



Inductive Proximity Switches
19 - 60 mm
Sensing Distance



Non-contact detection of metal objects

AC - DC - PNP - NPN - Normally Open - Normally Closed - Cable - Plug - Teach-In - +100 °C - IP68

| | | | | | |
|--------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--|
| Sensing distance Sn [mm] | 19 | 20 | 20 | 20 | |
| Mounting | nf | nf | nf | f | |
| Housing size [mm] | Ø 35 / L = 90 | Ø 34 / L = 80 | 40 x 40 x 120 | PG36 / L = 70 | |
| |  |  |  |  | |
| Housing material | PTFE | PBT | PBT | brass, nickel plated | |
| Protection class | IP 68 | IP 67 | IP 67 | IP 67 | |
| Type | IKH 019 | IKH 020 | IKQ 020 | IKZ 471 / IKZ 474 | |
| High temperature | yes (+120 °C) | yes | no | yes | |

| | | | | | |
|--------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|--|
| Sensing distance Sn [mm] | 25 | 25 | 25 | 30 | |
| Mounting | conditionally f | f | f | nf | |
| Housing size [mm] | PG36 / L = 70 | 60 x 60 x 40 | 60 x 60 x 40 | 40 x 40 x 120 | |
| |  |  |  |  | |
| Housing material | brass, nickel plated | PBT / aluminium | aluminium | PBT | |
| Protection class | IP 67 | IP 67 | IP 67 | IP 67 | |
| Type | IKZ 475 | IKI 025 | IKF 025 | IKQ 030 | |
| High temperature | no | yes | yes | no | |

f = flush / nf = non flush

The sensing distance stated above describes the axial approximation of a square steel plate with its side length equal to three times the sensing distance. (for example: Sensing distance 50 mm relates to a steel plate with side length of 150 x 150 mm). Smaller metal object reduces the maximum attainable sensing distance.

Inductive Proximity Switches

35 - 60 mm sensing distance

| 35 | 40 | 40 | 40 | 45 |
|----------------|----------------|----------------|----------------|----------------|
| nf | nf | f | f | f |
| Ø 54 / L = 68 | 40 x 40 x 120 | 80 x 80 x 40 | 80 x 80 x 40 | 110 x 110 x 55 |
| | | | | |
| PBT | PBT | PBT | aluminium | aluminium |
| IP 67 |
| IKH 035 | IKQ 040 | IKK 040 | IKG 040 | IKD 045 |
| yes | no | yes | yes | yes |

| 50 | 50 | 50 / 60 | 60 | 60 |
|----------------|-----------------|--------------------------|-----------------|-----------------|
| nf | nf | nf | nf | nf |
| Ø 80 / L = 67 | 80 x 120 x 30 | 80 x 80 x 40 | 150 x 108 x 58 | 162 x 150 x 58 |
| | | | | |
| PBT | PBT | PBT | PBT / aluminium | PBT / aluminium |
| IP 67 | IP 67 | IP 67 | IP 67 | IP 67 |
| IKJ 050 | IKRD 050 | IKK 050 / IKK 060 | IKN 060 | IKNR 060 |
| yes | yes | yes | yes | yes |

The attainable sensing distance is a function of the material of the metal object and can be calculated using the correction factor: **max. possible sensing distance = sensing distance x correction factor**

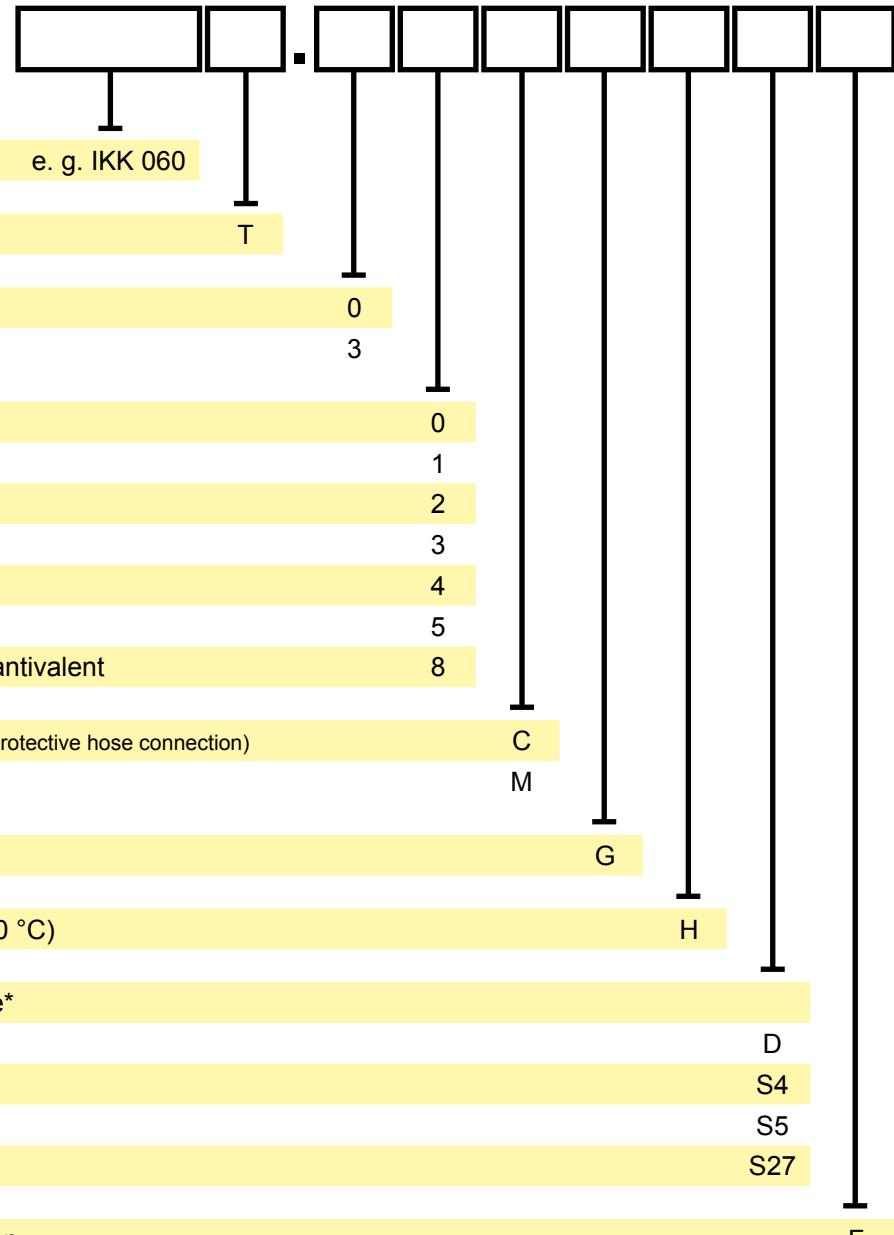
| | | | | | | | | |
|--------------------------|------------|-------|-----------------|-------|----------|--------|--------|---------------|
| material | metal foil | steel | stainless steel | brass | aluminum | copper | nickel | cast iron |
| correction factor | 1,2 | 1 | 0,5 ... 0,8 | 0,45 | 0,4 | 0,3 | 0,7 | 0,93 ... 1,05 |

Basic Information

Inductive proximity switches detect metal objects contactless. Proxitron offers the widest variety of robustly constructed designs for standard industrial solutions and complex applications. Versions with extended temperature range and the comfortable setting with teach-in enable safe operation even under demanding conditions. Customisations provide the optimum solution for every application.

- **contactless detection of metal objects**
- **unaffected by contamination**
- **different supply voltages**
- **various switching outputs**
- **short circuit and reverse polarity protection**
- **versions up to +120 °C available**
- **cable- or plug connection**
- **protection class up to IP68**

Type Code



*Connecting cables are available in different lengths and materials.

Please tell us your requirements. We will be pleased to advise you.

** Proximity switches with Proxi-Teach™ recognise the existing installation conditions after one key is pressed and adjust the operating distance optimally. This enables safety operation under non-standard installation conditions. The effort upon startup is minimized.