

Inductive Proximity Switches

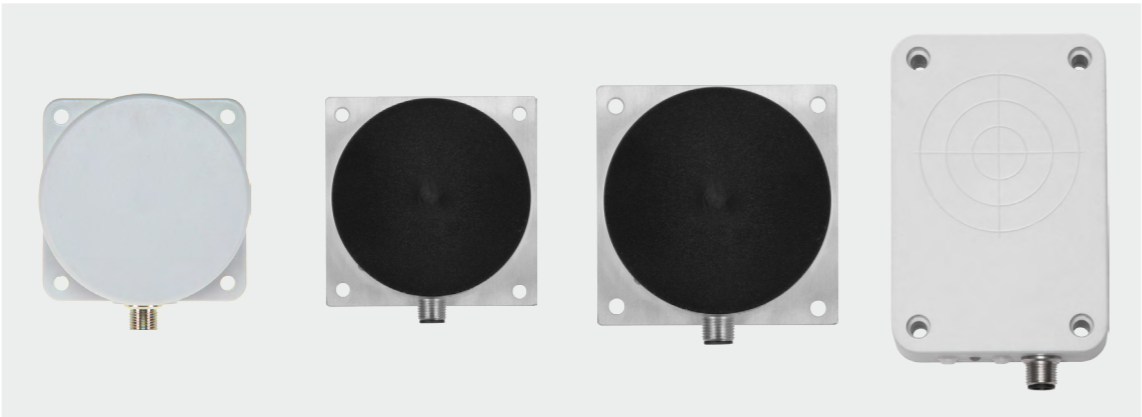
20 - 80 mm Sensing Distance

Non-contact detection of metal objects





Sensing distance Sn [mm]	20 / 30	20	20	25
Type	IKH 020 / IKH 030	IKQ 020	IKZ 471 / IKZ 474	IKZ 475
Mounting	non flush	non flush	flush	conditionally flush
Housing size [mm]	Ø 34 / L = 80	40 x 40 x 120	PG36 / L = 70	PG36 / L = 70
Housing material	PBT	PBT	brass, nickel plated	brass, nickel plated
Protection class	IP 67	IP 67	IP 67	IP 67
PROXI Heat ^{+°C}	yes	no	yes	no
PROXI Polar ^{-°C}	yes	no	yes	no



Sensing distance Sn [mm]	40 / 50	40	45	50
Type	IKK 040 / IKK 051	IKG 040	IKD 045	IKRD 050
Mounting	flush	flush	flush	non flush
Housing size [mm]	80 x 80 x 40	80 x 80 x 40	110 x 110 x 55	80 x 120 x 30
Housing material	PBT	aluminium	aluminium	PBT
Protection class	IP 67	IP 67	IP 67	IP 67
PROXI Heat ^{+°C}	yes	yes	yes	yes
PROXI Polar ^{-°C}	yes	yes	yes	yes

PROXI Polar^{-°C}

Proxitron low-temperature series for temperatures from -40 °C available for many designs.

PROXI Heat^{+°C}

Proxitron high-temperature series for temperatures of up to +120 °C available for many designs.

PROXI HT^{+°C}

Proxitron high-temperature series for temperatures of up to +230 °C

See "Inductive sensors high temperatures" brochure

PROXI PTFE

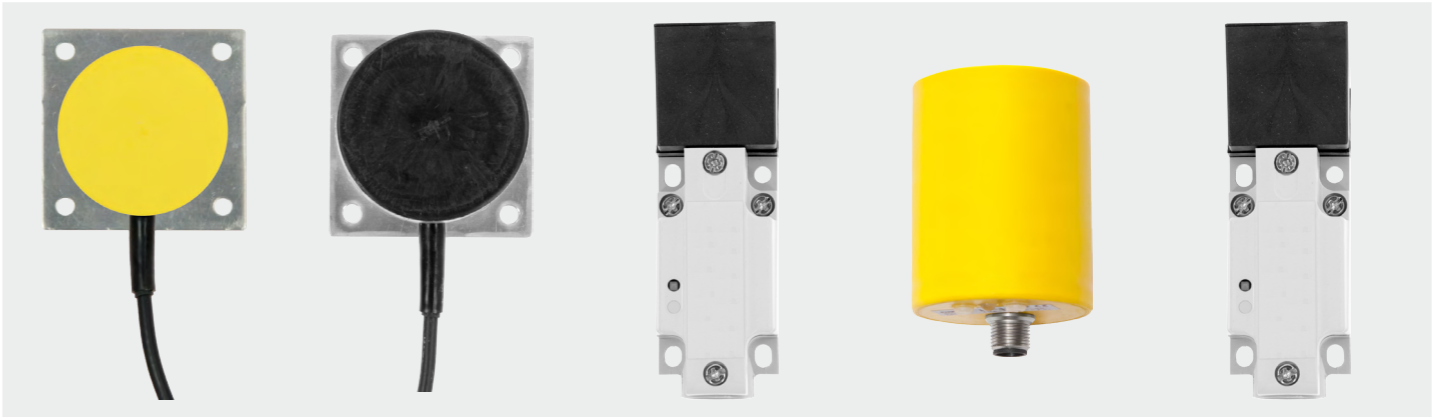
Proxitron sensors with PTFE housing for chemically aggressive environments.

See "Inductive sensors PTFE housing" brochure

PROXI Plus

Product line extension with increased switching distance in existing housing design.

See "ProxiPlus" brochure.



Sensing distance Sn [mm]	50 / 60 / 70	50 / 70	50 / 70	60 / 80	60 / 80
Type	IKK 050 / 060 / 070	IKJH 050 / IKJH 070	IKJ 050 / IKJ 070	IKN 060 / IKN 080	IKNR 060 / IKNR 080
Mounting	non flush	non flush	non flush	non flush	non flush
Housing size [mm]	80 x 80 x 40	80 x 80 x 70	Ø 80 / L = 67	150 x 108 x 58	162 x 150 x 58
Housing material	PBT	PBT	PBT	PBT / aluminium	PBT / aluminium
Protection class	IP 67	IP 67	IP 67	IP 67	IP 67
PROXI Heat ^{+°C}	yes	yes	yes	yes	yes
PROXI Polar ^{-°C}	yes	yes	yes	yes	yes

The sensing distance Sn describes the axial approaching 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.

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	aluminium	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

General Information Inductive Proximity Switches

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. Customized variants can be created, offering the ideal solution for every application.

- **Contactless detection of metal objects**
- **Unaffected by contamination**
- **Different supply voltages**
- **Various switching outputs**
- **Short circuit and reverse polarity protection**
- **ProxiHeat up to +120 °C**
- **ProxiPolar from -40 °C**
- **Cable or plug connection**
- **Protection class up to IP68**

Type Code

Type (see table previous page)	e. g. IKK 060									
Proxi-Teach*	T									
20 - 260 V AC/DC		0								
24 V DC		1								
10 - 55 V DC		3								
NPN - normally closed			0							
NPN - normally open			1							
PNP - normally closed			2							
PNP - normally open			3							
2-wire normally closed AC/DC			4							
2-wire normally open AC/DC			5							
2-wire normally closed 24 V DC			6							
2-wire normally open 24 V DC			7							
PNP normally closed + PNP normally open			8							
Internal thread M16 at cable output (e.g. for protective hose connection)				C						
Fixed protective hose gland 3/8" or 5/16"				M						
Short circuit protection					G					
High temperature version up to +100 °C						H				
High temperature version up to +120 °C						H1				
Low temperature version from -40 °C						N				
Fixed connection cable**										
Connecting terminal box								D		
Plug M12x1 DC								S4		
Plug 7/8" – 16 UN								S5		
Plug M12x1 AC								S27		
Offset oscillation frequency for row installation									F	
Customer specific version										SA

* 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.

** Connection cables are available in standard lengths of 2, 5, 10, 15 and 20 m made of PVC, PUR, silicone and PTFE.