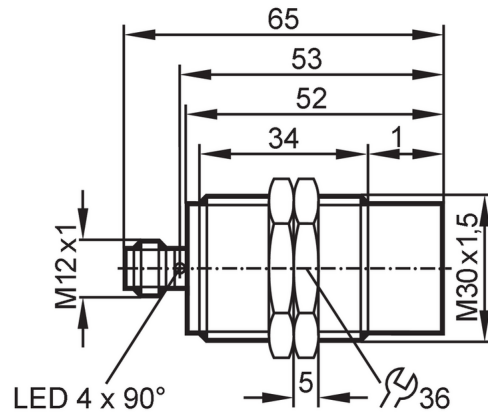




Inductive analog sensor with IO-Link

IIK4015A2PKG/IO/US



| Product characteristics | |
|--|--|
| Electrical design | PNP/NPN; (configurable) |
| Output function | normally open / closed; (configurable) |
| Communication interface | IO-Link |
| Housing | Threaded type |
| Dimensions [mm] | M30 x 1.5 / L = 65 |
| Electrical data | |
| Operating voltage [V] | 15...30 DC |
| Current consumption [mA] | < 30 |
| Protection class | II |
| Reverse polarity protection | yes |
| Outputs | |
| Electrical design | PNP/NPN; (configurable) |
| Output function | normally open / closed; (configurable) |
| Max. voltage drop switching output DC [V] | 2.5 |
| Permanent current rating of switching output DC [mA] | 100 |
| Switching frequency DC [Hz] | 300 |
| Analog voltage output [V] | 0...10; (linear; gradient: 0,714 V/mm; for frontal approach and for target made of mild steel: 45 x 45 x 1 mm) |
| Min. load resistance [Ω] | 2000 |
| Short-circuit protection | yes |
| Overload protection | yes |
| Monitoring range | |
| Measuring range [mm] | 1...15 |
| Switch point IO-Link [mm] | 2.37...13.99 |
| Accuracy / deviations | |
| Correction factor | steel: 1 / stainless steel: 0.7 / brass: 0.4 / aluminum: 0.4 / copper: 0.3 |
| Hysteresis [% of Sr] | 3...15 |
| Note on hysteresis | configurable |



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| | |
|---------------------------------------|--|
| Linearity error of analog output [%] | ± 1; (of the final value of the measuring range) |
| Repeatability analog output [%] | ± 1; (of the final value of the measuring range) |
| Temperature coefficient [%/K vom MEW] | ±0,15 |
| Temperature drift | ± 5 %; (of the final value of the measuring range) |

Reaction times

| | |
|--------------------|------|
| Response time [ms] | < 10 |
|--------------------|------|

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 0 | Generic Profiled Sensor |
| | Common - I&D | Identification and Diagnosis |
| | Function | Multiple switching signal |
| | Function | Teach channel |
| SIO mode | yes | |
| Required master port class | A | |
| Min. process cycle time [ms] | 3.2 | |
| IO-Link process data (cyclical) | Function | bit length |
| | process value | 16 |
| | device status | 4 |
| | binary switching information | 2 |
| IO-Link functions (acyclical) | switching cycles counter; switch-on cycle counter; operating hours counter; internal temperature; application specific tag | |
| Supported DeviceIDs | Type of operation | DeviceID |
| | default | 1206 |
| Note | For further information please see the IODD PDF file at "Downloads" | |

Operating conditions

| | |
|--------------------------|------------------------------------|
| Ambient temperature [°C] | -25...80 |
| 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 60068-2-27 | 40 g 6 ms; 4000 shocks each in every direction of the 3 coordinate axes |
| Fast temperature changes | EN 60068-2-14 Na | TA = -25°C; TB = 80°C; t1 = 30 min; t2 = < 10 s 50 cycles |
| MTTF [years] | 222 | |
| Embedded software included | yes | |

II5914



Inductive analog sensor with IO-Link

IIK4015A2PKG/IO/US

| | | |
|-------------|--------------------|-------------------------|
| UL approval | Ta | -25...60 °C |
| | Enclosure type | Type 1 |
| | voltage supply | Limited Voltage/Current |
| | UL approval number | A024 |
| | File number UL | E174191 |

| Mechanical data | |
|------------------------|--|
| Weight [g] | 142 |
| Housing | Threaded type |
| Mounting | non-flush mountable |
| Dimensions [mm] | M30 x 1.5 / L = 65 |
| Thread designation | M30 x 1.5 |
| Material | housing: brass white bronze coated; sensing face: PBT orange; LED window: PEI; lock nuts: brass white bronze coated |
| Tightening torque [Nm] | 50 |

| Displays / operating elements | | |
|-------------------------------|--------------------------------|--------------------------|
| Display | target in measuring range | 4 x LED, yellow lights |
| | target outside measuring range | 4 x LED, yellow flashing |

| Accessories | |
|----------------|--------------|
| Items supplied | lock nuts: 2 |

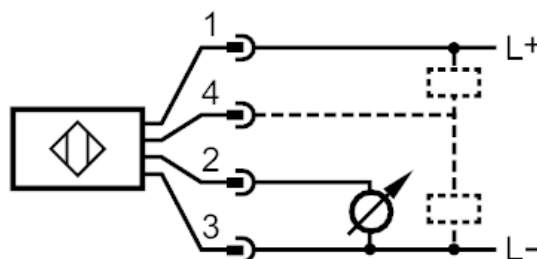
| Remarks | |
|---------------|--------|
| Pack quantity | 1 pcs. |

Electrical connection - plug

Connector: 1 x M12; coding: A



Connection



- 1 L +
- 2 OUT
- 3 L -
- 4 OUT / IO-Link