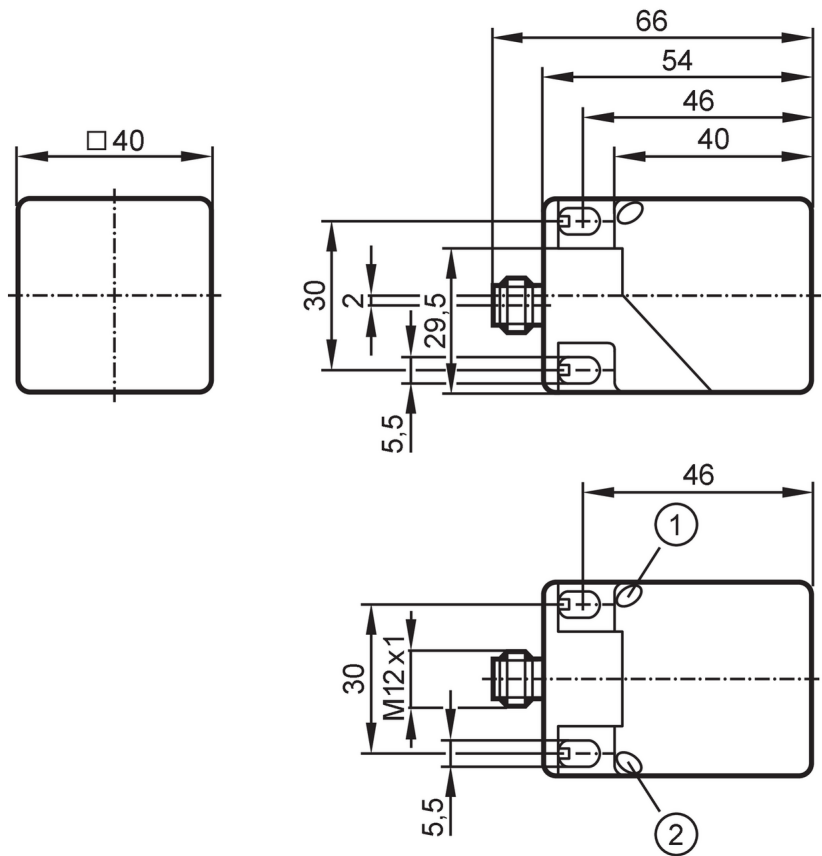


# IM5124



## Inductive sensor

IMC4020UCPKG/K1/SC/US-100-DPA



- 1 LED yellow
- 2 LED green



| Product characteristics             |      |                                              |
|-------------------------------------|------|----------------------------------------------|
| Electrical design                   |      | PNP                                          |
| Output function                     |      | complementary                                |
| Sensing range                       | [mm] | 20                                           |
| Housing                             |      | rectangular                                  |
| Dimensions                          | [mm] | 40 x 40 x 54                                 |
| Application                         |      |                                              |
| Special feature                     |      | correction factor = 1; 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...36 DC                                   |
| Current consumption                 | [mA] | < 20                                         |
| Protection class                    |      | II                                           |
| Reverse polarity protection         |      | yes                                          |
| Outputs                             |      |                                              |
| Electrical design                   |      | PNP                                          |



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|                                                 |      |                    |
|-------------------------------------------------|------|--------------------|
| Output function                                 |      | complementary      |
| Max. voltage drop switching output DC           | [V]  | 2.5                |
| Max. leakage current                            | [mA] | 0.1                |
| Permanent current rating of switching output DC | [mA] | 200                |
| Switching frequency DC                          | [Hz] | 200                |
| Short-circuit protection                        |      | yes                |
| Type of short-circuit protection                |      | yes (non-latching) |
| Overload protection                             |      | yes                |

## Monitoring range

|                       |      |           |
|-----------------------|------|-----------|
| Sensing range         | [mm] | 20        |
| Real sensing range Sr | [mm] | 20 ± 10 % |
| Operating distance    | [mm] | 0...16.2  |

## Accuracy / deviations

|                       |           |                                                                    |
|-----------------------|-----------|--------------------------------------------------------------------|
| Correction factor     |           | steel: 1 / stainless steel: 1 / brass: 1 / aluminum: 1 / copper: 1 |
| Hysteresis            | [% of Sr] | 1...20                                                             |
| Switch-point drift    | [% of Sr] | -10...10                                                           |
| Correction factor = 1 |           | yes                                                                |

## Operating conditions

|                     |      |          |
|---------------------|------|----------|
| Ambient temperature | [°C] | -25...70 |
| Protection          |      | IP 67    |

## Tests / approvals

|             |                           |                                |
|-------------|---------------------------|--------------------------------|
| EMC         | EN 61000-4-2 ESD          | 8 kV CD / 6 kV AD              |
|             | EN 61000-4-3 HF radiated  | 10 V/m                         |
|             | EN 61000-4-4 Burst        | 2 kV                           |
|             | EN 61000-4-5 Surge        | 0,5 kV line to line, Ri: 2 Ohm |
|             | EN 61000-4-6 HF conducted | 10 V                           |
|             | EN 55011                  | class B                        |
| MTTF        | [years]                   | 975                            |
| UL approval | Ta                        | -25...70 °C                    |
|             | Enclosure type            | Type 1                         |
|             | voltage supply            | Class 2                        |
|             | File number UL            | E174191                        |

## Mechanical data

|              |      |                                                                                                                                                |
|--------------|------|------------------------------------------------------------------------------------------------------------------------------------------------|
| Weight       | [g]  | 141.5                                                                                                                                          |
| Housing      |      | rectangular                                                                                                                                    |
| Sensing face |      | 5 positions selectable                                                                                                                         |
| Mounting     |      | flush mountable                                                                                                                                |
| Dimensions   | [mm] | 40 x 40 x 54                                                                                                                                   |
| Material     |      | housing: PA weld coated; sensing face: PA black weld coated; bevelled housing part: PA; clamp: orange; screw: stainless steel (1.4567 / 304Cu) |

## Displays / operating elements

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

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### Remarks

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

### Electrical connection - plug

Connector: 1 x M12; coding: A; Contacts: 4; Locking: locking, rotatable, stainless steel (1.4404 / 316L)



### Connection

