



# AB1

## AB1/AP-1A

Ind.M4,PNP-NO,Cable,Sch-STD  
M4 CYLINDRICAL MINIATURIZED INDUCTIVE SENSORS

## OVERVIEW

- Complete range of cylindrical ultraminiaturized inductive sensors M4
- IP67 protection degree



## TECHNICAL FEATURES

### Detection properties

|                          |  |
|--------------------------|--|
| Nominal sensing distance | 0,6mm  |
| Operanting distance      | 0...0,48mm   |
| Standard target          | 4x4mm FE360  |
| Correction Factor        | copper: $0,23 \pm 10\%$ / aluminium: $0,26 \pm 10\%$ / brass: $0,31 \pm 10\%$ / stainless steel: $0,52 \pm 10\%$ |
| Thermal drift of Sr      | < 10%  |
| Repeat Accuracy          | < 5% (UB 24V Ta=23°C ±5°C)   |

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

## Application

|             |                         |
|-------------|-------------------------|
| Description | M4 standard flush mount |
|-------------|-------------------------|

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

## Outputs

|             |     |
|-------------|-----|
| Output type | PNP |
|-------------|-----|

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

|                     |      |
|---------------------|------|
| Switching frequency | 3kHz |
|---------------------|------|

## Electrical data

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

|                        |                    |
|------------------------|--------------------|
| No-Load supply current | $\leq 10\text{mA}$ |
|------------------------|--------------------|

|              |                     |
|--------------|---------------------|
| Load current | $\leq 100\text{mA}$ |
|--------------|---------------------|

|                 |                      |
|-----------------|----------------------|
| Leakage current | $\leq 10\mu\text{A}$ |
|-----------------|----------------------|

|                     |                                  |
|---------------------|----------------------------------|
| Output voltage drop | $\leq 1,5\text{V @}100\text{mA}$ |
|---------------------|----------------------------------|

|                    |             |
|--------------------|-------------|
| 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 | M4 x 0,5 / L = 22mm |
|------------|---------------------|

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

|          |                         |
|----------|-------------------------|
| Material | AISI303 Stainless Steel |
|----------|-------------------------|

|                  |                         |
|------------------|-------------------------|
| Housing material | AISI303 Stainless Steel |
|------------------|-------------------------|

|        |     |
|--------|-----|
| Weight | 30g |
|--------|-----|

|             |              |
|-------------|--------------|
| Connections | 2m PUR Cable |
|-------------|--------------|

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

|                   |       |
|-------------------|-------|
| Tightening torque | 1,5Nm |
|-------------------|-------|

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

|                    |    |
|--------------------|----|
| Diameter/Dimension | M4 |
|--------------------|----|

#### Test/Approvals

|           |       |
|-----------|-------|
| Approvals | CE UL |
|-----------|-------|

|                   |               |
|-------------------|---------------|
| 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 M5x0.5 |
|----------------------|---------------|

## Generical Data

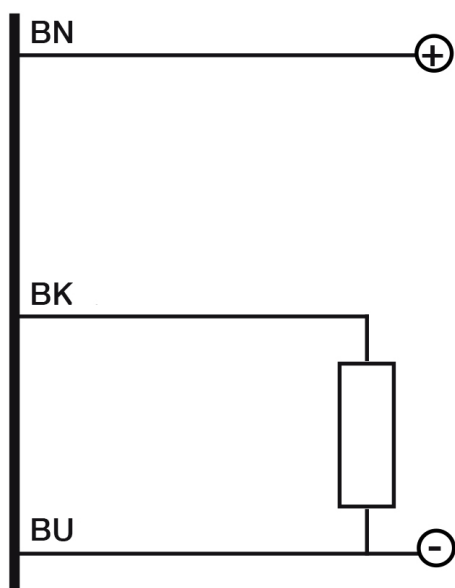
|            |                     |
|------------|---------------------|
| Dimensions | M4 x 0,5 / L = 22mm |
|------------|---------------------|

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

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

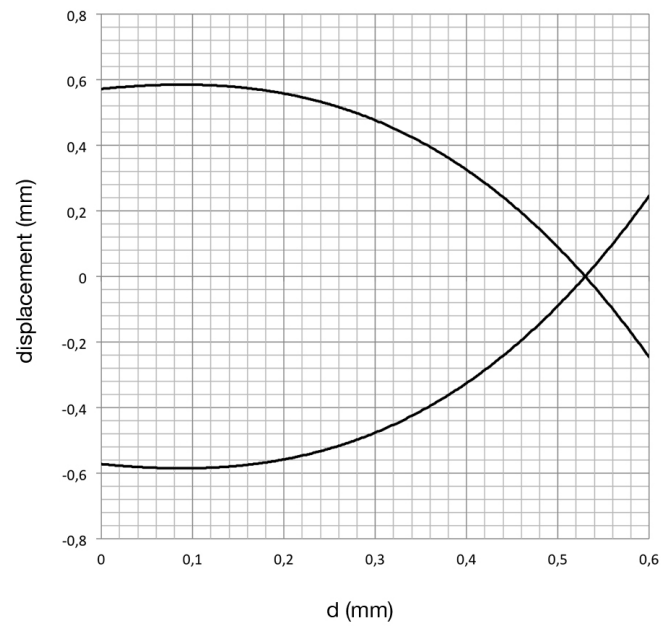
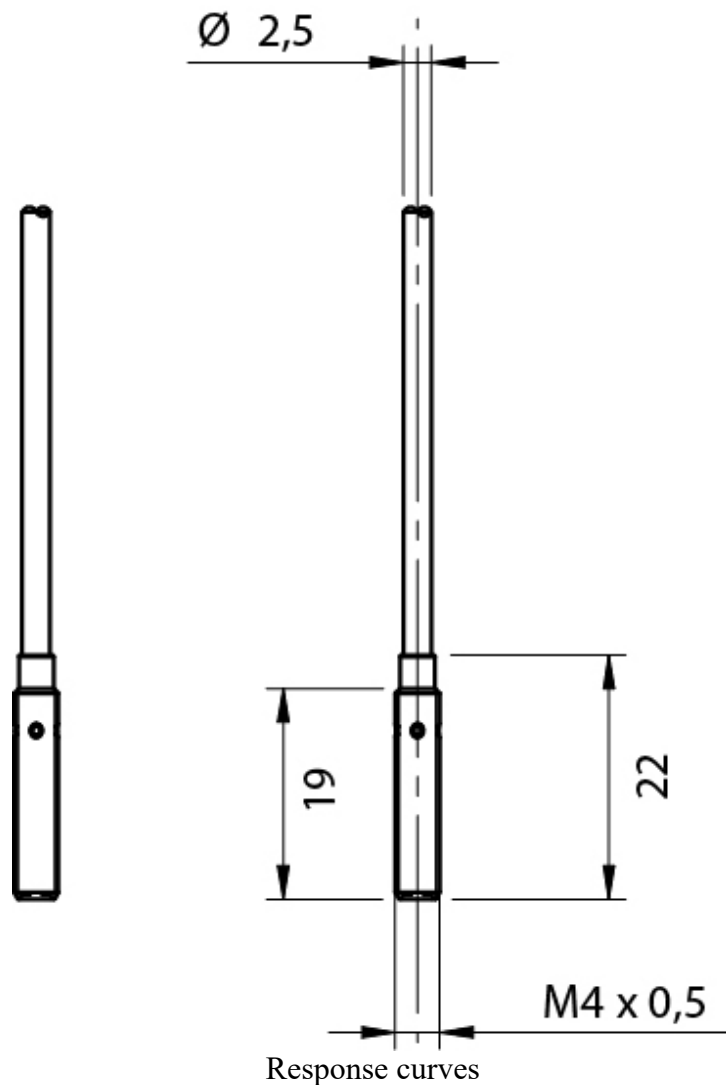
# CONNECTIONS

Electrical diagram

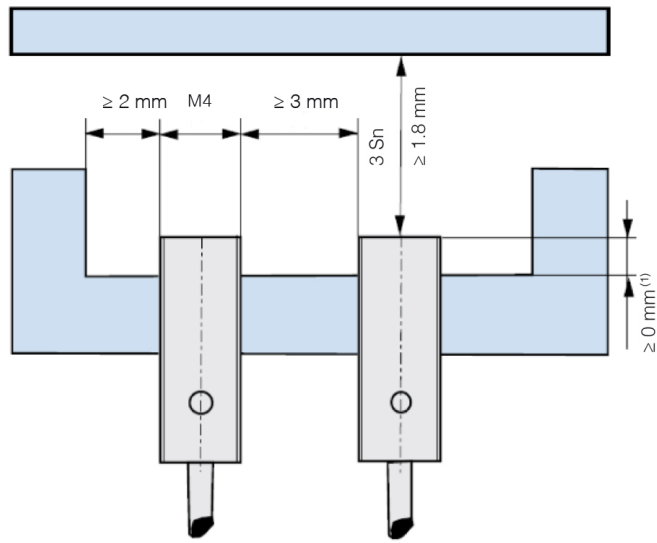


# OTHERS

Dimensions



Installation



<sup>(1)</sup>  $\geq 2.5 \text{ mm}$  without ferro-magnetic material

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