

inductive conductivity transmitter MLF 200

features

- inductive conductivity meter compact version
- completely hygienic design
- LCD display for indication and operation
- very fast temperature compensation
- separate 4...20 mA output for conductivity/ concentration and 4...20 mA output for temperature
- touch screen
- fast response time T90 <2.0 seconds
- temperature compensation for each range adjustable

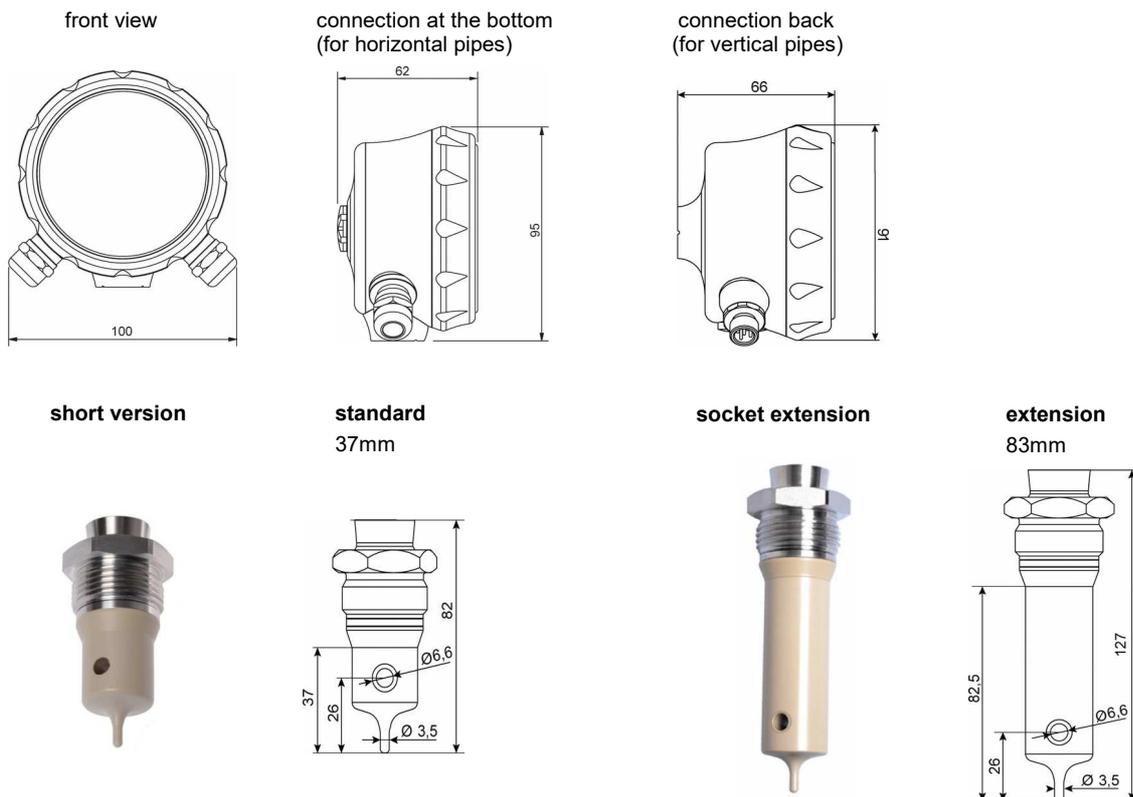
technical advantages

- integrated linearization function for sodium hydroxide and nitric acid
- freely configurable measuring range for custom media
- no failures due to leakage through the sensor tip and sensor consists of a component
- sensor tip completely made of PEEK, no failure caused by aggressive media
- big passage in the sensor (6.6mm) allows high percentage of solids
- high temperature range in continuous operation (...+ 140 ° C)
- 2 relay outputs



MLF 200-7H-A

dimensions (in mm)



oder-code MLF 200...

order-example: MLF 200-7-A

connection head

- 7H stainless steel head standard with screw cap and inspection glass, with screwing M16 (horizontal installation)
- 7V stainless steel head standard with screw cap and inspection glass, with screwing M16 (vertical installation)
- 8H stainless steel head standard with scew cap and inspection glass, with M12-plug (horizontal installation)
- 8V stainless steel head standard with scew cap and inspection glass, with M12-plug (vertical installation)

sensor design

- A standard
- B with socket extension (from DN65 applicable)

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general data

medium temperature	-20 ... 140 ° C 150 ° C up to 1 hour
media pressure	<10 bar (helium tested)
operating temperature	-30 ... 80 ° C
insulation voltage	500 VAC IEC529 IP67 / IP69K
moisture	IEC 68.2.38, 98% condensing
vibrations	IEC 60068.2.6 - Test Fc 1.0 mm (2-13,2hz) 0.7g (13,2-100hz)

technical data

case material	stainless steel, AISI 304
process connection	G1 "(connections see accessories)
<u>immersion depth</u>	
standard	37 mm
long version	83 mm
<u>material</u>	
media non-wetted parts	stainless steel AISI 304
media wetted parts	37...mm PEEK Natura 83...mm PEEK Natura+AISI316 L
<u>surface</u>	
media wetted parts	Ra < 0.8 mm
<u>measuring range</u>	
Conductivity	0...1 S/cm 14 ranges selectable
concentration	4 media set at the factory 1 user selected area
temperature	-30...150°C freely programmable area
<u>accuracy (sensor included. transmitter at 25°C ambient temperature)</u>	
conductivity/concentration	0 ... 500 mS/cm ≤ 1.5% 0 ... 1/0...500 mS/cm ≤ 1.0% 0 ... 1 S/cm ≤ 1.5%
temperature	≤ 0.4% of the selected range
<u>response time</u>	
conductivity/concentration	t90 < 2.0 seconds
temperature	t90 < 15 seconds
temperature compensation	0.0 ... 5.0%/°C, freely adjustable
compensation range	-20 ... 150°C
reference temperature	25°C (adjustable)
measuring time	< 0.3 seconds
up phase with display	≤ 15 seconds

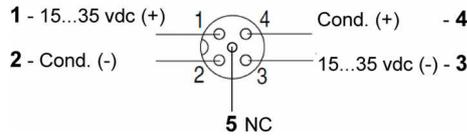
electrical data

power supply	15...35 VDC
<u>output</u>	
conductivity/concentration	4...20mA 4...20mA
temperature	4...20mA
relays	2 relays in the display
display	display with LCD display 2 relays outputs galvanically isolated
<u>temperature drift</u>	
conductivity	≤ 0,1%/K
temperatur	≤ 0,05%/K
<u>electrical connection</u>	
left side	M12, 5-pin M16 cable gland screw
right side	M12, 8-pole (only 4...20mA + relay output) M16 cable gland screw
material	plastic (PA) stainless steel

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connection assignments

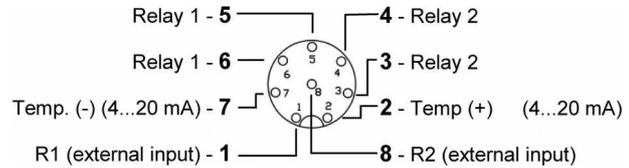
left side electrical connection



left side, 5-pin M12 connector

- | | | |
|----------|------------------|--------------|
| 1. brown | power supply (+) | (15...35VDC) |
| 2. white | conductivity (-) | (4...20mA) |
| 3. blue | power supply (-) | (15...35VDC) |
| 4. black | conductivity (+) | (4...20mA) |
| 5. NC | not connected | |

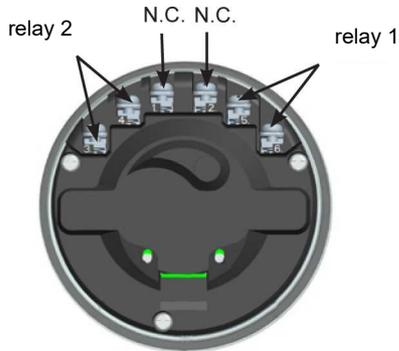
Right side electrical connection with relay output



right side, 8-pin M12-connector

- | | | |
|--------------|-----------------|------------------|
| 1. white | R1 | (external input) |
| 2. brown | temperature (+) | (4...20mA) |
| 3. green | relay 2 | |
| 4. yellow | relay 2 | |
| 5. grey | relay 1 | |
| 6. light red | relay 1 | |
| 7. blue | temperature (-) | (4...20mA) |
| 8. red | R2 | (external input) |

electrical connections on the display with relay output



electrical connections on the display with relay output

- | | |
|-------------------------------|---------|
| 1. not connected | |
| 2. not connected | |
| 3. green | relay 2 |
| 4. yellow | relay 2 |
| 5. grey | relay 1 |
| 6. light red | relay 1 |
| (3+5 can be connected common) | |

Setting of the external input for the selector

range	R1	R2	range	R1	R2
1	N.C.	N.C.	3	N.C.	24 VDC
2	24 VDC	N.C.	4	24 VDC	24 VDC

