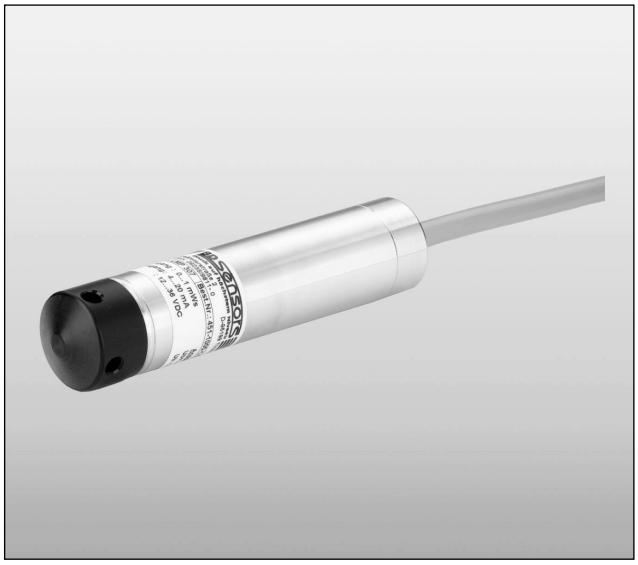
INGENIEROS ASOCIADOS DE CONTROL, S. L.
Telf. 913831390
comercial@iac-sl.es

SENSORS
pressure measurement



LMP 307

Stainless Steel Submersible Transmitter

- piezoresistive stainless steel sensor
- diameter 27 mm
- level measurement in water and clean to slightly contaminated media
- nominal pressure ranges
  0 ... 40 mbar up to 0 ... 25 bar
  (0 ... 40 cmWC up to 0 ... 250 mWC)

The submersible level transmitter LMP 307 has been designed for continuous fluid level measurement in water and clean to slightly contaminated media.

Housing material is 1.4571 (316Ti); the sensor diaphragm is made of 1.4435 (316L). Standard sealing material is FKM; other materials are available on request.

The high quality stainless steel sensor allows the LMP 307 excellent measuring performance.

With the LMP 307 a submersible level transmitter for a wide range of applications is available to the market.

Preferred areas of use are:

- environmental engineering: water supply, sewage treatment
- depth or level measurement in wells and open waters
- ground water level measurement
- level monitoring in open tanks

Characteristics

- small thermal effect
- excellent linearity
- excellent long term stability
- accuracy according to IEC 60770: 0.35 % FSO
  option: 0.25 % FSO
- option Ex: II 2 G EEx ia IIC T4
  (only for 4 ... 20 mA / 2-wire)
  (TÜV 03 ATEX 2006 X)
- customer specific versions:
  - special pressure ranges

CE Ex

LMP 307
Stainless Steel Level Transmitter

TÜV CERT
DIN EN ISO 9001

Input pressure range

Nominal pressure gauge	[bar]	0.04	0.06	0.1	0.16	0.25	0.4	0.6	1	1.6	2.5	4	6	10	16	25
Level	[mWC]	0.4	0.6	1	1.6	2.5	4	6	10	16	25	40	60	100	160	250
Permissible overpressure	[bar]	0.2	0.2	0.5	0.5	1	1	3	3	6	6	20	20	20	60	60

Output signal / Supply

Standard	2-wire: 4 ... 20 mA / V_S = 12 ... 36 V_{DC}	Ex-version: V_S = 14 ... 28 V_{DC}

Performance

Accuracy [1]	standard: ≤ ± 0.35 % FSO nominal pressure ≤ 0.4 bar: ≤ ± 0.5 % FSO option (nominal pressure > 0.4 bar): ≤ ± 0.25 % FSO
Permissible load	$R_{max} = [(V_S - V_{S\,min}) / 0.02]\ \Omega$
Influence effects	supply: 0.05 % FSO / 10 V load: 0.05 % FSO / kΩ
Long term stability	≤ ± 0.1 % FSO / year

Thermal effects

Nominal pressure P_N	≤ 0.1 bar	≤ 0.25 bar	≤ 0.4 bar	≤ 1 bar	> 1 bar
Tolerance range for offset and span	≤ ± 2 % FSO	≤ ± 1.5 % FSO	≤ ± 1 % FSO	≤ ± 1 % FSO	≤ ± 0.75 % FSO
in compensated range	0 ... 50 °C			0 ... 70 °C	

Electrical protection [2]

Insulation resistance	> 100 MΩ
Reverse polarity protection	no damage, but also no function
Electromagnetic compatibility	emission and immunity according to EN 61326
Ingress protection	IP 68
Option Ex-protection DX13-LMP 307	II 2 G EEx ia IIC T4 (only with 4 ... 20 mA / 2-wire) safety technical maximum values: V_i = 28 V, I_i = 93 mA, P_i = 660 mW

Permissible temperatures

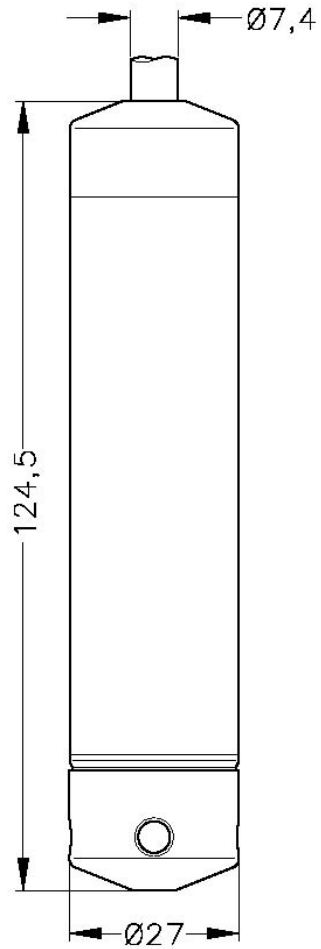
Medium	-10 ... 70 °C
Storage	-25 ... 70 °C

[1] accuracy according to IEC 60770 – limit point adjustment (non-linearity, hysteresis, repeatability)

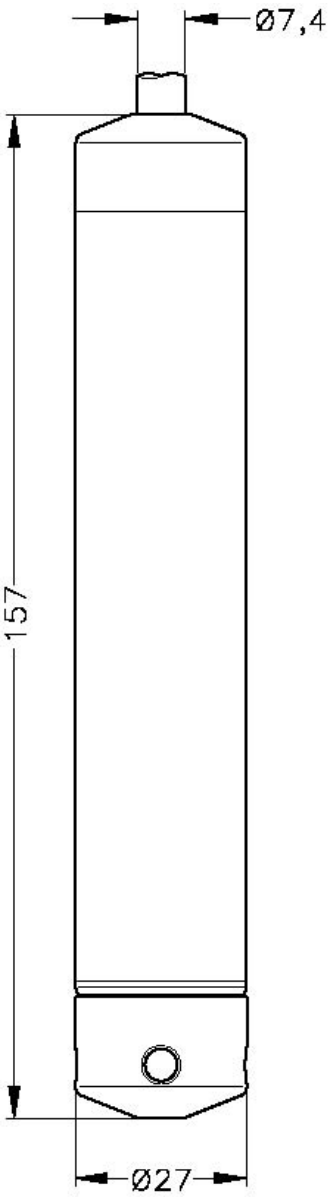
[2] additional external overvoltage protection unit in terminal box KL1 or KL2 with atmospheric pressure reference available on request (please ask for data sheet)

Dimensions

Standard



Option



Version with Ex-protection

Electrical connection

Cable with sheath material [3]	PVC grey PUR black FEP black

[3] cable with integrated air tube for atmospheric pressure reference

LMP 307
Stainless Steel Level Transmitter

Technical Data

Materials	
Housing	stainless steel 1.4571 (316Ti)
Seals	FKM
Diaphragm	stainless steel 1.4435 (316L)
Cable sheath	PVC / PUR / FEP

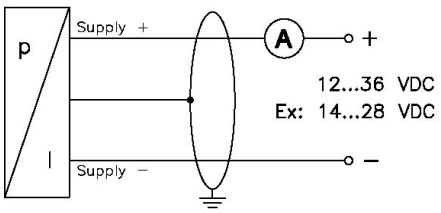
Miscellaneous	
Current consumption	max. 25 mA
Weight	approx. 200 g (without cable)

Mounting accessories (not included in delivery)
Screw fitting, stainless steel 1.4571 (316Ti)
Mounting flange for transmitter fixing, stainless steel 1.4571 (316Ti): DN25 / PN25 (∅115, 18 thick, 4 drill holes ∅14 at ∅85) DN50 / PN16 (∅165, 18 thick, 4 drill holes ∅18 at ∅125) DN80 / PN16 (∅200, 20 thick, 8 drill holes ∅18 at ∅160)
Terminal clamp, stainless steel 1.4301 (304) or steel, zinc plated

Pin configuration		
Electrical connection		cable colours (DIN 47100)
2-wire-system	Supply + Supply –	white brown
	Ground	yellow / black

Wiring diagram

2-wire-system (current)



SENSORS
pressure measurement