



# 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	AH	Ø 6.5 mm inductive proximity switch
housing	1	Standard body
	6	Short body
output state	A	NO output state
	C	NC output state
output logic	N	NPN logic output
	P	PNP logic output
distance	1	Shielded standard 1.5 mm
	2	Unshielded standard 2.5 mm
	3	Long distance shielded 2 mm
	4	Unshielded long distance 4 mm
connect.	A	Axial cable exit
	F	M8 plug cable exit
	H	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		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		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	2.5	AH6/AN-2H	AH6/CN-2H	AH6/AP-2H	AH6/CP-2H
			cable		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		AH6/AN-4A	AH6/CN-4A	AH6/AP-4A	AH6/CP-4A
	shielded	long distance	M8	2	AH6/AN-4F	AH6/CN-4F	AH6/AP-4F	AH6/CP-4F
			cable		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		AH6/AN-4A	AH6/CN-4A	AH6/AP-4A	AH6/CP-4A
unshielded	long distance	M8	4	AH6/AN-4F	AH6/CN-4F	AH6/AP-4F	AH6/CP-4F	
		cable		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		AH6/AN-4A	AH6/CN-4A	AH6/AP-4A	AH6/CP-4A	

## 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

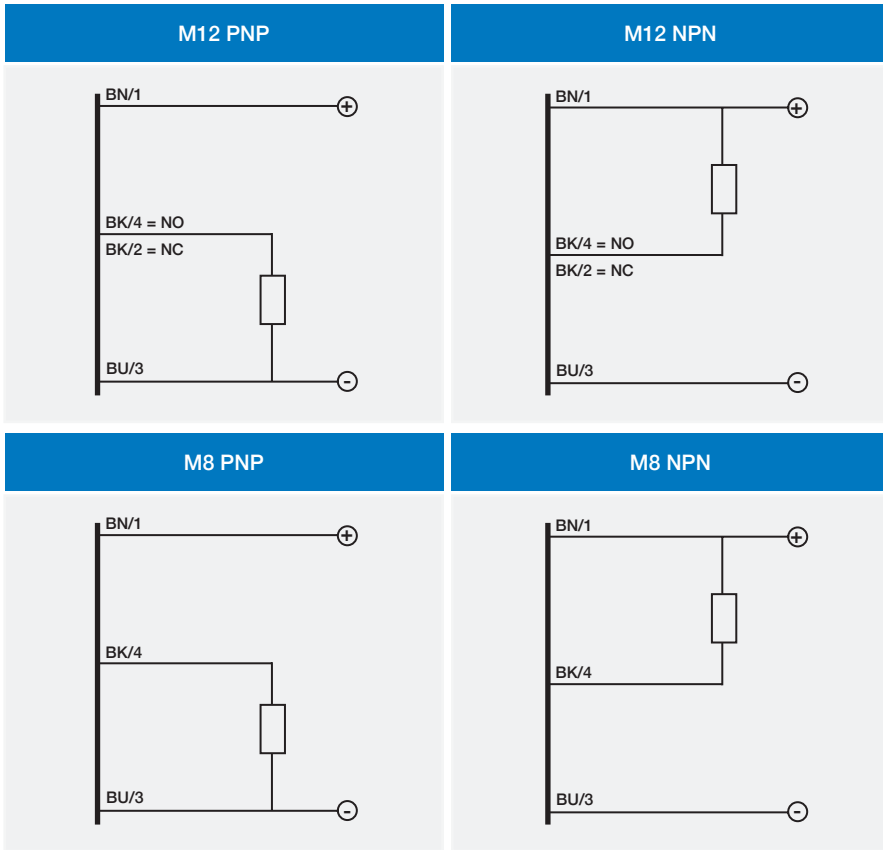


	AH*/**-1*	AH*/**-2*	AH*/**-3*	AH*/**-4*
				
nominal sensing	1.5 mm	2.5 mm	2 mm	4 mm
working distance	0...1.21 mm	0...2.02 mm	0...1.62 mm	0...3.24 mm
hysteresis	1...20% Sr			
standard target	8x8 mm FE360			12x12 mm FE360
repeatability	5%			
operating voltage	10...30 Vdc			
max ripple content	≤ 10%			
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 / 35 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

3 wires versions

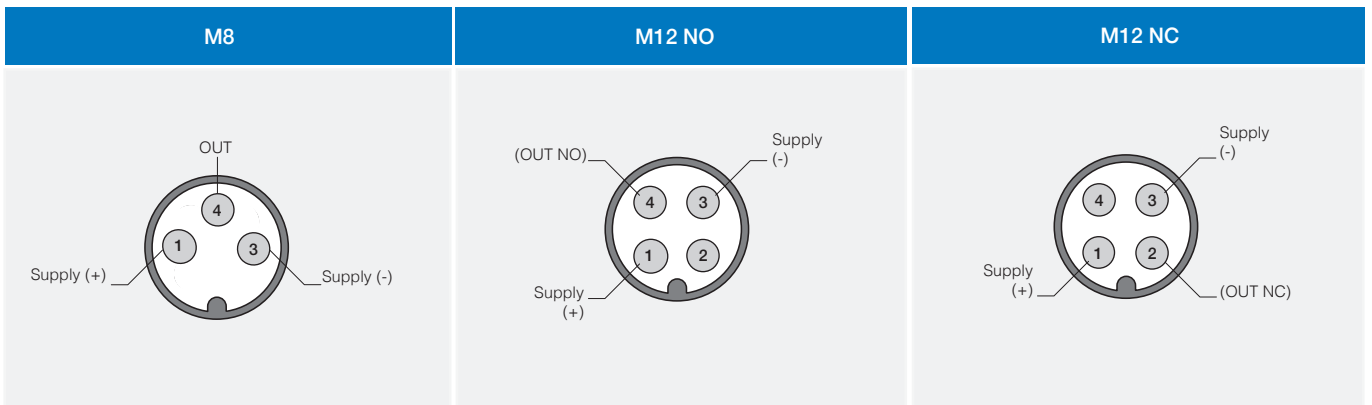
Ø 6.5 mm cylindrical



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

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**BU** blue  
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**WH** white

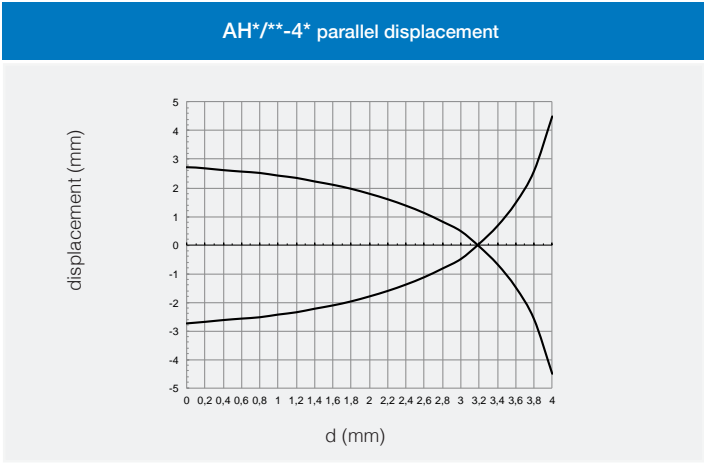
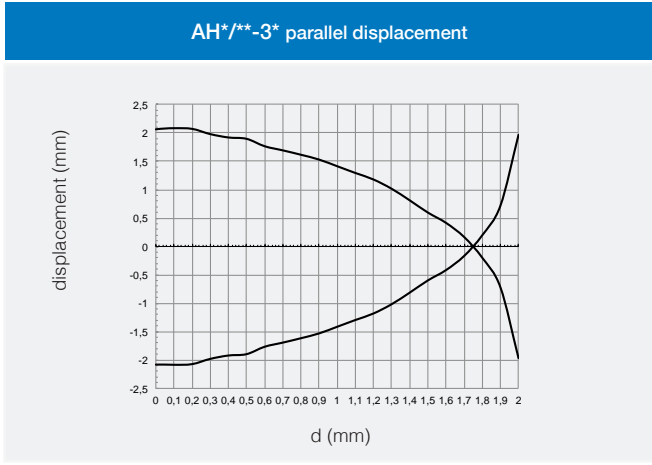
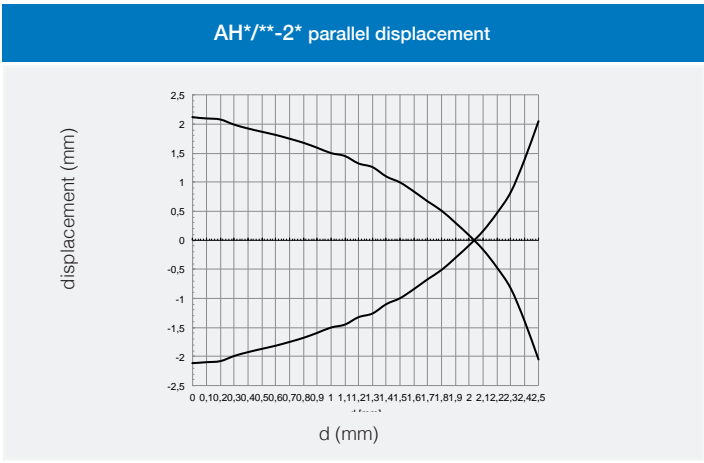
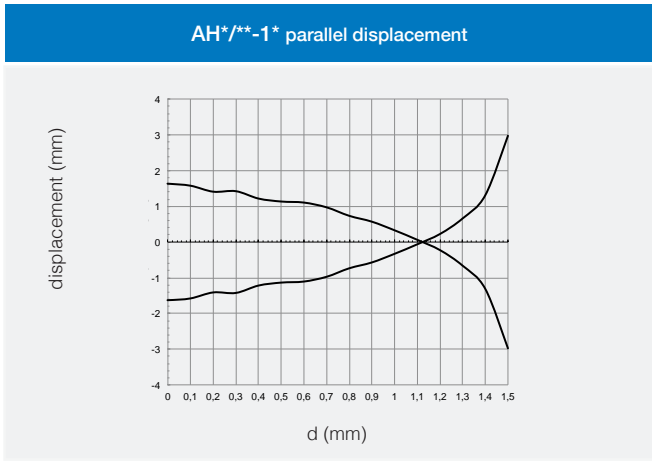
## plug



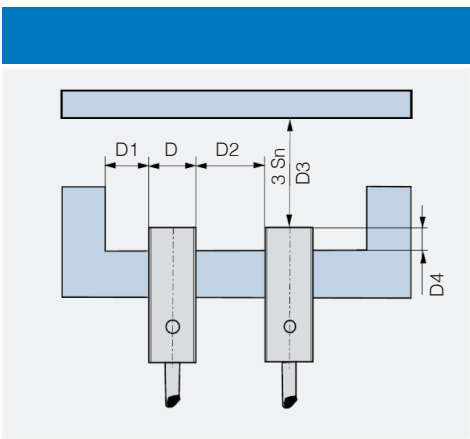
# response diagram



Ø 6.5 mm cylindrical



# installation

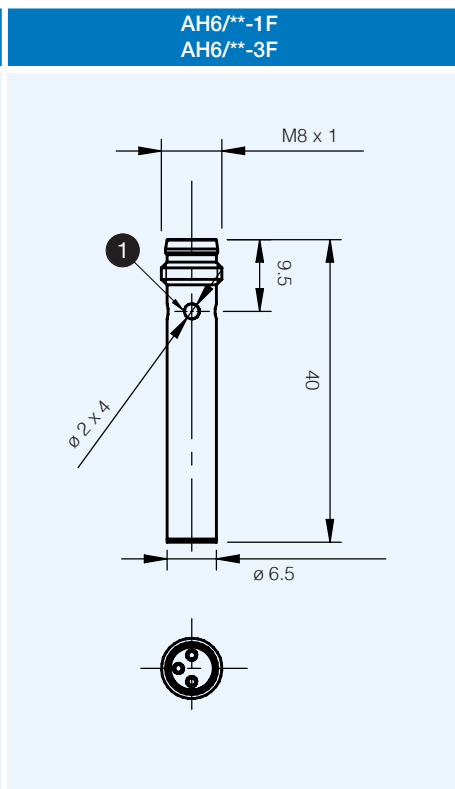
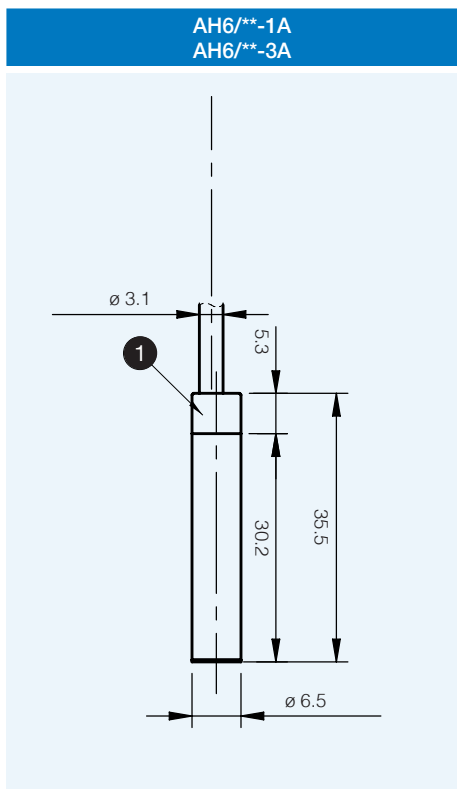
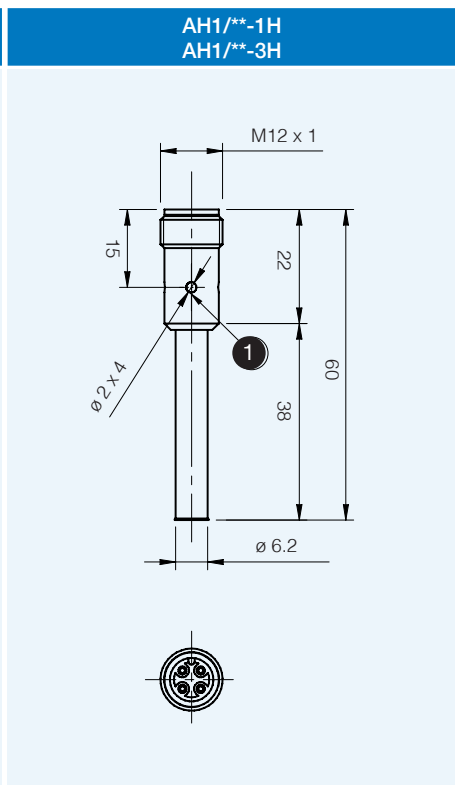
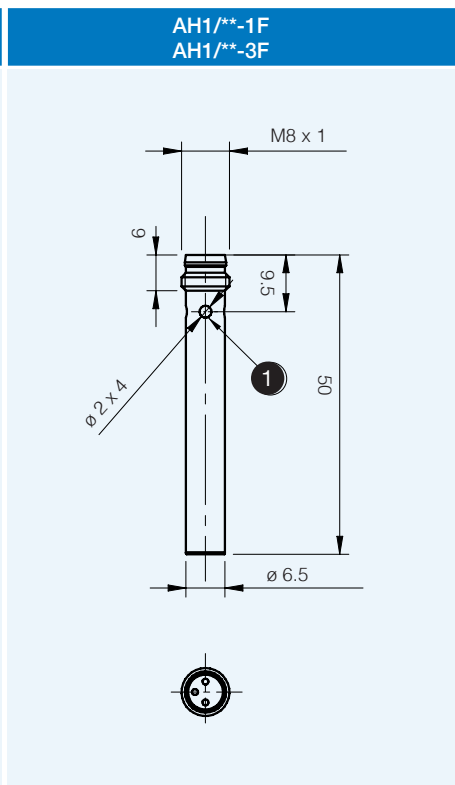
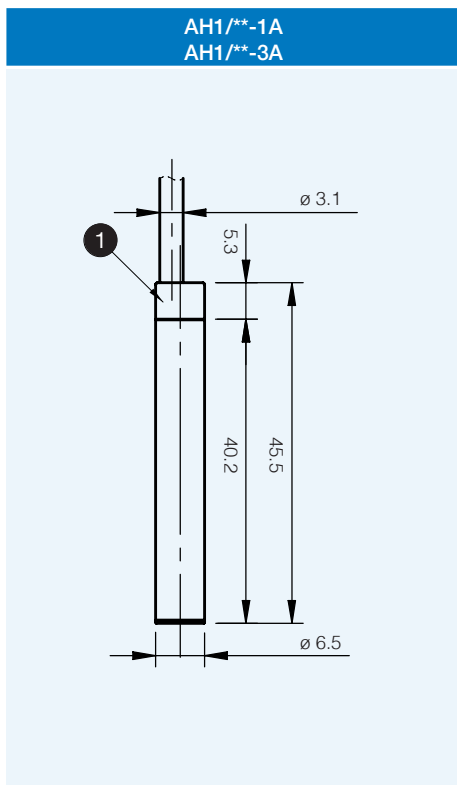


code	D4	D1	D2	D3
AH*/**-1*	≥ 1.3 mm <sup>(1)</sup>	≥ 3.25 mm	≥ 6.5 mm	≥ 4.5 mm
AH*/**-2*	≥ 5 mm	≥ 6.5 mm	≥ 13 mm	≥ 7.5 mm
AH*/**-3*	≥ 1.95 mm <sup>(1)</sup>	≥ 3.25 mm	> 6.5 mm	≥ 6 mm
AH*/**-4*	≥ 8 mm	≥ 6.5 mm	> 13 mm	≥ 12 mm

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

dimensions (mm)

Ø 6.5 mm cylindrical

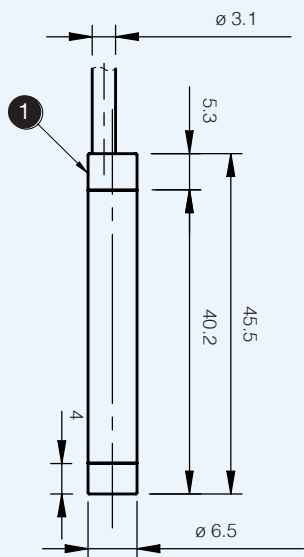


1 LED

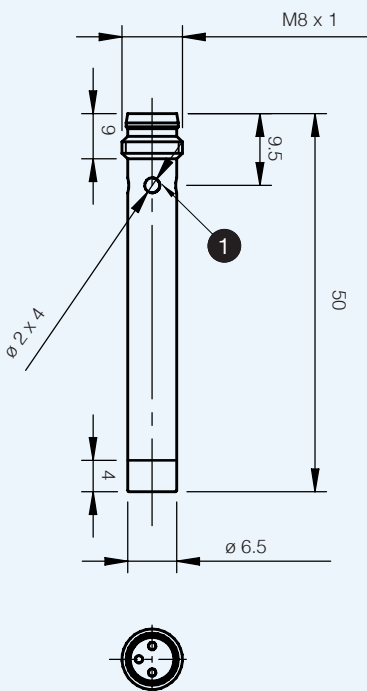


Ø 6.5 mm cylindrical

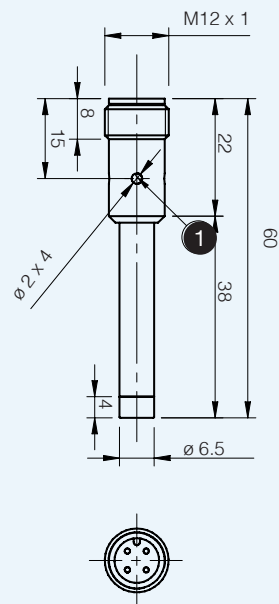
AH1/\*\*-2A  
AH1/\*\*-4A



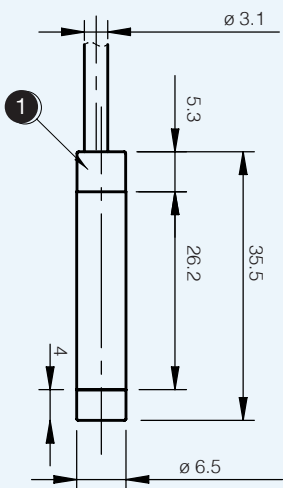
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AH1/\*\*-4F



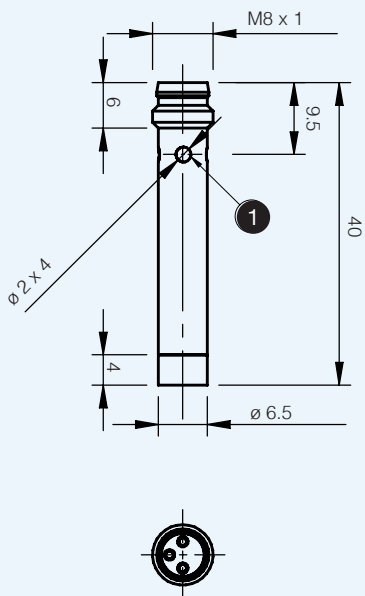
AH1/\*\*-2H  
AH1/\*\*-4H



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



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



1 LED