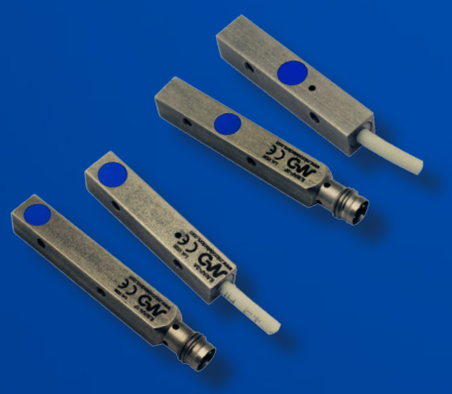
IL8 / IL9 series

8 x 8 mm cubic
miniaturized inductive sensors

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
			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
			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

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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
			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
			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

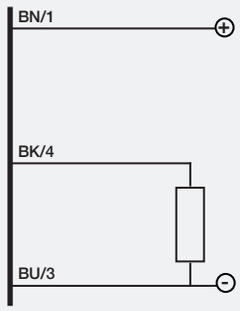
	IL8/**-1* IL9/**-1*	IL8/**-3* IL9/**-3*	IL8/**-5* IL9/**-5*
			
nominal sensing distance	1.5 mm	2 mm	2.5 mm
operating distance	0...1.21 mm	0...1.62 mm	0...2.02 mm
hysteresis	1...20%		
standard target	8x8 mm FE360		
repeatibility	5% @UB=20...30 V; Ta = 23°C ±5°C		
operating voltage	10...30 Vcc		
max. 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

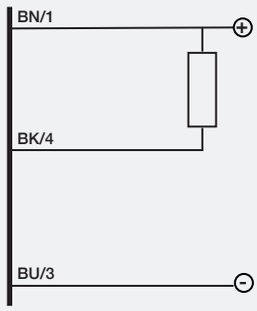
code	steel FE 360	copper	alluminium	brass	stainless steel
IL8/AP-1F	1	0.15	0.12	0.25	0.61
IL8/AP-3F		0.21	0.15	0.27	0.60
IL8/AP-5F		0.22	0.17	0.26	
IL9/AP-1F		0.16	0.11	0.22	0.61
IL9/AP-3F		0.19	0.15	0.25	
IL9/AP-5F		0.18	0.16	0.26	0.58

electrical diagrams of the connections

PNP



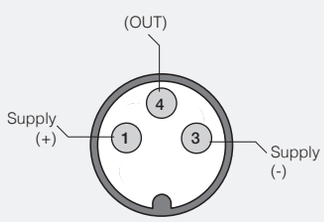
NPN



BN	brown
BU	blue
BK	black
WH	white

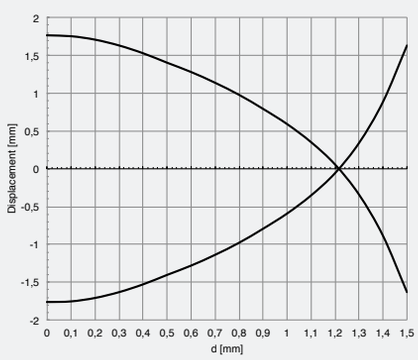
plug

M8



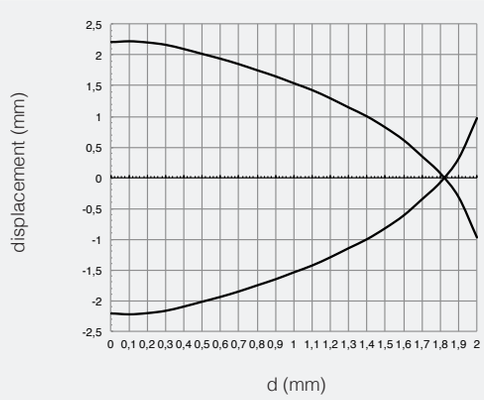
response diagram

IL8/**-1* parallel displacement

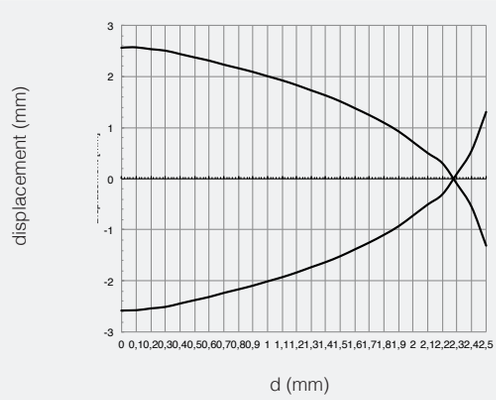


response diagram

IL8/**-3* parallel displacement

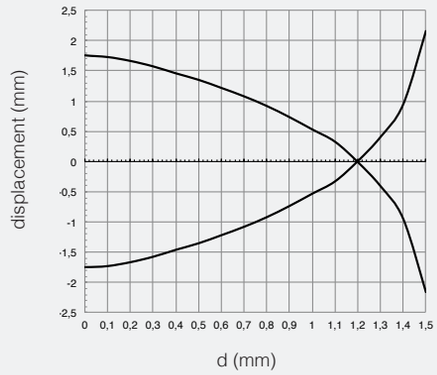


IL8/**-5* parallel displacement

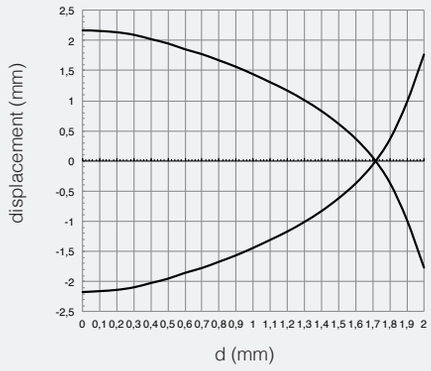


response diagram

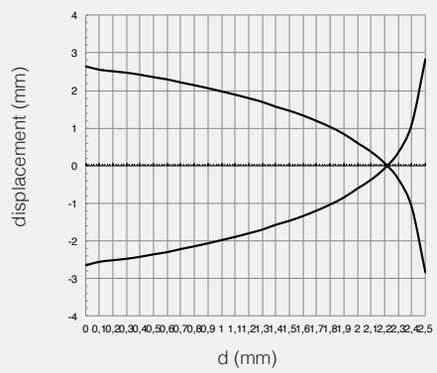
IL9/**-1* parallel displacement



IL9/**-3* parallel displacement

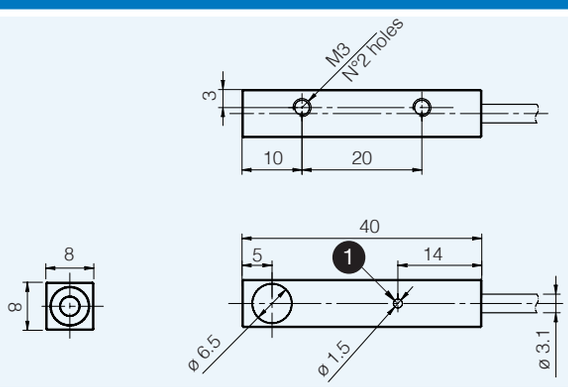


IL9/**-5* parallel displacement

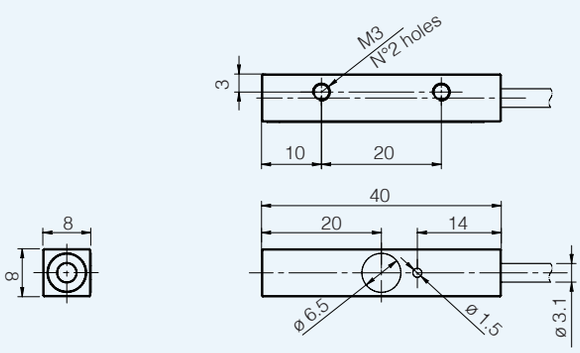


dimensions (mm)

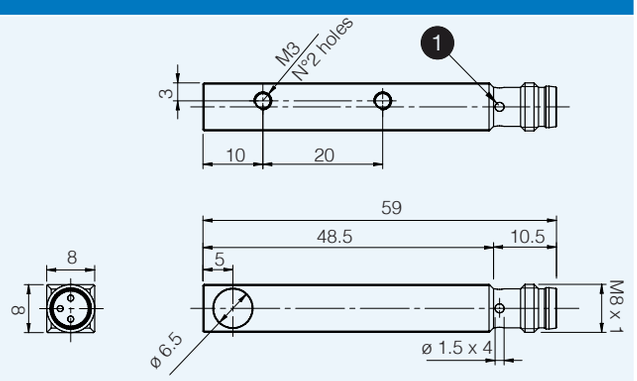
IL8/**-*A



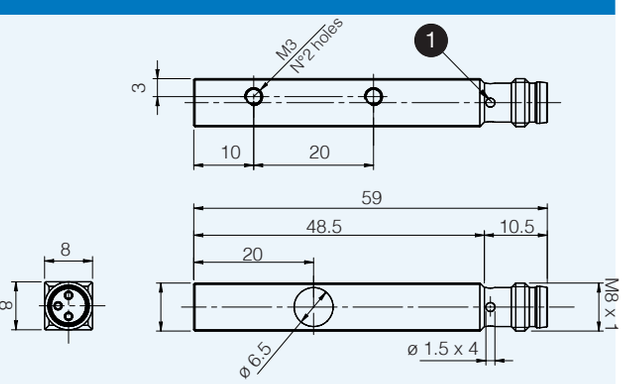
IL9/**-*A



IL8/**-*F



IL9/**-*F



1 LED