

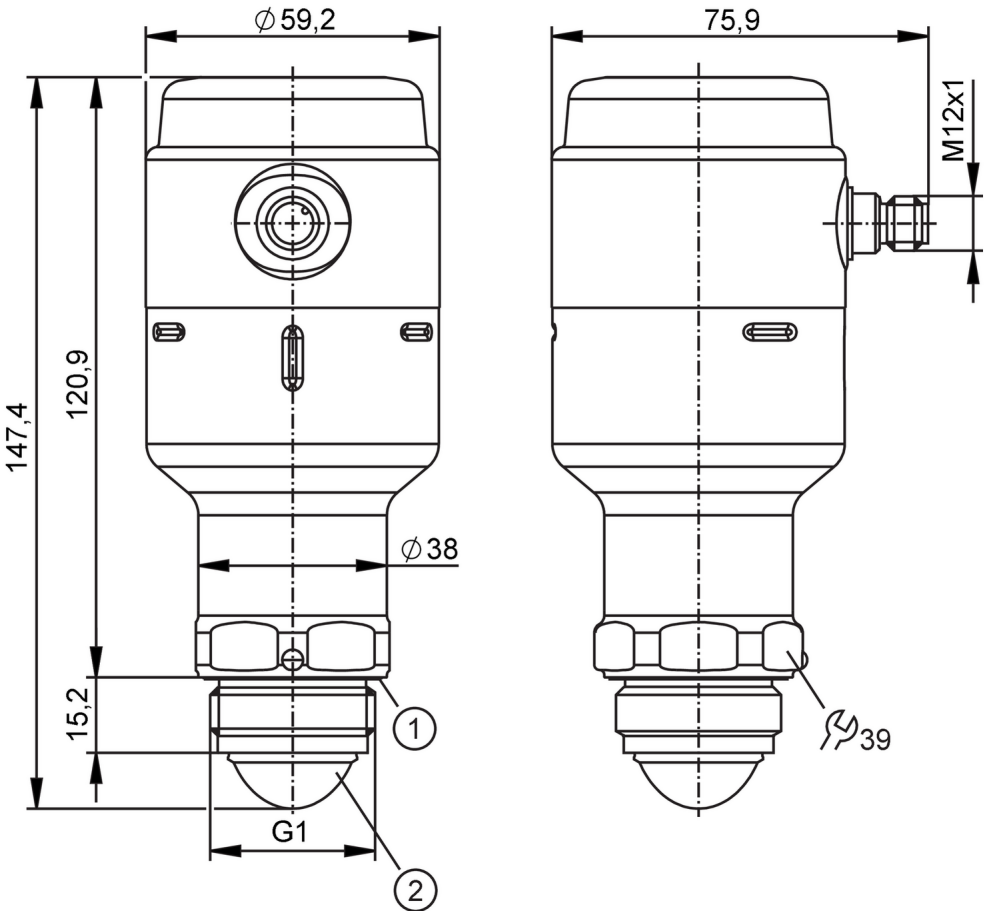
LW2720



Continuous level sensor

NON-CONTACT LEVEL TRANSMITTER

An IO-Link master and a parameter setting software (e.g. moneo or LR DEVICE) are required for initial set-up.



- 1 sealing
2 Antenna



EC 1935/2004

EHEDG Certified



FCM



IO-Link



Product characteristics

Number of inputs and outputs	Number of digital outputs: 1; Number of analog outputs: 1
Process connection	G 1 Aseptoflex Vario

Application

Special feature	gold-plated contacts
Dielectric constant of the medium	≥ 2
Recommended media	water; water-based media
Medium temperature [°C]	-40...150; (see diagram:)
Maximum speed of the change of level [mm/s]	200
Pressure rating [bar]	8
Note on pressure rating	0 bar at medium temperature < - 20 C
Vacuum resistance [mbar]	-1000
MAWP (for applications according to CRN) [bar]	8
Radio approval for	EU/RED; Great Britain; South Korea; USA; Canada; Australia; New Zealand; Vietnam; Singapore; Argentina; Brazil; Japan; Taiwan; South Africa; Mexico



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Note on radio approval	The list of countries applying the European Radio Equipment Directive 2014/53/EU (RED) can be found under "Downloads".
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Electrical data	
Operating voltage [V]	18...30 DC
Current consumption [mA]	< 80
Protection class	III
Reverse polarity protection	yes
Power-on delay time [s]	< 15
Measuring principle	FMCW (80 GHz technology); frequency range 77 - 81 GHz

Inputs / outputs	
Number of inputs and outputs	Number of digital outputs: 1; Number of analog outputs: 1

Outputs	
Total number of outputs	2
Output signal	switching signal; analog signal; IO-Link
Electrical design	PNP/NPN
Number of digital outputs	1; (2 configurable)
Output function	normally open / closed; (configurable)
Max. voltage drop switching output DC [V]	2.5
Permanent current rating of switching output DC [mA]	50
Number of analog outputs	1
Analog current output [mA]	4...20, invertible; (scalable)
Max. load [Ω]	$43,5 \cdot (U_b - 18) + 600 \Omega$
Short-circuit protection	yes
Type of short-circuit protection	yes (non-latching)
Overload protection	yes

Measuring/setting range	
Measuring range [m]	10; (see diagram:)
Sampling rate [Hz]	> 3

Accuracy / deviations	
Accuracy	$\pm 2 \text{ mm}$
Resolution [mm]	1
Zero signal (current) [mA]	3.8
Full signal (current) [mA]	20.5
Temperature drift per 10 K	$\pm 1 \text{ mm}$

Reaction times	
Response time [ms]	330

Interfaces	
Communication interface	IO-Link
Transmission type	COM2 (38,4 kBaud)
IO-Link revision	1.1
SDCI standard	IEC 61131-9

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Profiles	Smart Sensor - SSP 3.1	Measuring Sensor
	Common - I&D	Identification and Diagnosis
	Function	Multiple switching signal
SIO mode	yes	
Required master port class	A	
Process data analog	1	
Process data binary	2	
Min. process cycle time [ms]	6	
Supported DeviceIDs	Type of operation	DeviceID
	default	1324

Operating conditions		
Ambient temperature [°C]	-40...80	
Note on ambient temperature	see diagram:	
Storage temperature [°C]	-40...90	
Protection	IP 68; IP 69K	

Tests / approvals		
EMC	DIN EN 61326-1	group 1: Class A (IO-Link active); B (IO-Link not active, with analog and switching outputs)
Shock resistance	DIN EN 60068-2-27	50 g (11 ms) / 20 g (6 ms)
Vibration resistance	IEC 61298-3	2 g (10...1000 Hz)
MTTF [years]	330	

Mechanical data		
Weight [g]	727.15	
Material	stainless steel (1.4404 / 316L); PA; FKM; FVMQ	
Materials (wetted parts)	PTFE; EPDM	
Process connection	G 1 Aseptoflex Vario	
Surface characteristics Ra/Rz of the wetted parts	Ra < 0.76 µm	

Remarks		
Notes	An IO-Link master and a parameter setting software (e.g. moneo or LR DEVICE) are required for initial set-up.	
Pack quantity	1 pcs.	

Electrical connection

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



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Connection



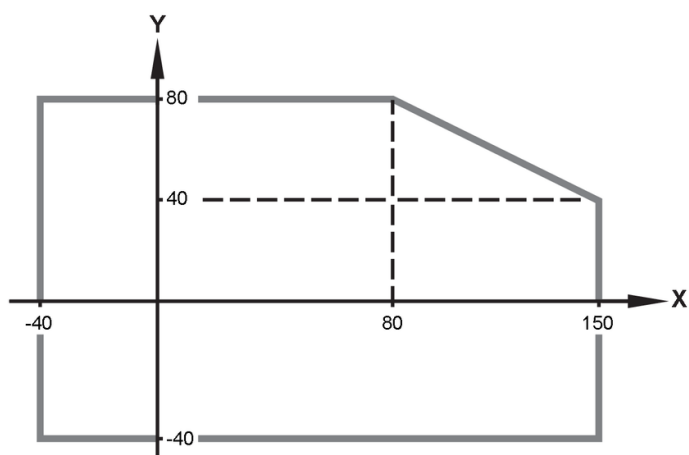
OUT1: Switching output IO-Link
OUT2: Switching output analog output

Colors to DIN EN 60947-5-2

Core colors :

BK = black
BN = brown
BU = blue
WH = white

Diagrams and graphs



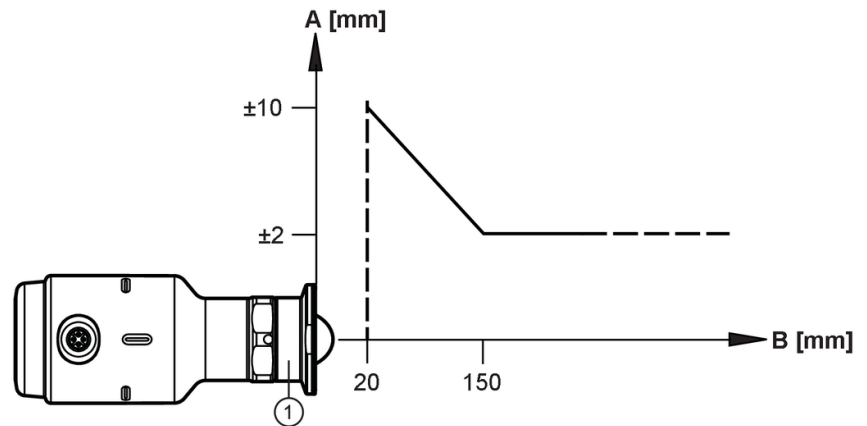
X process temperature °C

Y Ambient temperature °C

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1 Adapter example E33208

A Accuracy

B distance

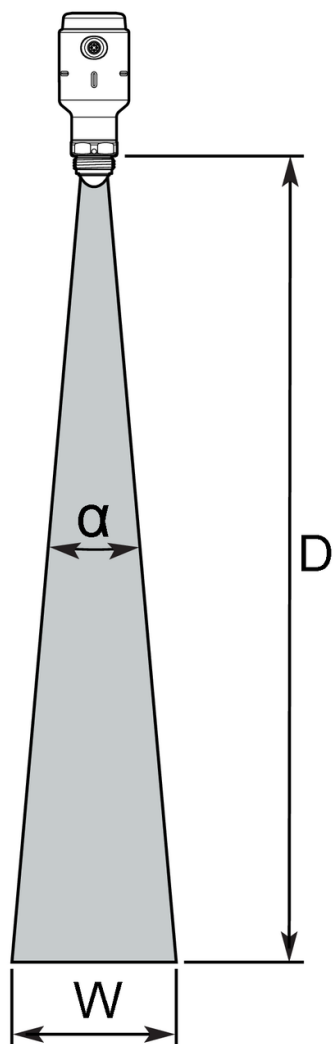
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Angle of radiation



Angle of radiation (α): 10°

distance (D) 2 m - Beam width (W) 0.4 m

distance (D) 4 m - Beam width (W) 0.7 m

distance (D) 6 m - Beam width (W) 1.1 m

distance (D) 8 m - Beam width (W) 1.4 m

distance (D) 10 m - Beam width (W) 1.8 m