



# **LMK 387**

# **Stainless Steel Probe**

Ceramic Sensor

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

# **Nominal pressure**

from 0 ... 1 mH<sub>2</sub>O up to 0 ... 100 mH<sub>2</sub>O

### **Output signal**

2-wire: 4 ... 20 mA others on request

### Special characteristics

- diameter 22 mm
- diaphragm ceramics 99.9% Al<sub>2</sub>O<sub>3</sub>
- good long-term stability
- especially for waste water

# **Optional versions**

- housing material titanium
- **IS-version** Ex ia = intrinsically safe for gas and dust
- drinking water certificate according to DVGW and KTW
- temperature element Pt 100
- mounting with stainless steel tube
- different kinds of cables and elastomers

The stainless steel probe LMK 387 developed for level and gauge measurement in waste water, sludge or water courses. The mechanical robustness of the flush ceramic diaphragm facilitates an easy disassembly and cleaning of the probe in case of service.

Compared to the level probe LMK 382 the outer diameter is only 22 mm, whereby the installation or retrofitting can be easily carried out in 1 "pipes or in confined installation conditions. An IS-version (zone 0) is also available.

### Preferred areas of use



groundwater and level monitoring



# Sewage

waste water treatment water recycling



# Fuel and oil

tank battery biogas plants



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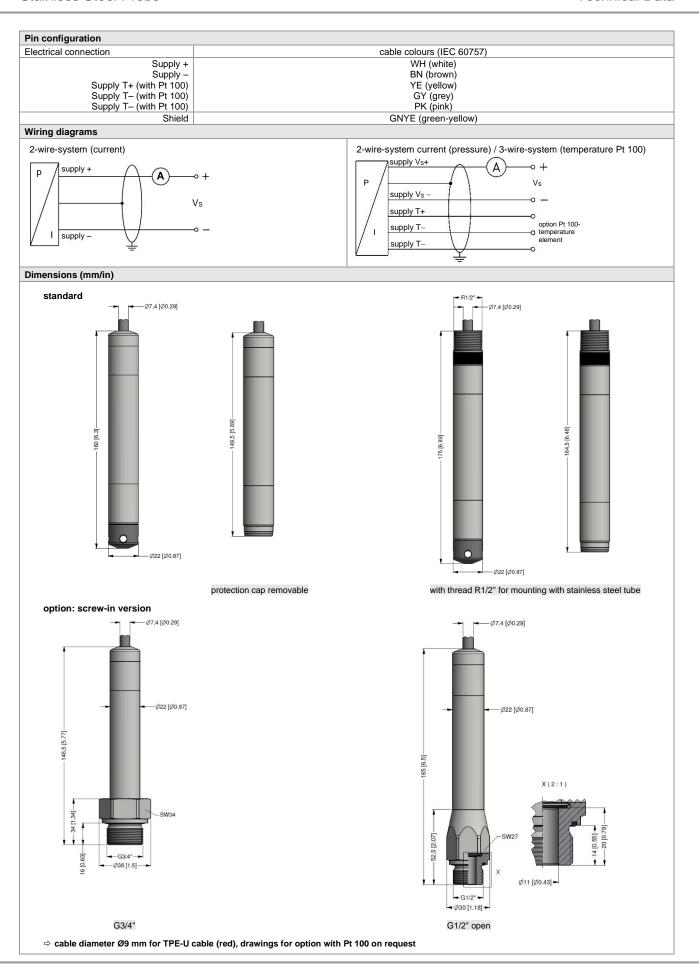


Stainless Steel Probe

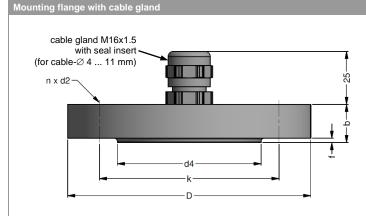
Input pressure range												
Nominal pressure gauge	[bar]	0.1	0.16	0.25	0.4	0.6	1	1.6	2.5	4	6	10
Level	[mH <sub>2</sub> O]	1	1.6	2.5	4	6	10	16	25	40	60	100
Overpressure	[bar]	3	4	5	5	7	7	12	20	20	20	20
Burst pressure ≥	[bar]	4	6	8	8	9	9	18	25	25	30	30
Permissible vacuum	[bar]	-0.2	-0.3		-0	.5				-1		
Max. ambient pressure (housing): 40 bar												

	oai				
Output signal / Supply					
Standard	2-wire: 4 20 mA / V <sub>S</sub> :	= 12 36 V <sub>D</sub>			
Option IS-version	2-wire: 4 20 mA / V <sub>S</sub> :				
Option temperature element Pt 100	1 - 1111 - 1111 - 1111 - 1111		2		
Temperature range	-25 125 °C				
Connectivity technology	3-wire				
	100 Ω at 0 °C		max. voltage 10 V <sub>DC</sub> , max. current 2 mA,	in intrinsically safe circuin intrinsically safe circuin	
Resistance	3850 ppm/K		max. power 10 mW,	in intrinsically safe circu	
Temperature coefficient	<del></del>		max. power 10 mv,	iii iiiiiiiisicaliy sale circu	111 403 1111
Supply Is	0.3 1.0 mA <sub>DC</sub>				
Performance					
Accuracy <sup>1</sup>	standard: ≤ ± 0.35 % FS		option: ≤ ± 0.25 % FS	80	
Permissible load	$R_{\text{max}} = [(V_S - V_{S \text{ min}}) / 0.0]$				
Influence effects	supply: 0.05 % FSO / 1	) V	load: 0.05 % FSO / k	Ω	
Long term stability	≤ ± 0.1 % FSO / year				
Turn-on time	450 msec				
Mean response time	≤ 70 msec				
Measuring rate	80 Hz				
1 accuracy according to IEC 60770 - limit	point adjustment (non-lineari	y, hysteresis,	repeatability)		
Thermal effects (offset and span)	, , ,		7/		
Tolerance band	≤±1%FSO				
in compensated range	-20 80 °C				
Permissible temperatures	P / - ==	05.00			
Permissible temperatures	medium / storage: -25	. 85 °C			
Electrical protection <sup>2</sup>					
Short-circuit protection	permanent				
Reverse polarity protection	no damage, but also no	function			
Electromagnetic compatibility	emission and immunity	according to I	EN 61326		
<sup>2</sup> additional external overvoltage protection	n unit in terminal box KL 1 or	KL 2 with atmo	ospheric pressure reference	available on request	
Electrical connection				·	
Cable with sheath material <sup>3</sup>	PUR (-25 70	°C) black	Ø 7.4 mm		
Cable Will Great Haterial	FEP 4 (-25 70	,	Ø 7.4 mm		
	TPE-U (-25 125	,		with drinking water certification	ato)
	TPE-U 5 (-25 125	,	Ø 9.0 mm	with dilliking water certifica	others on request
Bending radius	static installation: 10-fo			pplication: 20-fold cable of	
<sup>3</sup> shielded cable with integrated ventilation					
<sup>4</sup> do not use freely suspended probes with				absolute, the ventilation tube	e is closed)
5 only in combination with IS-version (exp					
· · ·	, , , , , , , , , , , , , , , , , , ,				
waterials unedia Wetted)					
Materials (media wetted)	standard: stainless ste	el 1 4404 (31	16.1.)		
Housing		el 1.4404 (31	16 L)		others on request
Housing	option: titanium	el 1.4404 (31	16 L)		others on request
	option: titanium standard: FKM		,		others on request
Housing	option: titanium standard: FKM option: EPDM (with	out / with drin	lking water certificate) emperature from -15 °C)		others on request
Housing Seals (O-rings)	option: titanium standard: FKM option: EPDM (with FFKM (min.	out / with drin	king water certificate)		
Housing Seals (O-rings) Diaphragm	option: titanium standard: FKM option: EPDM (with	out / with drin	king water certificate)		
Housing Seals (O-rings)	option: titanium standard: FKM option: EPDM (with FFKM (min. ceramics Al <sub>2</sub> O <sub>3</sub> 99.9% POM-C	out / with drin	king water certificate)		
Housing Seals (O-rings)  Diaphragm Protection cap Cable sheath	option: titanium standard: FKM option: EPDM (with FFKM (min. ceramics Al <sub>2</sub> O <sub>3</sub> 99.9%	out / with drin	king water certificate)		
Housing Seals (O-rings)  Diaphragm Protection cap Cable sheath Explosion protection	option: titanium standard: FKM option: EPDM (with FFKM (min. ceramics Al <sub>2</sub> O <sub>3</sub> 99.9% POM-C PUR, FEP, TPE-U	out / with drin permissible t	king water certificate) emperature from -15 °C)		
Housing Seals (O-rings)  Diaphragm Protection cap Cable sheath	option: titanium standard: FKM option: EPDM (with FFKM (min. ceramics Al <sub>2</sub> O <sub>3</sub> 99.9% POM-C PUR, FEP, TPE-U  IBEXU 15 ATEX 1066 X	out / with drin permissible t	king water certificate) emperature from -15 °C)		
Housing Seals (O-rings)  Diaphragm Protection cap Cable sheath Explosion protection	option: titanium standard: FKM option: EPDM (with FFKM (min. ceramics Al <sub>2</sub> O <sub>3</sub> 99.9% POM-C PUR, FEP, TPE-U  IBEXU 15 ATEX 1066 X zone 0: II 1G Ex ia IIE	out / with drin permissible t / IECEx IBE T4 Ga	king water certificate) emperature from -15 °C)		
Housing Seals (O-rings)  Diaphragm Protection cap Cable sheath  Explosion protection Approval DX14B-LMK 387	option: titanium standard: FKM option: EPDM (with FFKM (min. ceramics Al <sub>2</sub> O <sub>3</sub> 99.9% POM-C PUR, FEP, TPE-U  IBEXU 15 ATEX 1066 X zone 0: II 1G Ex ia IIE zone 20: II 1D Ex ia IIII	out / with drin permissible t / IECEx IBE T4 Ga C T135 °C Da	king water certificate) emperature from -15 °C)  18.0019X		
Housing  Seals (O-rings)  Diaphragm  Protection cap  Cable sheath  Explosion protection  Approval DX14B-LMK 387  Safety technical maximum values	option: titanium standard: FKM option: EPDM (with FFKM (min. ceramics Al₂O₃ 99.9% POM-C PUR, FEP, TPE-U  IBEXU 15 ATEX 1066 X zone 0: II 1G Ex ia III zone 20: II 1D Ex ia IIII Ui = 28 V, Ii = 93 mA, Pi	out / with drin permissible t / IECEx IBE T4 Ga C T135 °C Da = 660 mW, C	tking water certificate) emperature from -15 °C)  18.0019X  18.02 nF, Li = 0 µH;	opposite the enclosure	
Housing Seals (O-rings)  Diaphragm Protection cap Cable sheath Explosion protection Approval DX14B-LMK 387  Safety technical maximum values (pressure)	option: titanium  standard: FKM option: EPDM (with FFKM (min. ceramics Al <sub>2</sub> O <sub>3</sub> 99.9%  POM-C PUR, FEP, TPE-U  IBEXU 15 ATEX 1066 X zone 0: II 1G Ex ia IIE zone 20: II 1D Ex ia IIIC U <sub>i</sub> = 28 V, I <sub>i</sub> = 93 mA, P <sub>i</sub> the supply connections	out / with drin permissible t / IECEx IBE T4 Ga C T135 °C Da = 660 mW, C nave an inner	king water certificate) emperature from -15 °C)  18.0019X  i = 49.2 nF, Li = 0 μH; r capacity of max. 100 nF or	• •	
Housing  Seals (O-rings)  Diaphragm  Protection cap  Cable sheath  Explosion protection  Approval DX14B-LMK 387  Safety technical maximum values	option: titanium  standard: FKM option: EPDM (with FFKM (min. ceramics Al <sub>2</sub> O <sub>3</sub> 99.9%  POM-C PUR, FEP, TPE-U  IBEXU 15 ATEX 1066 X zone 0: II 1G Ex ia IIE zone 20: II 1D Ex ia IIIC U <sub>i</sub> = 28 V, I <sub>i</sub> = 93 mA, P <sub>i</sub> the supply connections	out / with drin permissible t / IECEx IBE T4 Ga C T135 °C Da = 660 mW, C nave an inner	tking water certificate) emperature from -15 °C)  18.0019X  18.02 nF, Li = 0 µH;	• •	
Housing  Seals (O-rings)  Diaphragm Protection cap Cable sheath  Explosion protection  Approval DX14B-LMK 387  Safety technical maximum values (pressure) Safety technical maximum values	option: titanium standard: FKM option: EPDM (with FFKM (min. ceramics Al <sub>2</sub> O <sub>3</sub> 99.9% POM-C PUR, FEP, TPE-U  IBEXU 15 ATEX 1066 X zone 0: II 1G Ex ia IIE zone 20: II 1D Ex ia III U <sub>i</sub> = 28 V, I <sub>i</sub> = 93 mA, P <sub>i</sub> the supply connections  U <sub>i</sub> = 30 V, I <sub>i</sub> = 54 mA, P <sub>i</sub>	out / with drin permissible t / IECEx IBE T4 Ga C T135 °C Da = 660 mW, C nave an innel	king water certificate) emperature from -15 °C)  18.0019X  i = 49.2 nF, Li = 0 μH; r capacity of max. 100 nF or	rature element Pt 100)	
Housing  Seals (O-rings)  Diaphragm Protection cap Cable sheath  Explosion protection  Approval DX14B-LMK 387  Safety technical maximum values (pressure) Safety technical maximum values (temperature)	option: titanium standard: FKM option: EPDM (with FFKM (min. ceramics Al <sub>2</sub> O <sub>3</sub> 99.9% POM-C PUR, FEP, TPE-U  IBEXU 15 ATEX 1066 X zone 0: II 1G Ex ia IIE zone 20: II 1D Ex ia III U <sub>i</sub> = 28 V, I <sub>i</sub> = 93 mA, P <sub>i</sub> the supply connections  U <sub>i</sub> = 30 V, I <sub>i</sub> = 54 mA, P <sub>i</sub> in zone 0: -2	out / with drin permissible t / IECEx IBE T4 Ga C T135 °C Da = 660 mW, C nave an innel	tking water certificate) emperature from -15 °C)  18.0019X  Gi = 49.2 nF, Li = 0 µH; r capacity of max. 100 nF occious of temperature.	rature element Pt 100)	
Housing  Seals (O-rings)  Diaphragm Protection cap Cable sheath  Explosion protection  Approval DX14B-LMK 387  Safety technical maximum values (pressure) Safety technical maximum values (temperature)	option: titanium  standard: FKM option: EPDM (with FFKM (min. ceramics Al <sub>2</sub> O <sub>3</sub> 99.9%  POM-C PUR, FEP, TPE-U  IBEXU 15 ATEX 1066 X zone 0: II 1G Ex ia IIE zone 20: II 1D Ex ia IIIC U <sub>i</sub> = 28 V, I <sub>i</sub> = 93 mA, P <sub>i</sub> the supply connections  U <sub>i</sub> = 30 V, I <sub>i</sub> = 54 mA, P <sub>i</sub> in zone 0: -2 zone 1 and higher: -2	out / with drin permissible t / IECEx IBE T4 Ga C T135 °C Da = 660 mW, C nave an inner = 405 mW, C 0 60 °C wi 5 65 °C	tking water certificate) emperature from -15 °C)  18.0019X  Gi = 49.2 nF, Li = 0 µH; r capacity of max. 100 nF occious of temperature.	rature element Pt 100)	
Housing  Seals (O-rings)  Diaphragm Protection cap Cable sheath  Explosion protection  Approval DX14B-LMK 387  Safety technical maximum values (pressure) Safety technical maximum values (temperature) Permissible temp. for environment	option: titanium standard: FKM option: EPDM (with FFKM (min. ceramics Al <sub>2</sub> O <sub>3</sub> 99.9% POM-C PUR, FEP, TPE-U  IBExU 15 ATEX 1066 X zone 0: II 1G Ex ia IIIc Zone 20: II 1D Ex ia IIIc Ui = 28 V, Ii = 93 mA, Pi the supply connections  Ui = 30 V, Ii = 54 mA, Pi in zone 0: 2 zone 1 and higher: -2 cable capacity: si	out / with drin permissible t  / IECEx IBE T4 Ga C T135 °C Da = 660 mW, C nave an inner = 405 mW, C 0 60 °C wi 5 65 °C gnal line/shie	king water certificate) emperature from -15 °C)  18.0019X  18.0019X  19.10 μH; r capacity of max. 100 nF constitution of the path 0.8 bar up to 1.1 bar	rature element Pt 100) r se: 160 pF/m	
Housing  Seals (O-rings)  Diaphragm Protection cap Cable sheath  Explosion protection Approval DX14B-LMK 387  Safety technical maximum values (pressure) Safety technical maximum values (temperature) Permissible temp. for environment  Connecting cables	option: titanium standard: FKM option: EPDM (with FFKM (min. ceramics Al <sub>2</sub> O <sub>3</sub> 99.9% POM-C PUR, FEP, TPE-U  IBExU 15 ATEX 1066 X zone 0: II 1G Ex ia IIIc Zone 20: II 1D Ex ia IIIc Ui = 28 V, Ii = 93 mA, Pi the supply connections  Ui = 30 V, Ii = 54 mA, Pi in zone 0: 2 zone 1 and higher: -2 cable capacity: si	out / with drin permissible t  / IECEx IBE T4 Ga C T135 °C Da = 660 mW, C nave an inner = 405 mW, C 0 60 °C wi 5 65 °C gnal line/shie	tking water certificate) emperature from -15 °C)  18.0019X  18.0019X  19.10	rature element Pt 100) r se: 160 pF/m	
Housing  Seals (O-rings)  Diaphragm Protection cap Cable sheath  Explosion protection Approval DX14B-LMK 387  Safety technical maximum values (pressure) Safety technical maximum values (temperature) Permissible temp. for environment Connecting cables (by factory)  Miscellaneous	option: titanium standard: FKM option: EPDM (with FFKM (min. ceramics Al <sub>2</sub> O <sub>3</sub> 99.9% POM-C PUR, FEP, TPE-U  IBEXU 15 ATEX 1066 X zone 0: II 1G Ex ia IIE zone 20: II 1D Ex ia IIIE Ui = 28 V, Ii = 93 mA, Pi the supply connections Ui = 30 V, Ii = 54 mA, Pi in zone 0: -2 zone 1 and higher: -2 cable capacity: si cable inductance: si	out / with drin permissible t  / IECEx IBE T4 Ga C T135 °C Da = 660 mW, C nave an inner = 405 mW, C 0 60 °C wi 5 65 °C gnal line/shie	tking water certificate) emperature from -15 °C)  18.0019X  18.0019X  18.0019X  19.0019X  10.0019X  10.001	rature element Pt 100) r ne: 160 pF/m ne: 1 µH/m	others on request
Housing  Seals (O-rings)  Diaphragm Protection cap Cable sheath  Explosion protection  Approval DX14B-LMK 387  Safety technical maximum values (pressure) Safety technical maximum values (temperature) Permissible temp. for environment  Connecting cables (by factory)  Miscellaneous  Drinking water certificate 6	option: titanium standard: FKM option: EPDM (with FFKM (min. ceramics Al <sub>2</sub> O <sub>3</sub> 99.9% POM-C PUR, FEP, TPE-U  IBEXU 15 ATEX 1066 X zone 0: II 1G Ex ia IIIc zone 20: II 1D Ex ia IIIc U <sub>i</sub> = 28 V, I <sub>i</sub> = 93 mA, P <sub>i</sub> the supply connections U <sub>i</sub> = 30 V, I <sub>i</sub> = 54 mA, P <sub>i</sub> in zone 0: -2 zone 1 and higher: -2 cable capacity: si cable inductance: si	out / with drin permissible t  / IECEx IBE T4 Ga C T135 °C Da = 660 mW, C ave an inner = 405 mW, C 0 60 °C v gnal line/shie gnal line/shie	king water certificate) emperature from -15 °C)  18.0019X  18.0019X  18.0019X  18.0019X  19.00	rature element Pt 100) r ie: 160 pF/m ie: 1 µH/m ation "with drinking water o	others on request
Housing  Seals (O-rings)  Diaphragm Protection cap Cable sheath  Explosion protection Approval DX14B-LMK 387  Safety technical maximum values (pressure) Safety technical maximum values (temperature) Permissible temp. for environment Connecting cables (by factory)  Miscellaneous	option: titanium standard: FKM option: EPDM (with FFKM (min. ceramics Al <sub>2</sub> O <sub>3</sub> 99.9% POM-C PUR, FEP, TPE-U  IBEXU 15 ATEX 1066 X zone 0: II 1G Ex ia IIE zone 20: II 1D Ex ia IIIC Ui = 28 V, Ii = 93 mA, Pi the supply connections Ui = 30 V, Ii = 54 mA, Pi in zone 0: -2 zone 1 and higher: -2 cable capacity: si cable inductance: si	out / with drin permissible t  / IECEx IBE T4 Ga C T135 °C Da = 660 mW, C 0 60 °C wi 5 65 °C gnal line/shie gnal line/shie	king water certificate) emperature from -15 °C)  18.0019X  18.0019X  18.0019X  18.0019X  19.0019  10.	rature element Pt 100) r ie: 160 pF/m ie: 1 µH/m ation "with drinking water of	others on request
Housing  Seals (O-rings)  Diaphragm Protection cap Cable sheath  Explosion protection  Approval DX14B-LMK 387  Safety technical maximum values (pressure) Safety technical maximum values (temperature) Permissible temp. for environment  Connecting cables (by factory)  Miscellaneous  Drinking water certificate 6	option: titanium standard: FKM option: EPDM (with FFKM (min. ceramics Al <sub>2</sub> O <sub>3</sub> 99.9% POM-C PUR, FEP, TPE-U  IBEXU 15 ATEX 1066 X zone 0: II 1G Ex ia IIE zone 20: II 1D Ex ia IIIC Ui = 28 V, Ii = 93 mA, Pi the supply connections Ui = 30 V, Ii = 54 mA, Pi in zone 0: -2 zone 1 and higher: -2 cable capacity: si cable inductance: si	out / with drin permissible t  / IECEx IBE T4 Ga C T135 °C Da = 660 mW, C 0 60 °C wi 5 65 °C gnal line/shie gnal line/shie	king water certificate) emperature from -15 °C)  18.0019X  18.0019X  18.0019X  18.0019X  19.0019  10.	rature element Pt 100) r ie: 160 pF/m ie: 1 µH/m ation "with drinking water of	others on request
Housing  Seals (O-rings)  Diaphragm Protection cap Cable sheath  Explosion protection  Approval DX14B-LMK 387  Safety technical maximum values (pressure) Safety technical maximum values (temperature) Permissible temp. for environment  Connecting cables (by factory)  Miscellaneous Drinking water certificate 6 Option cable protection  Current consumption	option: titanium standard: FKM option: EPDM (with FFKM (min. ceramics Al <sub>2</sub> O <sub>3</sub> 99.9% POM-C PUR, FEP, TPE-U  IBEXU 15 ATEX 1066 X zone 0: II 1G Ex ia IIE zone 20: II 1D Ex ia III U <sub>i</sub> = 28 V, I <sub>i</sub> = 93 mA, P <sub>i</sub> the supply connections  U <sub>i</sub> = 30 V, I <sub>i</sub> = 54 mA, P <sub>i</sub> in zone 0: -2 zone 1 and higher: -2 cable capacity: si cable inductance: si  according to DVGW W 2 prepared for mounting v (standard: stainless steel max. 22 mA	out / with drin permissible t  / IECEx IBE T4 Ga T135 °C Da = 660 mW, C nave an innel = 405 mW, C 0 60 °C wi 5 65 °C gnal line/shie gnal line/shie 270 and UBA vith stainless el pipe with a	king water certificate) emperature from -15 °C)  18.0019X  18.0019X  18.0019X  18.0019X  19.0019  10.	rature element Pt 100) r ie: 160 pF/m ie: 1 µH/m ation "with drinking water of	others on request
Housing  Seals (O-rings)  Diaphragm Protection cap Cable sheath  Explosion protection Approval DX14B-LMK 387  Safety technical maximum values (pressure) Safety technical maximum values (temperature) Permissible temp. for environment  Connecting cables (by factory)  Miscellaneous Drinking water certificate 6 Option cable protection  Current consumption	option: titanium standard: FKM option: EPDM (with FFKM (min. ceramics Al <sub>2</sub> O <sub>3</sub> 99.9% POM-C PUR, FEP, TPE-U  IBEXU 15 ATEX 1066 X zone 0: II 1G Ex ia III Zone 20: II 1D Ex ia III Ui = 28 V, Ii = 93 mA, Pi the supply connections  Ui = 30 V, Ii = 54 mA, Pi in zone 0: 2 zone 1 and higher: -2 cable capacity: si cable inductance: si  according to DVGW W: prepared for mounting v (standard: stainless stee max. 22 mA approx. 180 g (without of	out / with drin permissible t  / IECEx IBE T4 Ga T135 °C Da = 660 mW, C nave an innel = 405 mW, C 0 60 °C wi 5 65 °C gnal line/shie gnal line/shie 270 and UBA vith stainless el pipe with a	king water certificate) emperature from -15 °C)  18.0019X  18.0019X  18.0019X  18.0019X  19.0019  10.	rature element Pt 100) r ie: 160 pF/m ie: 1 µH/m ation "with drinking water of	others on request
Housing  Seals (O-rings)  Diaphragm Protection cap Cable sheath  Explosion protection Approval DX14B-LMK 387  Safety technical maximum values (pressure) Safety technical maximum values (temperature) Permissible temp. for environment  Connecting cables (by factory)  Miscellaneous Drinking water certificate 6 Option cable protection  Current consumption Weight Ingress protection	option: titanium standard: FKM option: EPDM (with FFKM (min. ceramics Al <sub>2</sub> O <sub>3</sub> 99.9% POM-C PUR, FEP, TPE-U  IBExU 15 ATEX 1066 X zone 0: II 1G Ex ia III Ui = 28 V, Ii = 93 mA, Pi the supply connections  Ui = 30 V, Ii = 54 mA, Pi in zone 0: 2 zone 1 and higher: -2 cable capacity: si cable inductance: si  according to DVGW W: prepared for mounting v (standard: stainless stee max. 22 mA approx. 180 g (without of	out / with drin permissible t  / IECEx IBE     T4 Ga     T135 °C Da = 660 mW, C nave an inner = 405 mW, C 0 60 °C wi 5 65 °C gnal line/shie gnal line/shie 270 and UBA vith stainless el pipe with a able)	king water certificate) emperature from -15 °C)  18.0019X  18.0019X  18.0019X  18.0019X  19.0019  10.	rature element Pt 100) r ie: 160 pF/m ie: 1 µH/m ation "with drinking water of	others on request
Housing  Seals (O-rings)  Diaphragm Protection cap Cable sheath  Explosion protection Approval DX14B-LMK 387  Safety technical maximum values (pressure) Safety technical maximum values (temperature) Permissible temp. for environment  Connecting cables (by factory)  Miscellaneous Drinking water certificate 6 Option cable protection  Current consumption  Weight Ingress protection CE-conformity	option: titanium standard: FKM option: EPDM (with FFKM (min. ceramics Al <sub>2</sub> O <sub>3</sub> 99.9% POM-C PUR, FEP, TPE-U  IBExU 15 ATEX 1066 X zone 0: II 1G EX ia IIE zone 20: II 1D EX ia IIIE Ui = 28 V, Ii = 93 mA, Pi the supply connections  Ui = 30 V, Ii = 54 mA, Pi in zone 0: 2 zone 1 and higher: -2 cable capacity: si cable inductance: si  according to DVGW W: prepared for mounting v (standard: stainless stee max. 22 mA approx. 180 g (without of IP 68 EMC Directive: 2014/30	out / with drin permissible t  / IECEx IBE     T4 Ga     T135 °C Da = 660 mW, C nave an inner = 405 mW, C 0 60 °C wi 5 65 °C gnal line/shie gnal line/shie 270 and UBA vith stainless el pipe with a able)	king water certificate) emperature from -15 °C)  18.0019X  18.0019X  18.0019X  18.0019X  19.0019  10.	rature element Pt 100) r ie: 160 pF/m ie: 1 µH/m ation "with drinking water of	others on request
Housing  Seals (O-rings)  Diaphragm Protection cap Cable sheath  Explosion protection Approval DX14B-LMK 387  Safety technical maximum values (pressure) Safety technical maximum values (temperature) Permissible temp. for environment  Connecting cables (by factory)  Miscellaneous Drinking water certificate 6 Option cable protection  Current consumption Weight Ingress protection	option: titanium standard: FKM option: EPDM (with FFKM (min. ceramics Al <sub>2</sub> O <sub>3</sub> 99.9% POM-C PUR, FEP, TPE-U  IBEXU 15 ATEX 1066 X zone 0: II 1G Ex ia IIE zone 20: II 1D Ex ia IIII Ui = 28 V, Ii = 93 mA, Pi the supply connections Ui = 30 V, Ii = 54 mA, Pi in zone 0: -2 zone 1 and higher: -2 cable capacity: si cable inductance: si  according to DVGW W 2 prepared for mounting v (standard: stainless stee max. 22 mA approx. 180 g (without of IP 68 EMC Directive: 2014/30 2014/34/EU	out / with drin permissible t  / IECEx IBE T4 Ga C T135 °C Da = 660 mW, C nave an innet = 405 mW, C 0 60 °C with 5 65 °C gnal line/shie gnal line/shie 270 and UBA with stainless el pipe with a able)	king water certificate) emperature from -15 °C)  18.0019X  18.0019X  18.0019X  18.0019X  19.10	rature element Pt 100) r ne: 160 pF/m ne: 1 µH/m ation "with drinking water of mpact product hible; other lengths on requirements."	others on request

Stainless Steel Probe



### Stainless Steel Probe



dimensions in mm					
	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 steel 1.4305 (303); plastic			
Seal insert	material: TPE (ingress protection IP 68)				
Hole pattern	according to DIN 2507				

3		
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 n	nm	
Material of housing	standard: steel, zinc plated	optionally: stainless steel 1.4	4301 (304)
Material of clamping jaws and positioning clips	PA (fibre-glass reinforced)		
Dimensions (mm)	174 x 45 x 32		
Hook diameter	20 mm		
			\A/=! -4

Ordering type	Ordering code	Weight	
Terminal clamp, steel, zinc plated	Z100528	22222 160 Z	
Terminal clamp, stainless steel 1.4301 (304)	Z100527	approx. 160 g	

# Display program

<b>CIT 200</b> P	rocess display	with LED	display
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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 / 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 LMK 387 LMK 387 Pressure gauge in bar 3 6 0 3 6 3 absolute in bar consult gauge in mH<sub>2</sub>O 3 6 1 0 0 0 6 0 0 1.0 0.10 1.6 0.16 5 0 0 0 0 0 0.25 2.5 4.0 0.40 6.0 0.60 0 0 0 1.0 0 0 10 6 0 1 5 0 1 0 0 1 0 0 1 0 0 2 9 9 9 16 1.6 2.5 25 40 4.0 6 60 6.0 100 10 customer consult stainless steel 1.4404 (316L) 1 titanium Т customer q consult Design screw-in version G1/2" open screw-in version G3/4" flush Diaphragm ceramics Al<sub>2</sub>O<sub>3</sub> 99.9 % С a customer consult Output 4 ... 20 mA / 2-wire 1 intrinsic safety 4 ... 20 mA / 2-wire Ε customer 9 consult Seals FKM 1 **EPDM** 3 DVGW / KTW: EPDM 1 3T FFKM<sup>2</sup> 7 consult customer consult Electrical connection PUR-cable (black, Ø 7.4 mm) 3 2 FEP-cable (black, Ø 7.4 mm) 3 TPE-U-cable (blue, Ø 7.4 mm) 3 4 TPE-U-cable (red, Ø 9.0 mm) <sup>4</sup> 42 DVGW / KTW: TPE-U-cable (blue, Ø 7.4 mm) 1,3 F customer consult standard 0.35 % FSO 3 option 0.25 % FSO customer 9 consult Cable length in m 9 9 9 Special version standard 0 0 0 1 3 with temperature sensor Pt 100 0 prepared for mounting with stainless steel pipe 5 0 2 5 customer 9 9 9 consult

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<sup>1</sup> drinking water certification only possible with EPDM seal (code 3T) in combination with TPE-U cable (code F); not possible with IS-protection (explosion protection)

<sup>&</sup>lt;sup>2</sup> min. permissible temperature from -15 °C

<sup>&</sup>lt;sup>3</sup> shielded cable with integrated air tube for atmospheric pressure reference

<sup>&</sup>lt;sup>4</sup> only in combination with IS version (explosion protection) and temperature element Pt 100

<sup>&</sup>lt;sup>5</sup> stainless steel pipe is not part of the supply