

**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

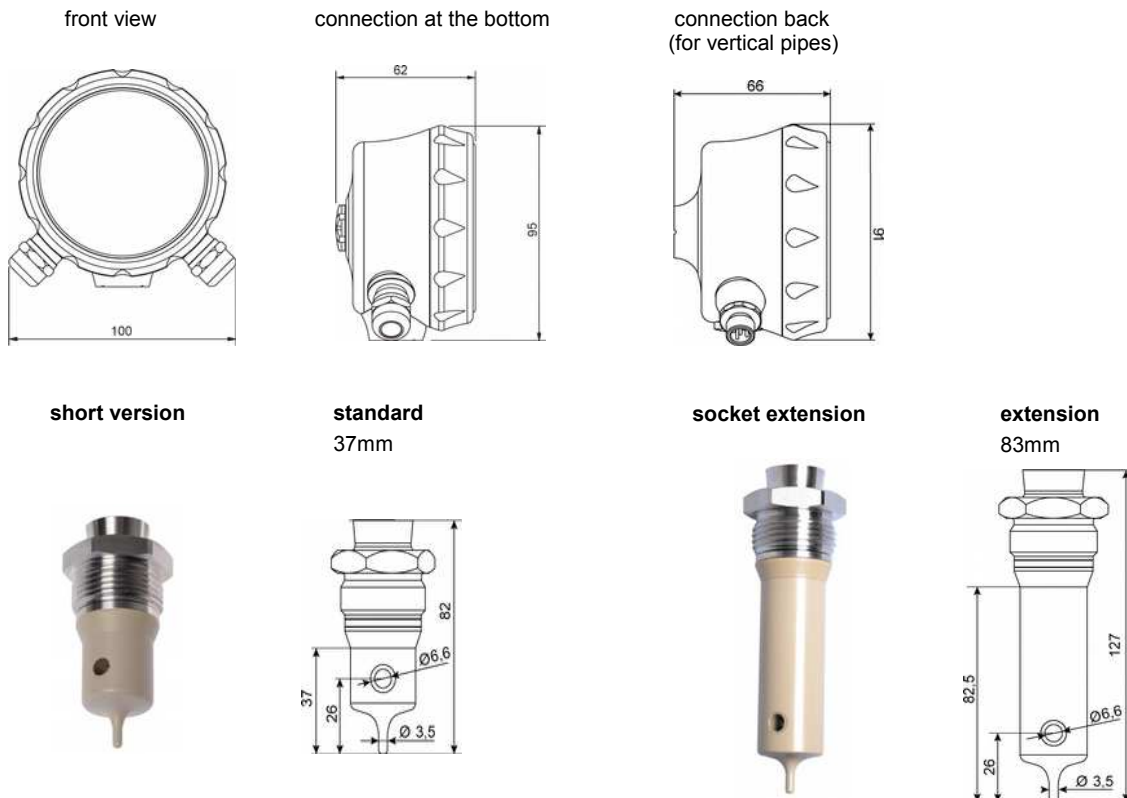
**technical advantages**

- 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



**MLF200-7-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 scw cap and inspection glass, with M12-plug (horizontal installation)
- 8V stainless steel head standard with scw 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

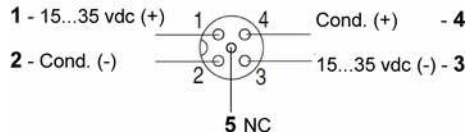
**electrical data**

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

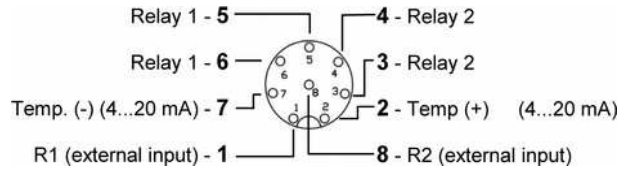
**left side electrical connection**



**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    |              |

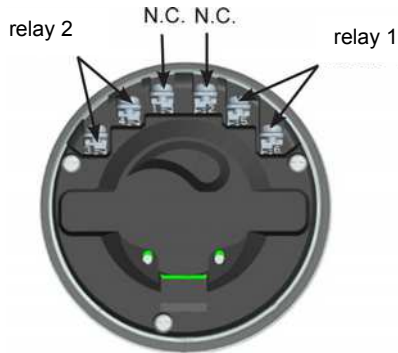
**Right side electrical connection with relay output**



**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

