

# LW2120

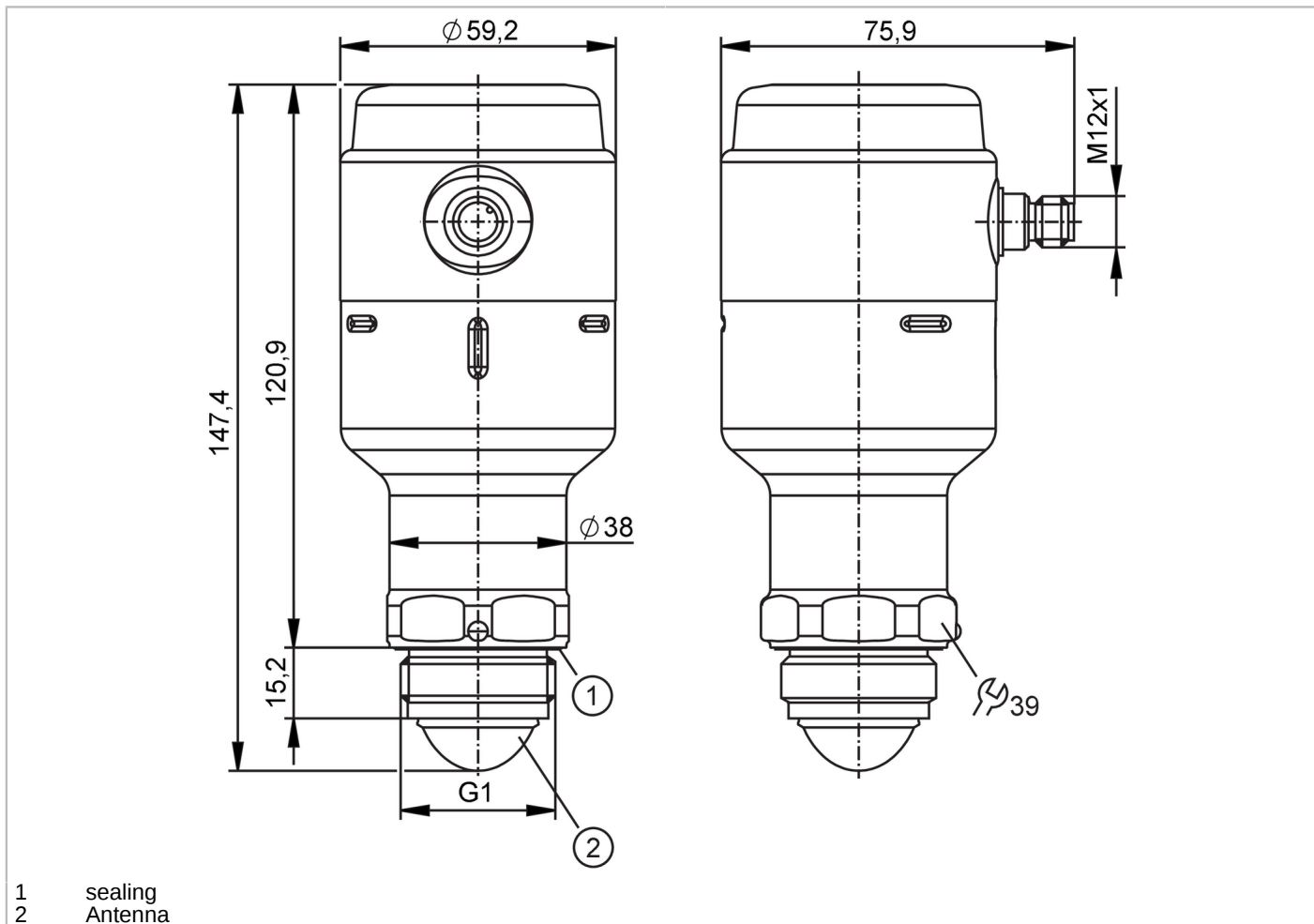


## Continuous level sensor

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.

For high process temperatures: The temperature at the process connection is decisive. The actual medium temperature may be higher. use according to FDA compliance only in conjunction with a hygienic adapter



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
Process temperature [°C]	-40...150; (see diagram and note under remarks)
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

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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
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 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]	$43,5 * (U_b - 18) + 600 \Omega$
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	± 2 mm
Resolution [mm]	1
Zero signal (current) [mA]	3.8
Full signal (current) [mA]	20.5
Temperature drift per 10 K	± 1 mm

Reaction times	
Response time [ms]	330

Interfaces	
Communication interface	IO-Link

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Transmission type	COM2 (38,4 kBaud)	
IO-Link revision	1.1	
SDCI standard	IEC 61131-9	
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	<b>Type of operation</b>	<b>DeviceID</b>
	default	1611

### 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

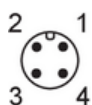
Weight [g]	723.8	
Material	stainless steel (1.4404 / 316L); PA; FKM; FVMQ	
Materials (wetted parts)	PTFE; EPDM; FVMQ when used without Aseptoflex Vario adapter	
Process connection	G 1 Aseptoflex Vario	
Surface characteristics Ra/Rz of the wetted parts	Ra < 0.76 µm	

### Remarks

Notes	An IO-Link master and a parameter setting software (e.g. moneo or LR DEVICE) are required for initial set-up.; For high process temperatures: The temperature at the process connection is decisive. The actual medium temperature may be higher.; use according to FDA compliance only in conjunction with a hygienic adapter
Pack quantity	1 pcs.

### Electrical connection

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



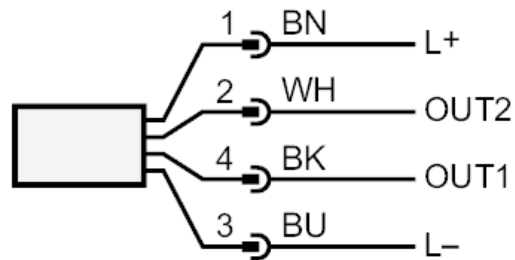
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### Connection



OUT1: Switching output IO-Link  
OUT2: Switching output analog output  
Colors to DIN EN 60947-5-2  
Core colors :  
BK = black  
BN = brown  
BU = blue  
WH = white

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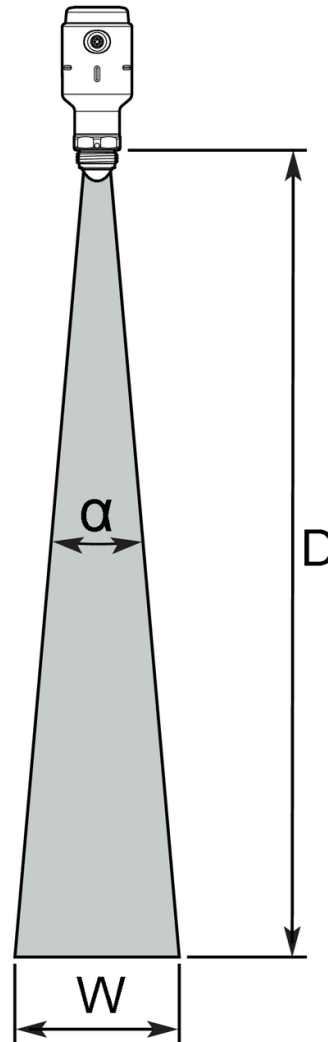


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### Diagrams and graphs

Angle of radiation



distance  
(D) Beam width (W) 8° (with antenna extension) / 10° (without antenna extension)

2 m 0.3 m / 0.4 m

4 m 0.6 m / 0.7 m

6 m 0.8 m / 1.1 m

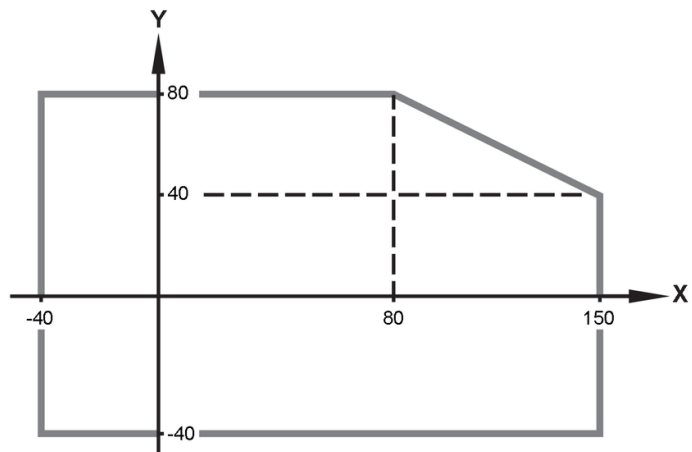
8 m 1.1 m / 1.4 m

10 m 1.4 m / 1.8 m

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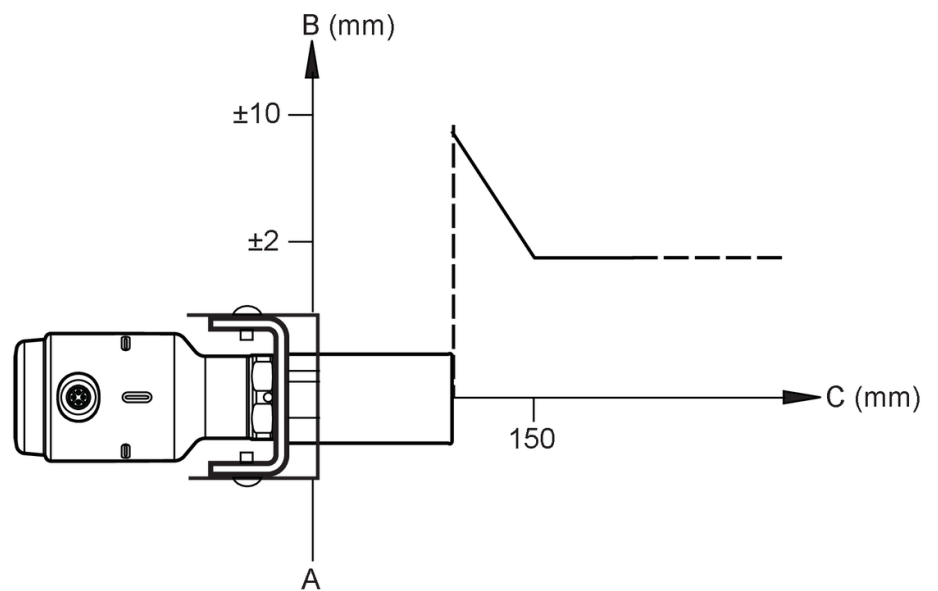
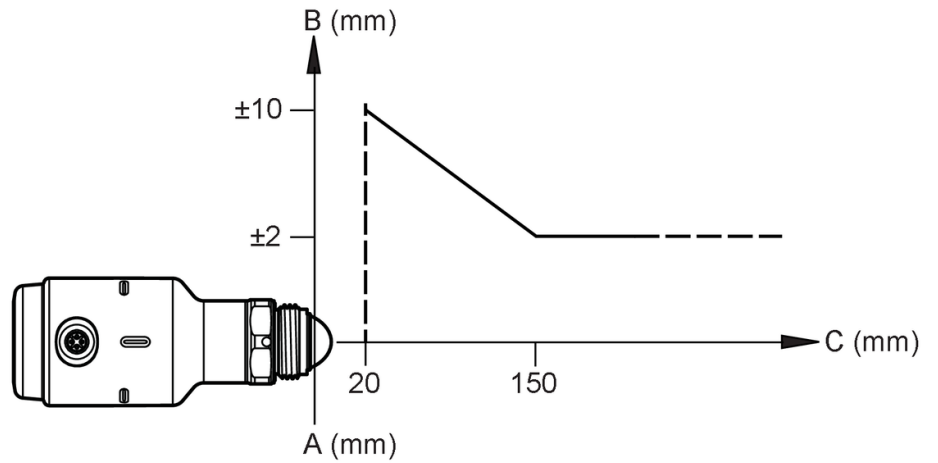


X process temperature °C  
Y Ambient temperature °C

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- A device reference point
- B Accuracy
- C distance