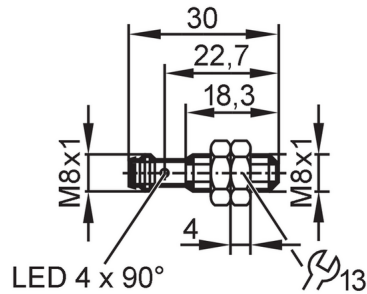


# IES223



## Inductive sensor

IEB2003BARKG/V4A/AS



### Product characteristics

Electrical design		PNP/NPN
Output function		normally open
Sensing range	[mm]	3
Housing		Threaded type
Dimensions	[mm]	M8 x 1 / L = 30

### Application

Special feature	gold-plated contacts; Increased sensing range
Application	Suitable for industrial, mobile, cooling and lubricating applications; Industrial applications

### Electrical data

Operating voltage	[V]	10...30 DC
Current consumption	[mA]	< 20
Protection class		III
Reverse polarity protection		yes

### Outputs

Electrical design		PNP/NPN
Output function		normally open
Max. voltage drop switching output DC	[V]	2.5
Max. leakage current	[mA]	0.5
Permanent current rating of switching output DC	[mA]	100
Switching frequency DC	[Hz]	800
Short-circuit protection		yes
Overload protection		yes

### Monitoring range

Sensing range	[mm]	3
Real sensing range Sr	[mm]	3 ± 10 %
Operating distance	[mm]	0...2.43
Increased sensing range		yes

### Accuracy / deviations


Correction factor		steel: 1 / stainless steel: 0.7 / brass: 0.4 / aluminum: 0.4 / copper: 0.3
Hysteresis	[% of Sr]	1...15
Switch-point drift	[% of Sr]	-10...10

# IES223



## Inductive sensor

IEB2003BARKG/V4A/AS

Operating conditions		
Ambient temperature	[°C]	-40...85
Protection		IP 65; IP 66; IP 67; IP 68; IP 69K; (with ifm socket duly screwed on)
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 60068-2-27	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
Salt spray test	EN 60068-2-52 Kb	severity level 5 (4 test cycles)
MTTF	[years]	1708
Embedded software included		yes
UL approval	Ta	-25...80 °C
	Enclosure type	Type 1
	voltage supply	Limited Voltage/Current
	UL approval number	A017
	File number UL	E174191
Mechanical data		
Weight	[g]	12.95
Housing		Threaded type
Mounting		flush mountable
Dimensions	[mm]	M8 x 1 / L = 30
Thread designation		M8 x 1
Material		stainless steel (1.4404 / 316L); sensing face: LCP white; LED window: PEI; lock nuts: stainless steel (1.4404 / 316L)
Tightening torque	[Nm]	A = 5 mm: 2 Nm; B: 5 Nm
Displays / operating elements		
Display	Switching status	4 x 90° LED, yellow
Accessories		
Items supplied		lock nuts: 2
Remarks		
Pack quantity		1 pcs.
Electrical connection - plug		
Connector: 1 x M8; Contacts: gold-plated		
		

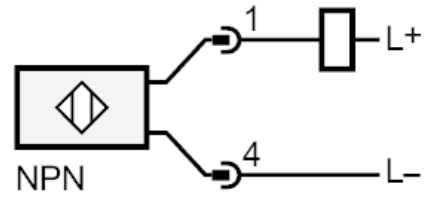
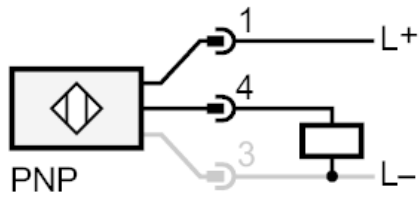
# IES223



## Inductive sensor

IEB2003BARKG/V4A/AS

### Connection



### Diagrams and graphs

#### Installation

