



LMP 307

Stainless Steel Probe

Stainless Steel Sensor

accuracy according to IEC 60770: standard: 0.35 % FSO option: 0.25 % / 0.1 % FSO

Nominal pressure

from 0 ... 1 mH₂O up to 0 ... 250 mH₂O

Output signals

2-wire: 4 ... 20 mA

3-wire: 0 ... 20 mA / 0 ... 10 V

others on request

Special characteristics

- diameter 26,5 mm
- small thermal effect
- excellent accuracy
- excellent long term stability

Optional versions

- IS-protection zone 0
- SIL 2 (Safety Integrity Level)
- cable protection via corrugated pipe
- different kinds of cables
- different kinds of seal materials

The stainless steel probe LMP 307 is designed for continuous level measurement in water and clean or waste fluids.

Basic element is a high quality stainless steel sensor with high requirements for exact measurement with excellent long term stability.

Preferred areas of use are

Water / filtrated sewage



drinking water system ground water level measurement rain spillway basin pump and booster stations level measurement in container water treatment plants water recycling



Fuel / Oil fuel storage

tank farm











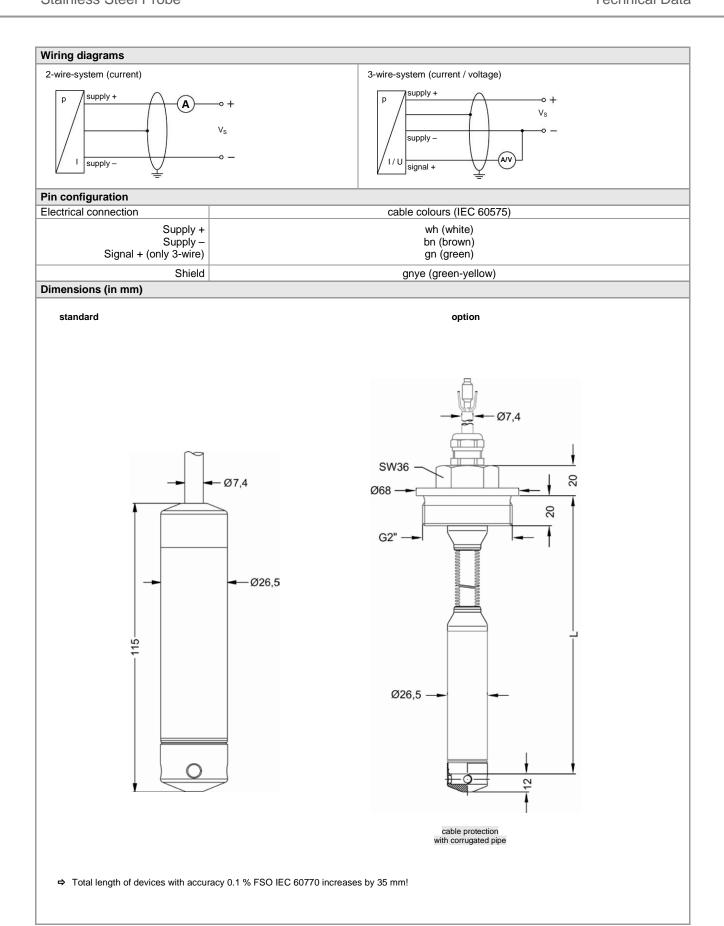


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Input pressure range														
Nominal pressure gauge	[bar]	0.1	0.16	0.25	0.4	0.6	1	1.6	2.5	4	6	10	16	25
Level	[mH ₂ O]	1	1.6	2.5	4	6	10	16	25	40	60	100	160	250
Overpressure	[bar]	0.5	1	1	2	5	5	10	10	20	40	40	80	80
Burst pressure ≥	[bar]	1.5	1.5	1.5	3	7.5	7.5	15	15	25	50	50	120	120

Output signal / Supply						
Standard	2-wire: 4 20) mA /	V _S = 8	32 V _{DC}	SIL-vers	ion: V _S = 14 28 V _{DC}
Option Ex-protection	 		V _S = 10			ion: V _S = 14 28 V _{DC}
Options 3-wire		mA /	V _S = 14 V _S = 14	30 V _{DC}	5.2	
Performance	0 1	,	V 3 – 11	00 100		
Accuracy	standard: nomir	nal nressi	re < 0.4 ba	,.	≤ ± 0.5 % FSO	
Accuracy	nomir option 1: nomir	nal pressu nal pressu	ire ≥ 0.4 ba ire ≥ 0.4 ba pressures:	·:	≤ ± 0.35 % FSO ≤ ± 0.25 % FSO ≤ ± 0.1 % FSO	
Permissible load	current 2-wire: current 3-wire: voltage 3-wire:	$R_{max} = [(R_{max} = 5)]$ $R_{min} = 10$) / 0.02 A]	Ω	
Influence effects	supply: load:		FSO / 10 V FSO / kΩ			
Long term stability	≤ ± 0.1 % FSO / y	ear at refe	erence cond	litions		
Response time	2-wire: < 10 mse	ec;		3-wire:	≤ 3 msec	
¹ accuracy according to IEC 60770 – lim	it point adjustment (no	n-linearity,	hysteresis, re	peatability)		
Thermal effects (Offset and Span)					
Nominal pressure P _N [bar]		< 0.40				<u>≥</u> 0.40
Tolerance band [% FSO]		≤ ± 1				 ≤±0.75
in compensated range [°C]				0.	70	
Permissible temperatures						
Permissible temperatures	medium: -10	70 °C		storage:	-25 70 °C	
Electrical protection ²	modium. To	10 0		otorago.	20 10	
Short-circuit protection	permanent					
Reverse polarity protection	no damage, but al	so no fun	ction			
Electromagnetic compatibility	emission and imm			J 61326		
 additional external overvoltage protect 					sure reference availa	ole on request
Electrical connection	orr arme in corrimian por			, p. 10110 p. 00	ouro rorororo avana	
Cable with sheath material ³	PVC (-5 70 °C)	arev	DI ID /-10) 70 °C)	hlack	FEP⁴ (-10 70 °C) black
³ cable with integrated air tube for atmos ⁴ do not use freely suspended probes wi	pheric pressure refere	nce	,			1
Materials (media wetted)						
Housing	stainless steel 1.4	404 (316l	_)			
Seals	FKM others on request					
Diaphragm	stainless steel 1.4	435 (316)	_)			
Protection cap	stainless steel 1.4 POM	435 (316	_)			
Explosion protection (only for 4.	POM 20 mA / 2-wire)	,				
Protection cap Explosion protection (only for 4.	POM 20 mA / 2-wire) IBExU 10 ATEX 1 zone 0: II 1G E	068 X /	IECEx IBE	E 12.0027)	(
Protection cap Explosion protection (only for 4 . Approvals DX19-LMP 307	POM 20 mA / 2-wire) IBExU 10 ATEX 1 zone 0: II 1G E zone 20: II 1D E U _i = 28 V, I _i = 93 r	068 X / Ex ia IIC TEx ia IIIC Tex ia III	IECEx IBE 14 Ga T 85°C Da 60 mW, C ₁	≈ 0 nF, L _i ≈	≈ 0 µH,	nousing
Protection cap Explosion protection (only for 4. Approvals DX19-LMP 307 Safety technical maximum values	POM 20 mA / 2-wire) IBExU 10 ATEX 1 zone 0: II 1G E zone 20: II 1D E U _i = 28 V, I _i = 93 r the supply connect in zone 0:	068 X / Ex ia IIIC T Ex ia IIIC T nA, P _i = 6 etions hav	IECEx IBE 4 Ga T 85°C Da 60 mW, C ₁ ? e an inner c	≈ 0 nF, L _i ≈		nousing
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Protection cap Explosion protection (only for 4 . Approvals	POM 20 mA / 2-wire) IBEXU 10 ATEX 1 zone 0: II 1G E zone 20: II 1D E U _i = 28 V, I _i = 93 r the supply connect in zone 0: in zone 1 or highe cable capacitance	068 X / Ex ia IIC T Ex ia IIIC inA, P _i = 6 tions hav -20 r: -20	IECEx IBE 4 Ga 7 85°C Da 60 mW, C ₁ : e an inner c . 60 °C with . 70 °C line/shield	≈ 0 nF, L _i ≈ apacity of p _{atm} 0.8 balso signal	= 0 μH, max. 27 nF to the har up to 1.1 bar) pF/m
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Protection cap Explosion protection (only for 4 . Approvals DX19-LMP 307 Safety technical maximum values Ambient temperature range Connecting cables (by factory) Miscellaneous Option SIL ⁵ 2 application Current consumption Weight Ingress protection	POM 20 mA / 2-wire) IBEXU 10 ATEX 1 zone 0: II 1G E zone 20: II 1D E U _i = 28 V, I _i = 93 r the supply connect in zone 0: in zone 1 or highe cable capacitance cable inductance: according to IEC 6 signal output curre	068 X / Ex ia IIC T Ex ia IIIC nA, P _i = 6 etions hav -20 r: -20 : signal signal	IECEx IBE 4 Ga 7 85°C Da 60 mW, C _i e an inner c . 60 °C with . 70 °C line/shield line/shield . C 61511 x. 25 mA/s	≈ 0 nF, L _i ≈ apacity of p _{atm} 0.8 balso signal also signal	≈ 0 μH, max. 27 nF to the har up to 1.1 bar line/signal line: 160 line/signal line: 1μl) pF/m H/m
Protection cap Explosion protection (only for 4 . Approvals DX19-LMP 307 Safety technical maximum values Ambient temperature range Connecting cables (by factory) Miscellaneous Option SIL ⁵ 2 application Current consumption Weight	POM 20 mA / 2-wire) IBEXU 10 ATEX 1 zone 0: II 1G E zone 20: II 1D E U _i = 28 V, I _i = 93 r the supply connect in zone 0: in zone 1 or highe cable capacitance cable inductance: according to IEC 6 signal output curre approx. 200 g (with	068 X / Ex ia IIC T Ex ia IIIC nA, P _i = 6 tions hav -20 r: -20 : signal signal 61508 / IE ent: ma hout cabl	IECEx IBE 4 Ga T 85°C Da 60 mW, Ci e an inner c . 60°C with . 70°C line/shield line/shield fC 61511 x. 25 mA / s e)	≈ 0 nF, L _i ≈ apacity of p _{atm} 0.8 balso signal also signal	≈ 0 μH, max. 27 nF to the har up to 1.1 bar line/signal line: 160 line/signal line: 1μl) pF/m H/m

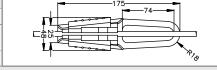


Stainless Steel Probe

Mounting flange with o	able gland		
Technical data			
Suitable for	all probes		cable gland M16x1.5 with seal insert (for cable-∅ 4 11 mm)
Flange material	stainless steel 1.4404 (316L)		Searmsert (for cable-22 4 11 mm)
Material of cable gland	standard: brass, nickel plated on request: stainless steel 1.4305 (303)	; plastic	nxØd
Seal insert	material: TPE (ingress protection IP 68)		
Hole pattern	according to DIN 2507		
Version	Size (in mm)	Weight	۵ ا
DN25 / PN40	D = 115, k = 85, b = 18, n = 4, d= 14	1.4 kg	
DN50 / PN40	D = 165, k = 125, b = 20, n = 4, d= 18	3.2 kg	Øk
DN80 / PN16	D = 200, k = 160, b = 20, n = 8, d= 18	4.8 kg	ØU
Ordering type		Ordering code	
DN25 / PN40 with cable	gland brass, nickel plated	ZMF2540	
DN50 / PN40 with cable	gland brass, nickel plated	ZMF5040	
DN80 / PN16 with cable	gland brass, nickel plated	ZMF8016	
Terminal alamn			

Terminal clamp

Technical data		
Suitable for	all probes with cable Ø 5.5 10.5 mm	
Material	standard: steel, zinc plated optionally: stainless steel 1.4301 (304)	
Weight	approx. 160 g	
Ordering type		Ordering code



Ordering type	Ordering code
Terminal clamp, steel, zinc plated	Z100528
Terminal clamp, stainless steel 1.4301 (304)	Z100527

Display program

CIT 200

Process display with LED display

CIT 250

Process display with LED display and contacts

CIT 300

Process display with LED display, contacts and analogue output

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

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.com



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in bar in mH ₂ O [bar] 0.10 0.16 0.25 0.40 0.60 1.0 1.6 2.5 4.0 6.0 10 16 25 customer 04 (316L) customer 04 (3-2-wire 04 / 2-wire	4 5 0 4 5 1	1 6 2 5 4 0 6 0 1 0 1 6 2 5 4 0 6 0 1 0	0 0 0 0 0 0 0 0 1 0 1 0 1 0 1 0 2 0 2 0	1 9	-0			-0	-0)-[- []			
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 $^{^{\}rm 1}$ not in combination with SIL $^{\rm 2}$ cable with integrated $\,$ air tube for atmospheric pressure reference