



Product Information L3 FOOD

L3 Pressure and Level transmitter



Range of applications

- · Hydrostatic Level measurement in dynamic temperature environments
- · Pressure measurement in pipes and vessels up to 110 °C (230 °F)
- · Hydrostatic Level measurement in inventory silo's

Application examples

· Hygienic pressure and level monitoring for brewing, dairy, and food and beverage processing

Hygienic design/Process connection

- · Front flush, 3-A installation for silos by Anderson flush fitting, E&H universal, or tank spud connections
- · Conforming to 3-A Sanitary Standard 74-06 with Tri-Clamp® DIRECTadapt
- · EHEDG compilant hygienic design with CLEANadapt process connection
- · CIP/SIP and continuous process up to 110 °C (230 °F)
- Available with over 20 integral hygienic connections, more available through CLEANadapt adapters

Features

- · Intuitive user interface makes set-up and configuration easy
- · Field repairable and reconfigurable through modular design
- State of the art temperature compensation allows temperature resistant pressure and level measurement
- · On board interface allows reconfiguration including 10:1 turndown in any units
- · Integrated tank tables allows volume and mass output when tank and product information are input
- · Patented dual o-ring seals provide IP69K ingress protection
- · Standard Hart 7.0 communication and graphical LCD display

Options/Accessories

- · Optional digital remote kit making display easier to view
- · Optional M12 molded cordset available
- · Wide range of ranges and fittings available

Measuring principle of the pressure sensor

This unit utilizes an internal piezoelectric transducer and an RTD temperature element to measure the pressure and temperature of the internal actuating fluid. The mV signal of the transducer and resistance of the RTD are measured and converted to a compensated pressure value by way of the signal acquisition board in the stem. This signal is digitally communicated to the head where the signal is converted to industry standard 4...20mA and Hart 7.0 signals.

For relative sensors the back of the diaphragm is vented and the output is relative to the atmospheric conditions.

Authorizations







Pressure and level sensor L3



Pressure and level sensor L3



Specification				
Measuring range URL [bar] Measuring range URL [psi]	Relative Relative	00.4 / -12 / -17 / -135 06 / -14.730 / -14.7100 / -14.7500		
Turndown	max. 10:1	of upper range limit (see also measurement accuracy)		
Overpressure strength	Factor	1.5 x nominal pressure of measuring element		
Measurement accuracy	Turndown to 5:1 Turndown over 5:1 Repeatability Long-term stability	≤ 0.10 % in calibrated measuring range ≤ 0.15 % in calibrated measuring range 0.05 % 0.2 % URL every 2 years		
Temperature effect	Process Ambient	< 0.016 % of calibrated measuring range / 5.5 °C (10 °F) < 0.016 % of calibrated measuring range / 5.5 °C (10 °F)		
Temperature range	Process Ambient	-18110 °C (0230 °F) at ambient temperature below 71 °C (160 °F) 071 °C (32160 °F)		
Response time		< 0.1 seconds		
Sample rate		< 0.05 seconds		
Materials	Connection head Metal cover Plastic cover Threaded connector Wetted parts Diaphragm Diaphragm seal/oil filling	Stainless steel, AISI 304 (1.4301), $R_a \le 0.8 \ \mu m$ (32 microinch) Stainless steel, AISI 304 (1.4301), $R_a \le 0.8 \ \mu m$ (32 microinch) Polycarbonate Stainless steel, AISI 304 (1.4301), $R_a \le 0.8 \ \mu m$ (32 microinch) Stainless steel, AISI 316L, $R_a \le 0.64 \ \mu m$ (25 microinch) Stainless steel, AISI 316L, $R_a \le 0.64 \ \mu m$ (25 microinch) Medical white oil / mineral oil / paraffin oil FDA approval number 21CFR172.878, 21CFR178.3620, 21CFR573.680 Neobee M20 (optional)		
Process connection	3-A compliant not 3-A compliant	1-1/2" Tri-Clamp® 2"Tri-Clamp® 2½" Tri-Clamp® 3" Tri-Clamp® AIC CPM Flush Mount Anderson Flush Mount Long (71060-A4, A6, A8) Anderson Flush Mount Long (71060-A3, A5, A7, A9) Rosemount/Foxboro Sanitary Spud - Short and Long Endress & Hauser Universal Adaptor - Short and Long M38x1.5 G1" 1-1/2" NPT 2 G1" Fixed Thread 38mm SMS Liner (female) 51mm SMS Liner (female) 40mm DIN 11851 (Milk Coupling) 50mm DIN 11851 (Milk Coupling)		
Electric connection	Cable gland Plug-in connection	M16x1.5 M12 plug, 5-pin, 1.4305		
Protection class		IP 67 (with cable fitting) / NEMA 4X IP 69 K (with plug-in connection)		
Auxiliary voltage		1836 V DC		
Output	Current loop	analog 420mA and Hart 7.0		
Tightening torque	For assembly all L3 components	27 Nm (20 ft-lbs)		
Weight		арргох. 780 g		

Advices FOOD

Cleaning/Maintenance



 In case of using pressure washers, do not point nozzle directly to electrical connections!

Reshipment

3



- Sensors shall be clean and must not be contaminated with dangerous media! Note the advice for cleaning!
- · Use suitable transport packaging only to avoid damage of the equipment!

Advice to conformity



- Applicable guidelines:
 Electromagnetic compatibility 2004/108/EC
- The accordance with applicable EC-guidelines is confirmed with CE-labeling of the device.
- · You have to guarantee the compliance of all guidelines applicable for the entire equipment.

Transport/Storage



- · No outdoor storage
- · Dry and dust free
- · Not exposed to corrosive media
- · Protected against solar radiation
- · Avoiding mechanical shock and vibration
- Storage temperature -55...+90 °C
- · Relative humidity max. 95 %

Standards and guidelines



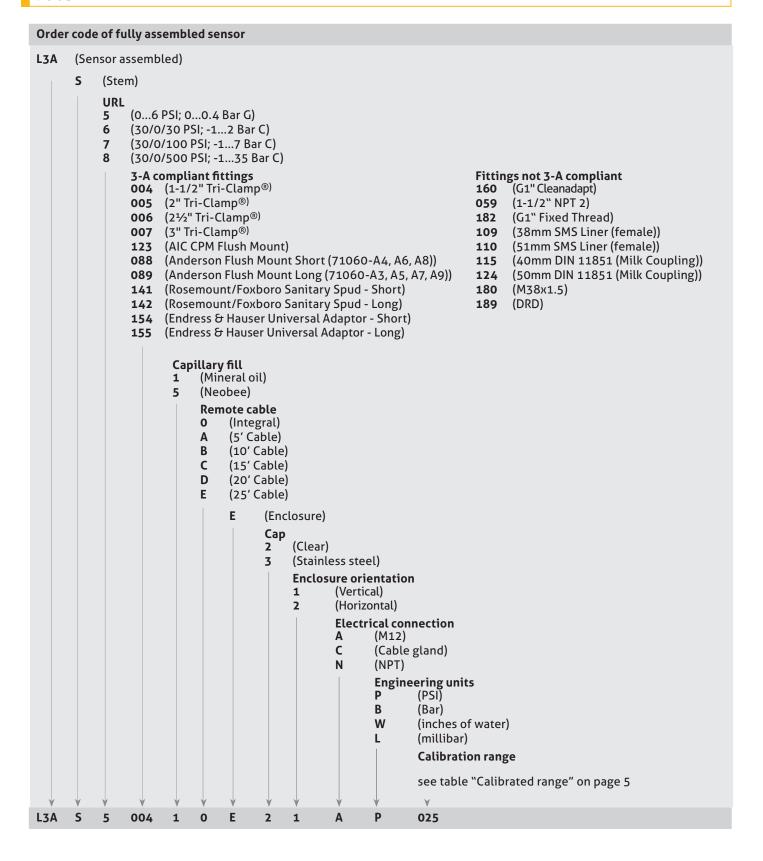
You have to comply with applicable regulations and directives.

Disposal



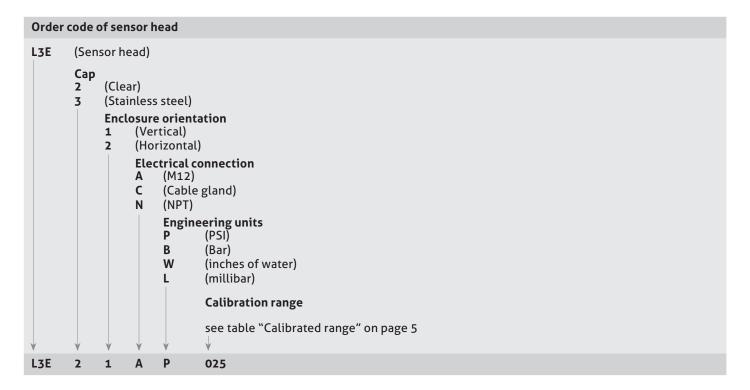
- This instrument is not subject to the WEEE directive 2002/96/EC and the respective national laws.
- Pass the instrument directly on to a specialised recycling company and do not use the municipal collecting points.

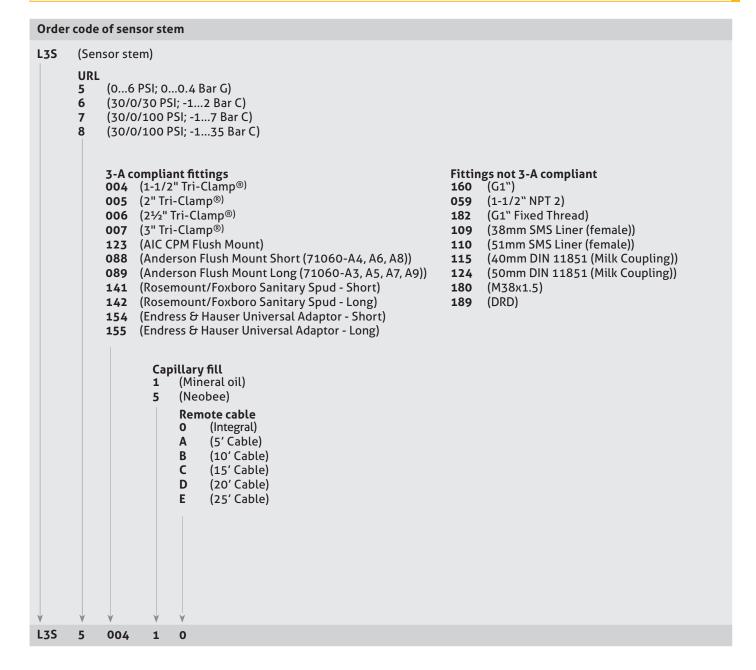
Product Information L3



Calibrated Range					
		compatible stems units			
range code	range	P	В	W	L
025	full vac-0	6	Х	Х	Х
028	full vac-0-15	6, 7	Х	Х	Х
029	full vac-0-30	6,7	Х	Х	Х
031	full vac-0-60	7, 8	Х	Х	Х
032	full vac-0-100	7, 8	Х	Х	Х
314	full vac-0-200	8	Х	Х	Х
066	0-30	6, 7	8	5	Х
068	0-50	7, 8	Х	5	5
069	0-60	7, 8	Х	5	5
071	0-100	7, 8	Х	5, 6	5
073	0-150	8	Х	5, 6	5
074	0-160	8	Х	6	5
075	0-200	8	Х	6	5, 6
077	0-300	8	Х	6,7	5, 6
081	0-500	8	Х	6,7	6
084	0-1000	Х	Х	7	6, 7
251	-1-0-1	5	6, 7	Х	Х
286	-1-0-2.5	5	7	Х	Х
217	-1-0-3	5	7	Х	Х
056	-1-0-4	5	7, 8	Х	Х
304	-1-0-7	6	7, 8	Х	Х
057	0-2	5	6,7	Х	Х
235	0-3	5	7	Х	Х
192	0-4	5	7, 8	Х	Х
060	0-6	5,6	7, 8	Х	Х
309	0-7	6	7, 8	Χ	Х

Calibrated	l Range				
		compatible stems units			
range code	range	P	В	W	L
061	0-10	6,7	8	Х	Х
065	0-20	6,7	8	5	Х
224	0-35	7	8	5	5
206	0-70	7, 8	Х	5	5
294	0-140	8	Х	5, 6	5
503	0-415	8	Х	6, 7	6
505	0-830	Х	Х	6, 7	6, 7
506	0-1385	Х	Х	7, 8	6, 7
078	0-350	8	Х	6, 7	5
086	0-2000	Х	Х	7, 8	6, 7
508	0-3300	Х	Х	8	7
089	0-4000	Х	Х	8	7, 8
428	0-1.5	5	6, 7	Х	Х
067	0-40	7	Х	5	5
079	0-400	8	Х	6, 7	5,6
501	0-1.2	5	6, 7	Х	Х
499	0-1200	Х	Х	7	6, 7
502	0-18	6,7	8	5	Х
504	0-480	8	Х	6, 7	6
507	0-1600	Х	Х	7, 8	6, 7
000	stem range	5, 6, 7, 8	5, 6, 7, 8	5, 6, 7, 8	5, 6, 7, 8
999	custom range (must specify)	5, 6, 7, 8	5, 6, 7, 8	5, 6, 7, 8	5, 6, 7, 8





Accessories	
Cord Sets Shielded Molded w/25' cable Shielded Molded w/50' cable Shielded Molded w/100' cable	42117H0025 42117H0050 42117H0100
Clear Cap w/gaskets Stainless Steel Cap w/gaskets M12 Quick Disconnect Receptacle Cord Grip 1/2" NPTF adaptor Seal Kit (6) gaskets Field Wireable Connector-Straight Field Wireable Connector-90° 5' Remote Kit 10' Remote Kit 25' Remote Kit	5632800001 5632900001 SP56726A0004 SP5633100000 SP5633200000 5633000001 42119B0000 42119A0000 SP73228A0005 SP73228A0010 SP73228A0025