

MAIN FEATURES

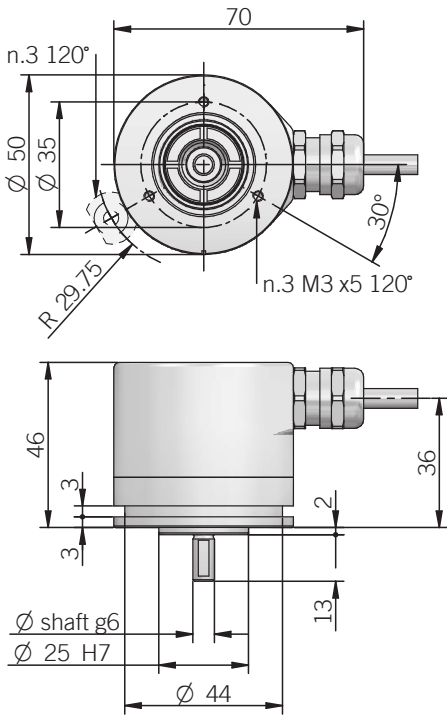
Singleturn absolute magnetic encoder size 50 mm with solid shaft

- Resolution 12 bit
- Power supply up to +28 V DC with analogue (voltage or current) as electrical interface
- Code reset for easy setup
- Cable or M12 output, other connector available on cable end
- Sturdy construction (separated chambers)
- Solid shaft diameter up to 10 mm
- IP 67 enclosure rating
- Mounting by synchronous flange

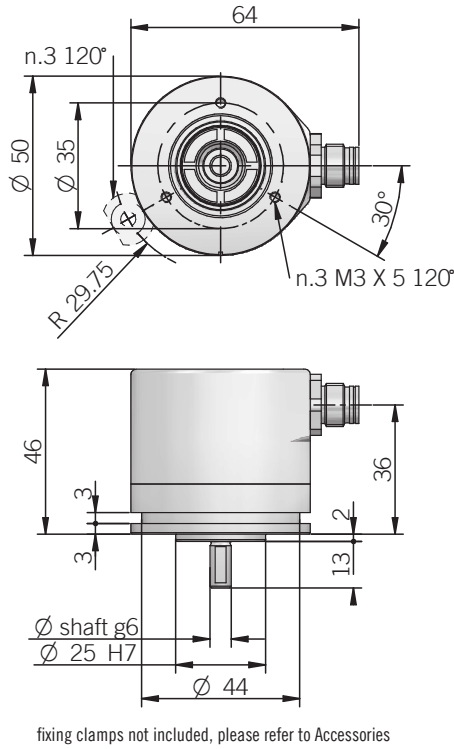


ORDERING CODE	EML	50A	360	X	12/28	V	05	X	6	X	3	P	R	.XXX
<p>SERIES analogue magnetic singleturn absolute encoder EML</p> <p>MODEL synchronous flange ø 25 mm 50A synchronous flange ø 30 mm 50B for anodized version please directly contact our offices</p> <p>ACTIVE ANGLE degrees 360 degrees 270 degrees 180 degrees 90</p> <p>OPTION to be reported if not used X reset ZE</p> <p>POWER SUPPLY 12 ... 28 V DC 12/28</p> <p>ELECTRICAL INTERFACE voltage V current I</p> <p>OUTPUT RANGE 0 ... 5 V 05 0 ... 10 V 010 0 ... 20 mA 020 4 ... 20 mA 420</p> <p>OPTIONS to be reported with voltage output / 3 wires current output X 4 wires current output Q</p> <p>SHAFT DIAMETER mm 6 mm 8 (3/8") 9,52 mm 9 mm 10</p> <p>ENCLOSURE RATING IP 65 X IP 67 S</p> <p>MAX ROTATION SPEED 3000 rpm 3</p> <p>OUTPUT TYPE cable (standard length 0,5 m) P M12 connector M12 female connector included, without female please add 162 as variant code</p> <p>DIRECTION TYPE axial A radial R</p> <p>VARIANT custom version XXX</p>														

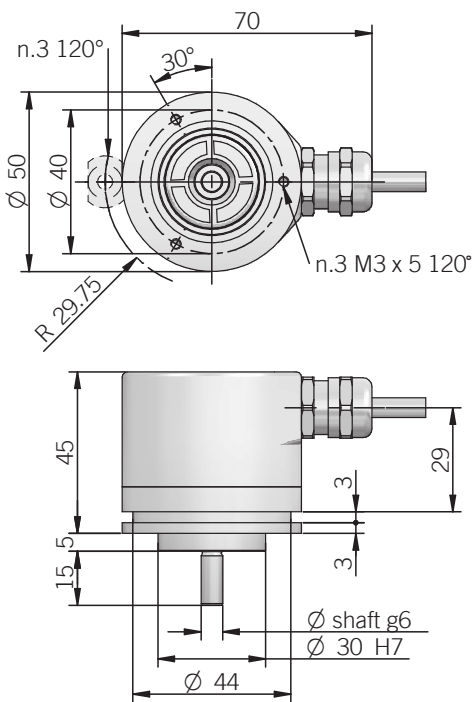
50 A
radial cable output



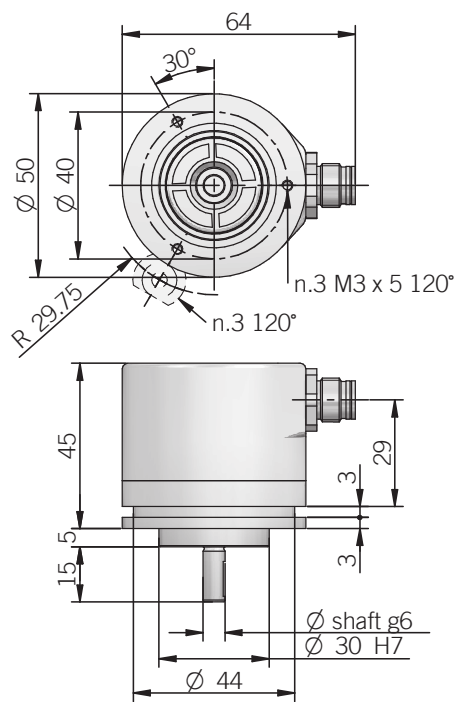
50 A
radial M12 output



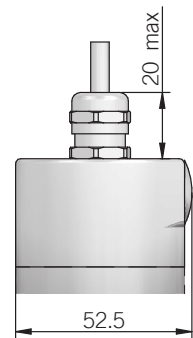
50 B
radial cable output



50 B
radial M12 output



Axial output



fixing clamps not included, please refer to Accessories

fixing clamps not included, please refer to Accessories

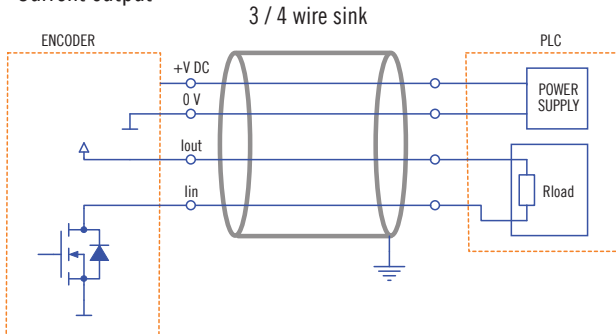
dimensions in mm

ELECTRICAL SPECIFICATIONS	
Resolution	12 bit
Output DAC resolution	12 bit
Active angle	90 ... 360 mechanical degrees
Power supply ¹	11,4 ... 29,4 V DC (reverse polarity protection)
Current consumption without load	40 mA max
Electrical interface ²	voltage (0 ... 5 V / 0 ... 10 V) current (0 ... 20 mA / 4 ... 20 mA)
Auxiliary inputs (U/D - RESET)	active high (+V DC) connect to 0 V if not used / RESET tmin 150 ms
Load	R _{min} = 1 kΩ (voltage output) R _{max} = (V DC - 2) / 0.02 (current output)
Output update frequency	100 kHz
Signal pattern	decreasing clockwise (shaft view)
Start-up time	150 ms
Linearity error	< 1 %
Electromagnetic compatibility	according to 2014/30/EU directive
RoHS	according to 2015/863/EU directive
UL / CSA	certificate n. E212495

¹ as measured at the transducer without cable influences
² for further details refer to OUTPUT LEVELS on TECHNICAL BASICS section
³ maximum load for static usage
⁴ measured on the transducer flange
⁵ condensation not allowed

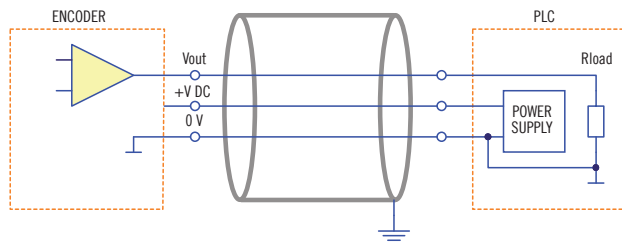
ELECTRICAL INTERFACE

Current output



with 3 wires interface I_{out} is internally connected to +V DC
 where $R_{LOAD\ max} = (V_{DC} - 2) / 0.02$

Voltage output



where $R_{LOAD\ min} = 1\ k\Omega$

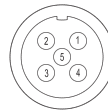
MECHANICAL SPECIFICATIONS	
Shaft diameter	∅ 6 / 8 / 9,52 (3/8") / 10 mm
Enclosure rating	X = IP 65 (IEC 60529) S = IP 67 (IEC 60529)
Max rotation speed	3000 rpm continuous / 5000 rpm peak
Max shaft load ³	30 N axial / 50 N radial
Shock	50 G, 11 ms (IEC 60068-2-27)
Vibration	20 G, 10 ... 2000 Hz (IEC 60068-2-6)
Moment of inertia	0,5 x 10 ⁻⁶ kgm ² (12 x 10 ⁻⁶ lbfm ²)
Starting torque (at +20°C / +68°F)	< 0,03 Nm (4,25 Ozin)
Bearing stage material	EN-AW 2011 aluminum
Shaft material	1.4305 / AISI 303 stainless steel
Housing material	EN-AW 2011 aluminum
Bearings	n.2 ball bearings
Bearings life	10 ⁹ revolutions
Operating temperature ^{4, 5}	-25° ... +85°C (-13° ... +185°F)
Storage temperature ⁵	-25° ... +85°C (-13° ... +185°F)
Weight	200 g (7,05 oz)

CONNECTIONS

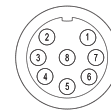
Function	Cable (voltage)	Cable (current)	5 pin M12	8 pin M12*
+ V DC	red	red	2	8
0 V	black	black	4	5
V _{out}	green	/	3	/
I _{in}	/	yellow	3	3
I _{out}	/	green	/	2
U / D	blue	blue	5	7
RESET	white	white	1	1
⊥	shield	shield	housing	housing

* 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



SIGNAL PATTERN (decreasing CW)

