Inductive Proximity Switches
70 - 200 mm
Sensing Distance

Non-contact detection of metal objects

AC - DC - Normally Open - Normally Closed - -40 °C - +120 °C - Teach-In - IP68

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Proxitron
SENSORS MADE IN GERMANY

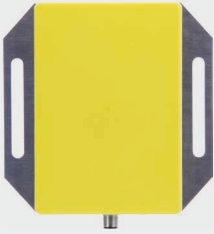| Sensing distance Sn [mm]	70	70	70	80	
Mounting	nf	nf	nf	nf	
Housing size [mm]	Ø 95 / H = 40	108 x 150 x 43	110 x 110 x 43	140 x 140 x 36	
Housing material	PBT	PBT / aluminium	PBT	PBT / aluminium	
Protection class	IP 67	IP 67	IP 67	IP 67	
Type	IKM 070	IKMN 070	IKN 070	IKNB 080	
PROXI Heat +°C	yes	yes	yes	yes	
PROXI Polar -°C	yes	yes	yes	yes	

Sensing distance Sn [mm]	100	100	100	100 / 125	
Mounting	nf	nf	nf	nf	
Housing size [mm]	150 x 150 x 56	108 x 194 x 56	150 x 210 x 56	Ø 163 / H = 64	
Housing material	PBT / aluminium	PBT / aluminium	PBT / aluminium	PBT	
Protection class	IP 67	IP 67	IP 67	IP 67	
Type	IKQ 100	IKQA 100	IKQR 100	IKO 100 / IKO 125	
PROXI Heat +°C	yes	yes	yes	yes	
PROXI Polar -°C	yes	yes	yes	yes	

f = flush / nf = non flush
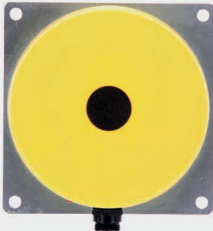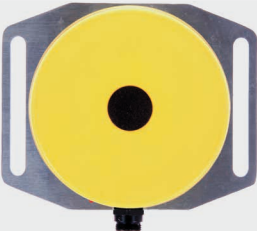
PROXI Heat +°C   Proxitron high temperature series for temperatures up to +120 °C.

PROXI Polar -°C   Proxitron low temperature series for temperatures from -40 °C.

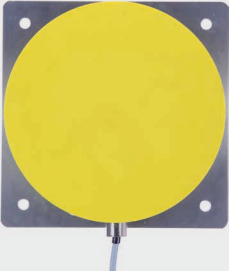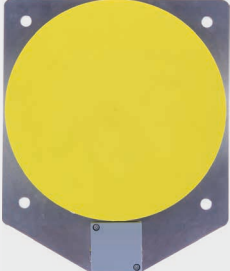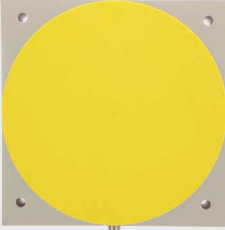The sensing distance stated above describes the axial approximation of a square steel plate with its side length equal to three times the sensing distance. (for example: Sensing distance 70 mm relates to a steel plate with side length of 210 x 210 mm). Smaller metal object reduces the maximum attainable sensing distance.

	100 / 125	100	100	100	120
	nf	nf	f	f	nf
	170 x 170 x 68	180 x 210 x 68	210 x 210 x 75	230 x 230 x 85	280 x 150 x 68
	PBT / aluminium	PBT / aluminium	aluminium	PP / aluminium	PBT / aluminium
	IP 67	IP 67	IP 67	IP 68	IP 67
	IKOH 100 / IKOH 125	IKON 100	IKE 100	IKC 100	IKU 215
	yes	yes	yes	no	yes
	yes	yes	yes	yes	yes

	120	120 / 140	120 / 140	180	150 / 200
	nf	nf	nf	nf	f / nf
	300 x 150 x 68	212 x 212 x 58	212 x 270 x 58	202 x 202 x 98	320 x 320 x 85
	PBT / aluminium	PBT / aluminium	PBT / aluminium	PBT / PP	PP / aluminium
	IP 67	IP 67	IP 67	IP 67	IP 68
	IKUR 215	IKOA 120 / IKOA 140	IKOAR 120 / IKOAR 140	IKOC 180	IKC 150 / IKC 200
	yes	yes / no	yes / no	no	no
	yes	yes	yes	no	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**

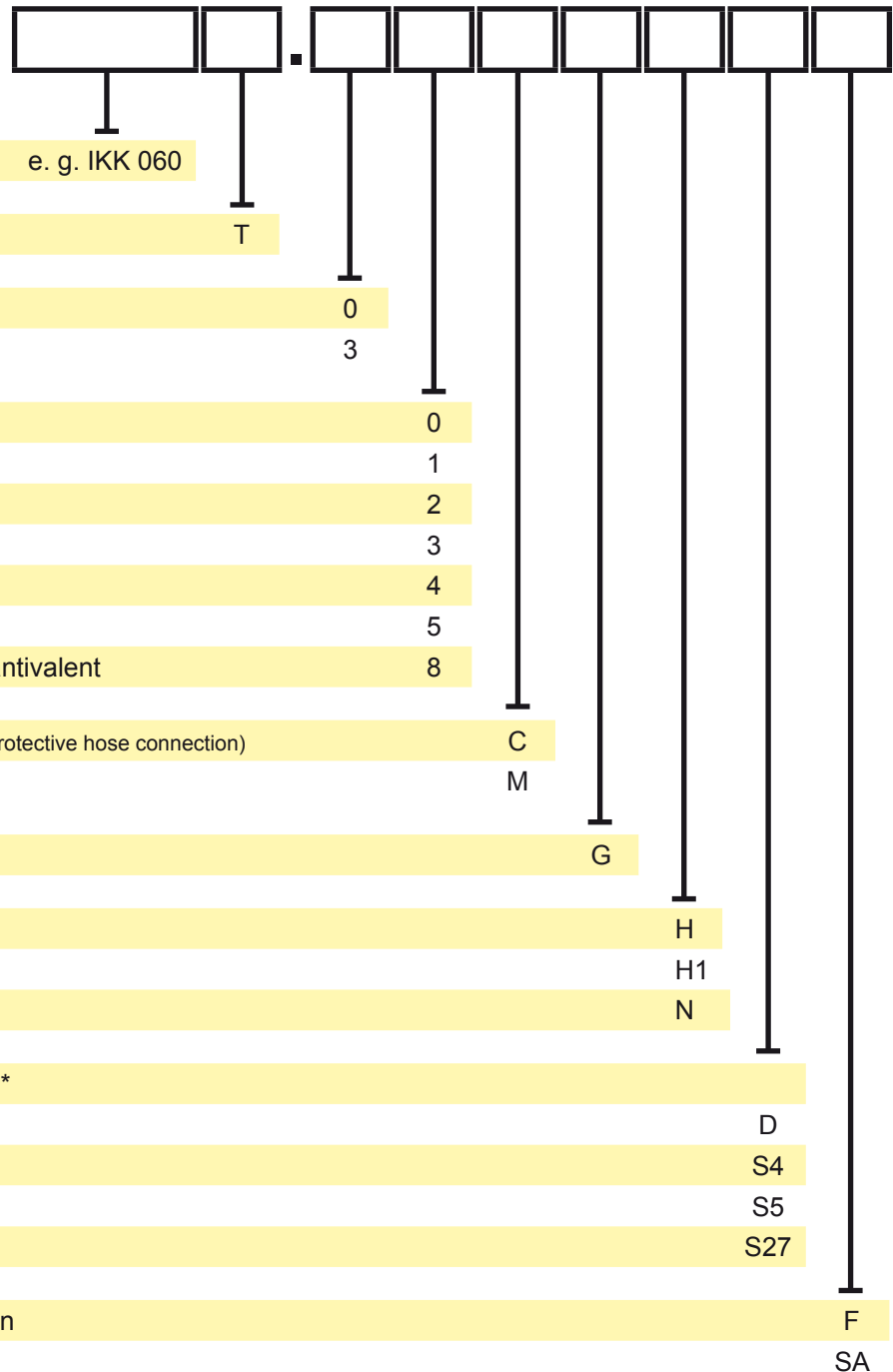| material	metal foil	steel	stainless steel	brass	aluminium	copper	nickel	cast iron
correction factor	1,2	1	0,5 ... 0,8	0,45	0,4	0,3	0,7	0,93 ... 1,05

Inductive Proximity Switches
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**
- **ProxiHeat for up to +120 °C**
- **ProxiPolar from -40°C**
- **cable- or plug connection**
- **protection class up to IP68**

Type Code

Description	Code
Type (see table previous page)	e. g. IKK 060
Proxi-Teach**	T
20 - 260 V AC/DC	0
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
PNP normally open + PNP normally closed antivalent	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
Standard version with fixed connection cable*	
Connecting terminal box	D
Plug M12x1 DC	S4
Plug 7/8" – 16 UN (IP68)	S5
Plug M12x1 AC	S27
Offset oscillation frequency for row installation	F
Customer specific version	SA

*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.