

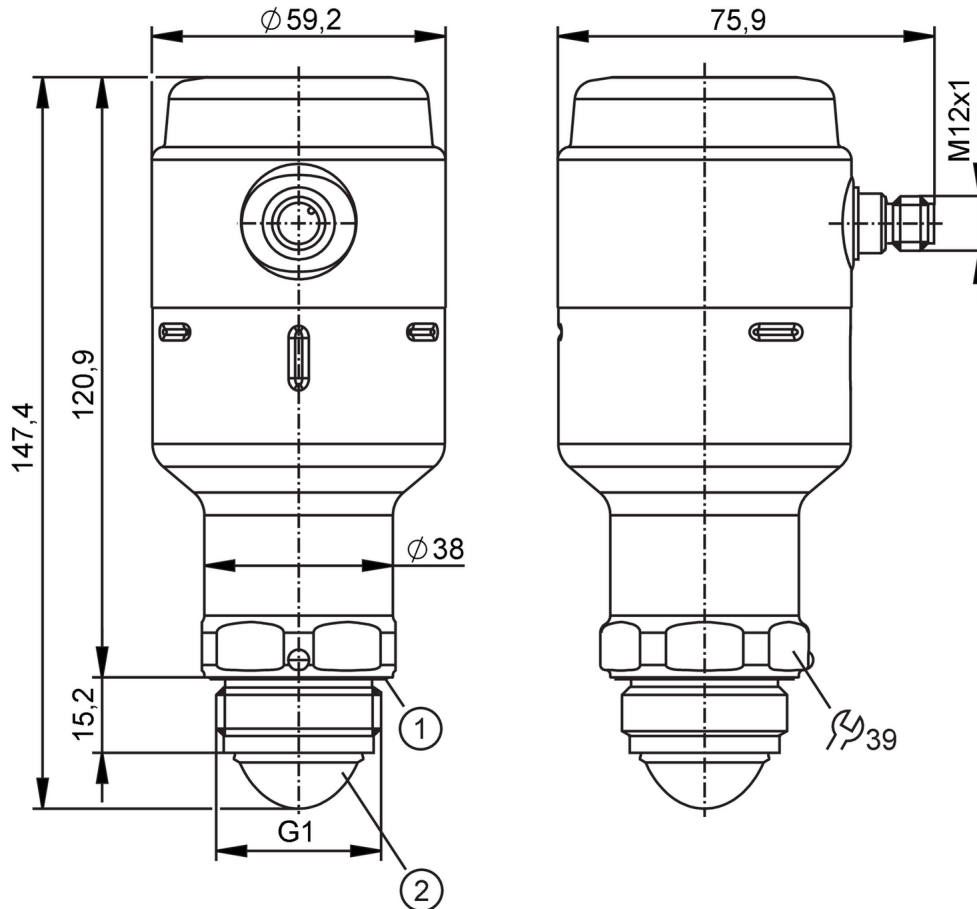
LW2720



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



Product characteristics

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

Application

Special feature	Gold-plated contacts
Dielectric constant of the medium	≥ 2
Recommended media	water; hydrous 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".

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 analogue outputs: 1
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Outputs

Total number of outputs	2
Output signal	switching signal; analogue signal; IO-Link
Electrical design	PNP/NPN
Number of digital outputs	1; (2 parameterisable)
Output function	normally open / normally closed; (parameterisable)
Max. voltage drop switching output DC	[V] 2.5
Permanent current rating of switching output DC	[mA] 50
Number of analogue outputs	1
Analogue current output	[mA] 4...20, invertible; (scalable)
Max. load	[Ω] $43,5 * (U_b - 18) + 600 \Omega$
Short-circuit protection	yes
Type of short-circuit protection	pulsed
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	$\pm 1 \text{ mm}$

Response times

Response time	[ms] 330
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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 type		A
Process data analogue		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 analogue 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
Materials		stainless steel (316L/1.4404); 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: gold-plated



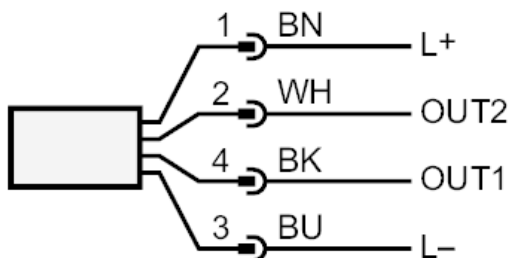
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Connection

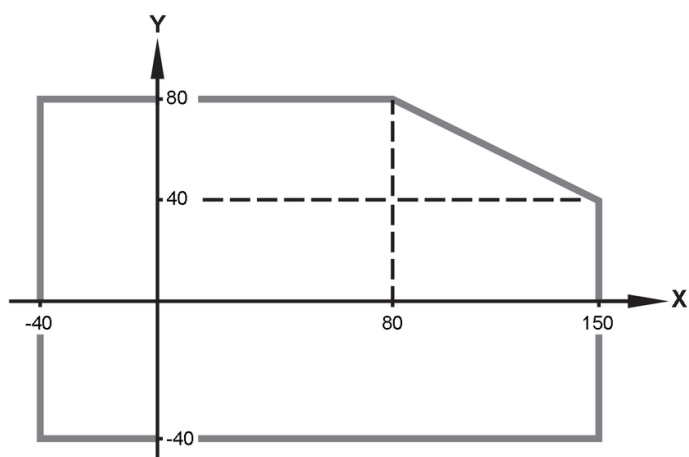


OUT1: switching output IO-Link
OUT2: switching output analogue output
colours to DIN EN 60947-5-2

Core colours :

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

Diagrams and graphs



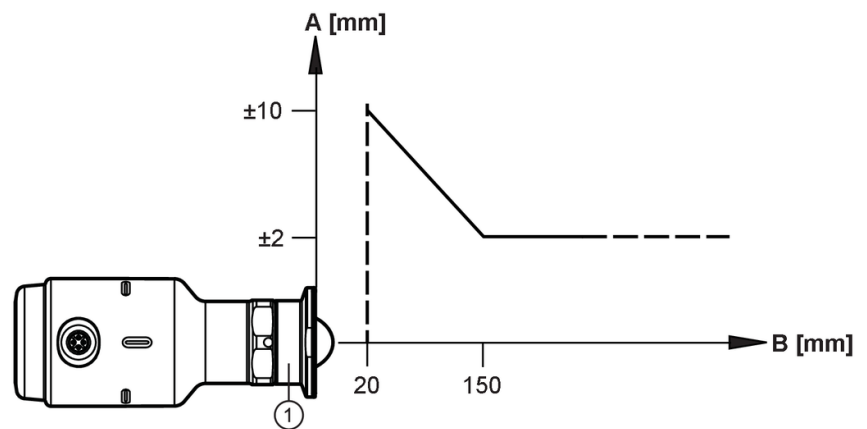
X process temperature °C

Y Ambient temperature °C

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1 Adapter example E33208

A accuracy

B distance

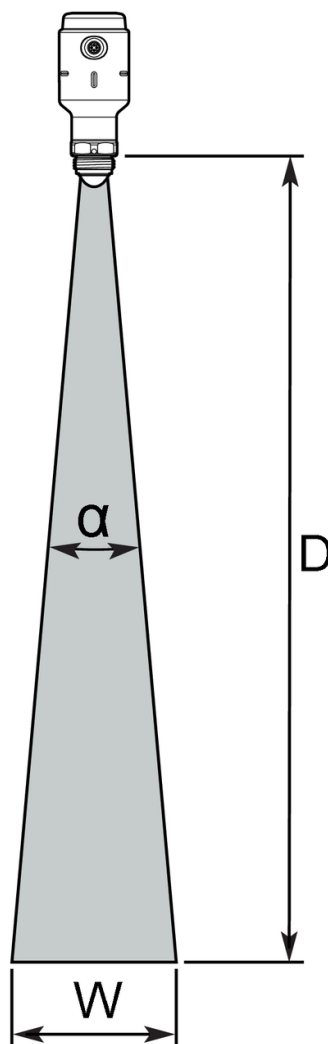
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Angle of radiation



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