EAX 80 A / D
SSI

EXPLOSION PROOF ATEX SINGLETURN ABSOLUTE ENCODER

MAIN FEATURES

Explosion proof encoder for applications within explosive and hazardous areas.

- Optical sensor technology (OptoASIC)
- Resolution up to 13 bit (8192 ppr)
- Power supply up +28 V DC with SSI as electrical interface
- Code reset for easy setup
- 10mm solid shaft diameter
- Cable output
- Mounting by syncronous or centering square flange

EX CLASSIFICATION

It has been assured with EC-TYPE Examination Certifcate CESI 04 ATEX 082 that the EAX 80 comply with essential health and safety requirements according to

- EN 60079-0:2012+A11:2013
- EN 60079-1:2007
- EN 60079-31:2014

Declaration of conformity and CE declaration are available for download from Eltra website www.eltra.it

ORDERING CODE

EAX	80A	256	G	8/28	S	X	X	10	X	3	PR	. XXX

SERIES
singleturn absolute flameproof encoder EAX

MODEL
synchronous flange ø 40 mm 80A
centering square flange ø 40 mm 80D

RESOLUTION
ppr 360 / 720 / 1440 / 2880 / 3600 / 4096 / 8192
please directly contact our offices for other pulses

CODE TYPE
binary B
gray G
(no powers of 2) binary offset code (0-XXX) BC
(no powers of 2) gray offset code (0-XXX) GC

POWER SUPPLY
8 ... 28 V DC 8/28

ELECTRICAL INTERFACE
Serial Synchronous Interface - SSI S

LOGIC
to be reported X

OPTIONS
to be reported if not used X
reset ZE

SHAFT DIAMETER
mm 10

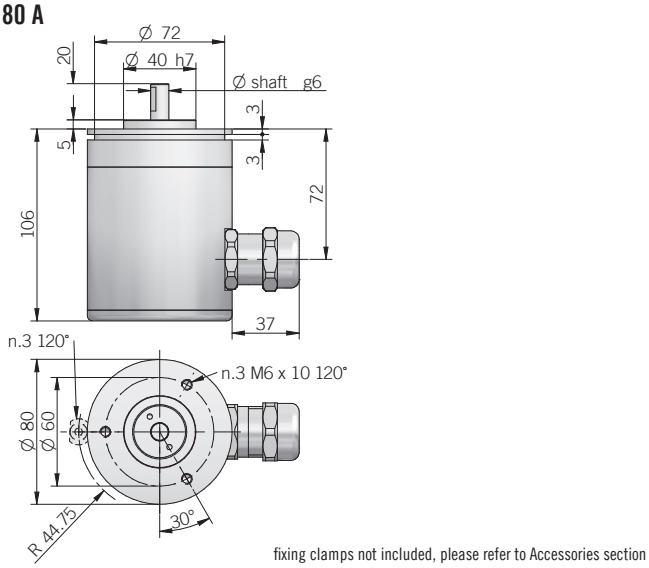
ENCLOSURE RATING
IP 65 X

MAX ROTATION SPEED
3000 rpm 3

OUTPUT TYPE
radial cable (standard length 1,5 m) PR

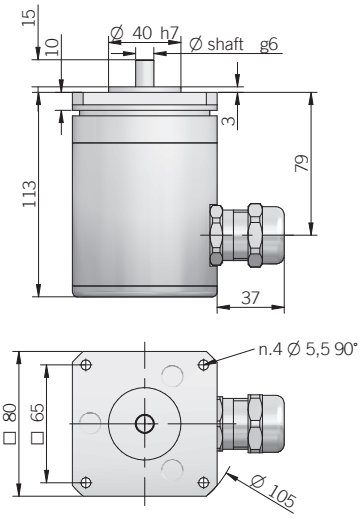
VARIANT
custom version XXX

80 A



fixing clamps not included, please refer to Accessories section

80 D



dimensions in mm

ELECTRICAL SPECIFICATIONS

Resolution	from 360 to 8192 ppr
Power supply	7,6 ... 29,4 V DC
Current consumption without load	100 mA
Output type*	RS-422 (LTC1690 or equivalent)
Auxiliary inputs (U/D - Reset)	active high (+V DC) connect to 0 V if not used / Reset tmin 150 ms
Clock frequency	100 kHz ... 1 MHz
SSI monostable time (Tm)	18 µs
SSI pause time (Tp)	> 35 µs
SSI frame	(MSB ... LSB) 13 bit data length
Accuracy	± 1/2 LSB
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

MECHANICAL SPECIFICATIONS

Shaft diameter	ø 10 mm
Enclosure rating	IP 65 (IEC 60529)
Max rotation speed	3000 rpm
Max shaft load	200 N axial / radial
Shock	50 G, 11 ms (IEC 60068-2-27)
Vibration	10 G, 10 ... 2000 Hz (IEC 60068-2-6)
Moment of inertia	1,5 x 10^{-6} kgm² (36 x 10^{-6} lbft²)
Starting torque (at +20°C / +68°F)	< 0,03 Nm (4,25 Ozin)
Bearing stage material	anodized aluminum
Shaft material	1.4305 / AISI 303 stainless steel
Housing material	anodized aluminum
Bearings	2 ball bearings
Bearings life	10^9 revolutions
Operating temperature	0° ... +50°C (+32° ... +122°F)
Storage temperature	-15° ... +70°C (+5° ... +158°F)
Weight	1200 g (42,33 oz)

CONNECTIONS

Function	Cable
+ V DC	red
0 V	grey
data +	green
data -	brown
clock +	yellow
clock -	pink
U / D	blue
RESET	white
⏚	shield

ATEX MARKING

II 2GD
Ex d IIC T6 Gb
Ex tb IIIC T85°C Db
IP 65

II 2GD

II: group II: different than mines
2: category 2: high level of protection
GD: areas containing gas (G) and dust (D)

Ex d IIC T6 Gb

Ex d: flameproof enclosure for explosive atmospheres with gases, vapours and mists
IIC: group of gas IIC
T6: max surface temperature +85°C of the device for atmospheres with gas
Gb: product with a high level of protection

Ex tb IIIC T85°C Db

Ex tb: flameproof enclosure safety type
IIIC: group of dust combustibles IIIC
T85°C: max surface temperature +85°C of the device in the presence of dust
Db: product with a high level of protection