

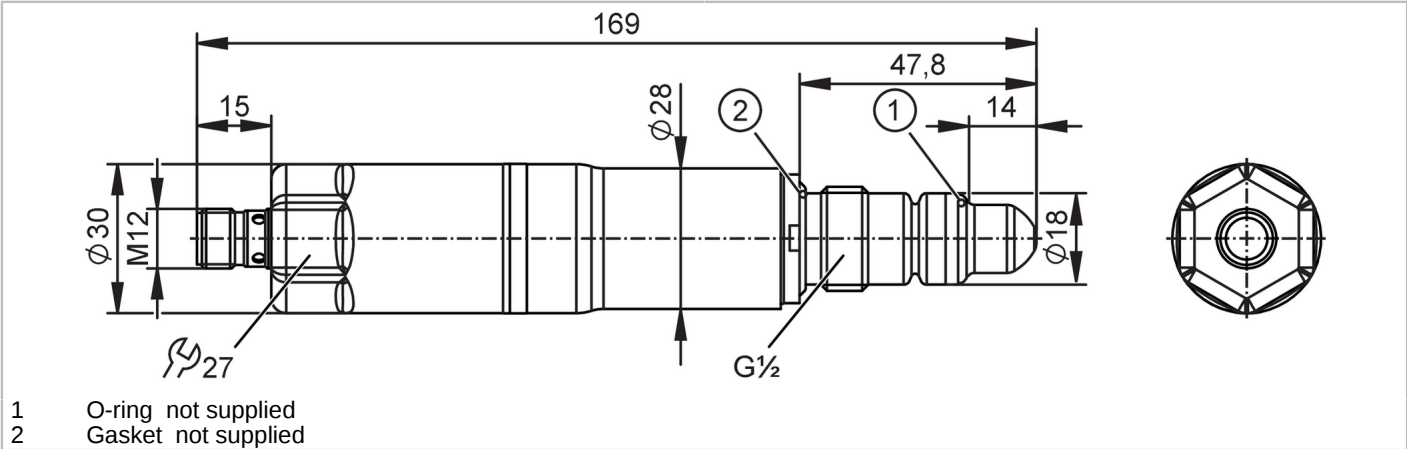
LMH610



Sensor for point level detection

LMACE-A12K-QSKG-1/US

To ensure secure mounting compatible with the medium, a sealing set suitable for the application must be used. Please refer to chapters Medium temperature and Accessories. These sealing sets are not included.



Product characteristics

Number of inputs and outputs	Number of digital outputs: 2
Factory setting	oils; oil-based media
Process connection	threaded connection G 1/2

Application

Special feature	gold-plated contacts
Media	Fluessige Medien; pastöse Medien; powder
Conditionally suitable for	use at pressures > 40...100 bar only on request
Cannot be used for	See the operating instructions, chapter "Function and features".
Medium temperature [°C]	-20...250
Medium temperature [°C]	when used under hygienic conditions with accessories: E43030 -15...240
	when used under hygienic conditions with accessories: E43033 -15...200
	when used under hygienic conditions with accessories: E43031 -20...150
	when used under industrial conditions with accessories: E43032 -20...250
Pressure rating [bar]	40
Vacuum resistance [mbar]	-1000
Probe length [mm]	13.7

Electrical data

Operating voltage [V]	18...30 DC
Current consumption [mA]	< 30
Protection class	III
Reverse polarity protection	yes
Measuring principle	capacitive

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Inputs / outputs			
Number of inputs and outputs		Number of digital outputs: 2	
Outputs			
Total number of outputs		2	
Output signal		switching signal; IO-Link	
Electrical design		PNP/NPN	
Number of digital outputs		2	
Output function		normally open / closed; (configurable)	
Max. voltage drop switching output DC [V]		2.5	
Permanent current rating of switching output DC [mA]		100	
Short-circuit protection		yes	
Type of short-circuit protection		yes (non-latching)	
Overload protection		yes	
Measuring/setting range			
Factory setting		oils; oil-based media	
Temperature measurement			
Measuring range [°C]		-40...250	
Resolution [°C]		0.1	
Accuracy / deviations			
Temperature measurement			
Accuracy [K]		± 0,6	
Temperature drift per 10 K [K]		± 0.055	
Reaction times			
Response time [s]		< 0.5	
Interfaces			
Communication interface		IO-Link	
Transmission type		COM2 (38,4 kBaud)	
IO-Link revision		1.1	
SDCI standard		IEC 61131-9	
Profiles		Smart Sensor - SSP 4.1.2	
		Measuring and Switching Sensor, 2 channel	
		Common - I&D	
		Identification and Diagnosis	
		Extension	
		Quantity detection, switches when value exceeds the setpoint	
		Function	
		Locator	
		Function	
		ProductURI	
SIO mode		yes	
Required master port class		A	
Min. process cycle time [ms]		4.5	
Supported DeviceIDs		Type of operation	
		DeviceID	
		default	
		1516	
Operating conditions			
Ambient temperature [°C]		-40...85	

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Note on ambient temperature	Medium temperature: $\leq 200\text{ }^{\circ}\text{C}$
	-40...60 $^{\circ}\text{C}$
	Medium temperature: $\leq 250\text{ }^{\circ}\text{C}$
Storage temperature [°C]	-40...85
Protection	IP 68; IP 69K; (7 days / 3 m water depth / 0.3 bar: IP68)

Tests / approvals		
EMC	DIN EN 61000-6-2	
	DIN EN 61000-6-4	: in plastic or open metal tanks
	DIN EN 61000-6-3	: in a closed metal tank
Shock resistance	DIN EN 60068-2-27	50 g (11 ms)
Vibration resistance	DIN EN 60068-2-6	20 g (10...2000 Hz)
MTTF [years]		356
UL approval	UL approval number	H017
	File number UL	E174191

Mechanical data		
Weight [g]		301.7
Housing		tubular
Dimensions [mm]		$\varnothing 30 / L = 169$
Material	housing: stainless steel (1.4404 / 316L); Male receptacle: PEI; O-ring: FKM	
Materials (wetted parts)	probe: ceramics (99.97 % Al_2O_3) surface characteristics: $R_a < 0,38\text{ }\mu\text{m} / R_z = 4\text{ }\mu\text{m}$; O-ring (internal): FFKM	
Process connection		threaded connection G 1/2

Displays / operating elements		
Display	Switching status	LED, yellow
	operating status	LED, green
	warning	LED, red

Accessories		
Accessory required		sealing set, E43030
		sealing set, E43033
		sealing set, E43031
		Gasket, E43032

Remarks		
Remarks	An overview of the materials, approvals and conformities of the accessories can be found in the respective data sheet.	
	The E43031 sealing kit slightly increases the sensor sensitivity	
	the values for accuracy and response times apply to flowing water and an isolated process	
	see operating instructions	
Notes	To ensure secure mounting compatible with the medium, a sealing set suitable for the application must be used. Please refer to chapters Medium temperature and Accessories.; These sealing sets are not included.	
Pack quantity		1 pcs.

Electrical connection		
Connector: 1 x M12; coding: A; Contacts: 4, gold-plated		
		

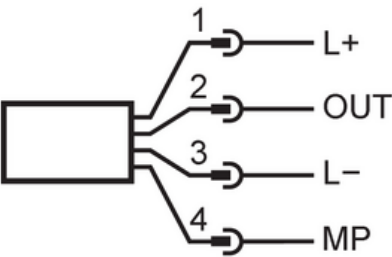
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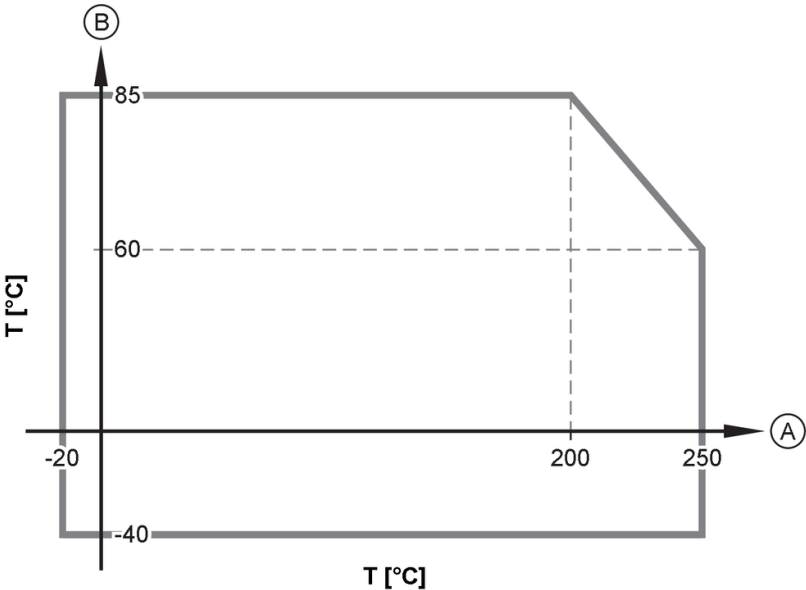
Connection



1	L+	
2	OUT	DO2 (NC)
3	L-	
4	MP	DO1 (NO), IO-Link

DO: digital output; MP: multi-function connection

Diagrams and graphs



- A Medium temperature
- B Ambient temperature