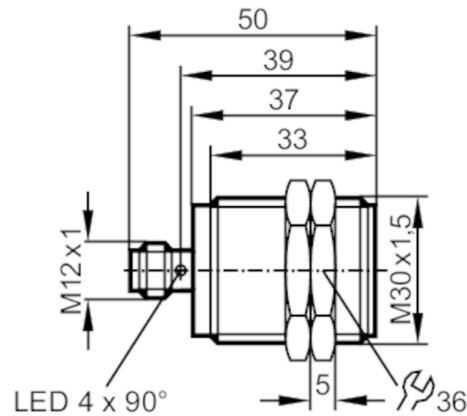


# NI501A



## Inductive NAMUR sensor

IIB2015BN/US/1G/1D



### Electrical data

|                                    |                                                                                                             |
|------------------------------------|-------------------------------------------------------------------------------------------------------------|
| Connection to switching amplifiers | 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...30; (when used outside the hazardous area)                                                            |
| Current consumption [mA]           | < 1; (disabled; conductive: > 2,1)                                                                          |
| Protection class                   | II                                                                                                          |

### Outputs

|                                                      |                                            |
|------------------------------------------------------|--------------------------------------------|
| Electrical design                                    | NAMUR                                      |
| Output function                                      | normally closed                            |
| Permanent current rating of switching output DC [mA] | 30; (when used outside the hazardous area) |
| Switching frequency DC [Hz]                          | 100                                        |

### Detection zone

|                            |           |
|----------------------------|-----------|
| Sensing range [mm]         | 15        |
| Real sensing range Sr [mm] | 15 ± 10 % |
| Operating distance [mm]    | 0...12.15 |

### 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

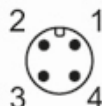
|                          |          |
|--------------------------|----------|
| Ambient temperature [°C] | -20...70 |
| Protection               | IP 67    |

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| Tests / approvals                                                                              |                                                    |                     |
|------------------------------------------------------------------------------------------------|----------------------------------------------------|---------------------|
| Approval                                                                                       | BVS 04 ATEX E 091 X; IECEx BVS 06.0003             |                     |
| ATEX marking                                                                                   | <div>II 1G Ex ia IIB T6 Ga</div>                   |                     |
|                                                                                                | <div>II 2G Ex ia IIC T6 Gb</div>                   |                     |
|                                                                                                | <div>II 1D Ex ia IIIC T 90°C Da</div>              |                     |
| EMC                                                                                            | EN 60947-5-6                                       |                     |
| Shock/vibration resistance                                                                     | 30 g (11 ms) / 10-55 Hz (1 mm)                     |                     |
| MTTF                                                                                           | [years]                                            | 2514                |
| Safety classification                                                                          |                                                    |                     |
| Max. internal capacitance                                                                      | [nF]                                               | 230                 |
| Max. internal inductance                                                                       | [μH]                                               | 210                 |
| Mechanical data                                                                                |                                                    |                     |
| Weight                                                                                         | [g]                                                | 159.2               |
| Housing                                                                                        | threaded type                                      |                     |
| Mounting                                                                                       | flush mountable                                    |                     |
| Dimensions                                                                                     | [mm]                                               | M30 x 1.5 / L = 50  |
| Thread designation                                                                             | M30 x 1.5                                          |                     |
| Materials                                                                                      | brass special coating; sensing face: PBT; plug: PA |                     |
| Displays / operating elements                                                                  |                                                    |                     |
| Display                                                                                        | switching status                                   | 4 x 90° LED, yellow |
| Accessories                                                                                    |                                                    |                     |
| Accessories (supplied)                                                                         | lock nuts: 2                                       |                     |
| Remarks                                                                                        |                                                    |                     |
| Pack quantity                                                                                  | 1 pcs.                                             |                     |
| Electrical connection - plug                                                                   |                                                    |                     |
| Connector: 1 x M12                                                                             |                                                    |                     |
| <div></div> |                                                    |                     |

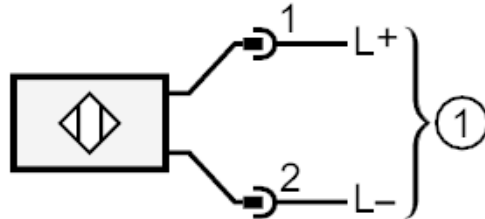
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## Inductive NAMUR sensor

IIB2015BN/US/1G/1D

### Connection



1 = connection to NAMUR amplifiers