

BLIND HOLLOW SHAFT MAGNETIC MULTITURN ABSOLUTE ENCODER

MAIN FEATURES

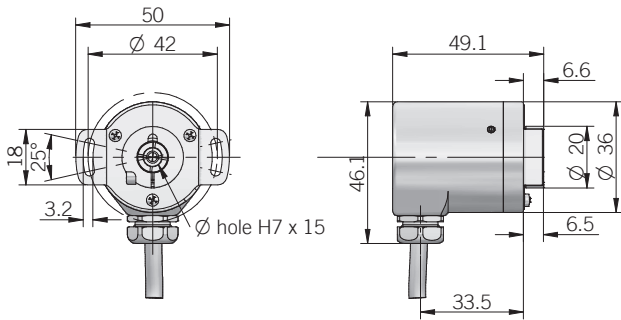
Miniaturized multiturn absolute encoder for limited size applications.

- Magnetic sensor technology without contact (Magnetic ASIC + Energy Harvesting)
- Sturdy construction thanks to separated chambers
- Up to 51 bit as total resolution (12 bit single turn + 39 bit multiturn)
- Power supply up to +30 V DC with SSI as electrical interface
- Code reset for easy setup
- Cable output, connector available on cable end
- 6 mm diameter blind hollow shaft
- Mounting by stator coupling or torque pin



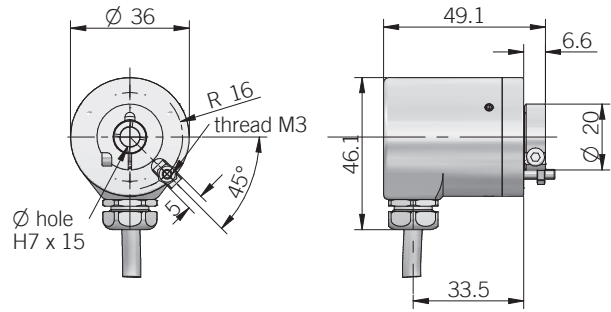
ORDERING CODE	EAM	36F	13 / 12	G	8/30	S	P	X	6	X	8	P	.XXX
SERIES magnetic multiturn absolute encoder series EAM													
MODEL blind hollow shaft with stator coupling 36F blind hollow shaft with torque pin 36G													
MULTITURN RESOLUTION turns from 1 to 39 bit													
SINGLETURN RESOLUTION from 1 to 12 bit													
CODE TYPE binary B gray G													
POWER SUPPLY 5 V DC 5 8 ... 30 V DC 8/30													
ELECTRICAL INTERFACE Serial Synchronous Interface - SSI S													
LOGIC positive P													
OPTIONS to be reported if not used X reset ZE													
BORE DIAMETER mm 6													
ENCLOSURE RATING IP 67 cover side / IP 65 shaft side X													
MAX ROTATION SPEED 8000 rpm 8													
OUTPUT TYPE radial cable (standard length 0,5 m) PR													
VARIANT custom version XXX													

36 F



dimensions in mm

36 G



torque pin is included in model G, for mounting instruction please refer to product installation notes

ELECTRICAL SPECIFICATIONS	
Multiturn resolution	turns from 1 to 39 bit
Singleturn resolution	ppr from 1 to 12 bit
Power supply	5 = 4,75 ... 5,25 V DC 8/30 = 7,6 ... 30 V DC (reverse polarity protection)
Power draw without load	< 400 mW
Output type*	RS-422 (SN65LBC179Q or equivalent)
Code type	binary or gray
Auxiliary inputs (U/D - Reset)	active high (+V DC) connect to 0 V if not used / Reset t_{min} 150 ms
Clock frequency	100 kHz ... 1 MHz
SSI monostable time (Tm)	20 μ s
SSI pause time (Tp)	> 35 μ s
SSI frame	Tree format (MSB ... LSB) up to 12 bit multiturn = length 25 bit (12MT + 12ST+'0') 13 to 14 bit multiturn = length 27 bit (14MT + 12ST + '0') 15 to 19 bit multiturn = length 32 bit (19MT + 12ST + '0')
Accuracy	$\pm 0,35^\circ$ typical
Counting direction	decreasing clockwise (shaft view)
Start-up time	150 ms
Electromagnetic compatibility	according to 2014/30/EU directive
RoHS	according to 2011/65/EU directive
UL / CSA	certificate n. E212495

* for further details please see OUTPUT LEVELS under TECHNICAL BASICS section

CONNECTIONS	
Function	Cable
+ V DC	red
0 V	black
data +	green
data -	brown
clock +	yellow
clock -	orange
U / D	red / blue
RESET	white
\perp	shield

MECHANICAL SPECIFICATIONS	
Bore diameter	$\varnothing 6$ mm
Enclosure rating	IP 67 cover side / IP 65 shaft side (IEC 60529)
Rotation speed	8000 rpm continuous / 10000 rpm max
Max shaft load	20 N axial / radial
Shock	50 G, 11 ms (IEC 60068-2-27)
Vibration	20 G, 10 ... 2000 Hz (IEC 60068-2-6)
Moment of inertia	0,001 x 10 ⁻⁶ kgm ² (0,02 x 10 ⁻⁶ lbf ²)
Starting torque (at +20°C / +68°F)	< 0,01 Nm (1,42 Ozin)
Shaft material	1.4305 / AISI 303 stainless steel
Housing material	AISI 420 stainless steel
Bearing stage material	EN-AW 2011 aluminium
Bearings	2 ball bearings
Bearings life	10 ⁹ revolutions
Operating temperature	-20° ... +85°C (-4° ... +185°F)
Storage temperature	-20° ... +85°C (-4° ... +185°F)
Fixing torque for collar clamping	0,6 Nm (85 Ozin) recommended
Weight	150 g (5,29 oz)

