V3 series

Inductive sensors with AC/DC supply voltage

features

- **Complete range of AC/DC inductive sensors**
- **Protected against short circuits in all working conditions**
- **NO/NC selection with DC supply voltage**



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- **Catalogue / Manuals**

code description

V3 M 1 / R 0 - 3 A 8F

series	V3	AC/DC inductive sensors
housing diameter	E	M8 housing
	M	M12 housing
	K	M18 housing
	T	M30 housing
housing	1	Standard housing
output state	R	NO (AC) – NO/NC (DC) (1)
	S	NC (AC) – NC/NO (DC) (2)
	0	2 wires
distance	3	Shielded – Long distance
	4	Unshielded – Long distance
connect.	A	2m cable exit
	Q	½"-20 UNF Dual keyway plug cable exit (Cod.C)
	8F	PUR cable

(1) M8 models with cable exit: only NO (ac/dc) output
(2) M8 models with cable exit: only NC (ac/dc) output

available models

supply voltage	diameter	installation	distance (mm)	connections	NO (Vac/Vdc)	NC (Vac/Vdc)
20...120 Vdc	M8	shielded / L.D.	2	cable	V3E1/R0-3A8F	V3E1/S0-3A8F
		unshielded / L.D.	4		V3E1/R0-4A8F	V3E1/S0-4A8F

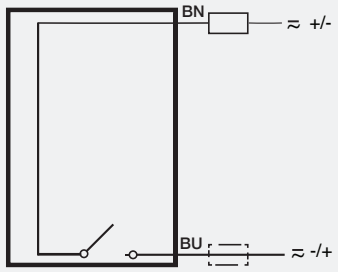
supply voltage	diameter	installation	distance (mm)	connections	NO (Vac) NO/NC (Vdc)	NC (Vac) NC/NO (Vac/Vdc)
20...250 Vdc	M8	shielded / L.D.	2	conn. ½"-20 UNF	V3E1/R0-3Q	V3E1/S0-3Q
		unshielded / L.D.	4		V3E1/R0-4Q	V3E1/S0-4Q
	M12	shielded / L.D.	4	cable	V3M1/R0-3A8F	V3M1/S0-3A8F
				conn. ½"-20 UNF	V3M1/R0-3Q	V3M1/S0-3Q
		unshielded / L.D.	6	cable	V3M1/R0-4A8F	V3M1/S0-4A8F
				conn. ½"-20 UNF	V3M1/R0-4Q	V3M1/S0-4Q
	M18	shielded / L.D.	6	cable	V3K1/R0-3A8F	V3K1/S0-3A8F
				conn. ½"-20 UNF	V3K1/R0-3Q	V3K1/S0-3Q
		unshielded / L.D.	10	cable	V3K1/R0-4A8F	V3K1/S0-4A8F
				conn. ½"-20 UNF	V3K1/R0-4Q	V3K1/S0-4Q
	M30	shielded / L.D.	12	cavo	V3T1/R0-3A8F	V3T1/S0-3A8F
				conn. ½"-20 UNF	V3T1/R0-3Q	V3T1/S0-3Q
		unshielded / L.D.	18	cable	V3T1/R0-4A8F	V3T1/S0-4A8F
				conn. ½"-20 UNF	V3T1/R0-4Q	V3T1/S0-4Q

technical specification

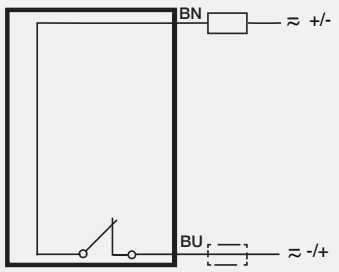
	V3E1/**-3*	V3E1/**-4*	V3M1/**-3*	V3M1/**-4*	V3K1/**-3*	V3K1/**-4*	V3T1/**-3*	V3T1/**-4*
diameter	M8		M12		M18		M30	
nominal sensing distance sn	2 mm	4 mm	4 mm	6 mm	6 mm	10 mm	12 mm	18 mm
operating distance	0…1.6 mm	0…3.2 mm		0…4.8 mm		0…8.1 mm	0...9.7 mm	0…14.5 mm
hysteresis	1 ... 20%							
standard target	8x8mm	12x12mm		18x18mm		30x30mm	36x36mm	54x54mm
repeat accuracy	≤ 5%							
supply voltage range	20 … 250 Vac – 50…60 Hz / 20 … 250 Vdc M8 models with cable exit: 20 … 120 Vac – 50…60 Hz / 20 … 120 Vdc							
max. ripple content	600 mA/150 ms max M8 models with cable exit: 150 mA/ms (Vac) – 150 mA/ms (Vdc)							
output current	5…140 mA (Vac) – 5…200 mA (Vdc) M8 models with cable exit: 5…55 mA (Vac) – 5…80 mA (Vdc)							
output voltage drop	≤ 7,5 V (Vac) - ≤ 8 V (Vdc) M8 models with cable exit: ≤ 7,5 V (Vac) - ≤ 8,5 V (Vdc)							
no load supply current	1 mA (Vac) – 0,7 mA (Vdc) M8 models with cable exit: 0,55 mA (Vac) – 0,40 mA (Vdc)							
logic output	MOSFET							
output state	NO (Vac)-NO/NC (Vdc) or NC (Vac)-NC/NO (Vdc) M8 models with cable exit: NO (Vac/Vdc) or NC (Vac/Vdc)							
AC switching frequency	25 Hz							
DC switching frequency	900 Hz	750 Hz	750 Hz	500 Hz	600 Hz	550 Hz	250 Hz	190 Hz
time delay before availability	100 ms							
ambient temperature range	-25° ... +70°C							
temperature drift of Sr	≤ 10% Sr							
short circuit protection	● (autoreset)							
overvoltage protection	●							
capacitive load protection	1 µF @ Vmin - 1 µF @ Vmax M8 models with cable exit: 0.1 µF @ Vmax - 1 µF @ Vmin							
indicatori LED	yellow (output energized)							
grado di protezione	IP 67 (1)							
compatibilità elettromagnetica	in conformity with the EMC Directive, according to IEC 60947-5-2							
shocks and vibrations	IEC 60947-5-2							
housing material	nickel plated brass							
sensing face	PA4T							
connection	2 m PUR cable exit ½"-20 UNF dual keyway plug cable exit							
weight	20 g plug / 70 g cable		20 g plug / 80 g cable	45 g plug / 100 g cable			120 g plug / 170 g cable	

electrical diagrams of connections

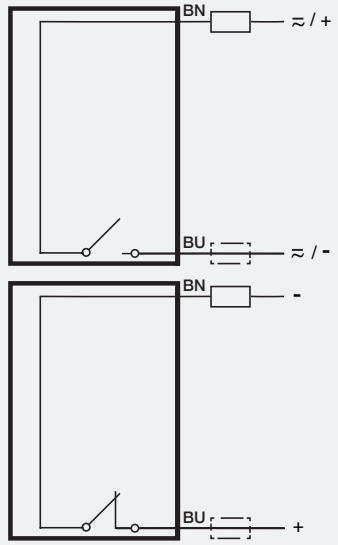
V3E1/R0-*A



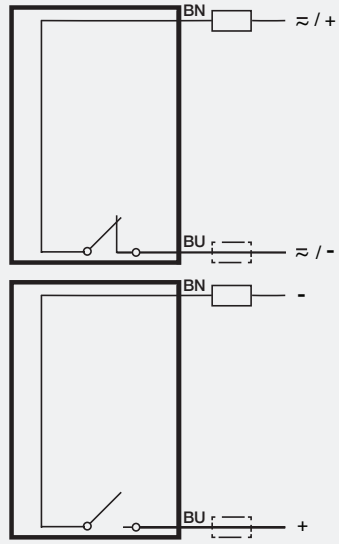
V3E1/S0-*A



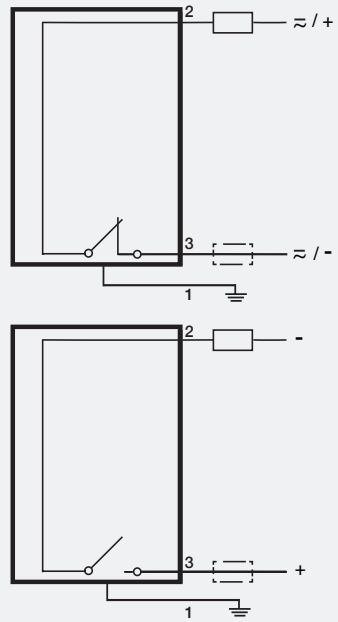
V3*1/R0-*A



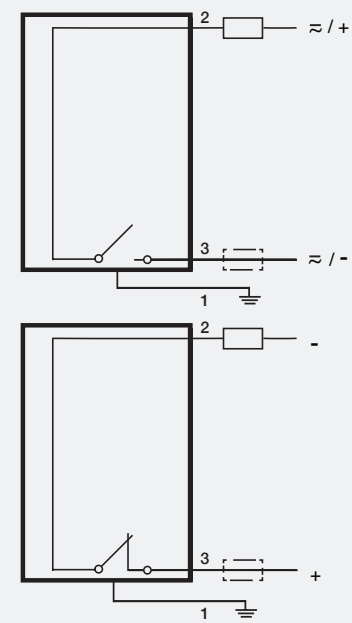
V3*1/S0-*A



V3*1/R0-*Q



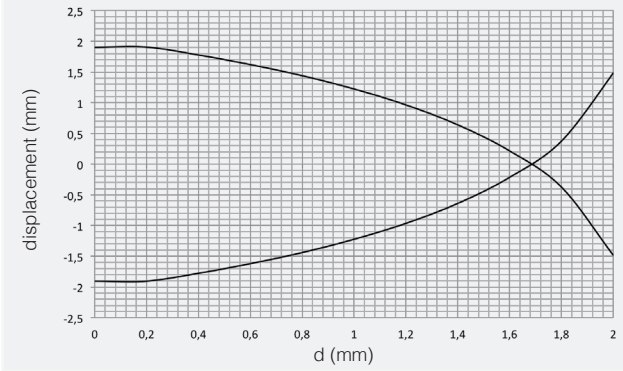
V3*1/S0-*Q



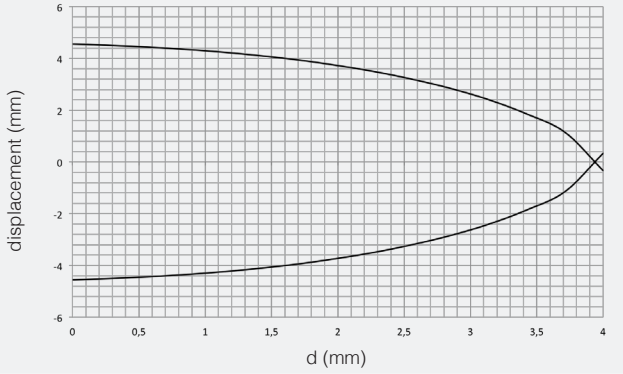
BN	brown
BU	blue
BK	black
WH	white

response diagram

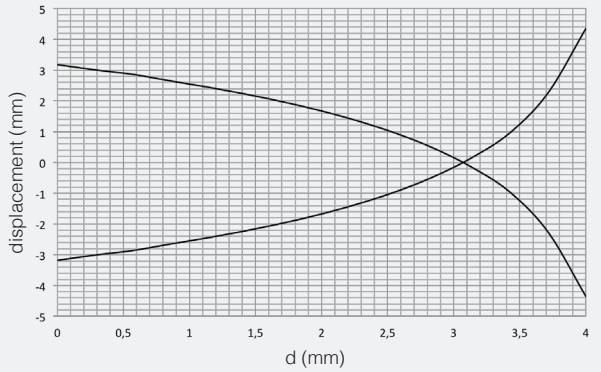
V3E1/**-3* parallel displacement



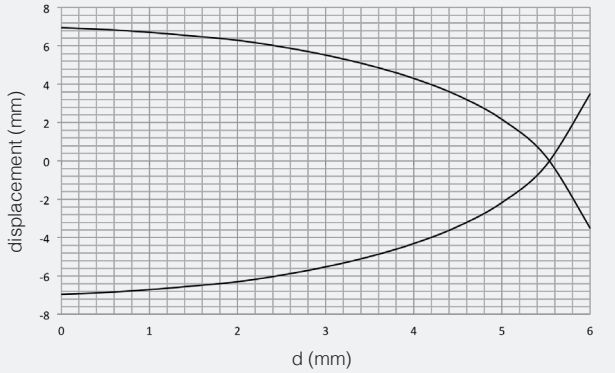
V3E1/**-4* parallel displacement



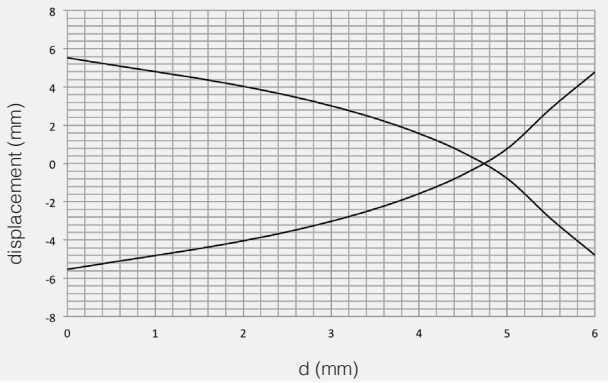
V3M1/**-3* parallel displacement



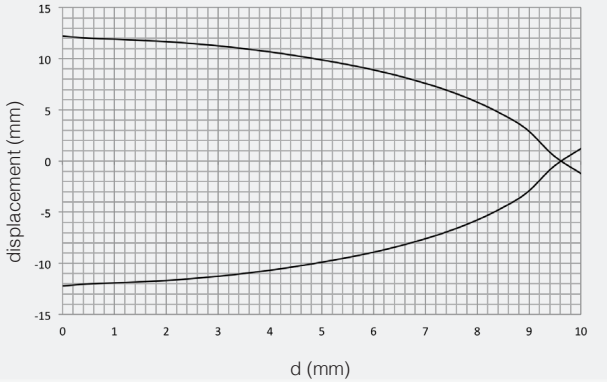
V3M1/**-4* parallel displacement



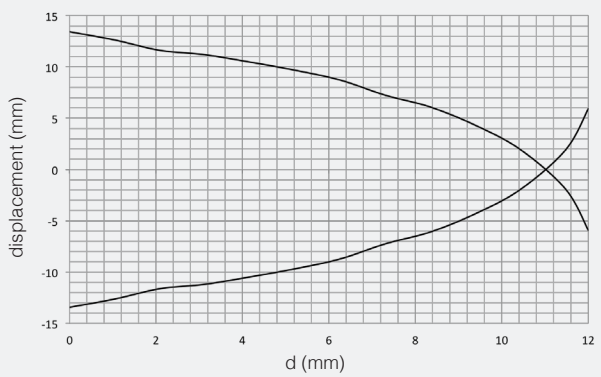
V3K1/**-3* parallel displacement



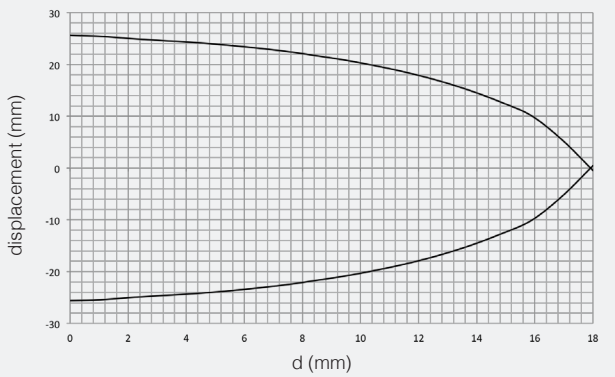
V3K1/**-4* parallel displacement



V3T1/**-3* parallel displacement

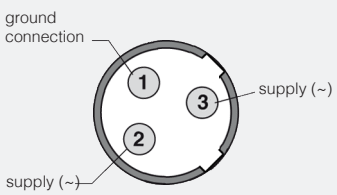


V3T1/**-4* parallel displacement



plug

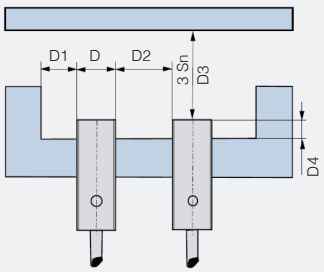
½"-20 UNF plug dual keyway



correction factors

code	steel FE 360	copper	alluminium	brass	stainless steel
V3E1/**-3*	1	0.51	0.48	0.56	0.83
V3E1/**-4*		0.47	0.52	0.57	0.79
V3M1/**-3*		0.48	0.54	0.60	0.86
V3M1/**-4*		0.49	0.54	0.58	0.79
V3K1/**-3*		0.39	0.46	0.52	0.81
V3K1/**-4*		0.47	0.51	0.55	0.77
V3T1/**-3*		0.42	0.48	0.53	0.83
V3T1/**-4*		0,55	0,51	0,46	0,81

installation



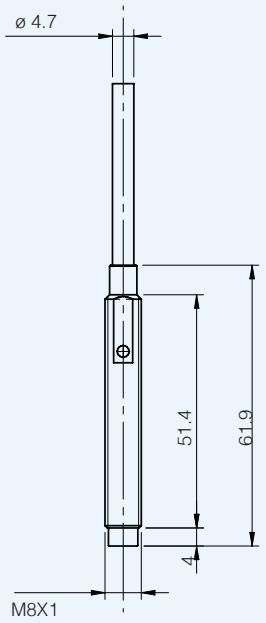
code	D4	D1	D2	D3
V3E1/**-3*	≥ 0 mm	≥ 4 mm	≥ 8 mm	≥ 6 mm
V3E1/**-4*	≥ 0 mm (2)	≥ 8 mm	≥ 16 mm	≥ 12 mm
V3M1/**-3*	≥ 0 mm	≥ 8 mm	≥ 12 mm	≥ 12 mm
V3M1/**-4*	≥ 0 mm(1)	≥ 12 mm	≥ 24 mm	≥ 18 mm
V3K1/**-3*	≥ 0 mm	≥ 9 mm	≥ 18 mm	≥ 18 mm
V3K1/**-4*	≥ 0 mm(2)	≥ 18 mm	≥ 36 mm	≥ 30 mm
V3T1/**-3*	≥ 0 mm	≥ 15 mm	≥ 30 mm	≥ 36 mm
V3T1/**-4*	≥ 0 mm(3)	≥ 30 mm	≥ 60 mm	≥ 54 mm

(1) ≥ 1.5 mm for magnetic material
(2) ≥ 1 mm for magnetic material
(3) ≥ 4 mm for magnetic material

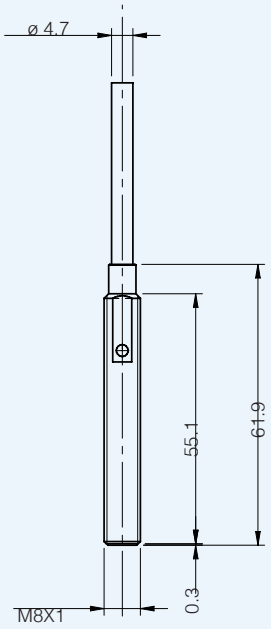
dimensions

model with M12 cable exit

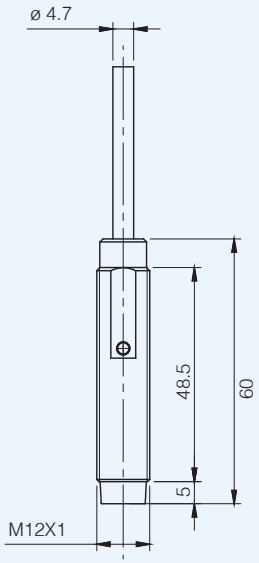
V3E1/**-4A



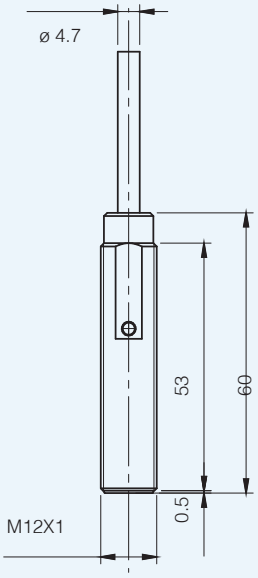
V3E1/**-3A



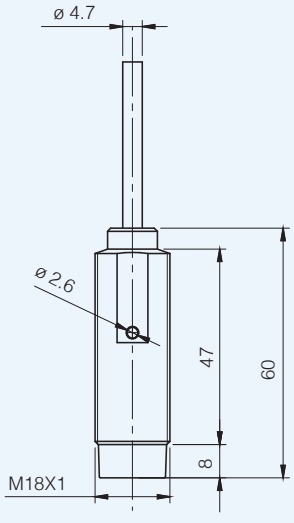
V3M1/**-4A



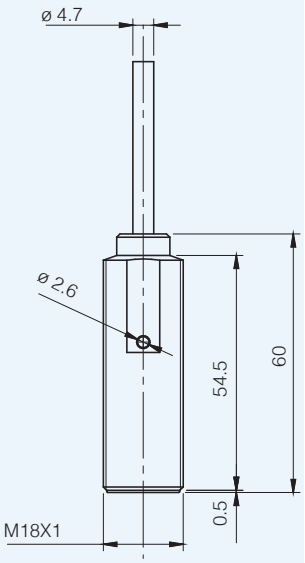
V3M1/**-3A



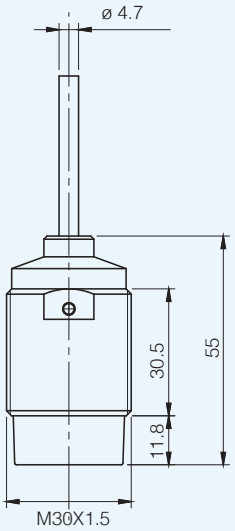
V3K1/**-4A



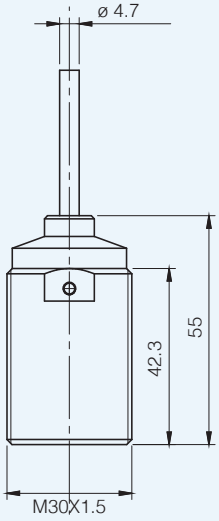
V3K1/**-3A



V3T1/**-4A



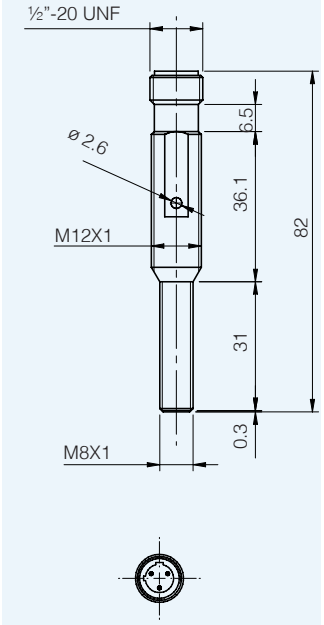
V3T1/**-3A



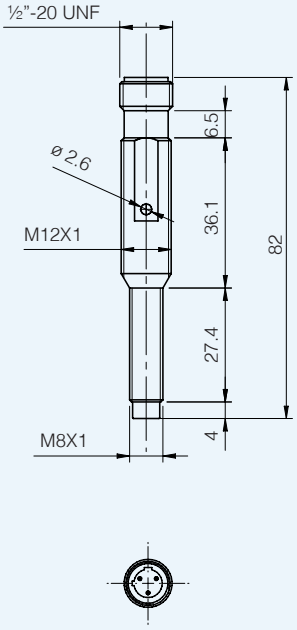
dimensions

models with ½"-20 UNF plug cable exit

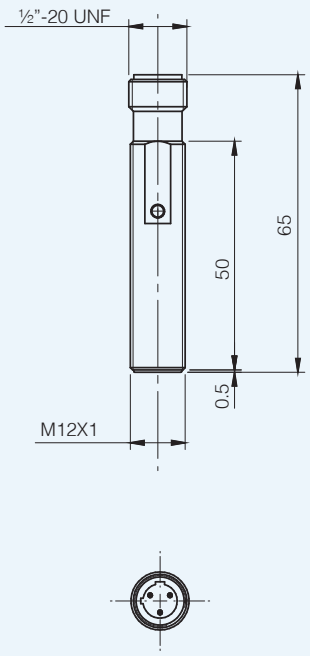
V3E1/**-3Q



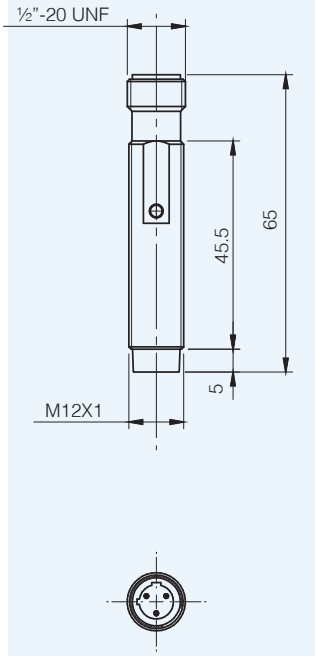
V3E1/**-4Q



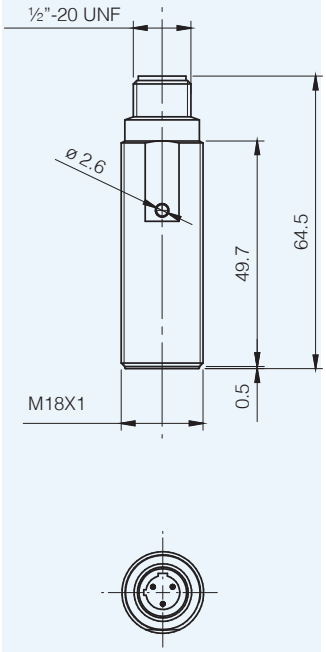
V3M1/**-3Q



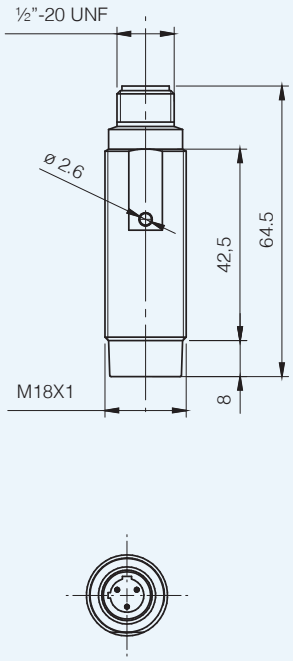
V3M1/**-4Q



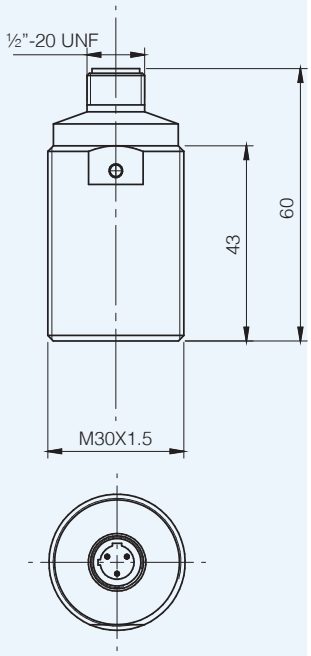
V3K1/**-3Q



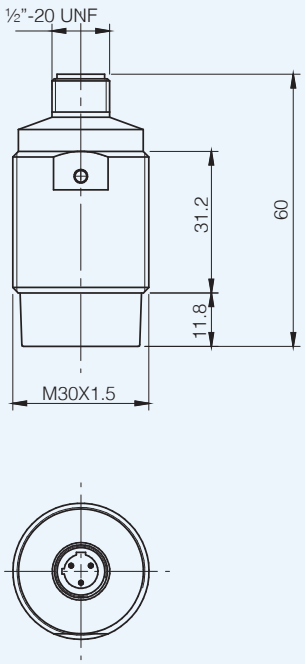
V3K1/**-4Q



V3T1/**-3Q



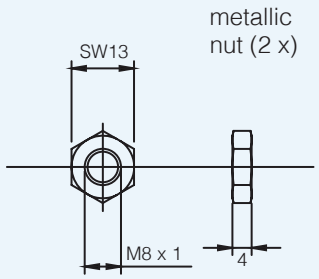
V3T1/**-4Q



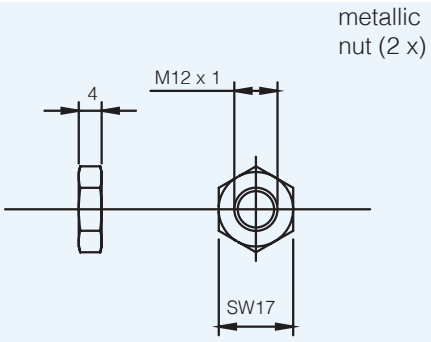
dimensions (mm)

accessories included in all models

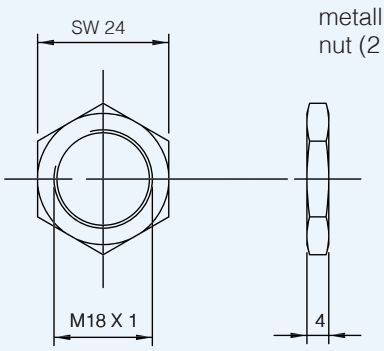
V3E1



V3M1



V3K1



V3T1

