



# ET series

Cylindrical with extended temperature range



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## features

- Stainless steel housing
- M12, M18 models
- IP68 protection degree
- Complete protection against electrical damages



## web contents



- Application notes
- Photos
- Catalogue / Manuals







## code description

ET M 1 / B N - 1 H

series	<b>ET</b>	Extended working temperature range inductive sensors
dimens.	<b>M</b>	M12 diameter
	<b>K</b>	M18 diameter
housing	<b>1</b>	Standard housing
output state	<b>B</b>	NO + NC complementary output
output logic	<b>P</b>	PNP logic
	<b>N</b>	NPN logic
distance	<b>1</b>	Shielded standard (2/5 mm)
	<b>2</b>	Unshielded standard (4/8 mm)
connect.	<b>H</b>	M12 plug cable exit

## available models

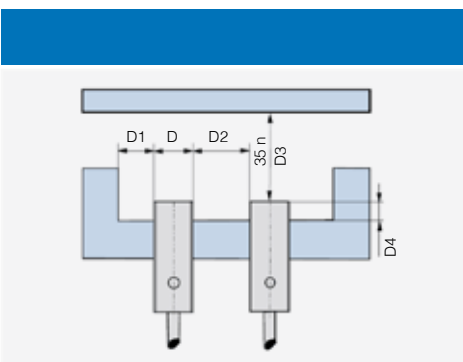
diameter	installation	plug	distance (mm)	PNP / NO + NC	NPN / NO + NC
M12	shielded	M12	2	ETM1/BP-1H	ETM1/BN-1H
	unshielded		4	ETM1/BP-2H	ETM1/BN-2H
M18	shielded		5	ETK1/BP-1H	ETK1/BN-1H
	unshielded		8	ETK1/BP-2H	ETK1/BN-2H

	ETM1/B*-1H	ETM1/B*-2H	ETK1/B*-1H	ETK1/B*-2H
				
nominal sensing distance $S_n$	2 mm	4 mm	5 mm	8 mm
working distance	0...1.62 mm	0...3.24 mm	0...4 mm	0...6.5 mm
hysteresis	1...20%			
standard target	12 x 12 mm FE360		18 x 18 mm FE360	24 x 24 mm FE360
repeatability	5% @UB=20...30 V; Ta = 23°C ±5°C			
operating voltage	10...30 Vdc			
output type	NPN or PNP - NO + NC			
max ripple content	≤ 10%			
output current	≤ 80 mA			≤ 150 mA
output voltage drop	≤ 2 V @ I <sub>o</sub>			≤ 1.5 V @ I <sub>o</sub>
no-load supply current			≤ 20 mA	
leakage current			≤ 10 µA	
switching frequency	1,5 kHz			1,2 kHz
power on delay			100 ms	
ambient temperature range			-25...+110 °C	
temperature drift of Sr			≤ 10% Sr	
short circuit protection			●	
voltage reversal protection			●	
induction protection			●	
shocks and vibration	IEC EN 60947-5-2			
weight	30 g			55 g
LEDs	No			
protection degree	IP68 (1m, 7 days)			
EMC	in conformity with the EMC Directive, according to IEC 60947-5-2			
shocks and vibrations	IEC 60947-5-2			
housing material	AISI 303 stainless steel			
active head material	PPS			PSU
connection			M12 plug	
tightening torque (on nuts)	20 Nm			50 Nm
tightening torque (on plug)			2.w5 Nm	

## correction factors

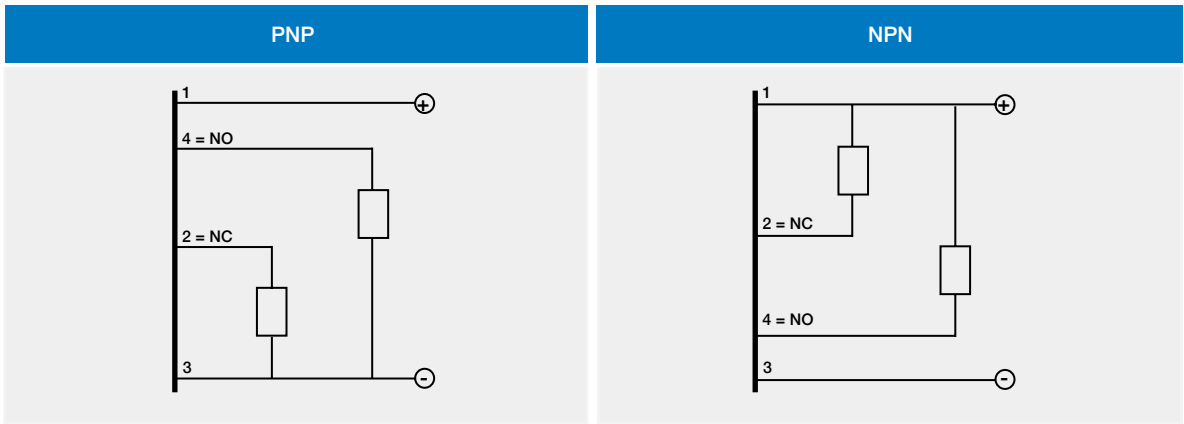
model	FE 360	copper	alluminium	brass	stainless steel
ETM1/B*-1H	1	0.10 ± 10%	0.20 ± 10%	0.30 ± 10%	0.70 ± 10%
ETM1/B*-2H		0.40 ± 10%	0.50 ± 10%	0.60 ± 10%	0.90 ± 10%
ETK1/B*-1H		0.20 ± 10%	0.30 ± 10%	0.40 ± 10%	0.70 ± 10%
ETK1/B*-2H		0.40 ± 10%	0.50 ± 10%	0.50 ± 10%	0.80 ± 10%

## installation

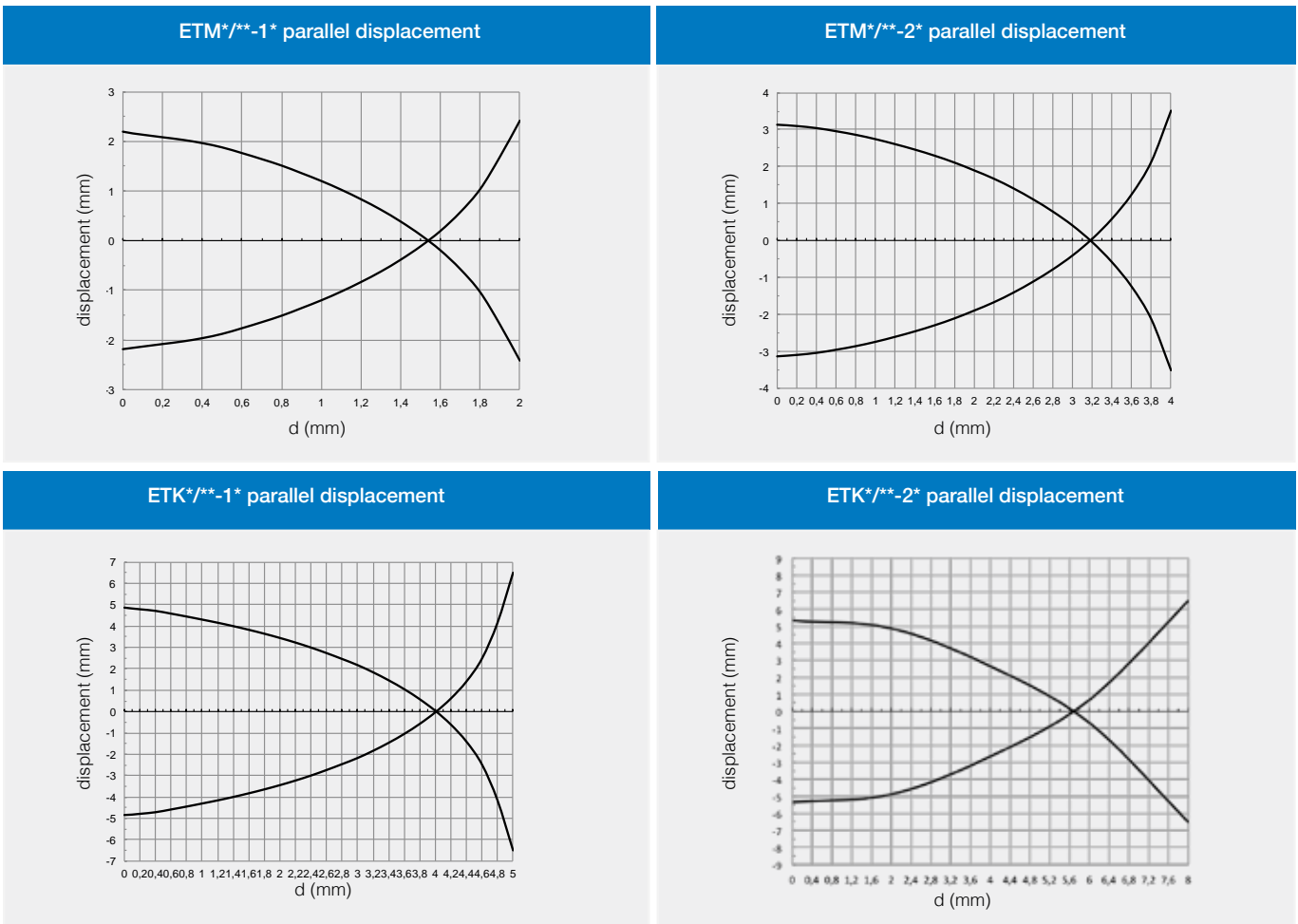


model	D4	D1	D2	D3
ETM1/**-1H	≥ 0 mm <sup>(1)</sup>	≥ 6 mm	≥ 12 mm	≥ 6 mm
ETM1/**-2H	≥ 6 mm <sup>(2)</sup>	≥ 12 mm	≥ 24 mm	≥ 12 mm
ETK1/**-1H	≥ 0 mm <sup>(3)</sup>	≥ 9 mm	≥ 18 mm	≥ 15 mm
ETK1/**-2H	≥ 8 mm <sup>(4)</sup>	≥ 18 mm	≥ 36 mm	≥ 24 mm

- <sup>(1)</sup> ≥ 1,2 mm without ferro-magnetic material
- <sup>(2)</sup> ≥ 0 mm without ferro-magnetic material
- <sup>(3)</sup> ≥ 3 mm without ferro-magnetic material
- <sup>(4)</sup> ≥ 12 mm without ferro-magnetic material



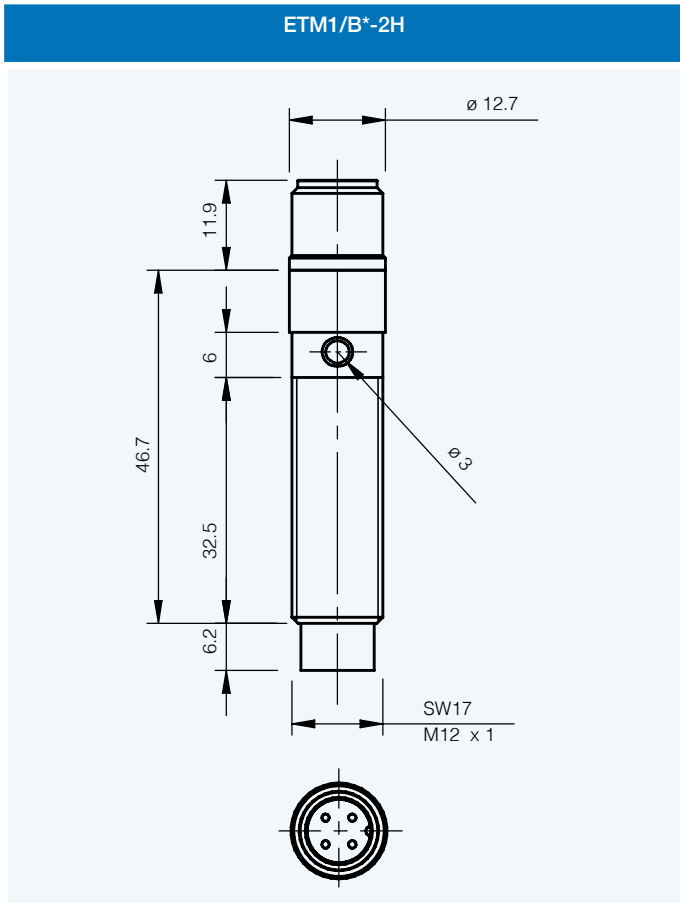
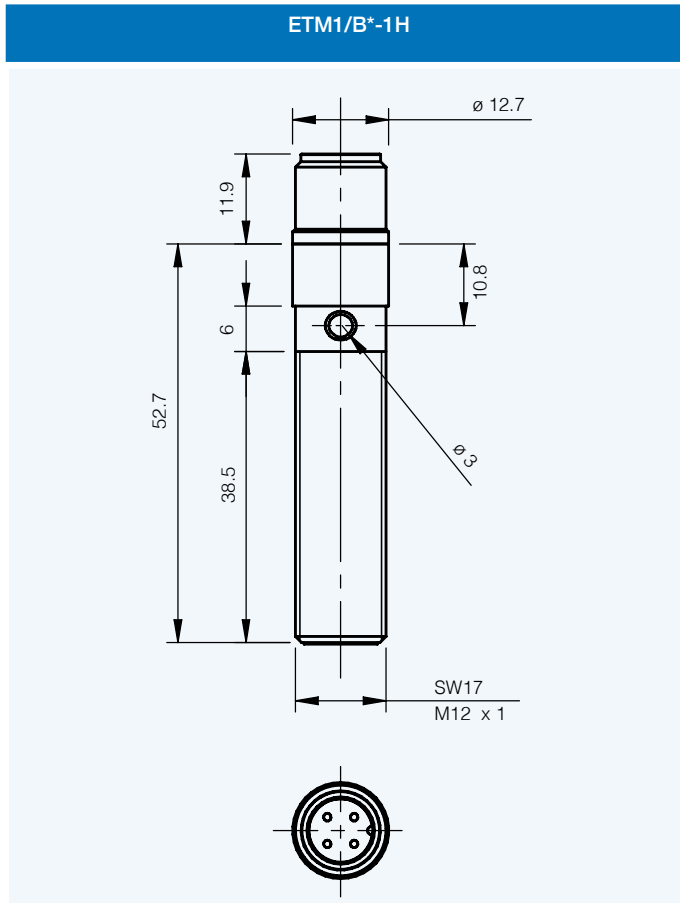
response diagram





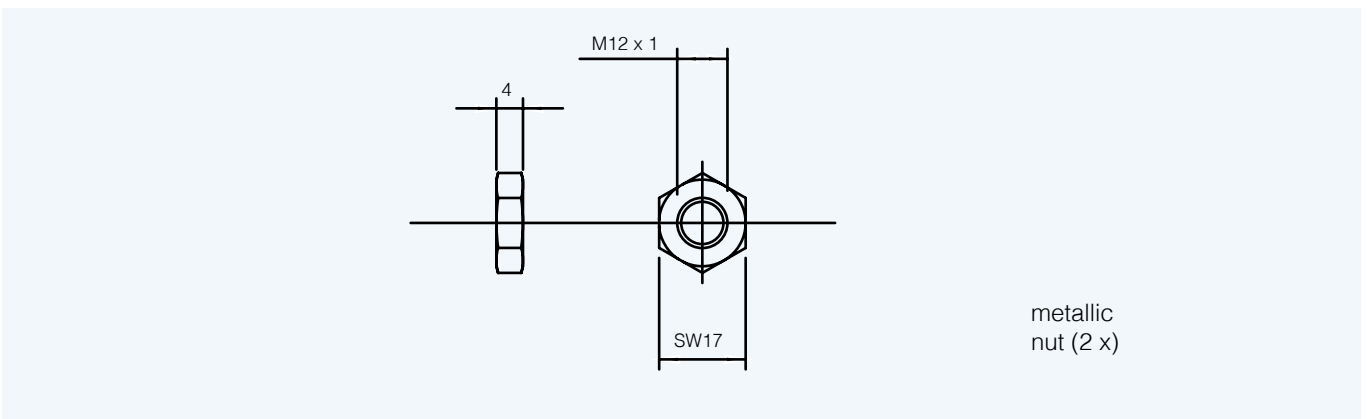
## dimensions (mm)

Cylindrical with extended temperature range



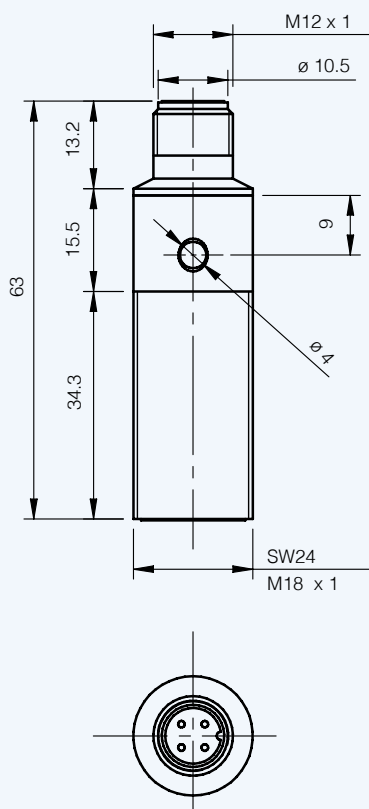
## dimensions (mm)

accessories included in all M12 models

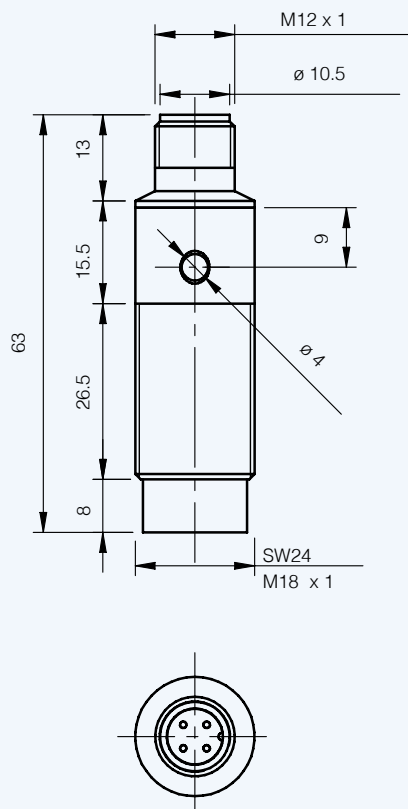




ETK1/B\*-1H



ETK1/B\*-2H



## dimensions (mm)

accessories included in all M18 models

