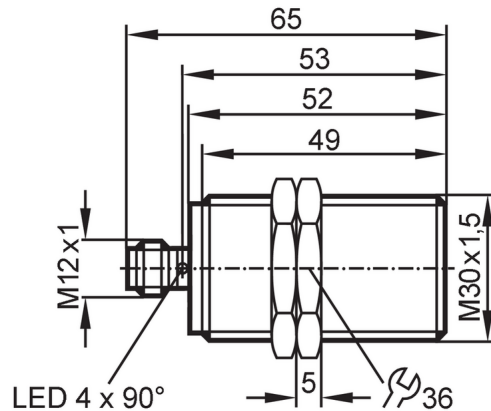




## Inductive sensor with IO-Link

IIK3012BFRKG/IO/US-104



### Product characteristics

Electrical design	PNP/NPN; (configurable)
Output function	normally open / closed; (selectable)
Communication interface	IO-Link
Housing	Threaded type
Dimensions [mm]	M30 x 1.5 / L = 65

### Electrical data

Operating voltage [V]	10...30 DC
Current consumption [mA]	< 15
Protection class	III
Reverse polarity protection	yes

### Outputs

Electrical design	PNP/NPN; (configurable)
Output function	normally open / closed; (selectable)
Max. voltage drop switching output DC [V]	2.5
Permanent current rating of switching output DC [mA]	100
Switching frequency DC [Hz]	100
Short-circuit protection	yes
Overload protection	yes

### Monitoring range

Switch point IO-Link [mm]	2.4...12.1; (configurable)
Measuring range IO-Link [mm]	1.3...13

### Accuracy / deviations

Correction factor	steel: 1 / stainless steel: 0.7 / brass: 0.5 / aluminum: 0.5 / copper: 0.4
Hysteresis [% of Sr]	3...15
Linearity error of analog output [%]	± 2 %; (of the final value of the measuring range)
Repeatability analog output [%]	± 1 %; (of the final value of the measuring range)
Temperature coefficient	± 0,3 %/K; (of the final value of the measuring range)



## Inductive sensor with IO-Link

IIK3012BFRKG/IO/US-104

Interfaces		
Communication interface	IO-Link	
Transmission type	COM2 (38,4 kBaud)	
IO-Link revision	1.1	
SDCI standard	IEC 61131-9 CDV	
Profiles	Smart Sensor - SSP 0	Generic Profiled Sensor
	Function	Device identification
	Function	Multiple switching signal
	Function	Process data variable
	Function	Device diagnosis
	Function	Teach channel
SIO mode	yes	
Required master port class	A	
Min. process cycle time [ms]	3	
Supported DeviceIDs	<b>Type of operation</b>	<b>DeviceID</b>
	default	791
Operating conditions		
Ambient temperature [°C]	-40...85	
Protection	IP 65; IP 66; IP 67; IP 68; IP 69K	
Tests / approvals		
EMC	EN 61000-4-2 ESD	4 kV CD / 8 kV AD
	EN 61000-4-3 HF radiated	10 V/m
	EN 61000-4-4 Burst	2 kV
	EN 61000-4-6 HF conducted	10 V
	EN 55011	class B
Vibration resistance	EN 60068-2-6 Fc	20 g (10...3000 Hz) / 50 sweep cycles per frequency; 1 octave per minute in 3 axes
Shock resistance	EN 60068-2-27 Ea	100 g 11 ms half-sine; 3 shocks each in every direction of the 3 coordinate axes
Continuous shock resistance	EN 60068-2-29 Eb	40 g 6 ms; 4000 shocks each in every direction of the 3 coordinate axes
Fast temperature changes	EN 60068-2-14 Na	TA = -40 °C; TB = 85 °C; t1 = 30 min; t2 = < 10 s; 50 cycles
MTTF [years]	664	
Embedded software included	yes	
UL approval	Ta	-25...70 °C
	Enclosure type	Type 1
	voltage supply	Limited Voltage/Current
	UL approval number	A008
	File number UL	E174191
Mechanical data		
Weight [g]	121.2	
Housing	Threaded type	
Mounting	flush mountable	
Dimensions [mm]	M30 x 1.5 / L = 65	
Thread designation	M30 x 1.5	

# II5973



## Inductive sensor with IO-Link

IIK3012BFRKG/IO/US-104

Material

housing: brass white bronze coated; sensing face: PBT orange;  
LED window: PEI; lock nuts: brass white bronze coated

### Displays / operating elements

Display	Switching status	4 x LED, yellow
	SIO mode	
	output stage supplied with current	LED, yellow lights
	IO-Link mode	
	target in measuring range	LED, yellow lights

### Accessories

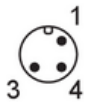
Items supplied	lock nuts: 2
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### Remarks

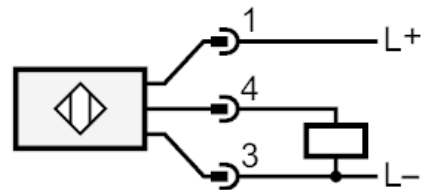
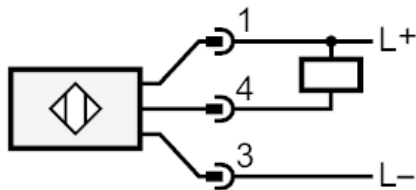
Pack quantity	1 pcs.
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### Electrical connection - plug

Connector: 1 x M12; coding: A



### Connection



4: OUT / IO-Link