



## Safety sensor 171

Our bestsellers with a design common to the market: magnetically actuated safety sensors in M30 housing. The large number of variants available from elobau provide solutions for almost all applications.

### Technical specification

- Available connection types: cable outlet, M8 and M12 housing connectors
- Simple diagnosis through optional LED and control contact
- Optionally with LED display

### Technical drawing

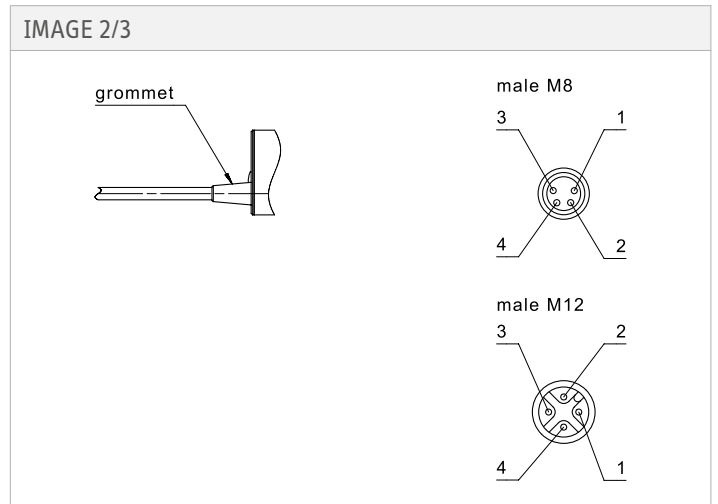
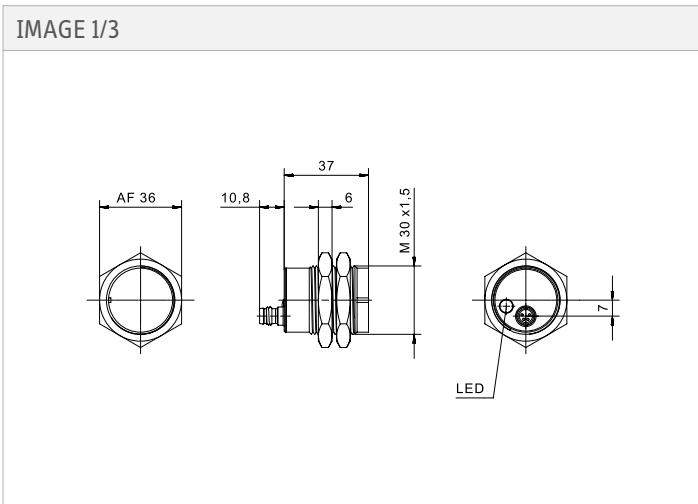
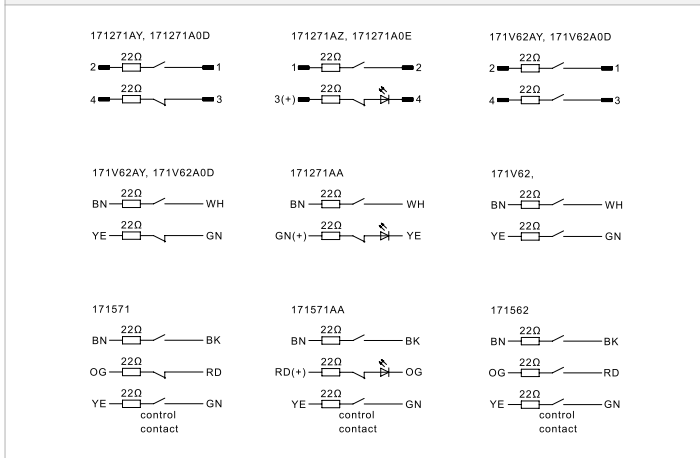
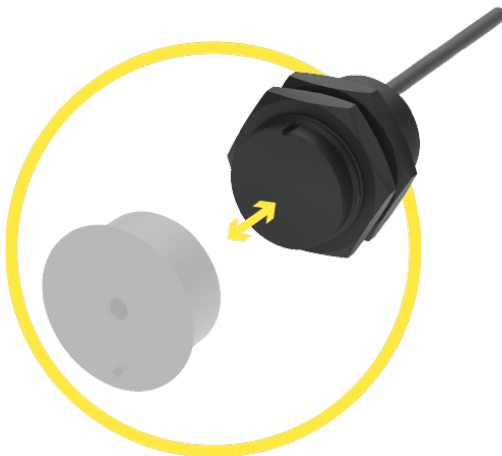


IMAGE 3/3



**Product options**

IMAGE 1/3



Suitable for front actuation. Assured switching distance (Sao) of 4 mm with standard actuators, 7 mm with extended-range actuators. Assured switch-off distance (Sar) of up to 17 mm with standard actuators, up to 23 mm with extended-range actuators

IMAGE 2/3

**ORDERING KEY**

|  | 171V62 | 171V62AY | 171V62A0D | 171271 | 171271AA |
|--|--------|----------|-----------|--------|----------|
| Plastic housing M30                        | x      | x        | x         | x      | x        |
| M12x1 connector, 4-pin, plastic            | -      | x        | -         | -      | -        |
| M8x1 connector, 4-pin, nickel-plated brass | -      | -        | x         | -      | -        |
| Connection cable 1m*                       | x      | -        | -         | x      | x        |
| N.O./N.C. contacts                         | x      | x        | x         | -      | -        |
| N.O./N.C. contacts                         | -      | -        | -         | x      | x        |
| Additional N.O. control contact            | -      | -        | -         | -      | -        |
| LED in series to N.C.                      | -      | -        | -         | -      | x        |
| Coded                                      | x      | x        | x         | x      | x        |
| Uncoded                                    | -      | -        | -         | -      | -        |

|  | 171271AY | 171271AZ | 171271A0D | 171271A0E | 171V62 |
|--|----------|----------|-----------|-----------|--------|
| Plastic housing M30                        | x        | x        | x         | x         | x      |
| M12x1 connector, 4-pin, plastic            | x        | x        | -         | -         | -      |
| M8x1 connector, 4-pin, nickel-plated brass | -        | -        | x         | x         | -      |
| Connection cable 1m*                       | -        | -        | -         | -         | x      |
| N.O./N.C. contacts                         | -        | -        | -         | -         | x      |
| N.O./N.C. contacts                         | x        | x        | x         | x         | -      |
| Additional N.O. control contact            | -        | -        | -         | -         | x      |
| LED in series to N.C.                      | -        | x        | -         | x         | -      |
| Coded                                      | x        | x        | x         | x         | x      |
| Uncoded                                    | -        | -        | -         | -         | -      |

|  | 171571 | 171571AA |  |  |  |
|--|--------|----------|--|--|--|
| Plastic housing M30                        | x      | x        |  |  |  |
| M12x1 connector, 4-pin, plastic            | -      | -        |  |  |  |
| M8x1 connector, 4-pin, nickel-plated brass | -      | -        |  |  |  |
| Connection cable 1m*                       | x      | x        |  |  |  |
| N.O./N.C. contacts                         | -      | -        |  |  |  |
| N.O./N.C. contacts                         | x      | x        |  |  |  |
| Additional N.O. control contact            | x      | x        |  |  |  |
| LED in series to N.C.                      | -      | x        |  |  |  |
| Coded                                      | x      | x        |  |  |  |
| Uncoded                                    | -      | -        |  |  |  |

\* Other cable lengths, cable materials and connector types on request

IMAGE 3/3

**MATCHING ACTUATORS**

| Actuators     | Actuation direction | 171V92         |                |                | 171V92AY       |                |                | 171V92A0D      |                |                | 171Z71         |                |                | 171Z71A        |                |                |
|---------------|---------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
|               |                     | S <sub>0</sub> | S <sub>1</sub> | S <sub>2</sub> | S <sub>0</sub> | S <sub>1</sub> | S <sub>2</sub> | S <sub>0</sub> | S <sub>1</sub> | S <sub>2</sub> | S <sub>0</sub> | S <sub>1</sub> | S <sub>2</sub> | S <sub>0</sub> | S <sub>1</sub> | S <sub>2</sub> |
| 304 200 00    | Front*              | 0.5            | 4              | 16             | 0.5            | 4              | 16             | 0.5            | 4              | 16             | 0.5            | 4              | 16             | 0.5            | 4              | 16             |
| 304 200 00 V  |                     | 0.5            | 4              | 16             | 0.5            | 4              | 16             | 0.5            | 4              | 16             | 0.5            | 4              | 16             | 0.5            | 4              | 16             |
| 304 200 00 H  |                     | 0.5            | 4              | 16             | 0.5            | 4              | 16             | 0.5            | 4              | 16             | 0.5            | 4              | 16             | 0.5            | 4              | 16             |
| 304 200 00 S  |                     | 3              | 7              | 20             | 3              | 7              | 20             | 3              | 7              | 20             | 3              | 7              | 20             | 3              | 7              | 20             |
| 304 200 00 VS |                     | 3              | 7              | 20             | 3              | 7              | 20             | 3              | 7              | 20             | 3              | 7              | 20             | 3              | 7              | 20             |
| 304 200 00 SH | 3                   | 7              | 20             | 3              | 7              | 20             | 3              | 7              | 20             | 3              | 7              | 20             | 3              | 7              | 20             |                |

| Actuators     | Actuation direction | 171Z71AY       |                |                | 171Z71AZ       |                |                | 171Z71A0D      |                |                | 171Z71A0E      |                |                | 171S82         |                |                |
|---------------|---------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
|               |                     | S <sub>0</sub> | S <sub>1</sub> | S <sub>2</sub> | S <sub>0</sub> | S <sub>1</sub> | S <sub>2</sub> | S <sub>0</sub> | S <sub>1</sub> | S <sub>2</sub> | S <sub>0</sub> | S <sub>1</sub> | S <sub>2</sub> | S <sub>0</sub> | S <sub>1</sub> | S <sub>2</sub> |
| 304 200 00    | Front*              | 0.5            | 4              | 16             | 0.5            | 4              | 16             | 0.5            | 4              | 16             | 0.5            | 4              | 16             | 0.5            | 4              | 17             |
| 304 200 00 V  |                     | 0.5            | 4              | 16             | 0.5            | 4              | 16             | 0.5            | 4              | 16             | 0.5            | 4              | 16             | -              | -              | -              |
| 304 200 00 H  |                     | 0.5            | 4              | 16             | 0.5            | 4              | 16             | 0.5            | 4              | 16             | 0.5            | 4              | 16             | -              | -              | -              |
| 304 200 00 S  |                     | 3              | 7              | 23             | 3              | 7              | 23             | 3              | 7              | 23             | 3              | 7              | 23             | 0.5            | 6              | 19             |
| 304 200 00 VS |                     | 3              | 7              | 23             | 3              | 7              | 23             | 3              | 7              | 23             | 3              | 7              | 23             | -              | -              | -              |
| 304 200 00 SH | 3                   | 7              | 23             | 3              | 7              | 23             | 3              | 7              | 23             | 3              | 7              | 23             | -              | -              | -              |                |

| Actuators     | Actuation direction | 171S71         |                |                | 171S71AA       |                |                |  |  |  |  |  |  |  |  |  |
|---------------|---------------------|----------------|----------------|----------------|----------------|----------------|----------------|--|--|--|--|--|--|--|--|--|
|               |                     | S <sub>0</sub> | S <sub>1</sub> | S <sub>2</sub> | S <sub>0</sub> | S <sub>1</sub> | S <sub>2</sub> |  |  |  |  |  |  |  |  |  |
| 304 200 00    | Front*              | 0.5            | 4              | 15             | 0.5            | 4              | 15             |  |  |  |  |  |  |  |  |  |
| 304 200 00 V  |                     | -              | -              | -              | -              | -              | -              |  |  |  |  |  |  |  |  |  |
| 304 200 00 H  |                     | -              | -              | -              | -              | -              | -              |  |  |  |  |  |  |  |  |  |
| 304 200 00 S  |                     | 0.5            | 6              | 17             | 0.5            | 6              | 17             |  |  |  |  |  |  |  |  |  |
| 304 200 00 VS |                     | -              | -              | -              | -              | -              | -              |  |  |  |  |  |  |  |  |  |
| 304 200 00 SH | -                   | -              | -              | -              | -              | -              |                |  |  |  |  |  |  |  |  |  |

S<sub>0</sub> = minimum switching distance (mm), S<sub>1</sub> = operating distance (mm), S<sub>2</sub> = assured switch-off distance (mm)

\* switching points for lateral actuation on request

## Electrical data

| Attribute                           | 171V62AY    | 171V62A0D | 171271AY | 171271AZ        | 171271A0E |
|-------------------------------------|-------------|-----------|----------|-----------------|-----------|
| Min. switching voltage              | 19.2 V DC   |           |          |                 |           |
| Max. switching voltage              | 28.8 V DC   |           |          |                 |           |
| Max. switching current              | 0.1 A       |           |          |                 |           |
| Max. switching current with LED     | -           |           |          | 0.02 A          |           |
| Max. switching power                | 3 W         |           |          |                 |           |
| Switching frequency                 | 5 Hz        |           |          |                 |           |
| Assured switching distance (Sao)    | 4 mm        |           |          |                 |           |
| Assured switch-off distance (Sar)   | 16 mm       |           |          |                 |           |
| Minimum switching distance (S0 min) | 0.5 mm      |           |          |                 |           |
| LED display                         | No          |           |          | single-coloured |           |
| Actuation                           | stirnseitig |           |          |                 |           |
| Switching principle                 | magnetic    |           |          |                 |           |
| Series resistor                     | 22 Ohm      |           |          |                 |           |
| Technology                          | Reed        |           |          |                 |           |
| Contact form                        | NO/NO       |           | NO/NC    |                 |           |
| Pollution degree                    | 3           |           |          |                 |           |
| Protection class                    | III         |           |          |                 |           |

## Safety-related characteristics

| Attribute                        | 171V62AY    | 171V62A0D | 171271AY | 171271AZ | 171271A0E |
|----------------------------------|-------------|-----------|----------|----------|-----------|
| Coding acc. to EN ISO 14119      | Low         |           |          |          |           |
| B10d acc. to EN ISO 13849-1      | 20000000    |           |          |          |           |
| Type acc. to EN ISO 14119        | 4           |           |          |          |           |
| Mission time in years            | 20 a        |           |          |          |           |
| Structure acc. to EN ISO 13849-1 | Two-channel |           |          |          |           |

## Mechanical data

| Attribute   | 171V62AY    | 171V62A0D | 171271AY | 171271AZ | 171271A0E |
|---|-------------|-----------|----------|----------|-----------|
| Housing design                                      | cylindrical |           |          |          |           |
| Dimensions  | M30 x 37 mm |           |          |          |           |
| Minimum installation distance (between two sensors) | 50 mm       |           |          |          |           |
| cannot be mounted flush                             | yes         |           |          |          |           |
| Detent present                                      | no          |           |          |          |           |

## Material information

| Attribute        | 171V62AY | 171V62A0D | 171271AY | 171271AZ | 171271A0E |
|------------------|----------|-----------|----------|----------|-----------|
| Housing material | PBT      |           |          |          |           |
| Nut material     | PBT      |           |          |          |           |
| Housing colour   | schwarz  |           |          |          |           |

## Environmental conditions

| Attribute                   | 171V62AY  | 171V62A0D         | 171271AY  | 171271AZ          | 171271A0E         |
|-----------------------------|---|-------------------|---|-------------------|-------------------|
| Protection class            | IP67 DIN EN 60529   | IP65 DIN EN 60529 | IP67 DIN EN 60529   |                   | IP65 DIN EN 60529 |
| Protection class, connector | IP67 DIN EN 60529 (geschraubt) - IP65 DIN EN 60529 (gesteckt) | IP65 DIN EN 60529 | IP67 DIN EN 60529 (geschraubt) - IP65 DIN EN 60529 (gesteckt) | IP67 DIN EN 60529 | IP65 DIN EN 60529 |
| Operating temperature min.  | -25 °C  |                   |   |                   |                   |
| Max. operating temperature  | 75 °C   |                   |   |                   |                   |
| Shock resistance (Norm)     | 30g / 11ms  |                   |   |                   |                   |
| Vibration resistance (Norm) | 10 - 55Hz   |                   |   |                   |                   |
| Min. storage temperature    | -25 °C  |                   |   |                   |                   |
| Max. storage temperature    | 75 °C   |                   |   |                   |                   |

## Installation

| Attribute       | 171V62AY      | 171V62A0D | 171271AY | 171271AZ | 171271A0E |
|-----------------|---------------|-----------|----------|----------|-----------|
| Mounting type   | Fastening nut |           |          |          |           |
| Thread          | M30           |           |          |          |           |
| Torque for nuts | 10 N m        |           |          |          |           |
| Installation    | arbitrary     |           |          |          |           |

## Connection

| Attribute      | 171V62AY        | 171V62A0D      | 171271AY        | 171271AZ | 171271A0E      |
|----------------|-----------------|----------------|-----------------|----------|----------------|
| Connector type | M12x1 - 4 polig | M8x1 - 4 polig | M12x1 - 4 polig |          | M8x1 - 4 polig |

## Approvals

| Attribute                    | 171V62AY | 171V62A0D | 171271AY | 171271AZ | 171271A0E |
|------------------------------|----------|-----------|----------|----------|-----------|
| CE label                     | yes      |           |          |          |           |
| Certified in accordance with | ETL      |           |          |          |           |

## Operating data

| Attribute          | 171V62AY | 171V62A0D | 171271AY | 171271AZ | 171271A0E |
|--------------------|----------|-----------|----------|----------|-----------|
| Possible actuators | 30420000 |           |          |          |           |