

LW2120



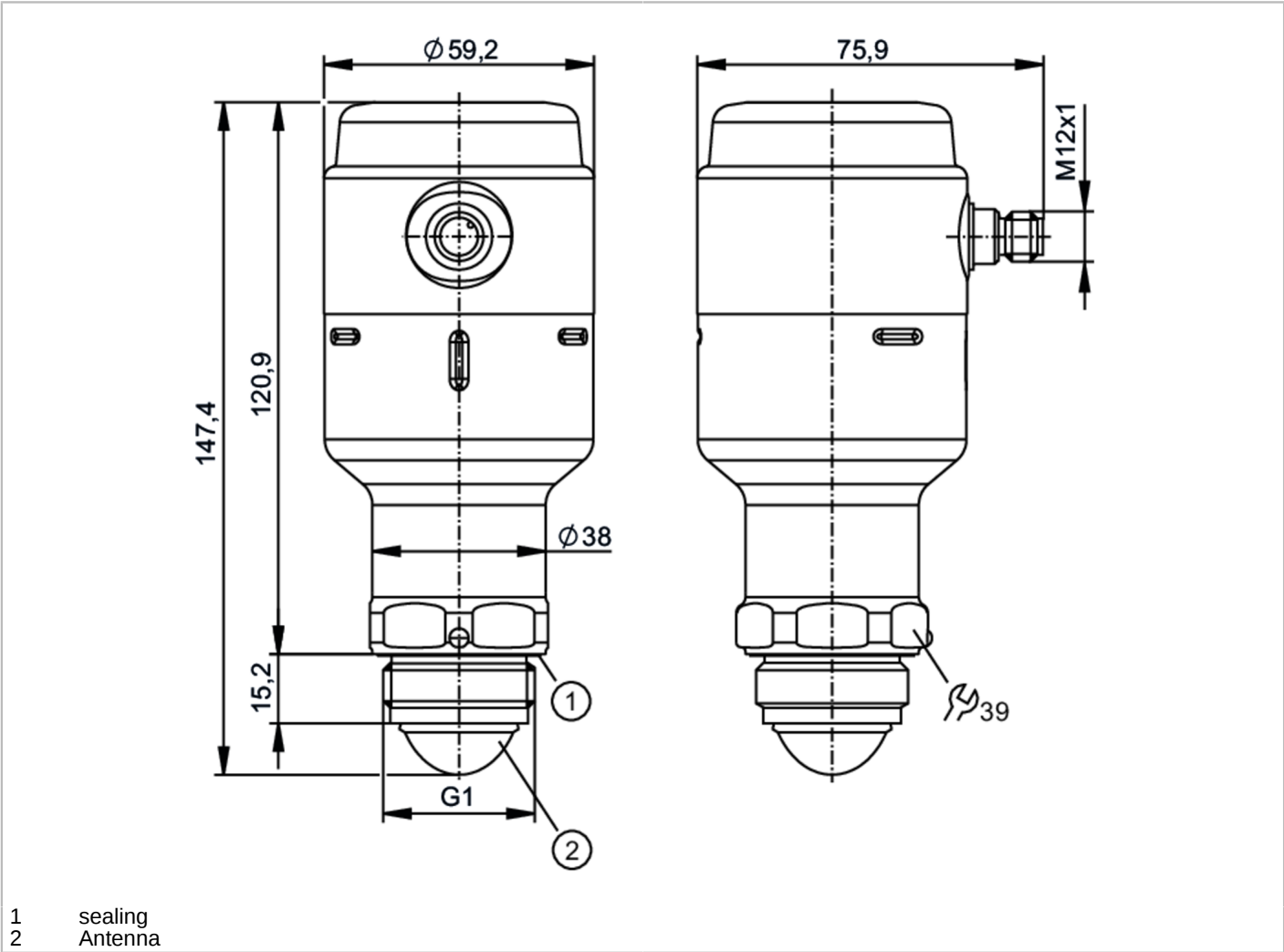
Continuous level sensor

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

System	gold-plated contacts
Dielectric constant of the medium	$\geq 2$
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



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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
Note on radio approval		The list of countries applying the European Radio Equipment Directive 2014/53/EU (RED) can be found under "Downloads".
<b>Electrical data</b>		
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
<b>Inputs / outputs</b>		
Number of inputs and outputs		Number of digital outputs: 1; Number of analog outputs: 1
<b>Outputs</b>		
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
<b>Measuring/setting range</b>		
Measuring range	[m]	10; (see diagram:)
Sampling rate	[Hz]	> 3
<b>Accuracy / deviations</b>		
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
<b>Reaction times</b>		
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	
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	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.	

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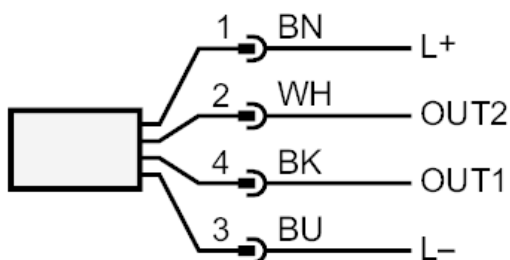
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### Electrical connection

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



### Connection

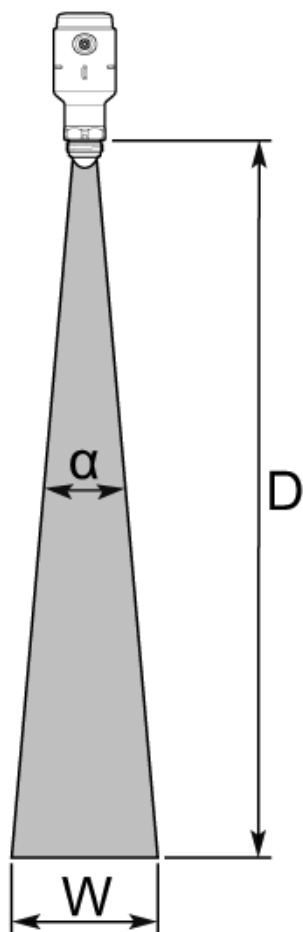


OUT1: Switching output IO-Link  
OUT2: Switching output analog output  
Colors to DIN EN 60947-5-2  
Core colors :  
BK = black  
BN = brown  
BU = blue  
WH = white



### Diagrams and graphs

Angle of radiation

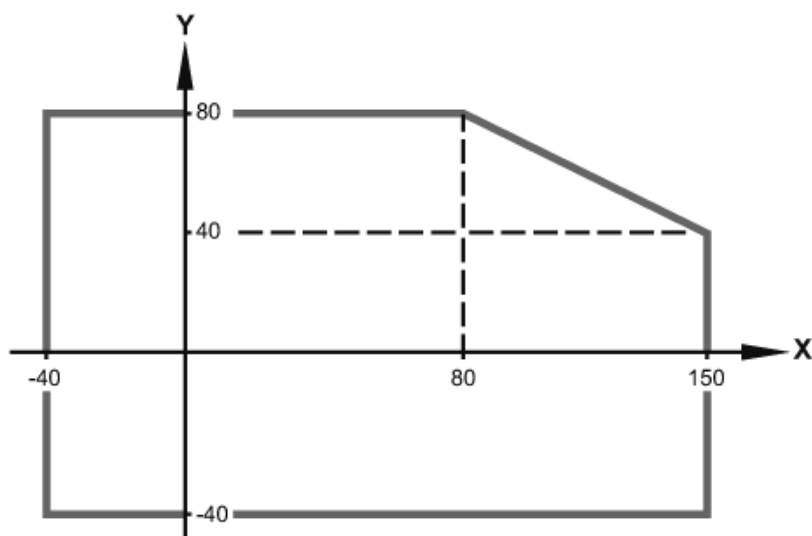


distance (D)	Beam width (W) 8° (with antenna extension) / 10° (without antenna extension)
2 m	0.3 m / 0.4 m
4 m	0.6 m / 0.7 m
6 m	0.8 m / 1.1 m
8 m	1.1 m / 1.4 m
10 m	1.4 m / 1.8 m

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X process temperature °C

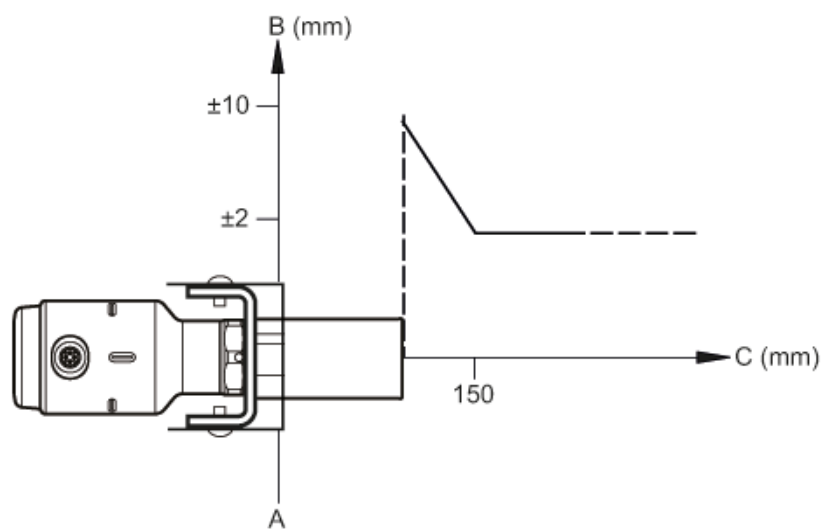
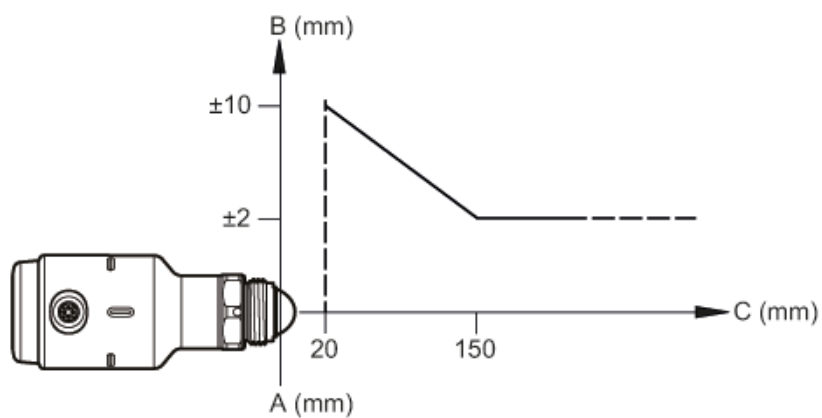
Y Ambient temperature °C

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- A device reference point
- B Accuracy
- C distance