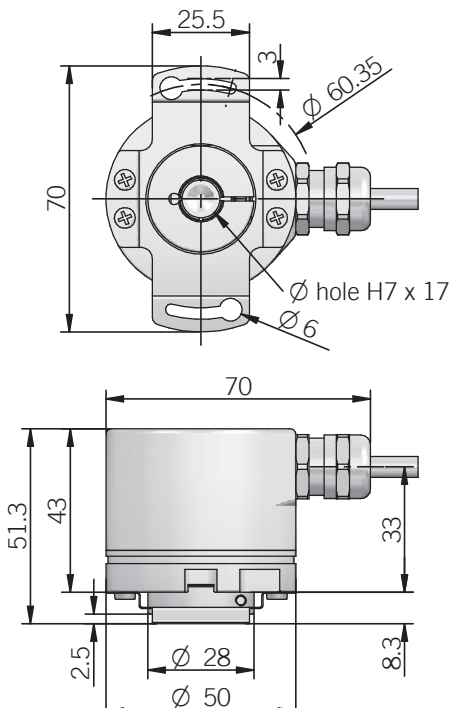
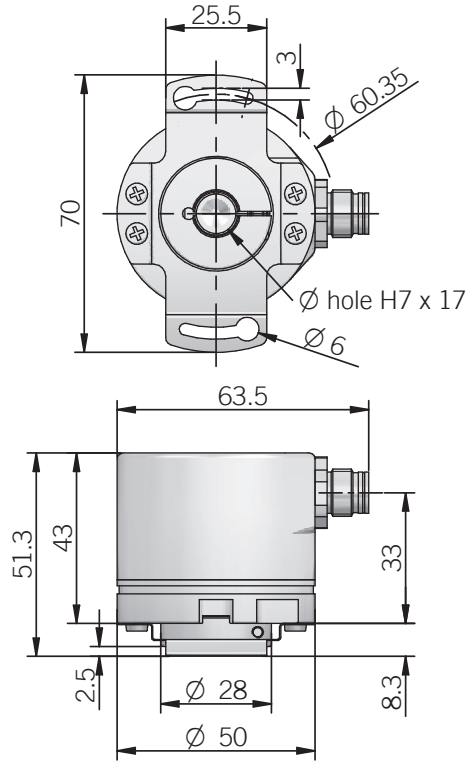


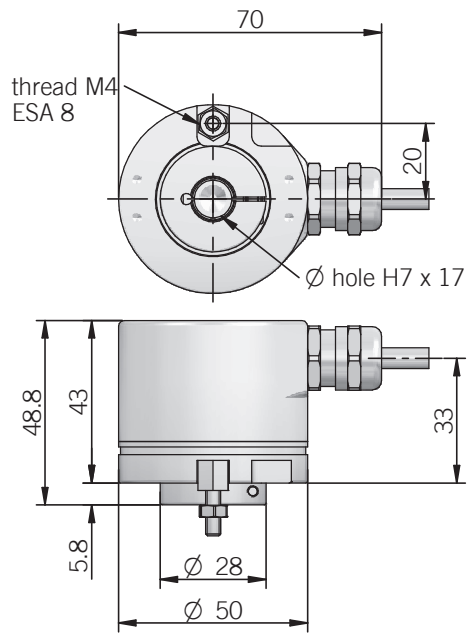
EML 50 F
radial cable



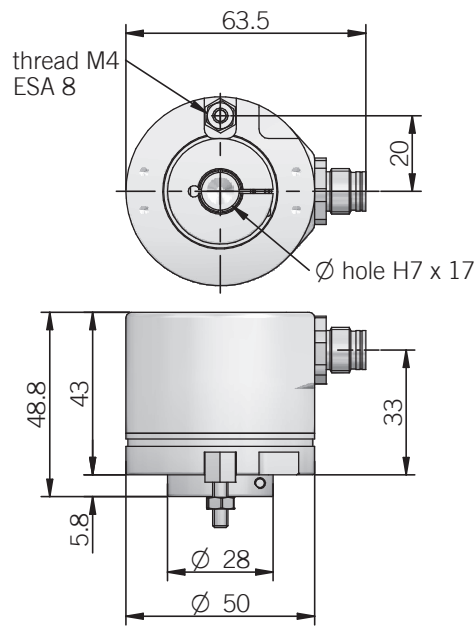
EMA 50 F
radial M12



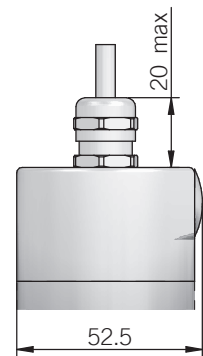
EML 50 G
radial cable



EMA 50 G
radial M12



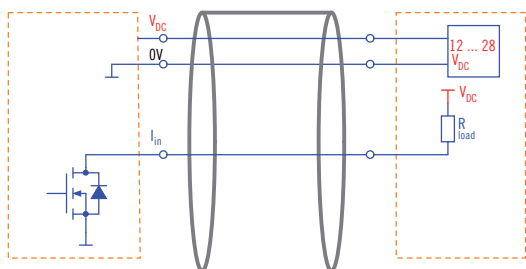
Axial output



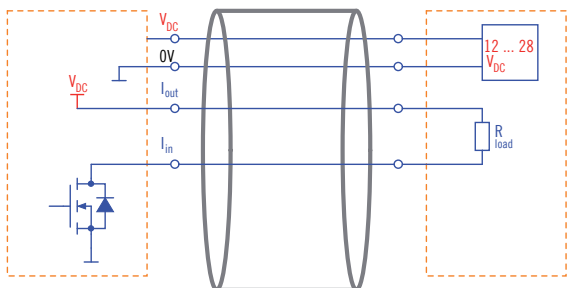
ELECTRICAL INTERFACE

Current output

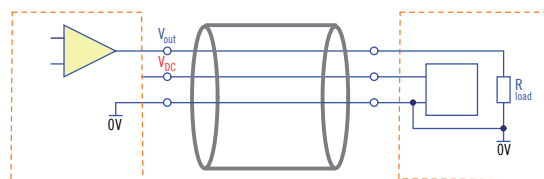
3 wire sink



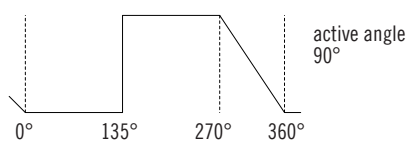
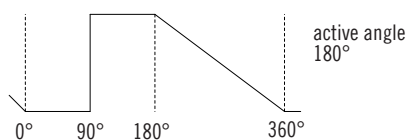
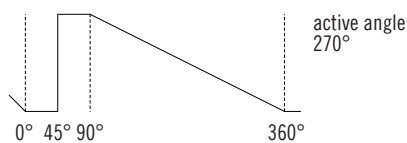
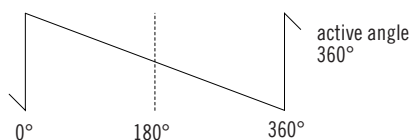
4 wire sink



Voltage output



SIGNAL PATTERN (decreasing CW)



ELECTRICAL SPECIFICATIONS

Resolution	12 bits per revolution
Output update frequency	100 kHz
Active angle	90 ... 360 mechanical degrees
Power supply	12/28 = 11,4 ... 29,4 V DC (reverse polarity protection)
Current consumption without load	40 mA max
Output type	voltage (0 ... 5 V / 0 ... 10 V) current (0 ... 20 mA / 4 ... 20 mA)
Auxiliary inputs (U/D - Reset)	active high (+Vdc) connect to 0V if not used / Reset tmin 150 ms
Load	Rmin= 1 kΩ (voltage output) Rmax= (V _{DC} - 2) / 0.02 (current output)
Linearity error	< 1%
Signal pattern	decreasing clockwise (shaft view)
Start-up time	150 ms
Electromagnetic compatibility	IEC 61000-6-2 IEC 61000-6-4

MECHANICAL SPECIFICATIONS

Bore diameter	∅ 6* / 8* / 9,52* (3/8") / 10* / 12* / 14 / 15 mm
Enclosure rating	X = IP 65 (IEC 60529) S = IP 67 (IEC 60529)
Max rotation speed	3000 rpm
Max shaft load	30 N axial / 50 N radial
Shock	50 G, 11 ms (IEC 60068-2-27)
Vibration	20 G, 10 ... 2000 Hz (IEC 60068-2-6)
Moment of inertia	4 x 10 ⁻⁶ kgm ²
Starting torque (at +20°C / +68°F)	< 0,03 Nm
Body material	EN-AW 2011 aluminum
Shaft material	1.4305 / AISI 303 stainless steel
Housing material	EN-AW 2011 aluminum
Bearings	2 ball bearings
Bearings life	10 ⁹ revolutions
Operating temperature	-25° ... +85°C (-13° ... +185°F)
Storage temperature	-25° ... +85°C (-13° ... +185°F)
Pinning torque for collar clamping	1,5 Nm recommended
Weight	200 g (7,05 oz)

* with supplied adapter shaft

CONNECTIONS

Function	Cable output (voltage)	Cable output (current)	5 pin M12 connector	8 pin M12 connector*
+ Vdc	red	red	2	8
0 Volt	black	black	4	5
V _{out}	green	/	3	/
I _{in}	/	yellow	3	3
I _{out}	/	green	/	2
U / D	blue	blue	5	7
RESET	white	white	1	1
⊖	shield	shield	housing	housing

* with Q current output

M12 connector (5 pin)
M12 A coded
solder side view FV



M12 connector (8 pin)
M12 A coded
solder side view FV

