

## LMC



- Probe lengths up to 4000 mm
- Measuring error: < 1.5 % of probe length
- $p_{\max}$ : 30 bar;  $t_{\max}$ : 90/125 °C
- Mech. connection:  
G 1 male, G 2 male (PVDF version),  
thread adapter
- Level indicator in percent,  
4-20 mA analogue output
- Four devices for various  
applications
- For ATEX applications



## Description

The TRODEKS capacitive level indicators type LMC serve to measure liquid levels in tanks. They consist of a measuring probe and a connecting head with a plug-in evaluation module. Depending on the operating conditions, different probes are available:

- single probe for standard applications
- double probe with PVDF connection for non metallic tanks and at the same time aggressive medias
- single probe with external reference tube for non metallic tanks or media with very low dielectric constant and
- single probe with a split connecting head for liquid temperatures of up to 125°C.

The devices do not have any mechanically moving parts and therefore hardly any mechanical wear. The plug-in evaluation module can be changed easily so that the devices are really easy to maintain.

## Working principle

The measuring system is based on the capacitive measuring method. The measuring probe and the tank wall or the second electrode respectively form the plates of a capacitor, the medium in the tank is the dielectric fluid. The capacity depends on the medium. The more the medium touches the measuring probe, the higher the capacity. This change is detected by the plug-in evaluation module and transformed in a percentage display or a 4-20 mA signal.

## Fields of application

- Water or Problematic liquids
- Liquid food
- Chemical and aggressive liquids
- Oil
- Pharmaceutical liquids

## Technical Data

Measuring principle:	capacitive (for liquids up to 1000 pF)
Probe length:	265...4000 mm (shorter versions on request)
Measuring error:	<1,5 % of probe length
Medium temperature:	max. 90 °C, up to max. 125 °C for Model LMC-H
Ambient temperature:	-10 ... +60 °C
Max. pressure:	30 bar at 20 °C 10 bar at 90 °C
Media DC-value:	$\epsilon_r = \text{min. } 1.5$
Materials:	Housing: Polycarbonate  Connection: stainless steel 1.4305 (model LMC-N, LMC-H, LMC-T) PVDF (model LMC-S)  Probe: stainless steel with PTFE coating for model LMC-N and LMC-H PVDF-coating for model LMC-S stainless steel probe 1.4305 with internal sensor (stainless steel for PTFE coating) for model LMC-T
Process connection:	G 1 male for model LMC-N, LMC-H, LMC-T G 2 male for model LMC-S  Adapter for model LMC-N, LMC-H, LMC-T: thread G 1 ¼, G 1 ½  welding-in sleeve (not for LMC-S)
	Ø external 40 mm
Display:	4-line LCD, alphanumeric, Display of % and mA (with one position after the decimal point)
Supply voltage:	10 ... 35 V <sub>DC</sub> 12 ... 30 V <sub>DC</sub> for ATEX
Electrical connection:	via 1 (2) cable gland M20x1,5
Output:	4-20 mA, 2-wire
Protection:	IP 65
ATEX:	 II 1/2 GD Ex ia IIC T4

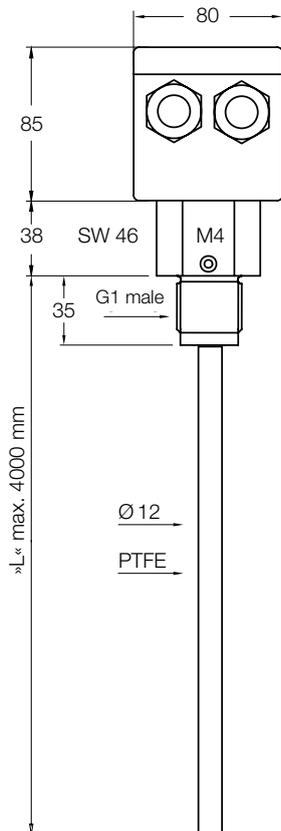
**Order Details** (Example: LMC-N 1 2G6 0 3)

Version	Probe length*	Mechanical connection	ATEX	Supply
LMC-N (Standard)	1 = up to 1 metre	2G6 = G1, stainless steel	0 = without E = ATEX	3 = 10...35 V <sub>DC</sub> (12...30 V <sub>DC</sub> for ATEX)
LMC-H (High temperature)	2 = up to 2 metre			
LMC-T (with reference pipe)	3 = up to 3 metre			
LMC-S (two probe sensor with PVDF connection)	4 = up to 4 metre	9G9 = G2, PVDF		

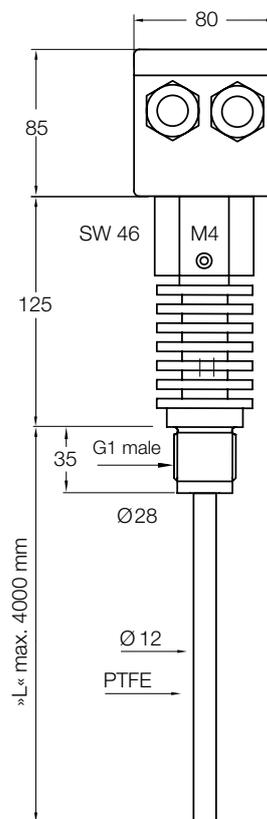
\* Please specify specific application length »L« in writing

**Dimensions** [mm]

LMC-N

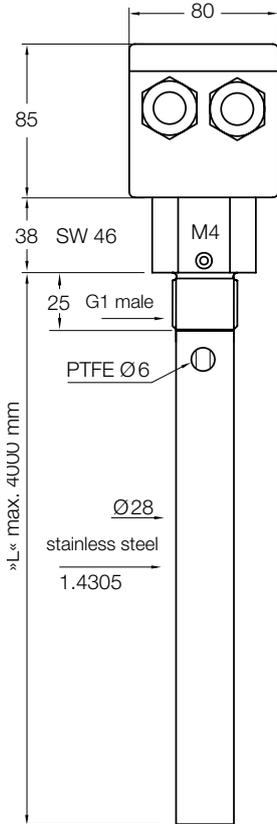


LMC-H

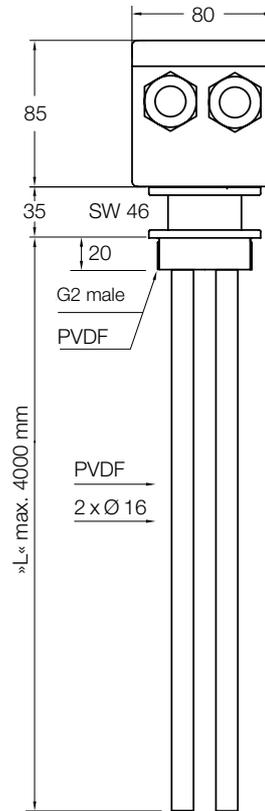


**Dimensions [mm]**

**LMC-T**



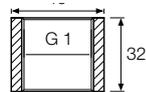
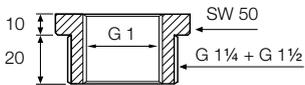
**LMC-S**



**Spare parts and accessories (Dimensions in mm)**

Thread adapter for  
G 1 ¼ and G 1 ½

Welding sleeve



**Spare parts/Accessories Model LMZ for capacitive level monitors LMC-N, LMC-T, LMC-H**

Model	Design	Adapter type	Specials
LMZ	<b>A</b> = Installation adapter (only for LMC-N, LMC-T, LMC-H)	<b>G7</b> = stainless steel thread adapter for G 1 ¼ <b>G8</b> = stainless steel thread adapter for G 1 ½ <b>S6</b> = stainless steel welding sleeve, external Ø 40 mm	<b>0</b> = without <b>Y</b> = version according to description