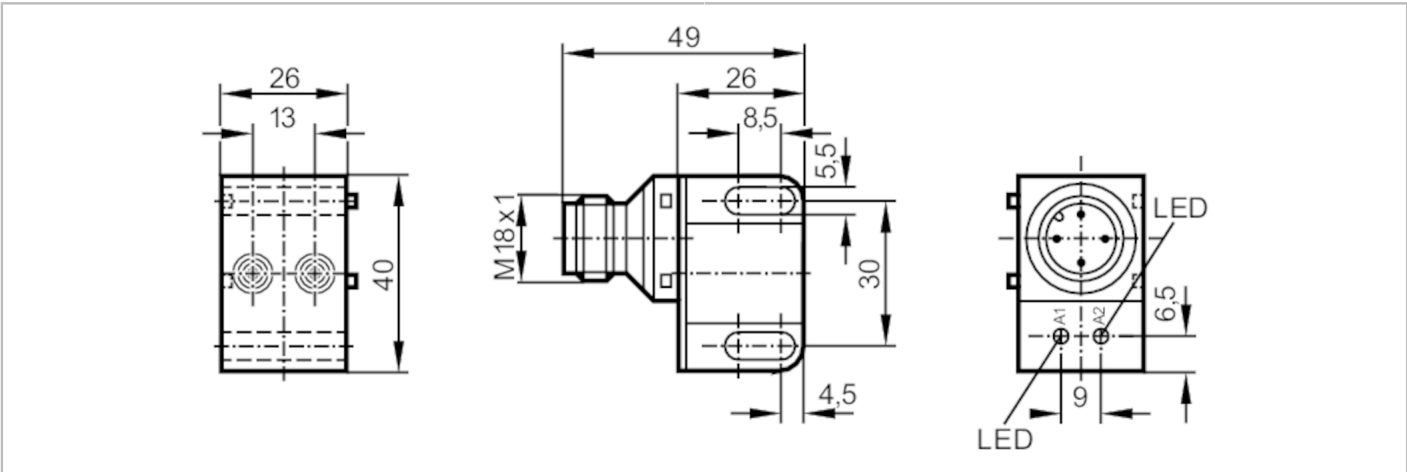


# NN5013



## Inductive NAMUR dual sensor for valve actuators

IND2004DN/BS-200-K/1D/1G/2G



| Product characteristics         |                                                                                                             |
|---------------------------------|-------------------------------------------------------------------------------------------------------------|
| Electrical design               | NAMUR                                                                                                       |
| Output function                 | 2 x normally closed                                                                                         |
| Sensing range [mm]              | 4                                                                                                           |
| Housing                         | rectangular                                                                                                 |
| Dimensions [mm]                 | 40 x 26 x 26                                                                                                |
| Electrical data                 |                                                                                                             |
| Connection at circuit amplifier | yes                                                                                                         |
| Switching amplifiers            | connection to certified intrinsically safe circuits with the max. values: U = 15 V / I = 50 mA / P = 120 mW |
| Nominal voltage DC [V]          | 8.2; (1kΩ)                                                                                                  |
| Supply voltage DC [V]           | 7.5...15                                                                                                    |
| Current consumption [mA]        | < 1; (disabled; conductive: > 2,1)                                                                          |
| Protection class                | III                                                                                                         |
| Outputs                         |                                                                                                             |
| Electrical design               | NAMUR                                                                                                       |
| Output function                 | 2 x normally closed                                                                                         |
| Switching frequency DC [Hz]     | 1800                                                                                                        |
| Monitoring range                |                                                                                                             |
| Sensing range [mm]              | 4                                                                                                           |
| Real sensing range Sr [mm]      | 4 ± 10 %                                                                                                    |
| Accuracy / deviations           |                                                                                                             |
| Correction factor               | steel: 1 / stainless steel: 0.7 / brass: 0.5 / aluminum: 0.4 / copper: 0.3                                  |
| Hysteresis [% of Sr]            | 1...15                                                                                                      |
| Switch-point drift [% of Sr]    | -10...10                                                                                                    |
| Operating conditions            |                                                                                                             |
| Ambient temperature [°C]        | -20...80                                                                                                    |
| Protection                      | IP 67                                                                                                       |



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| Tests / approvals                                                                              |                                                                            |                 |
|------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------|-----------------|
| Approval                                                                                       | DMT 02 ATEX E 028 X; BVS 04 ATEX E 153 X; IECEx BVS 06.0003X; TIIS TC17612 |                 |
| ATEX marking                                                                                   | II 1G Ex ia IIB T6 Ga Ta -20...70°C                                        |                 |
|                                                                                                | II 1G Ex ia IIB T5 Ga Ta -20...80°C                                        |                 |
|                                                                                                | II 2G Ex ia IIC T6 Gb Ta -20...70°C                                        |                 |
|                                                                                                | II 2G Ex ia IIC T5 Gb Ta -20...80°C                                        |                 |
|                                                                                                | II 1D Ex ia IIIC T200 90°C Da Ta: -20...70°C                               |                 |
|                                                                                                | II 1D Ex ia IIIC T200 100° C Da Ta: -20...80°C                             |                 |
| EMC                                                                                            | EN 60947-5-6                                                               |                 |
| Shock/vibration resistance                                                                     | 30 g (11 ms) / 10-55 Hz (1 mm)                                             |                 |
| MTTF [years]                                                                                   | 1253                                                                       |                 |
| Safety classification                                                                          |                                                                            |                 |
| Max. internal capacitance [nF]                                                                 | 140; (per intrinsically safe electric circuit)                             |                 |
| Max. internal inductance [µH]                                                                  | 130; (per intrinsically safe electric circuit)                             |                 |
| Mechanical data                                                                                |                                                                            |                 |
| Weight [g]                                                                                     | 79                                                                         |                 |
| Housing                                                                                        | rectangular                                                                |                 |
| Mounting                                                                                       | non-flush mountable                                                        |                 |
| Dimensions [mm]                                                                                | 40 x 26 x 26                                                               |                 |
| Material                                                                                       | housing: PBT; cover: PC                                                    |                 |
| Displays / operating elements                                                                  |                                                                            |                 |
| Display                                                                                        | Switching status                                                           | 2 x LED, yellow |
| Remarks                                                                                        |                                                                            |                 |
| Pack quantity                                                                                  | 1 pcs.                                                                     |                 |
| Electrical connection - plug                                                                   |                                                                            |                 |
| Connector: 1 x M18; coding: A                                                                  |                                                                            |                 |
| <div></div> |                                                                            |                 |

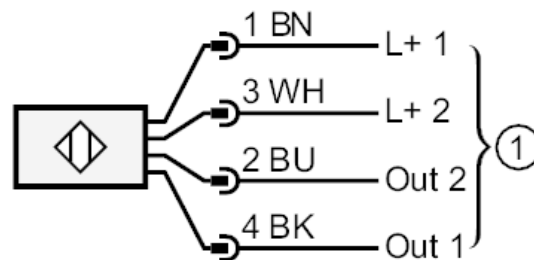
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### Connection



1 = connection to NAMUR-amplifier

Core colors :

BK = black  
BN = brown  
BU = blue  
WH = white