



EML 50 F / G ANALOGUE

BLIND HOLLOW SHAFT MAGNETIC SINGLETURN ABSOLUTE ENCODER

Specifications

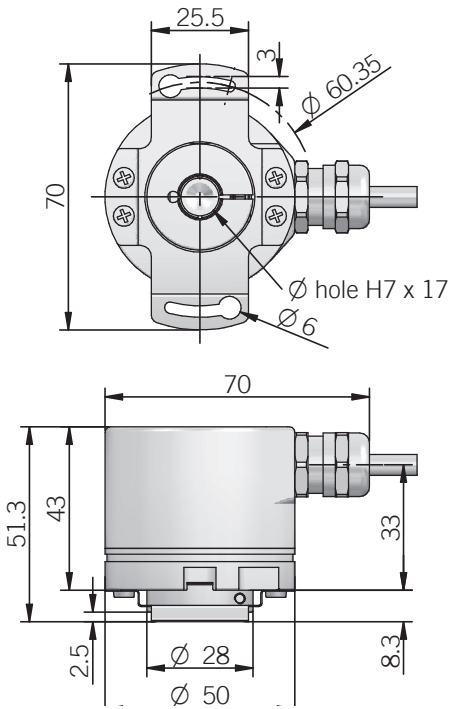
Singleturn absolute magnetic encoder size 50 mm with blind hollow shaft

- Resolution 12 bit
- Power supply up to +28 VDC with analogue (voltage or current) as electronic interface
- Code reset for easy setup
- Cable or M12 output, other connectors available on cable end
- Sturdy construction (separated chambers)
- Blind hollow shaft diameter up to 15 mm
- IP 67 enclosure rating

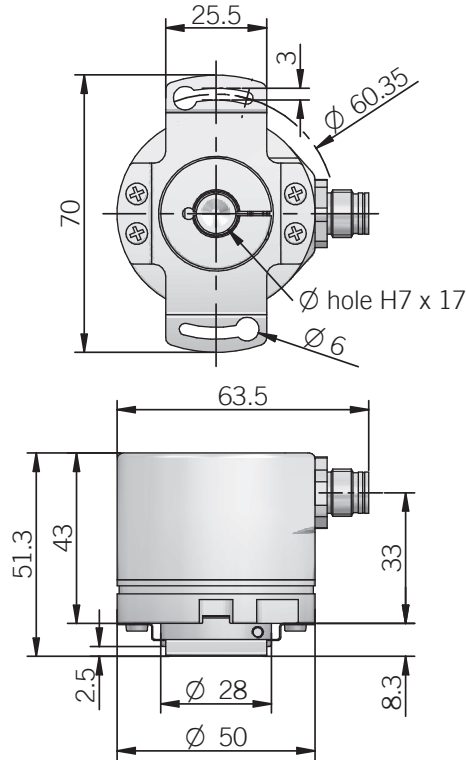


ORDERING CODE	EML	50F	360	X	12/28	V	05	X	6	X	3	P	R	.XXX
SERIES analogue magnetic singleturn absolute encoder EML														
MODEL blind hollow shaft with stator coupling 50F blind hollow shaft with anti-rotation pin 50G														
ACTIVE ANGLE degrees 360 degrees 270 degrees 180 degrees 90														
OPTION to be reported if not used X reset ZE														
POWER SUPPLY 12 ... 28 V DC 12/28														
ELECTRONIC INTERFACE voltage V current I														
OUTPUT RANGE 0 ... 5 V 05 0 ... 10 V 010 0 ... 20 mA 020 4 ... 20 mA 420														
OPTIONS to be reported with voltage output / 3 wires current output X 4 wires current output Q														
BORE DIAMETER mm 6 mm 8 9,52 (3/8") mm 9 mm 10 mm 12 mm 14 mm 15														
ENCLOSURE RATING IP 65 X IP 67 S														
MAX ROTATION SPEED 3000 rpm 3														
OUTPUT TYPE cable (standard length 0,5 m) P M12 connector M12 <i>female connector included, without female please add 162 as variant code</i>														
DIRECTION TYPE axial A radial R														
VARIANT custom version XXX														

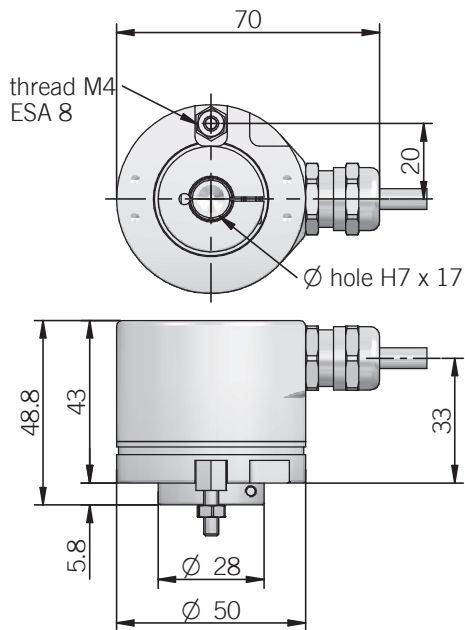
EML 50 F
radial cable



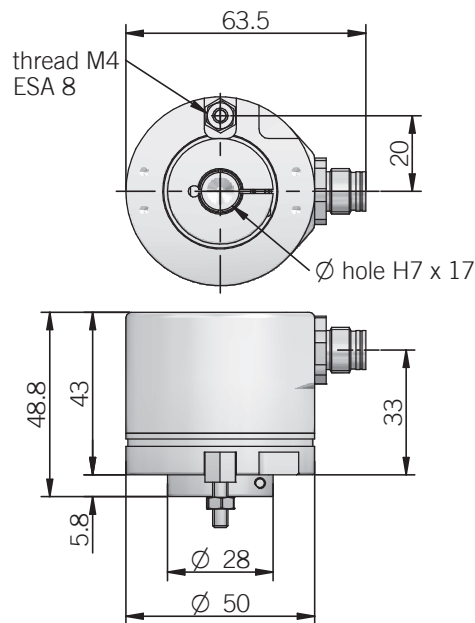
EMA 50 F
radial M12



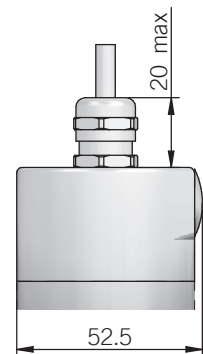
EML 50 G
radial cable



EMA 50 G
radial M12

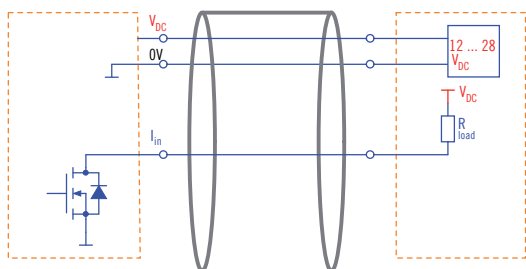


Axial output

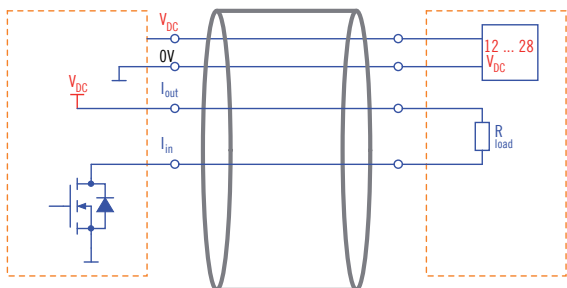
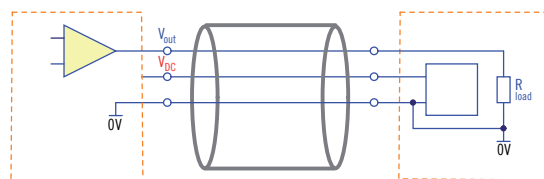
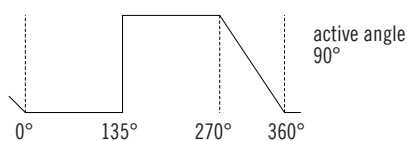
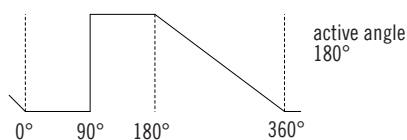
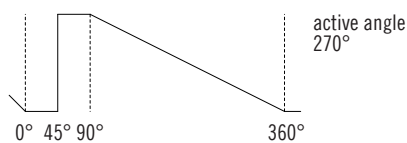
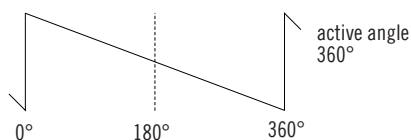


ELECTRICAL INTERFACE
Current output

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

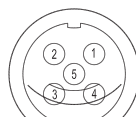
Bore diameter	∅ 6* / 8* / 9,52* (3/8") / 10* / 12* / 14 / 15 mm
Enclosure rating	X = IP 65 (IEC 60529) S = IP 67 (IEC 60529)
Max rotation speed	3000 rpm
Max shaft load	30 N axial / 50 N radial
Shock	50 G, 11 ms (IEC 60068-2-27)
Vibration	20 G, 10 ... 2000 Hz (IEC 60068-2-6)
Moment of inertia	4 x 10 ⁻⁶ 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
Vout	green	/	3	/
Iin	/	yellow	3	3
Iout	/	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
