



# AH series

Ø 6.5 mm cylindrical inductive sensors



Ø 6.5 mm cylindrical

## features

- Extremely reduced dimensions
- Metal housing (stainless steel)
- LED status indicator 360° visible
- IP 67 protection degree
- ATEX models, cat. 3, available on request
- Complete protection against electrical damages
- Standard and long distance models
- Standard and short body housing



## web contents



- Application notes
- Photos
- Catalogue / Manuals



## code description (\*)

AH 1 / AP - 1 A

series	<b>AH</b>	Ø 6.5 mm inductive proximity switch
housing	<b>1</b>	Standard body
	<b>6</b>	Short body
output state	<b>A</b>	NO output state
	<b>C</b>	NC output state
output logic	<b>N</b>	NPN logic output
	<b>P</b>	PNP logic output
distance	<b>1</b>	Shielded standard 1.5 mm
	<b>2</b>	Unshielded standard 2.5 mm
	<b>3</b>	Long distance shielded 2 mm
	<b>4</b>	Unshielded long distance 4 mm
connect.	<b>A</b>	Axial cable exit
	<b>F</b>	M8 plug cable exit
	<b>H</b>	M12 plug cable exit

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

## available models

### standard housing

diameter (mm)	installation	distance	connection	distance	NPN/NO	NPN/NC	PNP/NO	PNP/NC	
Ø 6,5	shielded	standard	cable	1.5	AH1/AN-1A	AH1/CN-1A	AH1/AP-1A	AH1/CP-1A	
			M8		AH1/AN-1F	AH1/CN-1F	AH1/AP-1F	AH1/CP-1F	
			M12		AH1/AN-1H	AH1/CN-1H	AH1/AP-1H	AH1/CP-1H	
			cable		AH1/AN-2A	AH1/CN-2A	AH1/AP-2A	AH1/CP-2A	
	unshielded	standard	M8	2.5	AH1/AN-2F	AH1/CN-2F	AH1/AP-2F	AH1/CP-2F	
			M12		AH1/AN-2H	AH1/CN-2H	AH1/AP-2H	AH1/CP-2H	
			cable		AH1/AN-3A	AH1/CN-3A	AH1/AP-3A	AH1/CP-3A	
			M8		AH1/AN-3F	AH1/CN-3F	AH1/AP-3F	AH1/CP-3F	
	shielded	long distance	M12	2	AH1/AN-3H	AH1/CN-3H	AH1/AP-3H	AH1/CP-3H	
			cable		AH1/AN-4A	AH1/CN-4A	AH1/AP-4A	AH1/CP-4A	
			M8		4	AH1/AN-4F	AH1/CN-4F	AH1/AP-4F	AH1/CP-4F
			M12			AH1/AN-4H	AH1/CN-4H	AH1/AP-4H	AH1/CP-4H

## available models

### short housing

diameter (mm)	installation	distance	connection	distance (mm)	NPN/NO	NPN/NC	PNP/NO	PNP/NC	
Ø 6,5	shielded	standard	cable	1.5	AH6/AN-1A	AH6/CN-1A	AH6/AP-1A	AH6/CP-1A	
			M8		AH6/AN-1F	AH6/CN-1F	AH6/AP-1F	AH6/CP-1F	
			cable		2.5	AH6/AN-2A	AH6/CN-2A	AH6/AP-2A	AH6/CP-2A
			M8			AH6/AN-2F	AH6/CN-2F	AH6/AP-2F	AH6/CP-2F
	unshielded	standard	M8	2	AH6/AN-3A	AH6/CN-3A	AH6/AP-3A	AH6/CP-3A	
			M8		AH6/AN-3F	AH6/CN-3F	AH6/AP-3F	AH6/CP-3F	
			cable		4	AH6/AN-4A	AH6/CN-4A	AH6/AP-4A	AH6/CP-4A
			M8			AH6/AN-4F	AH6/CN-4F	AH6/AP-4F	AH6/CP-4F





## correction factors

code	steel FE 360	copper	alluminium	brass	stainless steel
AH*/**-1*	1	0.06	0.13	0.24	0.56
AH*/**-2*		0.39	0.45	0.54	0.81
AH*/**-3*		0.1	0.17	0.25	0.6
AH*/**-4*		0.42	0.47	0.52	0.77

Ø 6.5 mm cylindrical



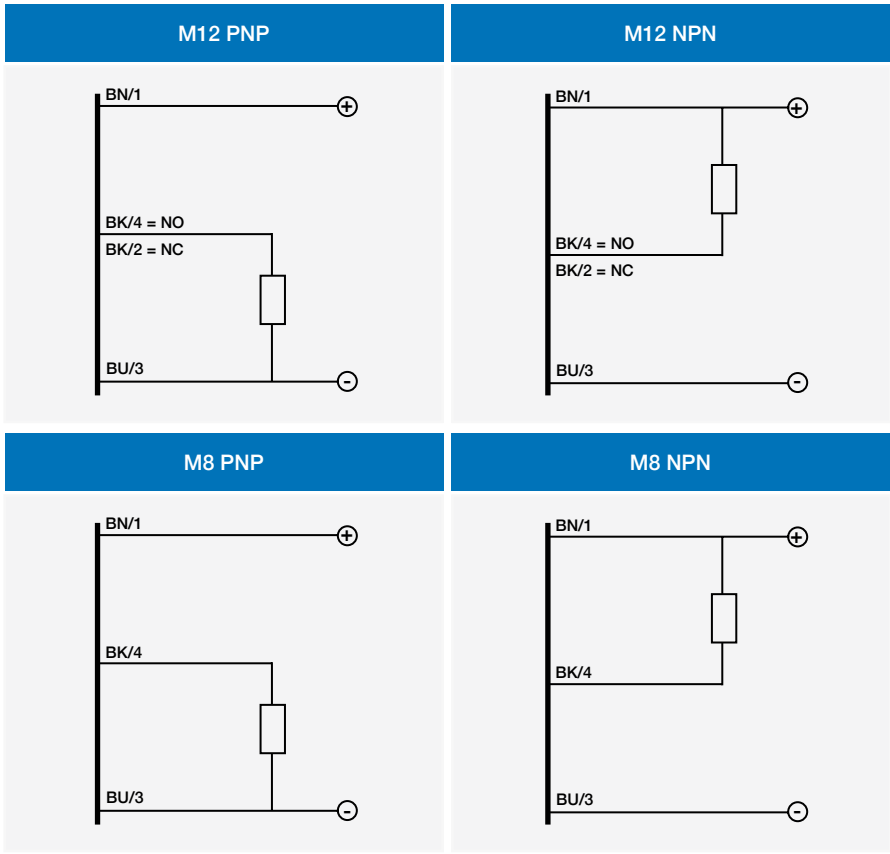
Ø 6.5 mm cylindrical

	AH*/**-1*	AH*/**-2*	AH*/**-3*	AH*/**-4*
				
nominal sensing	1.5 mm	2.5 mm	2 mm	4 mm
working distance	0...1.35 mm	0...2.25 mm	0...1.8 mm	0...3.5 mm
hysteresis	1...20% Sr			
standard target	8x8 mm FE360			12x12 mm FE360
repeatability	5%			
operating voltage	10...30 Vdc			
max ripple content	≤ 10%			
output type	NPN or PNP - NO or NC			
output current	≤ 200 mA			
output voltage drop	≤ 1.8 V @ 200 mA			
no-load supply current	10 mA			
leakage current	≤10 µA			
switching frequency	5 kHz			
power on delay	50 ms			
ambient temperature range	-25...+70 °C			
temperature drift of Sr	10%			
short-circuit protection	●			
voltage reversal protection	●			
induction protection	●			
shocks and vibrations	IEC 60947-5-2			
weight	5 g connector / 5 g cable			
LEDs	yellow LED output state			
protection degree	IP 67 ( EN60529 )			
EMC	in conformity with the EMC Directive, according to IEC 60947-5-2			
housing material	stainless steel			
active head material	PBT			
connection	cable 2 m PVC - plug M8 or M12			



# electrical diagrams of connections

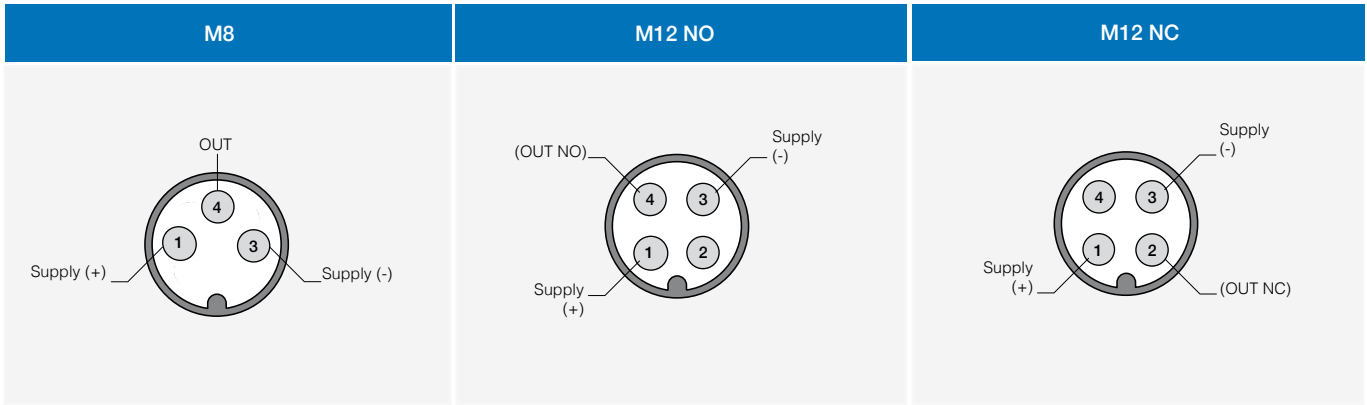
Ø 6.5 mm cylindrical



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

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**BU** blue  
**BK** black  
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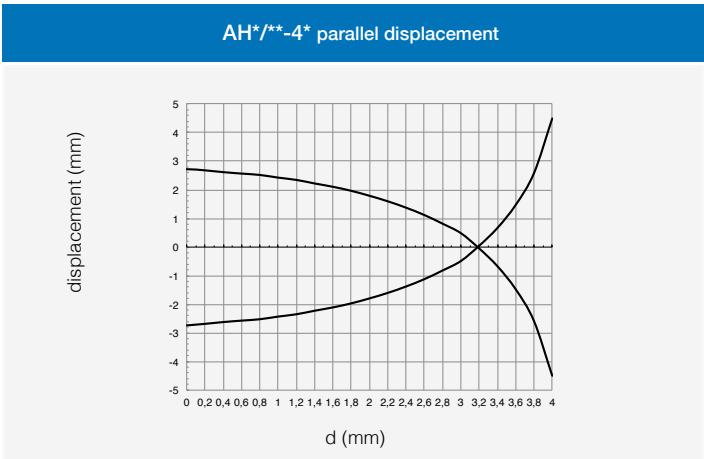
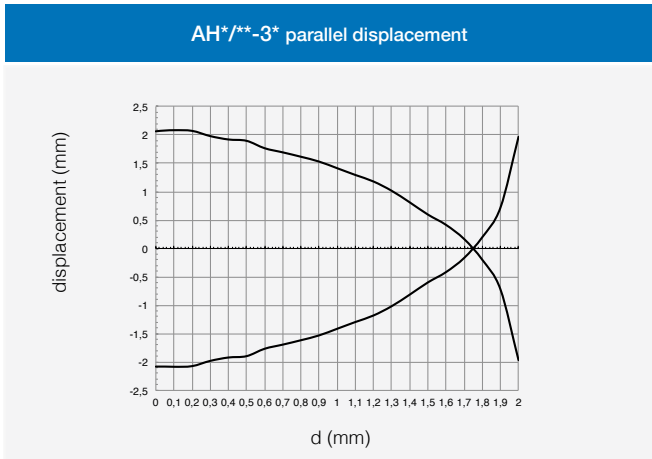
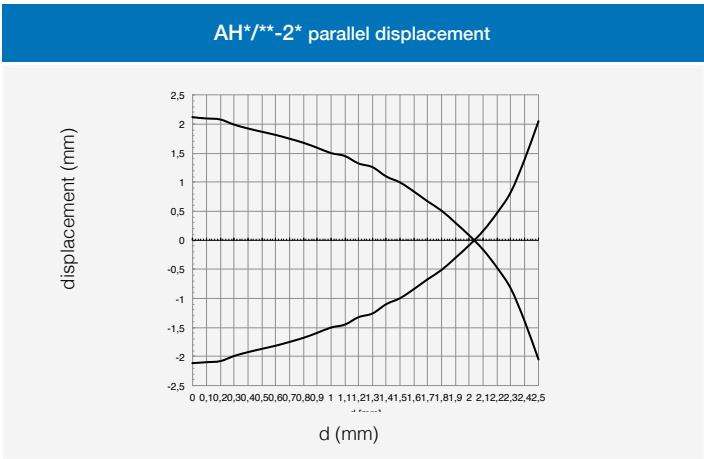
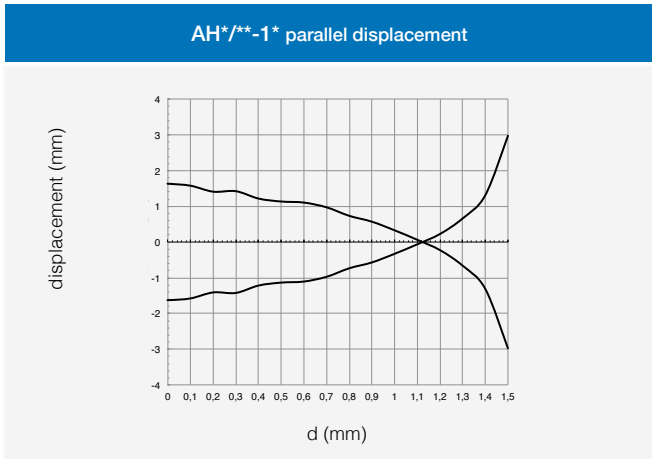
## plug



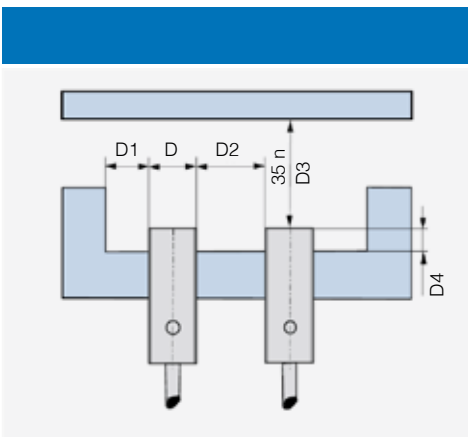
# response diagram



Ø 6.5 mm cylindrical



# installation

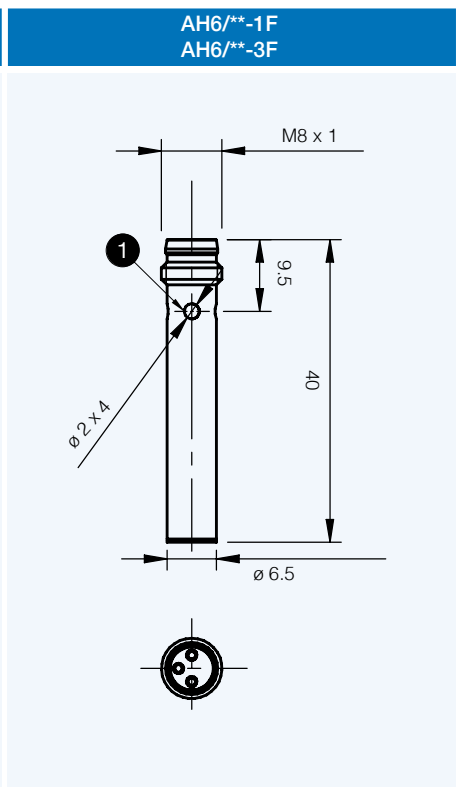
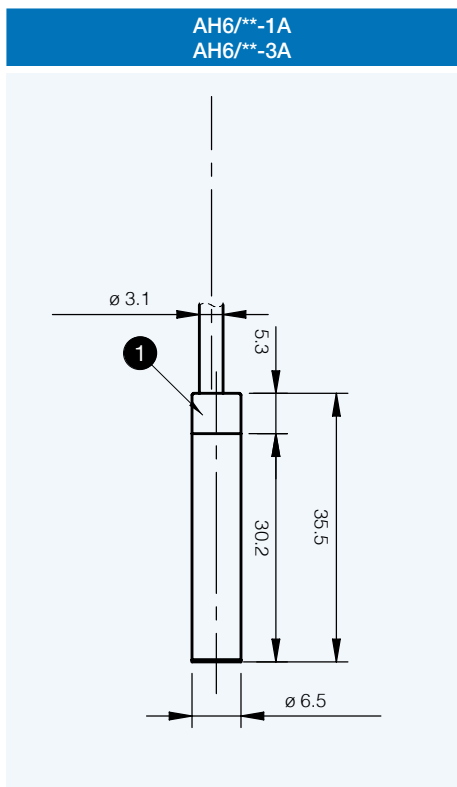
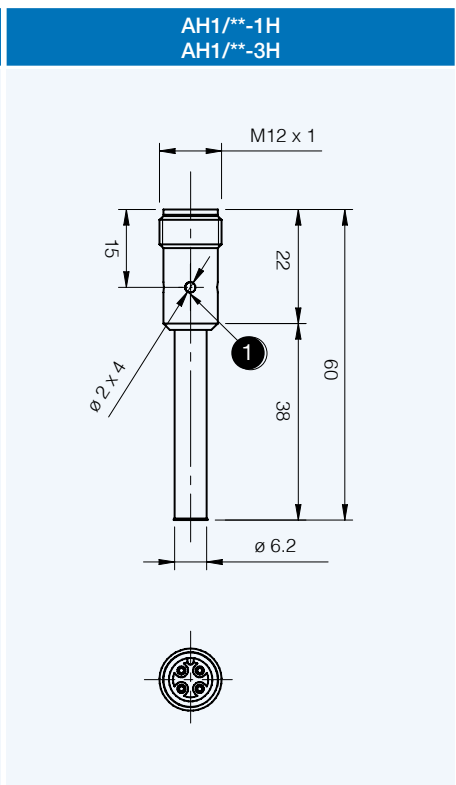
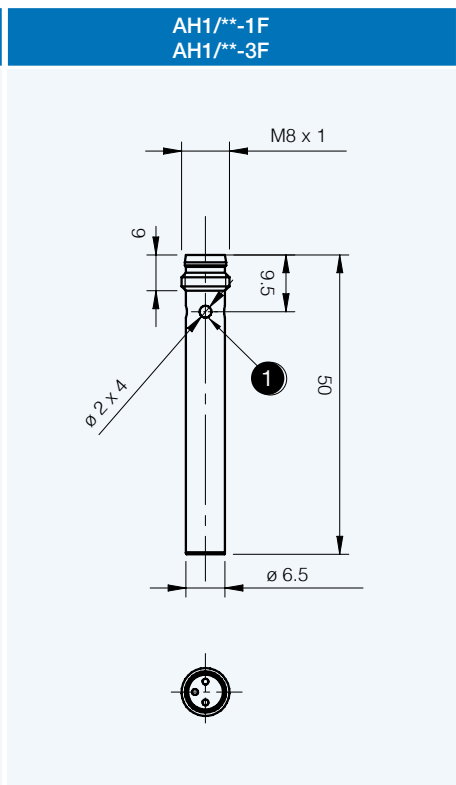
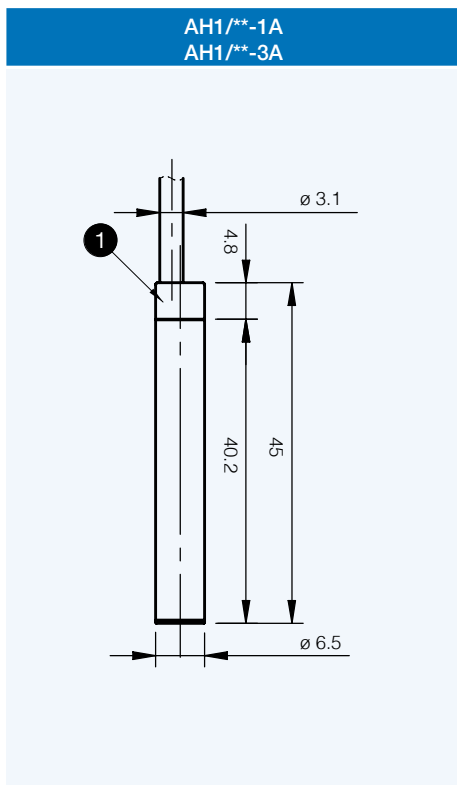


code	D4	D1	D2	D3
AH*/**-1*	≥ 3.9 mm	≥ 3.25 mm	≥ 6.5 mm	≥ 4.5 mm
AH*/**-2*	≥ 4 mm <sup>(1)</sup>	≥ 6.5 mm	≥ 13 mm	≥ 7.5 mm
AH*/**-3*	≥ 3.9 mm	≥ 3.75 mm	> 7 mm	≥ 6 mm
AH*/**-4*	≥ 6 mm	≥ 6.5 mm	> 15 mm	≥ 12 mm

<sup>(1)</sup> ≥ 2,6 mm for non magnetic materials

dimensions (mm)

Ø 6.5 mm cylindrical



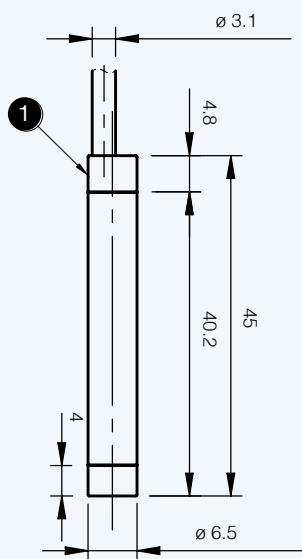
1 LED

AH

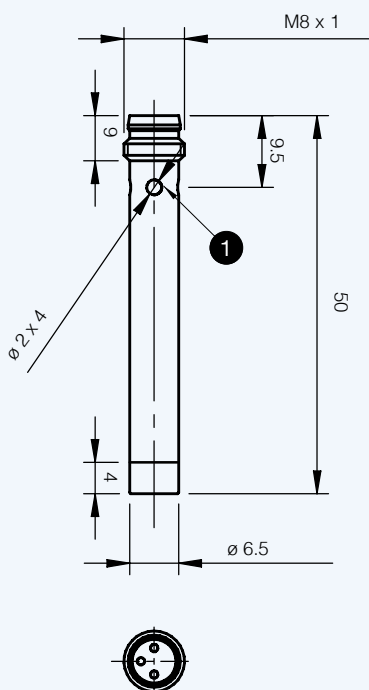


Ø 6.5 mm cylindrical

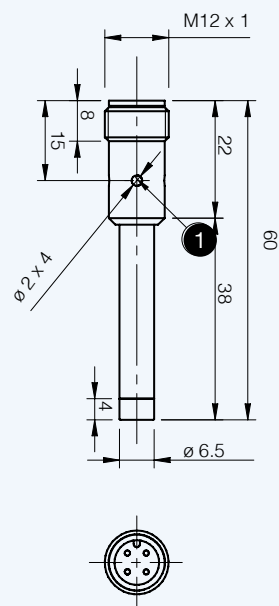
AH1/\*\*-2A  
AH1/\*\*-4A



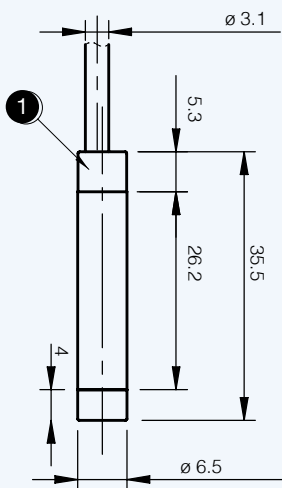
AH1/\*\*-2F  
AH1/\*\*-4F



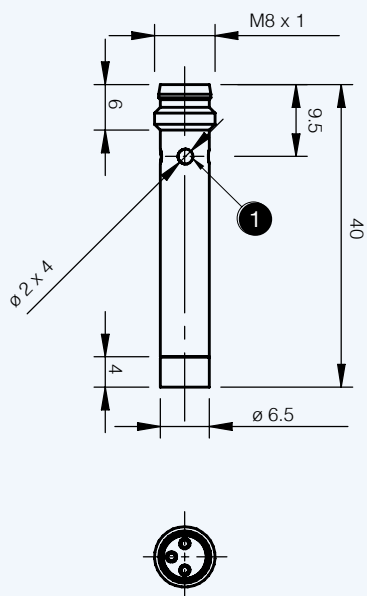
AH1/\*\*-2H  
AH1/\*\*-4H



AH6/\*\*-2A  
AH6/\*\*-4A



AH6/\*\*-2F  
AH6/\*\*-4F



1 LED