



# AK

## AK1/A0-1H

Ind.M18,2 wires DC-NO,M12 plug,Sch-STD  
M18 CYLINDRICAL INDUCTIVE SENSORS

## OVERVIEW

- Wide range of models: standard, long distance
- Output: cable, M12 and plug cable exit
- Models with 2, 3, and 4 wires
- ATEX models, cat. 3, available on request
- Models with complementary output (NO+NC)



## TECHNICAL FEATURES

### Detection properties

|                          |  |
|--------------------------|--|
| Nominal sensing distance | 5mm  |
| Operanting distance      | 0...4,05mm   |
| Standard target          | 18x18mm FE360  |
| Correction Factor        | copper: 0,40 / aluminium: 0,48 / brass: 0,50 / stainless steel: 0,86 |
| Thermal drift of Sr      | < 10%  |
| Repeat Accuracy          | < 5% (UB 24V Ta=23°C ±5°C)   |

|            |           |
|------------|-----------|
| Hysteresis | 1 ... 20% |
|------------|-----------|

## Application

|             |                          |
|-------------|--------------------------|
| Description | M18 standard flush mount |
|-------------|--------------------------|

|           |           |
|-----------|-----------|
| Functions | Proximity |
|-----------|-----------|

## Outputs

|             |         |
|-------------|---------|
| Output type | NPN/PNP |
|-------------|---------|

|                 |    |
|-----------------|----|
| Output Function | NO |
|-----------------|----|

|                     |       |
|---------------------|-------|
| Switching frequency | 300Hz |
|---------------------|-------|

## Electrical data

|                   |            |
|-------------------|------------|
| Operating Voltage | 10...30Vdc |
|-------------------|------------|

|                        |                    |
|------------------------|--------------------|
| No-Load supply current | $\leq 20\text{mA}$ |
|------------------------|--------------------|

|              |           |
|--------------|-----------|
| Load current | 3...100mA |
|--------------|-----------|

|                 |                           |
|-----------------|---------------------------|
| Leakage current | $\leq 0, \leq 8\text{mA}$ |
|-----------------|---------------------------|

|                     |                                  |
|---------------------|----------------------------------|
| Output voltage drop | $\leq 2,8\text{V @}100\text{mA}$ |
|---------------------|----------------------------------|

|                    |             |
|--------------------|-------------|
| Max ripple content | $\leq 10\%$ |
|--------------------|-------------|

|                |                         |
|----------------|-------------------------|
| LED indicators | Yellow LED output state |
|----------------|-------------------------|

|                                |                    |
|--------------------------------|--------------------|
| Time delay before availability | $\leq 50\text{ms}$ |
|--------------------------------|--------------------|

|                          |     |
|--------------------------|-----|
| Short-circuit protection | Yes |
|--------------------------|-----|

|                             |     |
|-----------------------------|-----|
| Reverse Polarity Protection | Yes |
|-----------------------------|-----|

|                                  |     |
|----------------------------------|-----|
| Impulsive Overvoltage Protection | Yes |
|----------------------------------|-----|

|                                    |     |
|------------------------------------|-----|
| Protection against inductive loads | Yes |
|------------------------------------|-----|

#### Mechanical data

|            |                    |
|------------|--------------------|
| Dimensions | M18 x 1 / L = 64mm |
|------------|--------------------|

|          |          |
|----------|----------|
| Mounting | Shielded |
|----------|----------|

|          |                     |
|----------|---------------------|
| Material | Nickel-plated brass |
|----------|---------------------|

|                  |                     |
|------------------|---------------------|
| Housing material | Nickel-plated brass |
|------------------|---------------------|

|        |     |
|--------|-----|
| Weight | 55g |
|--------|-----|

|             |          |
|-------------|----------|
| Connections | M12 Plug |
|-------------|----------|

|                      |     |
|----------------------|-----|
| Active Head Material | PBT |
|----------------------|-----|

|                   |      |
|-------------------|------|
| Tightening torque | 25Nm |
|-------------------|------|

|                       |               |
|-----------------------|---------------|
| Operating temperature | -25°C...+70°C |
|-----------------------|---------------|

|                    |     |
|--------------------|-----|
| Diameter/Dimension | M18 |
|--------------------|-----|

#### Test/Approvals

|           |       |
|-----------|-------|
| Approvals | CE UR |
|-----------|-------|

|                   |               |
|-------------------|---------------|
| EMC compatibility | IEC 60947-5-2 |
|-------------------|---------------|

|                       |  |
|-----------------------|--|
| Shocks and vibrations | Vibration IEC 60068-2-6 / Shock IEC 60068-2-27 |
|-----------------------|--|

|                      |      |
|----------------------|------|
| Degree of protection | IP67 |
|----------------------|------|

## Accessories

|                      |              |
|----------------------|--------------|
| Supplied Accessories | 2 nuts M18x1 |
|----------------------|--------------|

## Generical Data

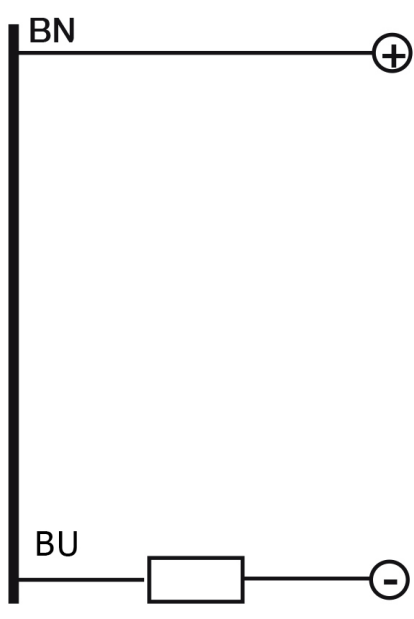
|            |                    |
|------------|--------------------|
| Dimensions | M18 x 1 / L = 64mm |
|------------|--------------------|

|                       |               |
|-----------------------|---------------|
| Operating Temperature | -25°C...+70°C |
|-----------------------|---------------|

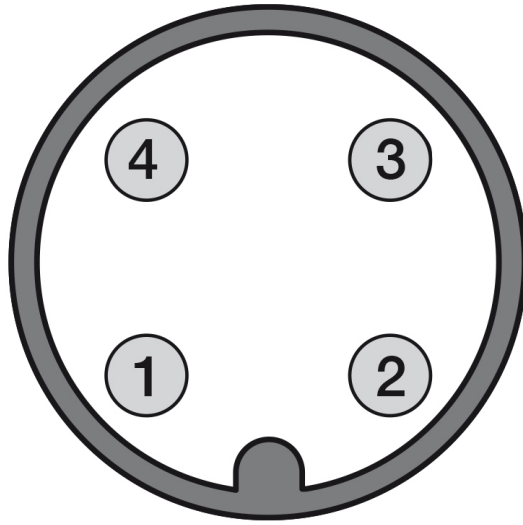
|                       |      |
|-----------------------|------|
| Mechanical Protection | IP67 |
|-----------------------|------|

# CONNECTIONS

Electrical diagram

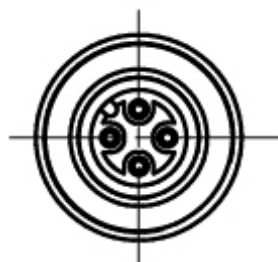
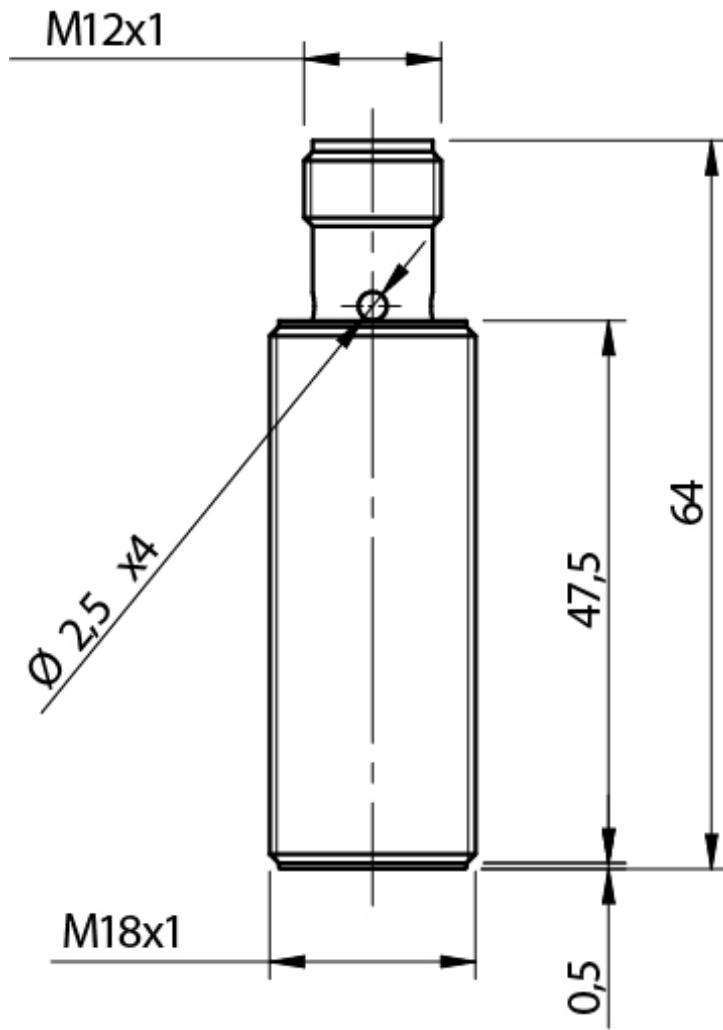


Connector

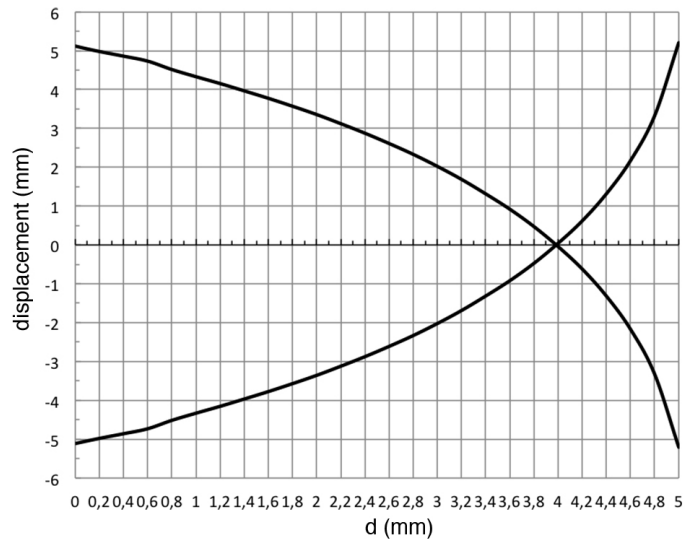


# OTHERS

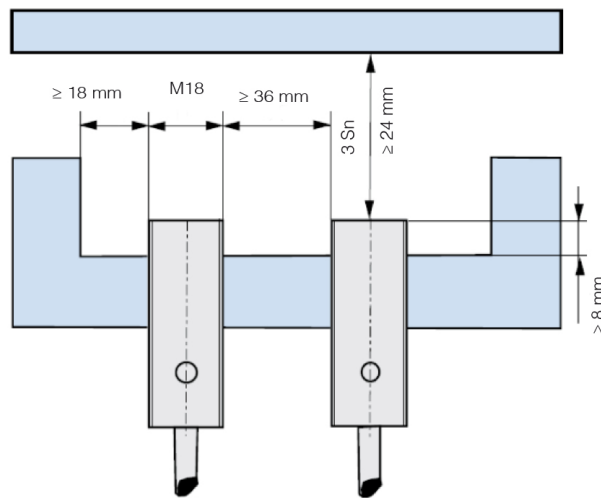
Dimensions



Response curves



### Installation



<sup>(1)</sup>  $\geq 3,6$  mm for non magnetic materials

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