Mercap is an excellent level transmitter for use in liquids, solids, interfaces and foam. Extreme process conditions with temperatures from –200 to 450°C (-328 to 842°F) and pressures from full vacuum (FV) to over 525 bar (7665 psi) are no match for Mercap.

Mercap's active shield technology ensures that measurement is unaffected by vapours, product deposits, dust and condensation which results in a highly accurate measurement. The unique mechanical probe design coupled with a high performance transmitter gives superior performance and low cost of ownership in a wide range of level measurement applications.

Complete with HART®SMART protocol for remote set-up and calibration, Mercap achieves reliable, stable measurement performance over a wide range of application conditions including very hazardous environments.

Product Features

- Patented active shield technology
- Simple push-button calibration
- 2-wire loop powered 4-20/20-4 mA measurement signal
- Smart transmitter (HART protocol)
- High temperature and pressure resistant

Technical Specifications

Transmitter

Measurement Range
- 0 to 3300 pF

Span
- min. 3.3 pF

Supply Voltage
- max. 33 Vdc
- min. 12 Vdc @ 3.6 mA
- min. 9.5 Vdc @ 22 mA

Measurement Current
- 3.6 to 22 mA / 22 to 3.6 mA (2 wire current loop)

Smart Communication
- conforming to the HART Communication Foundation (HCF)

Temperature Range
- -40 to 85°C (-40 to 185°F)

Temperature Stability
- 0.15 pF (0 pF) or 0.25% (typical < 0.1%) of actual measurement value, whichever is greater over the full temperature range

Non Linearity and Reproduceability
- <0.1% of full scale and actual measurement respectively

Accuracy
- <0.1% of actual measurement value

Features
- polarity protection input circuit
- E.S.D. protected
- galvanically isolated measurement circuit
- fully potted with epoxy resin

Diagnostics
- includes fault alarm when: primary variable (PV) out of limits, system failure in measurement circuit, deviation between A/D and D/A converter, check sum, watch dog and measurement current out of range

Measurement Current Signalling
- NAMUR NE 43

Function Rotary Switch
- position 1: 4 mA measurement value
- position 2: 20 mA measurement value
- position 3: 3.8 up to 20.5 mA range by means of a field service simulator
- position 4: functionality test

Probe

Process Connection
- screw mounting: NPT, BSPT, JIS
- flange mounting: ANSI, DIN, API

Process Material
- C 22.8, AISI 316 L, Monel 400, Hastelloy C22

Probe Diameter
- rod: 16 mm (0.63") or 24 mm (0.95")
- cable: 9 mm (0.35")

Probe Length
- rod version: 5500 mm (216")
- rope version: 35000 mm (1378")

Probe Lining
- PFA, Enamel, PTFE

Pressure Rating
- FV – 200 bar (2920 psi) up to 525 bar (7665 psi) as option

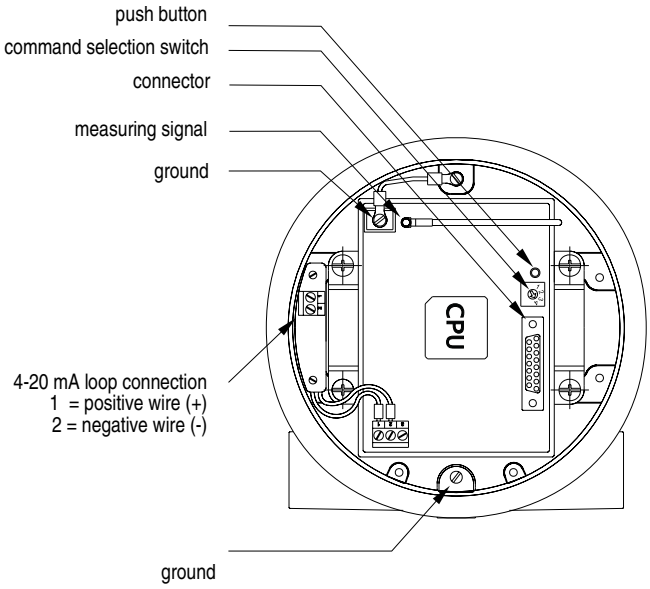
Temperature Rating
- -200 to 200°C (-328 to 392°F) up to 450°C (842°F) as option

Approvals
- CE (complies with the requirements of E.C.C. as per EN 55011 and EN 50082-2
- Cenelec: EEx ia IIC T6-T4, EEx ia IIB T6-T4 (Intrinsically Safe), EExd [ia] IIC T6-T4 (Explosion Proof), Ex nC IIC T4 (Non Sparking Proof)
- FM/CSA: Class I, II & III, Div. 1 Groups A, B, C and D (Intrinsically Safe), Class I, Div. 2, Class II, Div. 2, Class III, Div. 1&2 (Hazardous Locations)
- FM: Class I, II & III, Div. 1 Groups A, B, C and D (Explosion Proof)
- ATEX: II1GD EEx ia IICT6...T4

Specifications are subject to change without notice.

Wiring

Explosion Proof (Cenelec) Version



GP* (FM/CSA/Cenelec), IS* (FM/CSA/Cenelec) and XP* (FM) Versions

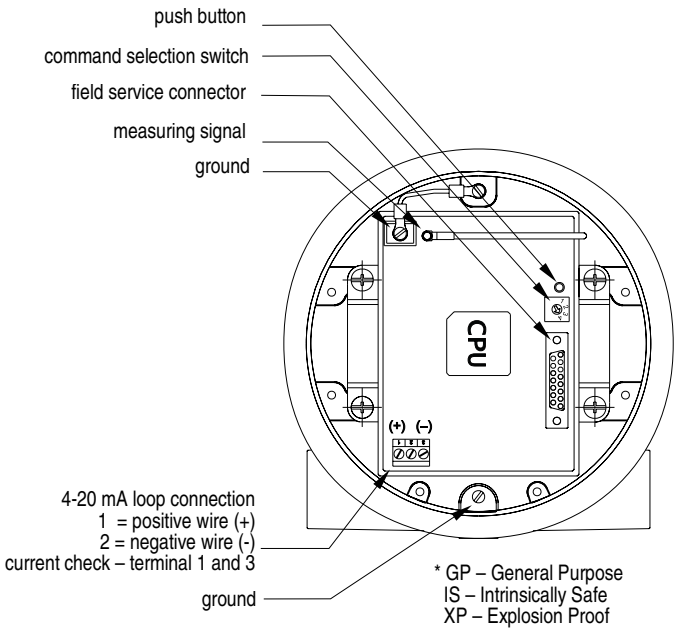


Table of Standard Combinations

Mercap Probe Version	MCP01					MCP02	MCP03
Process Connection Types	**Series S**	**Series D**	**Series SD**	**Series DD**	**Series HP**	**Interface**	**Sanitary**
Threaded	Yes	X	X	X	X	Yes	X
Flange	Yes	Yes	Yes	Yes	Yes	Yes	X
Tri-clamp	X	X	X	X	X	X	Yes
Sanitary thread	X	X	X	X	X	X	Yes
Process Connection Material							
Carbon steel C22.8N	X	Yes	Yes	Yes	X	X	X
Stainless steel AISI 316L	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Duplex steel	X	X	X	X	Yes	X	X
Hastelloy* B2 or C22	Yes	X	X	X	X	X	X
Monel 400	Yes	X	X	X	X	X	X
Probe Insulations							
P.F.A.	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Enamel	Yes	X	X	X	Yes	X	X
Length Parameters							
Max. rod length (mm/inch)	5500/216	5500/216	5500/216	5500/216	2500/100	N/A	5500/216
Max. cable length (mm/inch)	35000/1378	35000/1378	35000/1378	35000/1378	N/A	35000/1378	N/A
Max. pressure (bar/psi)**	200/2900	150/2175	150/2175	150/2175	525/7613	5/73	10/145
Max. Temp (°C/°F)***	200/392	200/392	200/392	200/392	450/842	100/212	200/392

X - Not available as standard
* Flange is made of AISI-316L stainless steel with a 5 mm welded Hastelloy plate
** depends on the temperature range
*** depends on the pressure range