

# IQW201



## Inductive sensor

IQ23008BBPKG/K1/SC/0.3M/PUR/US



- 1 LED green
- 2 LED yellow



### Product characteristics

|                    |               |
|--------------------|---------------|
| Electrical design  | PNP           |
| Output function    | normally open |
| Sensing range [mm] | 8             |
| Housing            | rectangular   |
| Dimensions [mm]    | 20 x 8 x 32   |

### Application

|                                          |                                                                        |
|------------------------------------------|------------------------------------------------------------------------|
| System                                   | Drag chain suitability; Increased sensing range; Magnetic-field immune |
| Application                              | Inductive sensors for welding applications                             |
| Magnetic-field immune                    | yes                                                                    |
| Max. electromagnetic field immunity [mT] | 300                                                                    |

### Electrical data

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

### Outputs

|                                                      |               |
|------------------------------------------------------|---------------|
| Electrical design                                    | PNP           |
| Output function                                      | normally open |
| Max. voltage drop switching output DC [V]            | 2.5           |
| Permanent current rating of switching output DC [mA] | 100           |



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|                              |                                          |                                                                                             |
|------------------------------|------------------------------------------|---------------------------------------------------------------------------------------------|
| Switching frequency DC       | [Hz]                                     | 2000                                                                                        |
| Short-circuit protection     |                                          | yes                                                                                         |
| Overload protection          |                                          | yes                                                                                         |
| <b>Monitoring range</b>      |                                          |                                                                                             |
| Sensing range                | [mm]                                     | 8                                                                                           |
| Real sensing range Sr        | [mm]                                     | 8 ± 10 %                                                                                    |
| Operating distance           | [mm]                                     | 0...6.48                                                                                    |
| Increased sensing range      |                                          | yes                                                                                         |
| <b>Accuracy / deviations</b> |                                          |                                                                                             |
| Correction factor            |                                          | steel: 1 / stainless steel: 1 / brass: 1 / aluminum: 1 / copper: 1                          |
| Hysteresis                   | [% of Sr]                                | 3...15                                                                                      |
| Switch-point drift           | [% of Sr]                                | -10...10                                                                                    |
| <b>Operating conditions</b>  |                                          |                                                                                             |
| Ambient temperature          | [°C]                                     | -40...85                                                                                    |
| Protection                   |                                          | IP 65; IP 66; IP 67; IP 68                                                                  |
| <b>Tests / approvals</b>     |                                          |                                                                                             |
| 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                                   |
| MTTF                         | [years]                                  | 1084                                                                                        |
| UL approval                  | Ta                                       | -40...60 °C                                                                                 |
|                              | Enclosure type                           | Type 1                                                                                      |
|                              | voltage supply                           | Limited Voltage/Current                                                                     |
|                              | UL approval number                       | A020                                                                                        |
|                              | File number UL                           | E174191                                                                                     |
| <b>Mechanical data</b>       |                                          |                                                                                             |
| Weight                       | [g]                                      | 40.9                                                                                        |
| Housing                      |                                          | rectangular                                                                                 |
| Mounting                     |                                          | flush mountable                                                                             |
| Dimensions                   | [mm]                                     | 20 x 8 x 32                                                                                 |
| Material                     |                                          | diecast zinc weld coated; sensing face: LCP black; LED window: TPU (urethane); potting: PUR |
| Drag chain suitability       |                                          | yes                                                                                         |
| Drag chain suitability       | Bending radius for flexible applications | min. 10 x cable diameter                                                                    |
|                              | Bending cycles                           | > 5 Mio.                                                                                    |

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### Displays / operating elements

|         |                   |                 |
|---------|-------------------|-----------------|
| Display | Display operation | 1 x LED, green  |
|         | Switching status  | 1 x LED, yellow |

### Remarks

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

### Electrical connection

Cable: 0.3 m, PUR, Ø 4.9 mm; 3 x 0.34 mm<sup>2</sup>

Connector: 1 x M12; coding: A



### Connection

