

# Inductive Surface Sensors

200 - 1000 mm length

Monitoring of roller paths and conveyor tracks



Inductive Surface Sensors  
200 - 1000 mm length



Sensor width [mm]	86		
Mounting	non flush	Sensing distance Sn [mm]	Measuring plate [mm]
Type sensor length 200 mm	<b>IKU 321</b>	80	200 x 100
Type sensor length 250 mm	<b>IKU 325</b>	80	250 x 100
Type sensor length 300 mm	<b>IKU 331</b>	80	300 x 100
Type sensor length 350 mm	<b>IKU 335</b>	80	350 x 100
Type sensor length 400 mm	<b>IKU 341</b>	80	400 x 100
Type sensor length 450 mm	<b>IKU 345</b>	80	450 x 100
Type sensor length 500 mm	<b>IKU 351</b>	80	500 x 100
Type sensor length 550 mm	<b>IKU 355</b>	80	550 x 100
Type sensor length 600 mm	<b>IKU 361</b>	80	600 x 100



Sensor width [mm]	140		
Mounting	non flush	Sensing distance Sn [mm]	Measuring plate [mm]
Type sensor length 250 mm	<b>IKU 825</b>	130	450 x 350
Type sensor length 300 mm	<b>IKU 831</b>	140	500 x 350
Type sensor length 350 mm	<b>IKU 835</b>	150	550 x 350
Type sensor length 400 mm	<b>IKU 841</b>	160	600 x 350
Type sensor length 450 mm	<b>IKU 845</b>	170	650 x 350
Type sensor length 500 mm	<b>IKU 851</b>	180	700 x 350
Type sensor length 550 mm	<b>IKU 855</b>	190	750 x 350
Type sensor length 600 mm	<b>IKU 861</b>	200	800 x 350
Type sensor length 650 mm	<b>IKU 865</b>	210	850 x 350
Type sensor length 700 mm	<b>IKU 871</b>	220	900 x 350
Type sensor length 750 mm	<b>IKU 875</b>	230	950 x 350
Type sensor length 800 mm	<b>IKU 881</b>	240	1000 x 350
Type sensor length 850 mm	<b>IKU 885</b>	240	1050 x 350
Type sensor length 900 mm	<b>IKU 891</b>	240	1100 x 350
Type sensor length 950 mm	<b>IKU 895</b>	240	1150 x 350
Type sensor length 1000 mm	<b>IKU 8101</b>	240	1200 x 350

The sensing distance describes the axial approaching of a square steel plate with size as in collum "measuring plate". A 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:

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Sensor width [mm]	100		
Mounting	non flush	Sensing distance Sn [mm]	Measuring plate [mm]
Type sensor length 300 mm	<b>IKU 131</b>	100	300 x 250
Type sensor length 350 mm	<b>IKU 135</b>	110	450 x 250
Type sensor length 400 mm	<b>IKU 141</b>	120	500 x 250
Type sensor length 450 mm	<b>IKU 145</b>	130	550 x 250
Type sensor length 500 mm	<b>IKU 151</b>	140	600 x 250
Type sensor length 550 mm	<b>IKU 155</b>	150	650 x 250
Type sensor length 600 mm	<b>IKU 161</b>	160	700 x 250
Type sensor length 650 mm	<b>IKU 165</b>	160	750 x 250
Type sensor length 700 mm	<b>IKU 171</b>	160	800 x 250



Sensor width [mm]	200		
Mounting	non flush	Sensing distance Sn [mm]	Measuring plate [mm]
Type sensor length 200 mm	<b>IKU 221</b>	130	390 x 390
Type sensor length 250 mm	<b>IKU 225</b>	145	435 x 435
Type sensor length 300 mm	<b>IKU 231</b>	160	480 x 480
Type sensor length 350 mm	<b>IKU 235</b>	175	525 x 525
Type sensor length 400 mm	<b>IKU 241</b>	190	570 x 570
Type sensor length 450 mm	<b>IKU 245</b>	205	650 x 600
Type sensor length 500 mm	<b>IKU 251</b>	220	700 x 600
Type sensor length 550 mm	<b>IKU 255</b>	235	750 x 600
Type sensor length 600 mm	<b>IKU 261</b>	250	800 x 600
Type sensor length 650 mm	<b>IKU 265</b>	250	850 x 600
Type sensor length 700 mm	<b>IKU 271</b>	250	900 x 600
Type sensor length 750 mm	<b>IKU 275</b>	250	950 x 600
Type sensor length 800 mm	<b>IKU 281</b>	250	1000 x 600
Type sensor length 850 mm	<b>IKU 285</b>	250	1050 x 600
Type sensor length 900 mm	<b>IKU 291</b>	250	1100 x 600
Type sensor length 950 mm	<b>IKU 295</b>	250	1150 x 600
Type sensor length 1000 mm	<b>IKU 2101</b>	250	1200 x 600

**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 Surface Sensors

Inductive surface sensors detect metal objects on roller paths and conveyor tracks without contact and replace a number of many small individual sensors. A variety of sensor widths and lengths allow the integration in different applications. Series mounting with frequency-offset versions enables monitoring of conveyor systems with a larger width efficiently. The comfortable setting with teach-in allows an easy installation and enables safe operation even under demanding conditions. Besides, the optimal solution for every application can be achieved by customizing the existing articles

- Monitoring of roller paths and conveyor tracks
- Detection of metals, e.G. Tubes, profiles, strips
- Material detection before sawing
- Detection of plates
- Removal control
- Material feeding in surface treatments
- Unaffected by contamination
- Large sensing distance
- Different sensor lengths and widths
- One single sensor instead of many individual sensors
- Installation in a row with frequency offset versions



## Type Code

	□	□	□	□	□	□	□	□	□
Type (see table previous page)	e. g. IKU 851								
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	
Fixed connection cable**									
Connecting terminal box									D
Plug M12x1 DC									S4
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.