



# IL8 / IL9 series

8 x 8 mm cubic  
miniaturized inductive sensors



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miniaturized



## features

- Complete range of cubic inductive sensors:
  1. IL8 series: 8x8 mm with sensing head at the top
  2. IL9 series: 8x8 mm with sensing head at the centre
- IP67 protection degree

## web contents



- Application notes
- Photos
- Catalogue / Manuals



## code description (\*)

	IL	8	/	A	P	-	3	A
series	IL	Cubic inductive sensor						
housing	8	8 x 8 mm, sensing head at the top						
	9	8 x 8 mm, sensing head at the centre						
output state	A	NO output state						
	C	NC output state						
output logic	N	NPN logic output						
	P	PNP logic output						
distance	1	Standard shielded model 1.5 mm						
	3	Long distance shielded model 2 mm						
	5	Extended distance shielded model 2.5 mm						
connect.	A	2 m cable exit in PUR						
	F	M8 plug cable exit						
	VF80	Free connector M8 + cable 200 mm PUR (**)						

(\*) ATEX models available, contact our Sales Dept. for further information.

(\*\*) Models without UL certification.

## IL8 available model

diameter	installation	distance	plug	distance	NPN/NO	NPN/NC	PNP/NO	PNP/NC	
8 x 8 detection top	shielded	standard	cable	1.5 mm	IL8/AN-1A	IL8/CN-1A	IL8/AP-1A	IL8/CP-1A	
			M8		IL8/AN-1F	IL8/CN-1F	IL8/AP-1F	IL8/CP-1F	
			pigtail M8		IL8/AN-1AVF80	IL8/CN-1AVF80	IL8/AP-1AVF80	IL8/CP-1AVF80	
		long distance	cable	2 mm	IL8/AN-3A	IL8/CN-3A	IL8/AP-3A	IL8/AN-3A	IL8/CP-3A
			M8		IL8/AN-3F	IL8/CN-3F	IL8/AP-3F	IL8/CP-3F	
			pigtail M8		IL8/AN-3AVF80	IL8/CN-3AVF80	IL8/AP-3AVF80	IL8/CP-3AVF80	
		expanse extended	cable	2.5 mm	IL8/AN-5A	IL8/CN-5A	IL8/AP-5A	IL8/CP-5A	IL8/CP-5A
			M8		IL8/AN-5F	IL8/CN-5F	IL8/AP-5F	IL8/CP-5F	
			pigtail M8		IL8/AN-5AVF80	IL8/CN-5AVF80	IL8/AP-5AVF80	IL8/CP-5AVF80	




IL8 / IL9

## IL9 available models

diameter (mm)	installation	distance	plug	distance (mm)	NPN/NO	NPN/NC	PNP/NO	PNP/NC	
8 x 8 detection center	shielded	standard	cable	1.5	IL9/AN-1A	IL9/CN-1A	IL9/AP-1A	IL9/CP-1A	
			M8		IL9/AN-1F	IL9/CN-1F	IL9/AP-1F	IL9/CP-1F	
			pigtail M8		IL9/AN-1VF80	IL9/CN-1VF80	IL9/AP-1VF80	IL9/CP-1VF80	
		long distance	cable	2	IL9/AN-3A	IL9/CN-3A	IL9/AP-3A	IL9/AN-3A	IL9/AN-3A
			M8		IL9/AN-3F	IL9/CN-3F	IL9/AP-3F	IL9/CP-3F	
			pigtail M8		IL9/AN-3VF80	IL9/CN-3VF80	IL9/AP-3VF80	IL9/CP-3VF80	
		expanse extended	cable	2.5	IL9/AN-5A	IL9/CN-5A	IL9/AP-5A	IL9/CP-5A	IL9/CP-5A
			M8		IL9/AN-5F	IL9/CN-5F	IL9/AP-5F	IL9/CP-5F	
			pigtail M8		IL9/AN-5VF80	IL9/CN-5VF80	IL9/AP-5VF80	IL9/CP-5VF80	

## technical specifications

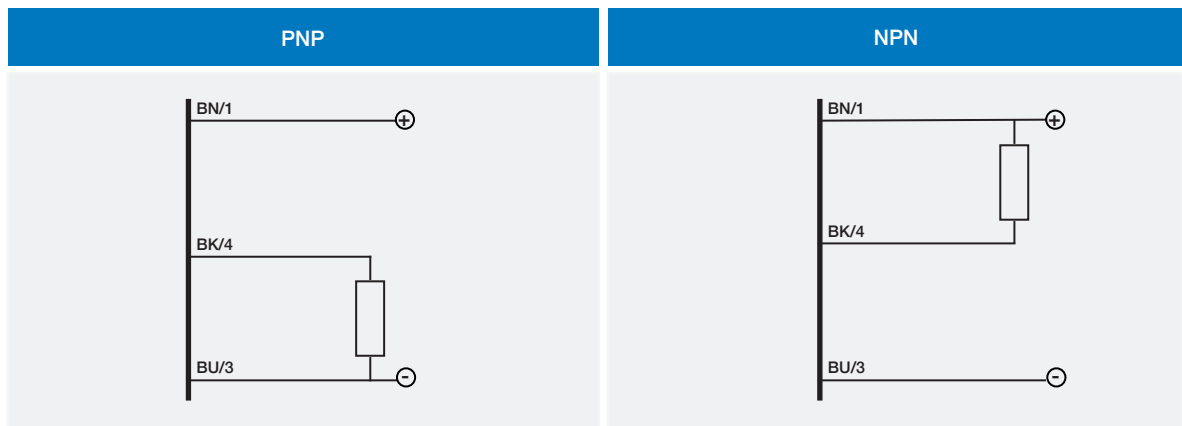
according to IEC EN 60947-5-2

	IL8/**-1* IL9/**-1*	IL8/**-3* IL9/**-3*	IL8/**-5* IL9/**-5*
			
nominal sensing distance	1.5 mm	2 mm	2.5 mm
operating distance	0...1.21 mm	0...1.62 mm	0...2.02 mm
hysteresis	1...20%		
standard target	8x8 mm FE360		
repeatability	5% @UB=20...30 V; Ta = 23°C ±5°C		
operating voltage	10...30 Vcc		
max. ripple content	≤ 10%		
output current	≤ 200 mA		
output voltage drop	≤ 1.5 V @ 200 mA		
no-load supply current	≤ 10 mA		
logic output	PNP or NPN		
output state	NO or NC		
leakage current	≤ 10 µA		
switching frequency	≤ 5 kHz		
power on delay	≤ 50 ms		
ambient temperature range	-25°C...+70°C		
temperature drift of Sr	≤ 10%		
short circuit protection	●		
induction protection	●		
voltage reversal protection	●		
shocks and vibrations	IEC 60947-5-2		
LEDs	yellow (output state)		
protection degree	IP67		
EMC	in conformity with the EMC Directive according to IEC 60947-5-2		
housing material	AISI303 stainless steel housing		
active head material	PBT		
connection	M8 plug cable exit / 2m PUR cable exit // M8 plug + 200 mm pigtail cable exit		

## correction factors

code	steel FE 360	copper	alluminium	brass	stainless steel
IL8/AP-1F	1	0.15	0.12	0.25	0.61
IL8/AP-3F		0.21	0.15	0.27	
IL8/AP-5F		0.22	0.17	0.26	0.60
IL9/AP-1F		0.16	0.11	0.22	
IL9/AP-3F		0.19	0.15	0.25	0.61
IL9/AP-5F		0.18	0.16	0.26	0.58

# electrical diagrams of the connections

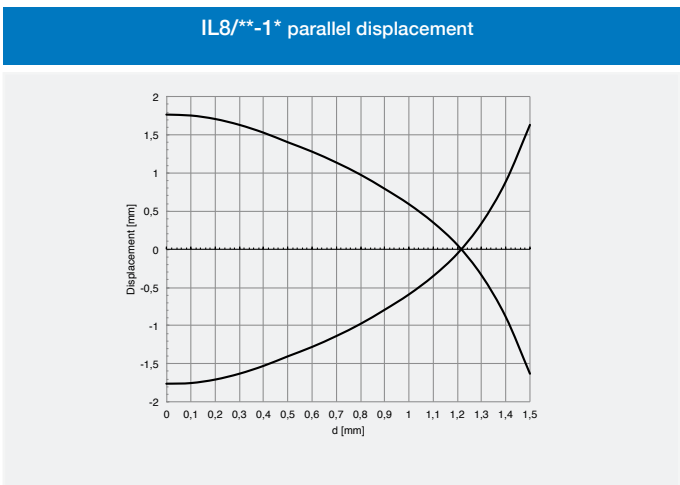
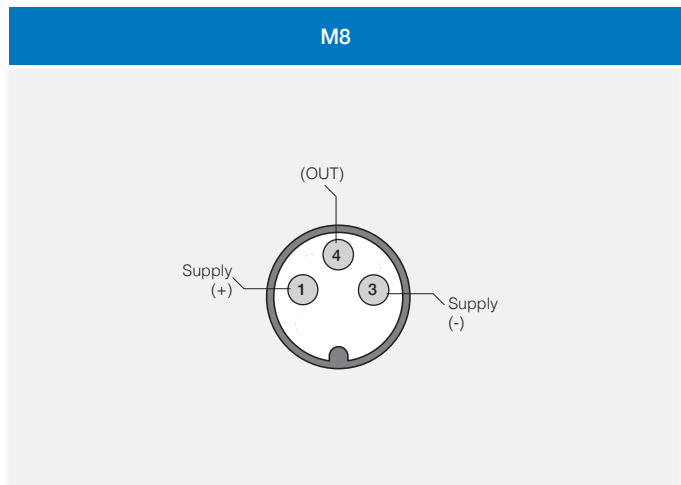


- BN brown
- BU blue
- BK black
- WH white

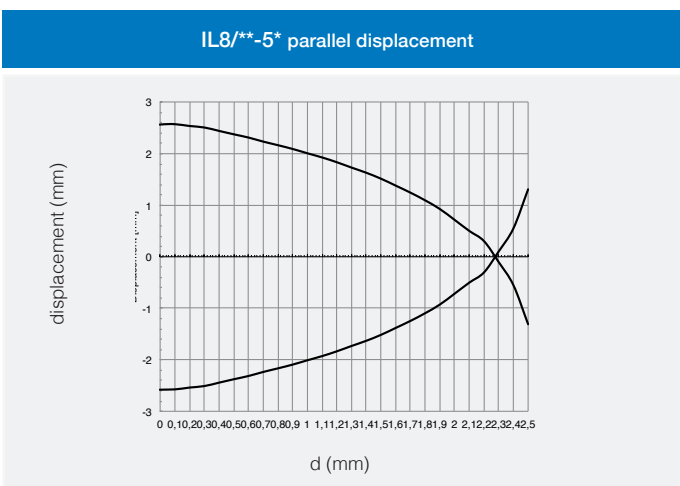
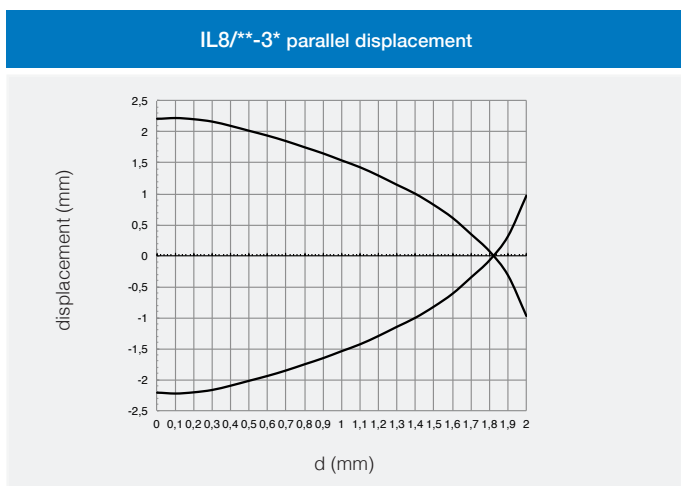
8 x 8 mm cubic  
miniaturized

## plug

## response diagram



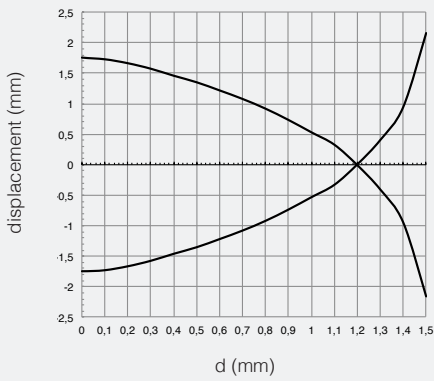
## response diagram



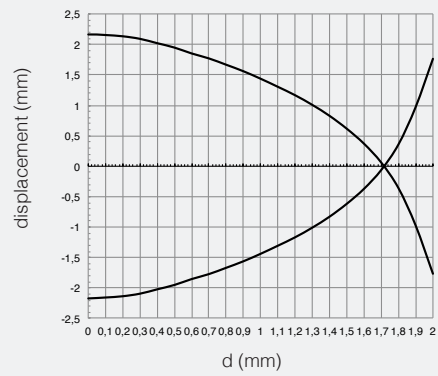
# response diagram

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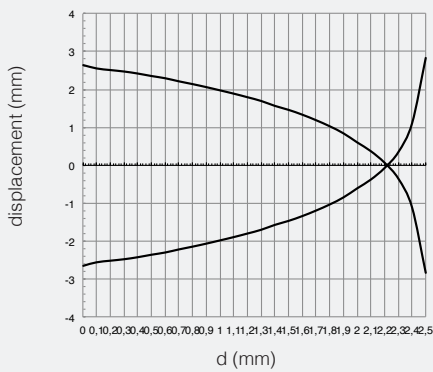
IL9/\*\*-1\* parallel displacement



IL9/\*\*-3\* parallel displacement

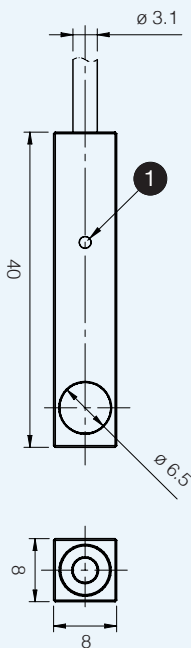


IL9/\*\*-5\* parallel displacement

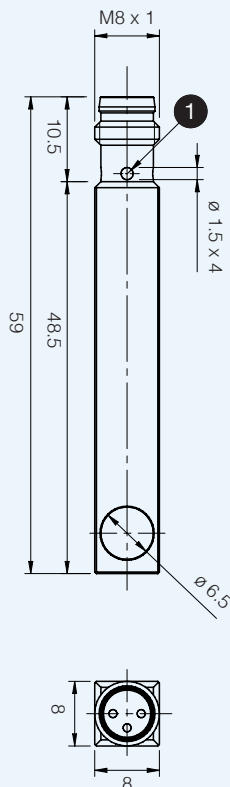


# dimensions (mm)

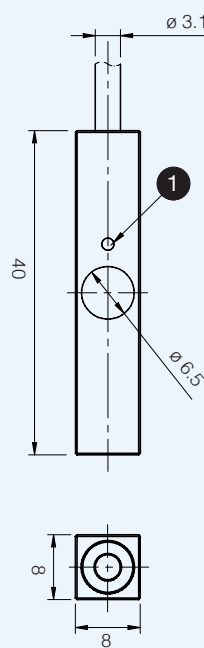
IL8/\*\*-A



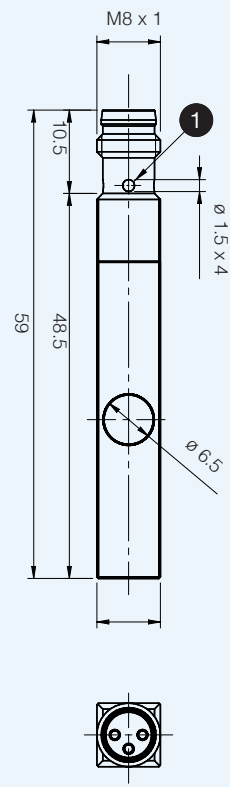
IL8/\*\*-F



IL9/\*\*-A



IL9/\*\*-F



1 LED

IL8 / IL9