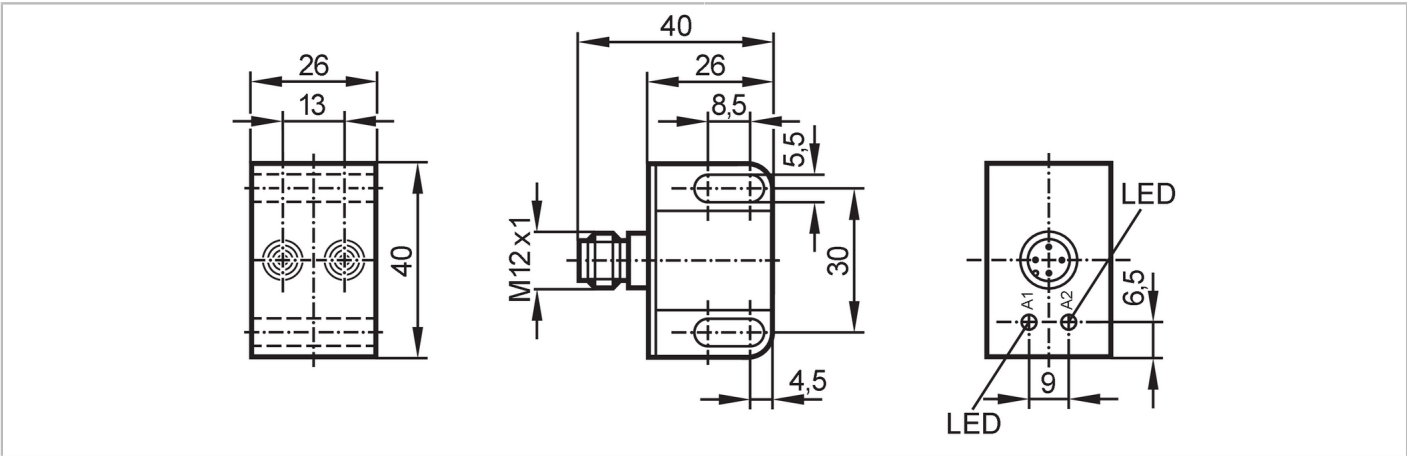


# IN5224



## Dual inductive sensor for valve actuators

IND2004DARKG/US-100-ZRV



### Product characteristics

|                    |                   |
|--------------------|-------------------|
| Electrical design  | PNP/NPN           |
| Output function    | 2 x normally open |
| Sensing range [mm] | 4                 |
| Housing            | rectangular       |
| Dimensions [mm]    | 40 x 26 x 26      |

### Application

|                 |                                     |
|-----------------|-------------------------------------|
| Special feature | gold-plated contacts                |
| Application     | Position sensor for valve actuators |

### Electrical data

|                             |            |
|-----------------------------|------------|
| Operating voltage [V]       | 10...36 DC |
| Protection class            | II         |
| Reverse polarity protection | yes        |

### Outputs

|                                                      |                    |
|------------------------------------------------------|--------------------|
| Electrical design                                    | PNP/NPN            |
| Output function                                      | 2 x normally open  |
| Max. voltage drop switching output DC [V]            | 4                  |
| Minimum load current [mA]                            | 4                  |
| Max. leakage current [mA]                            | 2 x 0.7            |
| Permanent current rating of switching output DC [mA] | 250                |
| Switching frequency DC [Hz]                          | 1300               |
| Short-circuit protection                             | yes                |
| Type of short-circuit protection                     | yes (non-latching) |
| Overload protection                                  | yes                |

### Monitoring range

|                            |          |
|----------------------------|----------|
| Sensing range [mm]         | 4        |
| Real sensing range Sr [mm] | 4 ± 10 % |
| Operating distance [mm]    | 0...3.25 |

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| Accuracy / deviations         |                                                                            |                          |
|-------------------------------|----------------------------------------------------------------------------|--------------------------|
| Correction factor             | steel: 1 / stainless steel: 0.7 / brass: 0.4 / aluminum: 0.3 / copper: 0.2 |                          |
| Hysteresis                    | [% of Sr]                                                                  | 1...15                   |
| Switch-point drift            | [% of Sr]                                                                  | -10...10                 |
| Operating conditions          |                                                                            |                          |
| Ambient temperature           | [°C]                                                                       | -20...80                 |
| Protection                    |                                                                            | IP 67                    |
| Tests / approvals             |                                                                            |                          |
| EMC                           | EN 60947-5-2                                                               |                          |
|                               | EN 55011                                                                   | class B                  |
| MTTF                          | [years]                                                                    | 1229                     |
| Mechanical data               |                                                                            |                          |
| Weight                        | [g]                                                                        | 40.5                     |
| Housing                       |                                                                            | rectangular              |
| Mounting                      |                                                                            | non-flush mountable      |
| Dimensions                    | [mm]                                                                       | 40 x 26 x 26             |
| Material                      |                                                                            | PBT; PC                  |
| Tightening torque             | [Nm]                                                                       | 0.6...1.5; (knurled nut) |
| Displays / operating elements |                                                                            |                          |
| Display                       | Switching status                                                           | 2 x LED, yellow          |
| Remarks                       |                                                                            |                          |
| Pack quantity                 |                                                                            | 1 pcs.                   |
| Electrical connection - plug  |                                                                            |                          |

Connector: 1 x M12; coding: A; Contacts: gold-plated

