LT3023

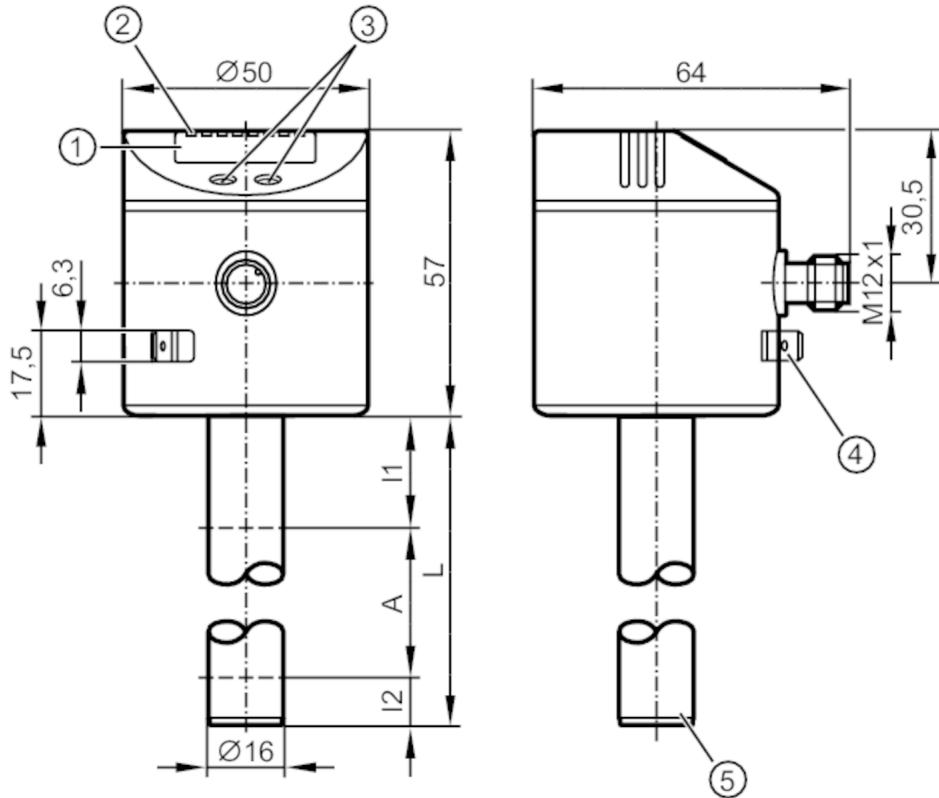**Electronic level and temperature sensor**

LT0472B-B-00KLPKG/US

1. alphanumeric display 4-digit
2. status LEDs
3. Programming buttons
4. housing connection flat-pin connector 6.3 mm DIN 46244
5. Position of the temperature measuring element

CE c(UL)us LISTED | EHL | IO-Link

Application		
Media		hydrous coolants; oils; oil-based media; water; media similar to water
Dielectric constant of the medium		> 2
Cannot be used for		extremely conductive media; adhering media; granulates; bulk material; acids; alkali
Tank pressure	[bar]	0.5; (when mounting with mounting accessories: E43001 - E43007, E43019)
Coolants		
Medium temperature	[°C]	0...35; (with climate tube E43101)
Oil		
Medium temperature	[°C]	0...70
Medium temperature short time	[°C]	0...90; (< 1 h)
Water		
Medium temperature	[°C]	0...35; (with climate tube E43101 35...60 °C)

LT3023

Electronic level and temperature sensor

Electrical data		
Operating voltage	[V]	18...30 DC
Current consumption	[mA]	< 50
Protection class		III
Reverse polarity protection		yes
Power-on delay time	[s]	< 3

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
Output function		normally open / closed; (configurable)
Max. voltage drop switching output DC	[V]	2.5
Permanent current rating of switching output DC	[mA]	200
Number of analog outputs		1
Analog current output	[mA]	4...20, invertible
Max. load	[Ω]	500
Analog voltage output	[V]	...10, invertible
Min. load resistance	[Ω]	2000
Short-circuit protection		yes
Type of short-circuit protection		thermal, pulsed
Overload protection		yes

Measuring/setting range		
Factory setting		mineral oils
Probe length L	[mm]	472
Active range A	[mm]	390
Inactive range I1 / I2	[mm]	60 / 22

Setting range		
Set point SP	[mm]	35...390
Reset point rP	[mm]	30...385
In steps of	[mm]	5
Reference point OP	[mm]	139 - 163 - 188 - 212 - 236 - 261 - 285 - 310 - 334 - 358 - 383 - 407 - OFF
Hysteresis, OP	[mm]	3

LT3023

Electronic level and temperature sensor

Temperature monitoring		
Measuring range	[°C]	0...90
Set point SP	[°C]	0.5...90
Reset point rP	[°C]	0...89.5
In steps of	[°C]	0.5
Resolution of switching output	[K]	0.5

Accuracy / deviations		
Measuring error [% of the final value]		± 5
Repeatability		± 2
Resolution	[mm]	5
Zero signal (voltage)	[V]	0
Zero signal (current)	[mA]	4.0
Full signal (voltage)	[V]	10
Full signal (current)	[mA]	20

Temperature monitoring		
Switch point accuracy	[K]	± 1,5
Resolution	[K]	0.5
Dynamic response T09	[s]	90

Software / programming	
Parameter setting options	hysteresis / window; normally open / closed; switching logic; current/voltage output; SP/ rP position; adjustment OP; medium selection; offset setting; switch-on/switch-off delay

Interfaces	
Communication interface	IO-Link
Transmission type	COM2 (38,4 kBaud)
IO-Link revision	1.1
SDCI standard	IEC 61131-9
IO-Link device ID	0x000287
Profiles	Smart Sensor: Process Data Variable; Device Identification, Device Diagnosis
SIO mode	yes
Required master port class	A
Process data analogue	4
Process data binary	1
Min. process cycle time [ms]	4.5

Operating conditions		
Ambient temperature	[°C]	0...60
Storage temperature	[°C]	-25...80
Protection		IP 67

LT3023

Electronic level and temperature sensor

LT0472B-B-00KLPKG/US

Tests / approvals			
EMC		DIN EN 61000-6-2	
		DIN EN 61000-6-4	
Shock resistance		DIN EN 60068-2-27	15 g (11 ms)
Vibration resistance		DIN EN 60068-2-6	5 g (10...2000 Hz)
MTTF	[years]	222	
UL approval		UL approval number	H002

Mechanical data		
Weight	[g]	440
Dimensions	[mm]	Ø 16
Material		stainless steel (1.4301 / 304); stainless steel (1.4404 / 316L); FKM; NBR; PBT; PC; PA; PP; TPV
Materials (wetted parts)		PP

Displays / operating elements		
Display	Display unit	4 x LED, green (cm, inch, °C, °F)
	Switching status	1 x LED, yellow
	Measured values	alphanumeric display, 4-digit
	Parameter setting	alphanumeric display, 4-digit

Remarks	
Pack quantity	1 pcs.

Electrical connection

Connector: 1 x M12

LT3023

Electronic level and temperature sensor

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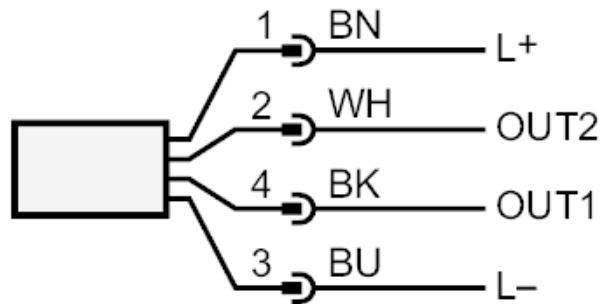
OUT1:	Switching output IO-Link	
OUT2:	analog output	
	Colours to DIN EN 60947-5-2	
	Core colors :	
BK =	black	
BN =	brown	
BU =	blue	
WH =	white	