Circuit diagrams

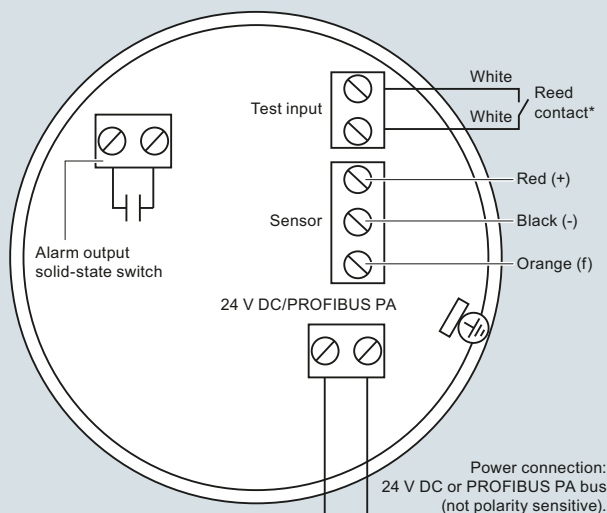
##### Wiring: Pointek CLS300 standard



##### 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 CLS300 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 CLS300 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 CLS300 connections