

LMP 308i



Detachable **Stainless Steel Probe** Precision

Stainless Steel Sensor

accuracy according to IEC 61298-2: 0.1 % FSO

Nominal pressure

from 0 ... 4 mH₂O up to 0 ... 200 mH₂O

Output signals

2-wire: 4 ... 20 mA 3-wire: 0 ... 10 V others on request

Special characteristics

- diameter 35 mm
- cable assembly and sensor head detachable
- excellent accuracy
- communication interface
- thermal error in compensated range -20 ... 70 °C: 0.2 % FSO TC 0.02 % FSO / 10K
- Turn-Down 1:10

Optional versions

- IS-version Ex ia = intrinsically safe for gas and dust
- mounting accessories e.g. mounting flange and terminal clamp in stainless steel
- different kinds of cables and elastomers

The detachable precision stainless steel probe LMP 308i is designed for continuous level measurement in water and low-viscosity fluids. The signal processing of sensor signal is done by digital electronics with 16-bit analogue digital converter. Consequently, it is possible to conduct an compensation of sensor intrinsic active deviations from normal conditions like nonlinearity and thermal error.

In order to facilitate stock-keeping and maintenance the sensor head is plugged to the cable assembly with a connector and can be changed easily.

Preferred areas of use are

Water / filtrated sewage

ground water level measurement level measurement in wells and open waters rain spillway basins



level measurement in containers water treatment plants water recycling



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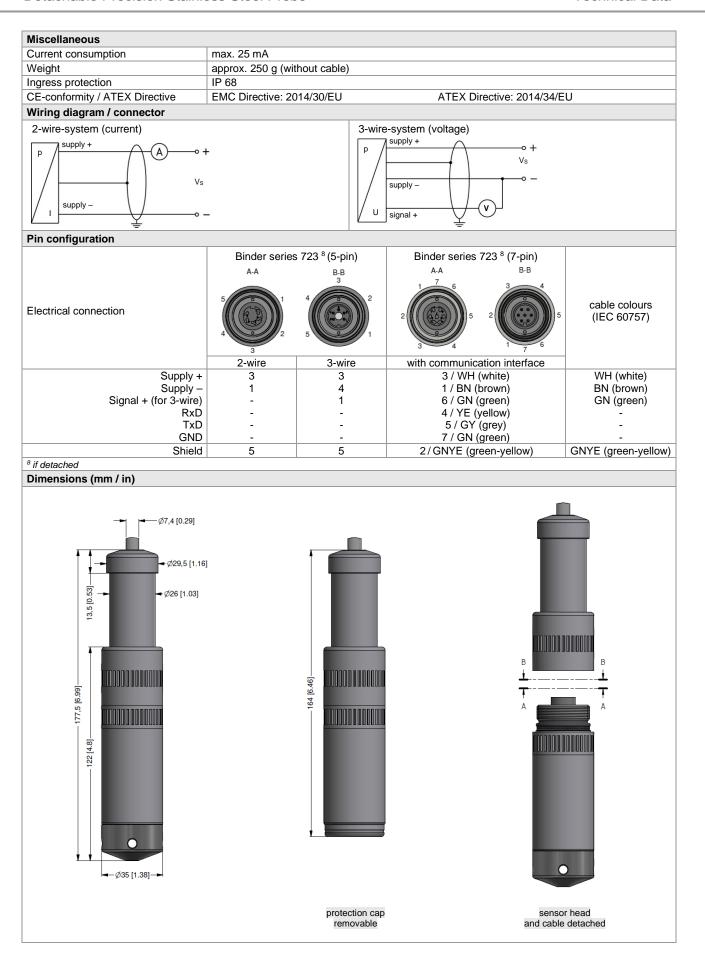








| Input pressure range | 1 | | | | | | |
|--|--|---|--|--|--|------------------------|----------------|
| Nominal pressure gaug | | 0.40 | 1 | 2 | 4 | 10 | 20 |
| Level | [mH ₂ O] | 4 | 10 | 20 | 40 | 100 | 200 |
| Overpressure | [bar] | 2 | 5 | 10 | 20 | 40 | 80 |
| Burst pressure | [bar] | 3 | 7.5 | 15 | 25 | 50 | 120 |
| Max. ambient pressure | | | 1.0 | | | | 120 |
| ¹ On customer request we | · 0, | | n-possibility by soft | ware on the requi | red pressure range | | |
| on outleand request no | adjust in a derie | o mam aro tam arm | , pecciamity by cont | rare errare requi | ea precedire range | | |
| Output signal / Supply | y | | | | | | |
| Standard | | 2-wire: 4 20 | $0 \text{ mA} / V_S = 12$ | 2 36 V _{DC} | | | |
| Option IS-version | | 2-wire: 4 20 | $0 \text{ mA} / V_S = 14$ | 28 V _{DC} | | | |
| Options | | 2-wire: 4 20 | $0 \text{ mA} / V_S = 12$ | 2 36 V _{DC} | vith communicati | ion interface | |
| | | | $0 \text{ V} / \text{V}_{\text{S}} = 14$ | | | | |
| | | 0 10 | $0 \text{ V} / \text{V}_{\text{S}} = 14$ | 36 V _{DC} \ | vith communicati | ion interface | |
| Performance | | | | | | | |
| Accuracy | | IEC 61298-2 ² : ≤ | ± 0.1 % FSO | | | | |
| Performance after turn- | -down (TD) | | 3 | | | | |
| - TD ≤ 1:5 | | no change of acc | | for nominal are | 001150 001100 0 | 10 har ass note | 2). |
| - TD > 1:5 | | formula for accur ≤ ± [0.1 + 0.015] | | | ssure gauge ≤ 0. | 40 bar see note | 3). |
| | | with turn-down = | | | ted range | | |
| | | e.g. following acc | curacy can be ca | lculated for turn | n-down 1:10: | | |
| | | ≤ ± (0.1 + 0.015 | | | |) | |
| Permissible load | | current 2-wire: R | $R_{\text{max}} = [(V_S - V_{S \text{ mi}})]$ | n) / 0.02 A] Ω | voltage 3 | 3-wire: $R_{min} = 10$ | kΩ |
| Influence effects | | supply: 0.05 % l | FSO / 10 V | | load: 0.0 | 05 % FSO / kΩ | |
| Long term stability | | ≤ ± (0.1 x turn-do | own) % FSO / ye | ar at reference | conditions | | |
| Response time | | ca. 200 msec | | | | | |
| Adjustability (with option | n | following parame | eters can be adju | sted (interface | / software neede | ed ⁴) | |
| communication interfac | | electronic dampi | | | 90 % FSO | turn-down of s | oan: max. 1:10 |
| ² accuracy according to IEC | | | | | | | |
| 3 naminal property actions | | | | | | | |
| 3 nominal pressure gauges | | | | | | 30 | |
| ³ nominal pressure gauges ≤ ± (0.1 + 0.02 x turn-dow ⁴ software, interface and ca | vn) % FSO e.g. t | orn-down 1:3: ≤ ± (0. | .1 + 0.02 x 3) % F | SO i.e. the accura | cy is ≤ ± 0.16 % FS | | er and XP) |
| $\leq \pm (0.1 + 0.02 \text{ x turn-dow})$ | vn) % FSO e.g. t able must separa | orn-down 1:3: ≤ ± (0. | .1 + 0.02 x 3) % F | SO i.e. the accura | cy is ≤ ± 0.16 % FS | | er and XP) |
| ≤ ± (0.1 + 0.02 x turn-dow ⁴ software, interface and ca | vn) % FSO e.g. t able must separa | orn-down 1:3: ≤ ± (0. | .1 + 0.02 x 3) % F. are is compatible w | SO i.e. the accura vith Windows® 95, | cy is ≤ ± 0.16 % FS | | er and XP) |
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cable gland M16x1.5 with seal insert (for cable-Ø 4 ... 11 mm)

| dimensions in mm | | | | |
|------------------|--------|--------|--------|--|
| size | DN25 / | DN50 / | DN80 / | |
| size | PN40 | PN40 | PN16 | |
| b | 18 | 20 | 20 | |
| D | 115 | 165 | 200 | |
| d2 | 14 | 18 | 18 | |
| d4 | 68 | 102 | 138 | |
| f | 2 | 3 | 3 | |
| k | 85 | 125 | 160 | |
| n | 4 | 4 | 8 | |

| Technical data | | | |
|-------------------------|---------------------------------|----------------------------|--------------------------|
| Suitable for | all probes | | |
| Flange material | stainless steel 1.4404 (316L) | | |
| Material of cable gland | standard: brass, nickel plated | on request: stainless stee | el 1.4305 (303); plastic |
| Seal insert | material: TPE (ingress protecti | on IP 68) | |
| Hole pattern | according to DIN 2507 | | |
| Ordering type | | Ordering code | Weight |

| Ordering type | Ordering code | Weight |
|---|---------------|--------|
| DN25 / PN40 with cable gland brass, nickel plated | ZMF2540 | 1.4 kg |
| DN50 / PN40 with cable gland brass, nickel plated | ZMF5040 | 3.2 kg |
| DN80 / PN16 with cable gland brass, nickel plated | ZMF8016 | 4.8 kg |

Terminal clamp



| Technical data | | |
|---|-------------------------------------|--|
| Suitable for | all probes with cable Ø 5.5 10.5 mm | |
| Material of housing | standard: steel, zinc plated | optionally: stainless steel 1.4301 (304) |
| Material of clamping jaws and positioning clips | PA (fibre-glass reinforced) | |
| Dimensions (mm) | 174 x 45 x 32 | |
| Hook diameter | 20 mm | |

| Ordering type | Ordering code | Weight |
|--|---------------|---------------|
| Terminal clamp, steel, zinc plated | Z100528 | approx 160 a |
| Terminal clamp, stainless steel 1.4301 (304) | Z100527 | approx. 160 g |

Display program

CIT 250 Process display with LED display and contacts

CIT 300 Process display with LED display, contacts and analogue outputCIT 350 Process display with LED display, bargraph, contacts and analog

CIT 350 Process display with LED display, bargraph, contacts and analogue output

CIT 400 Process display with LED display, contacts, analogue output and Ex-approval

CIT 600 Multichannel process display with graphics-capable LC display

CIT 650 Multichannel process display with graphics-capable LC display and datalogger

CIT 700 / CIT 750 Multichannel process display with graphics-capable TFT monitor, touchscreen and contacts

PA 440 Field display with 4-digit LC display

For further information please contact our sales department or visit our homepage: http://www.bdsensors.de



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Ordering code LMP 308i LMP 308i Pressure 4 4 0 4 4 1 in mH₂O Input [bar] 4 0 0 0 1 2 0 0 1 4 0 0 1 1 0 0 2 2 0 0 2 9 9 9 9 4.0 0.4 1.0 10 20 2.0 40 4.0 100 10 20 200 customer consult Housing stainless steel 1.4404 (316L) 9 customer consult stainless steel 1.4435 (316L) 1 customer consult Output 4 ... 20 mA / 2-wire 1 intrinsic safety 4 ... 20 mA / 2-wire 0 ... 10 V / 3-wire 3 customer consult **EPDM** customer consult PVC-cable (grey, Ø 7.4 mm) PUR-cable (black, Ø 7.4 mm) FEP-cable (black, Ø 7.4 mm) 3 customer 9 consult Accuracy 0.1 % FSO ² 1 customer 9 consult Cable length 9 9 9 in m consult Special version standard 1 1 with communication interface ³ 1 2 9 9 9 consult customer

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right to make modifications to

the

We reserve

01.04.2022 @

¹ cable with integrated ventilation tube for atmospheric pressure reference

 $^{^{\}rm 2}$ available on request: calibration of individual pressure range higher than 400 mbar with accuracy 0.1 %

³ software, interface and cable have to be order separately (ordering code: CIS-G; software appropriate for Windows® 95, 98, 2000, NT Version 4.0 or newer and XP)