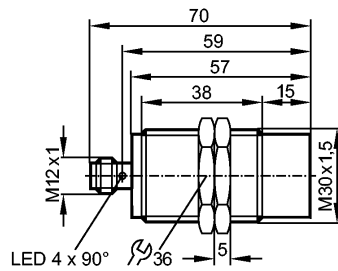


**IIM209**

IIK3022-BPKG/M/60V/US-104-DPS

Inductive sensors


**Product characteristics**

Inductive sensor
Metal thread M30 x 1.5
Connector
Increased sensing range
Gold-plated contacts
e1 type approval
Sensing range 22 mm; [nf] non-flush mountable

**Electrical data**

Electrical design	DC PNP
Operating voltage [V]	10...60 DC; "supply class 2" to cULus.
Current consumption [mA]	< 10
Protection class	II
Reverse polarity protection	yes

**Outputs**

Output function	normally open
Voltage drop [V]	< 2.5
Current rating [mA]	200
Short-circuit protection	pulsed
Overload protection	yes
Switching frequency [Hz]	100

**Range**

Sensing range [mm]	22
Real sensing range (Sr) [mm]	22 ± 10 %
Operating distance [mm]	0...17.82

**Accuracy / deviations**

Correction factors	mild steel = 1 / stainless steel approx. 0.7 / brass approx. 0.5 / aluminium approx. 0.45 / copper approx. 0.35
Hysteresis [% of Sr]	1...20
Switch-point drift [% of Sr]	-10...10

**Environment**

Ambient temperature [°C]	-40...85
Protection	IP 67 / IP 69K

**Tests / approvals**

EMC	Automotive area
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**Inductive sensors**

	<p>Noise emission and noise interference according to the automotive directive 95/54/EC (e1 type approval)</p> <p>Noise interference according to DIN ISO 11452-2: 100 V/m</p> <p>Conducted interference according to ISO 7637-2</p> <p>Pulse 1 2 3a 3b 4 5</p> <p>Severity level IV IV IV IV IV IV</p> <p>Failure criterion C C A A A C</p> <p>EN 61000-4-2 ESD: 4 kV CD / 8 kV AD</p> <p>EN 61000-4-3 HF radiated: 10 V/m</p> <p>EN 61000-4-4 Burst: 2 kV</p> <p>EN 61000-4-5 Surge: 0.5 kV (Mains line to line)</p> <p>EN 61000-4-6 HF conducted: 10 V</p> <p>EN 55011: class B</p>
Vibration resistance	<p>EN 60068-2-6 Fc</p> <p>20 g (10...3000 Hz) / -20°C and 50°C</p> <p>50 cycles per frequency, 1 octave per minute in each of 3 mutually perpendicular axes</p>
Shock resistance	<p>EN 60068-2-27 Ea</p> <p>100 g (11 ms half sine; 3 shocks in each direction along the three coordinate axes) / -40°C and 85°C</p>
Continuous shock resistance	<p>EN 60068-2-29 Eb</p> <p>40 g (6 ms; 4000 shocks in each direction along the three coordinate axes) / -20°C and 50°C</p>
Fast temperature changes	<p>EN 60068-2-14 Na</p> <p>TA = -40°C; TB = 85°C; t1 = 30 min; t2 = &lt; 10 s; 50 cycles</p>
Salt spray test	<p>EN 60068-2-52 Kb</p> <p>severity level 5 (4 test cycles)</p>
MTTF [Years]	900

**Mechanical data**

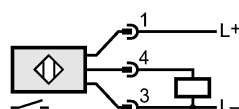
Mounting	non-flush mountable
Housing materials	housing: stainless steel; active face: PBT; lock nuts: Brass
Weight [kg]	0.124

**Displays / operating elements**

Output status indication	LED	yellow (4 x 90°)
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**Electrical connection**

Connection	M12 connector; Gold-plated contacts
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**Wiring**

**Accessories**

Accessories (included)	2 lock nuts
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**Remarks**

Pack quantity	[piece]	1
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