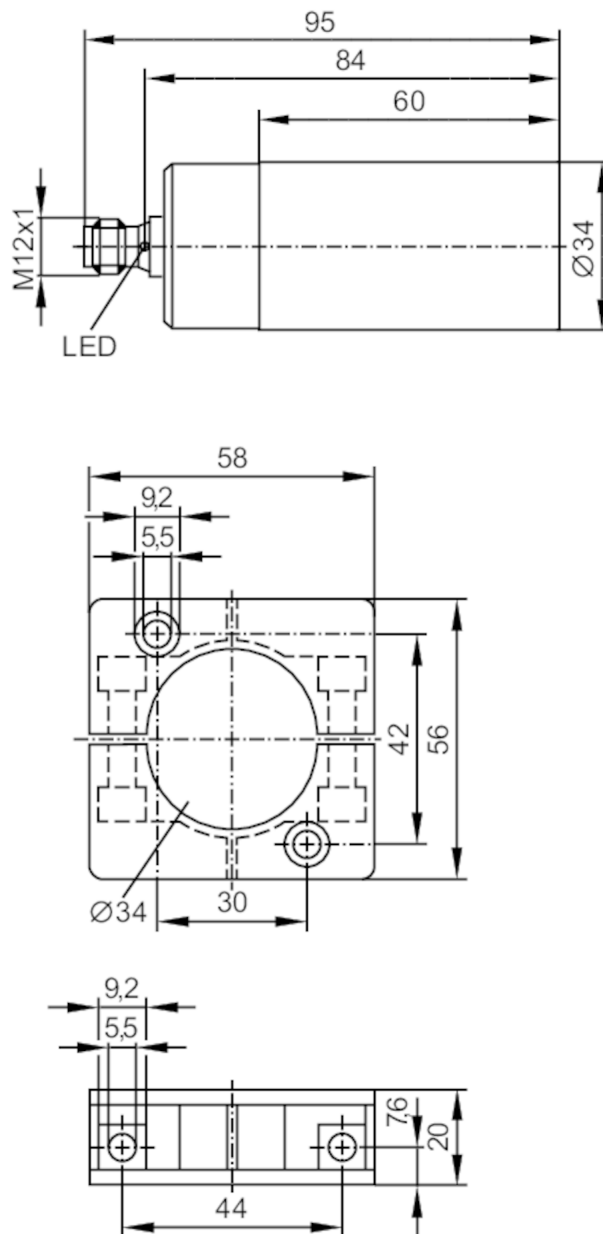


# IB5169



## Inductive sensor

IB-2020-FRKG/US-104-IRF



### Product characteristics

|                    |                                               |
|--------------------|-----------------------------------------------|
| Electrical design  | PNP/NPN                                       |
| Output function    | normally open / normally closed; (selectable) |
| Sensing range [mm] | 20                                            |
| Housing            | cylindrical                                   |
| Dimensions [mm]    | Ø 34 / L = 95                                 |

### Application

|                 |                      |
|-----------------|----------------------|
| Special feature | Gold-plated contacts |
|-----------------|----------------------|

### Electrical data

|                       |            |
|-----------------------|------------|
| Operating voltage [V] | 10...36 DC |
|-----------------------|------------|



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|                                                      |                                                                             |                     |
|------------------------------------------------------|-----------------------------------------------------------------------------|---------------------|
| Protection class                                     | II                                                                          |                     |
| Reverse polarity protection                          | yes                                                                         |                     |
| Outputs                                              |                                                                             |                     |
| Electrical design                                    | PNP/NPN                                                                     |                     |
| Output function                                      | normally open / normally closed; (selectable)                               |                     |
| Max. voltage drop switching output DC [V]            | 4.6                                                                         |                     |
| Minimum load current [mA]                            | 4                                                                           |                     |
| Max. leakage current [mA]                            | 1                                                                           |                     |
| Permanent current rating of switching output DC [mA] | 250                                                                         |                     |
| Switching frequency DC [Hz]                          | 200                                                                         |                     |
| Short-circuit protection                             | yes                                                                         |                     |
| Overload protection                                  | yes                                                                         |                     |
| Detection zone                                       |                                                                             |                     |
| 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: 0.7 / brass: 0.5 / aluminium: 0.4 / copper: 0.3 |                     |
| Hysteresis [% of Sr]                                 | 1...15                                                                      |                     |
| Switch point drift [% of Sr]                         | -10...10                                                                    |                     |
| Operating conditions                                 |                                                                             |                     |
| Ambient temperature [°C]                             | -25...70                                                                    |                     |
| Protection                                           | IP 67                                                                       |                     |
| Tests / approvals                                    |                                                                             |                     |
| EMC                                                  | EN 60947-5-2                                                                |                     |
| MTTF [years]                                         | 1941                                                                        |                     |
| Mechanical data                                      |                                                                             |                     |
| Weight [g]                                           | 226                                                                         |                     |
| Housing                                              | cylindrical                                                                 |                     |
| Mounting                                             | non-flush mountable                                                         |                     |
| Dimensions [mm]                                      | Ø 34 / L = 95                                                               |                     |
| Materials                                            | housing: PBT; sensing face: PBT orange; clamp: PBT black                    |                     |
| Displays / operating elements                        |                                                                             |                     |
| Display                                              | switching status                                                            | 4 x 90° LED, yellow |
| Accessories                                          |                                                                             |                     |
| Items supplied                                       | Mounting clamps: 1                                                          |                     |
| Remarks                                              |                                                                             |                     |
| Pack quantity                                        | 1 pcs.                                                                      |                     |

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### Electrical connection - plug

Connector: 1 x M12; coding: A; Locking: brass, anti-spatter; Contacts: gold-plated

