



# AC1 series

Ø 4 mm cylindrical  
miniaturized inductive sensors



Ø 4 mm cylindrical  
miniaturized

## features

- Smooth stainless steel housing
- Ø4 mm diameter
- Yellow output LED 360° visible
- Available 2 m PVC cable models or M8 connector models
- IP 67 protection degree



## web contents



- Application notes
- Photos
- Catalogue / Manuals



## code description<sup>(\*)</sup>

AC 1 / A P - 1 F 8F

series	AC	Inductive sensor Ø4 mm
housing	1	Miniaturized housing
output state	A	NO output state
	C	NC output state
output logic	P	PNP output
	N	NPN output
distance	1	Standard distance shielded 0.8 mm
	3	Long distance shielded 1.5 mm
connect.	A	Cable exit
	F	M8 connector exit
special models	8F	Models with cable in PUR

Models with plug or cable exit in PUR → certification



Models with cable exit in PVC → certification or

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

## available models

diameter	installation	distance	plug	distance (mm)	PNP/NO	NPN/NO	PNP/NC	NPN/NC
Ø 4	shield	standard	cable	0.8	AC1/AP-1A	AC1/AN-1A	AC1/CP-1A	AC1/CN-1A
			M8		AC1/AP-1F	AC1/AN-1F	AC1/CP-1F	AC1/CN-1F
		long distance	cable	1.5	AC1/AP-3A	AC1/AN-3A	AC1/CP-3A	AC1/CN-3A
			M8		AC1/AP-3F	AC1/AN-3F	AC1/CP-3F	AC1/CN-3F

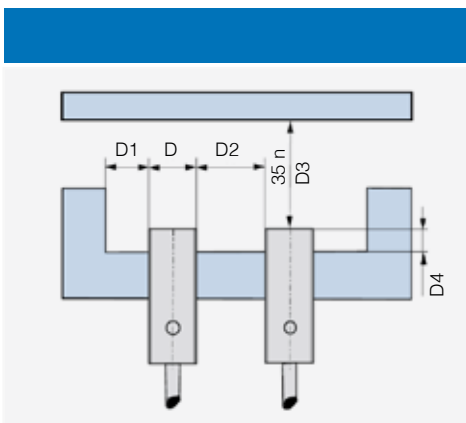
AC

	AC1/**-1*	AC1/**-3*
		
nominal sensing distance $S_n$	0.8 mm	1.5 mm
working distance	0...0.65 mm	0...1.21 mm
hysteresis	1...20%	
standard target	4 x 4 mm	4.5 x 4.5 mm
repeatability	5% @UB=20...30 V; $T_a = 23^\circ\text{C} \pm 5^\circ\text{C}$	
operating voltage	10...30 Vdc	
output type	NPN or PNP - NO or NC	
ripple	$\leq 10\%$	
output current	$\leq 100 \text{ mA}$	
output voltage drop	$\leq 1.5 \text{ V} @ 100 \text{ mA}$	
no-load supply current	$\leq 10 \text{ mA}$	
leakage current	$\leq 10 \mu\text{A}$	
switching frequency	7Hz	
power on delay	$\leq 50 \text{ ms}$	
temperature range	$-25...+70^\circ\text{C}$	
temperature drift	$\leq 10\%$	
power supply protections	polarity reversal	
output protection	short circuit (auto reset), overvoltage pulses	
EMC	in conformity with the EMC Directive according to IEC 60947-5-2	
shock and vibration	IEC 60947-5-2	
protection degree	IP67	
housing material	stainless steel AISI 303	
active head material	PBT	
reduction factor	see table	
LEDs	on (yellow LED)	
weight	4g M8 connector / 30 g cable	

### correction factors

model	FE 360	copper	aluminium	brass	stainless steel
AC1/**-1*	1	$0.28 \pm 10\%$	$0.21 \pm 10\%$	$0.32 \pm 10\%$	$0.63 \pm 10\%$
AC1/**-3*		$0.29 \pm 10\%$	$0.23 \pm 10\%$	$0.31 \pm 10\%$	$0.66 \pm 10\%$

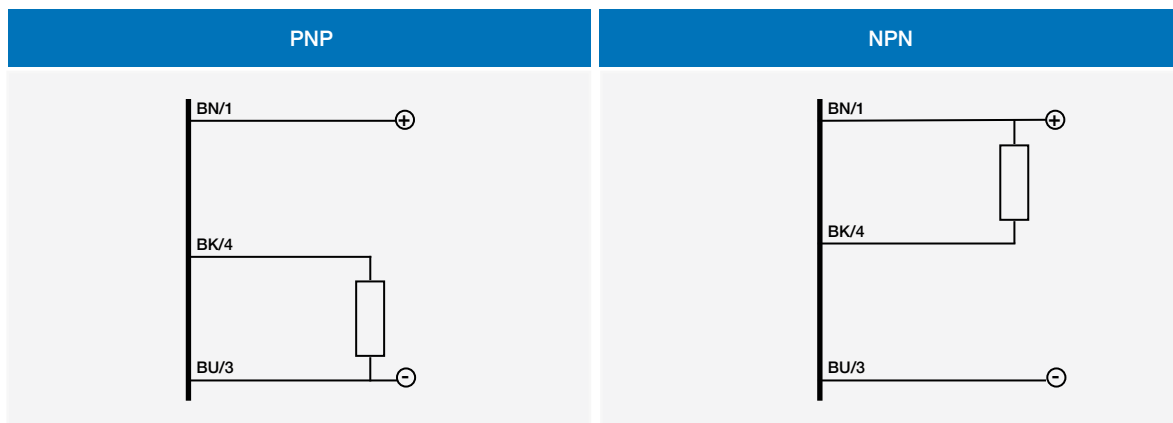
### installation



model	D4	D1	D2	D3
AC1/**-1*	$\geq 2 \text{ mm}^{(1)}$	$\geq 4 \text{ mm}$	$\geq 8 \text{ mm}$	$\geq 2.4 \text{ mm}$
AC1/**-3*	$\geq 3 \text{ mm}^{(2)}$	$\geq 4 \text{ mm}$	$\geq 8 \text{ mm}$	$\geq 4.5 \text{ mm}$

<sup>(1)</sup>  $\geq 3 \text{ mm}$  without ferro-magnetic material  
<sup>(2)</sup>  $\geq 4 \text{ mm}$  without ferro-magnetic material

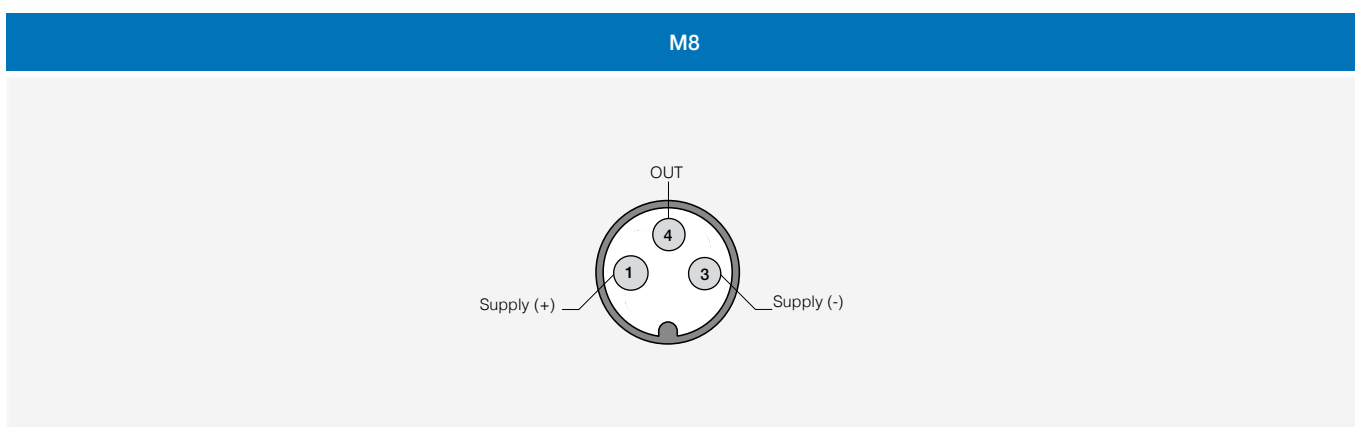
## electrical diagrams of connections



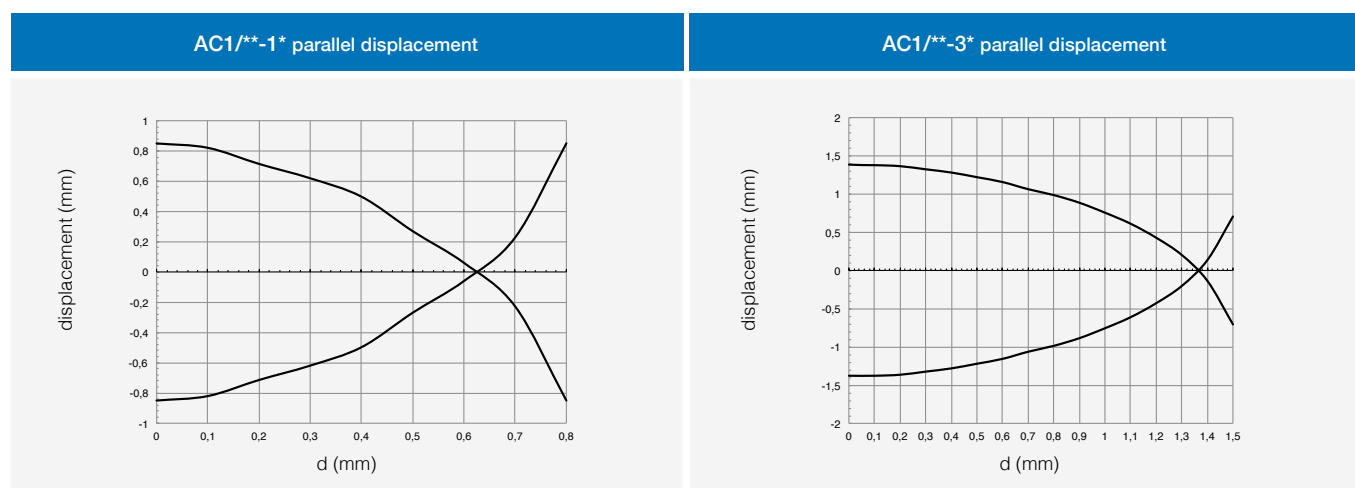
- BN** brown
- BU** blue
- BK** black
- WH** white

↗  
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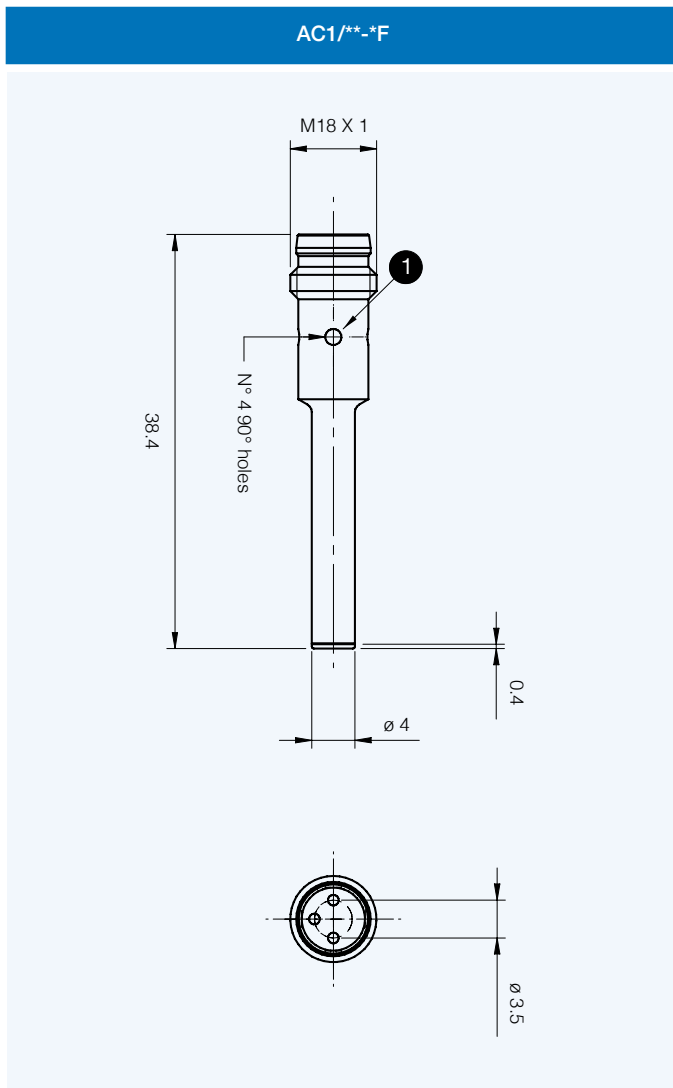
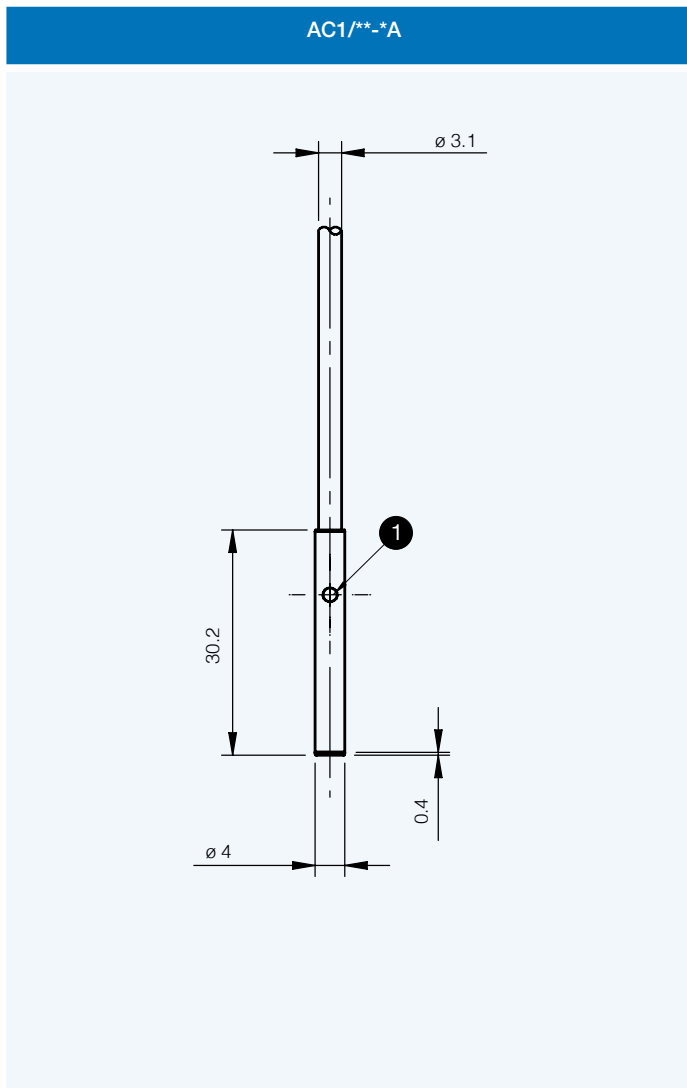
## plug



## response diagrams



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1 LED