

## EX 80 A / D

### EXPLOSION PROOF ATEX INCREMENTAL ENCODER



#### SPECIFICATIONS

Explosion proof encoder for applications within explosive and hazardous areas.

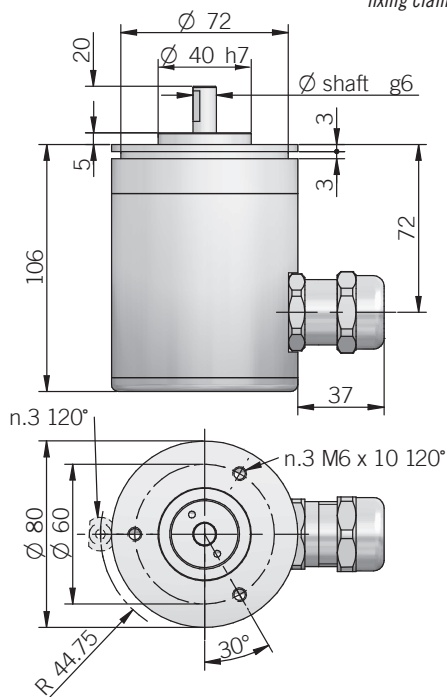
- 3 channel encoder (A / B / Z) up to 10000 ppr
- Power supply up to +28 VDC with several electronic interfaces available
- Up to 500 kHz output frequency
- 10 mm solid shaft diameter
- Mounting by synchronous or centering square flange

#### EX CLASSIFICATION

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

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

ORDERING CODE	EX	80A	500	S	5/28	N	10	X	3	PR	.XXX
<b>SERIES</b> explosion proof encoder series EX											
<b>MODEL</b> synchronous flange ø 40 mm 80A centering square flange ø 40 mm 80D											
<b>RESOLUTION</b> ppr from 100 to 10000 <i>see table for pulses availability</i>											
<b>ZERO PULSE</b> without zero pulse S with zero pulse Z											
<b>POWER SUPPLY</b> (with L electronic interface) 5 V DC 5 (with L or PC electronic interface) 8 ... 24 V DC 8/24 5 ... 28 V DC 5/28											
<b>ELECTRONIC INTERFACE</b> NPN N NPN open collector C push-pull P push-pull protected (AEIC-7272) PC line driver L power supply 5/28V - output RS-422 RS											
<b>SHAFT DIAMETER</b> mm 10											
<b>ENCLOSURE RATING</b> IP 65 X											
<b>MAX ROTATION SPEED</b> 3000 rpm 3											
<b>OUTPUT TYPE</b> radial cable (standard length 1,5 m) PR											
<b>VARIANT</b> custom version XXX											

**EX 80 A**
*fixing clamps not included*

*dimensions in mm*
**ELECTRICAL SPECIFICATIONS**

<b>Resolution</b>	from 100 to 10000 ppr
<b>Power supply</b>	5 = 4,5 ... 5,5 V DC 5/28 = 4,75 ... 29,4 V DC 8/24 = 7,6 ... 25,2 V DC (reverse polarity protection)
<b>Current consumption without load</b>	80 mA max
<b>Max load current</b>	N / C / P / PC = 50 mA / channel L / RS = 20 mA / channel
<b>Output type*</b>	NPN / NPN open collector / push-pull / line driver
<b>Max output frequency</b>	250 kHz up to 6000 ppr 500 kHz from 7200 ppr
<b>Counting direction</b>	A leads B clockwise (shaft view)
<b>Electromagnetic compatibility</b>	IEC 61000-6-1 IEC 61000-6-3

*\*output levels according to power supply, for further details please see under Technical basics*
**ATEX MARKING**

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

**II 2GD**

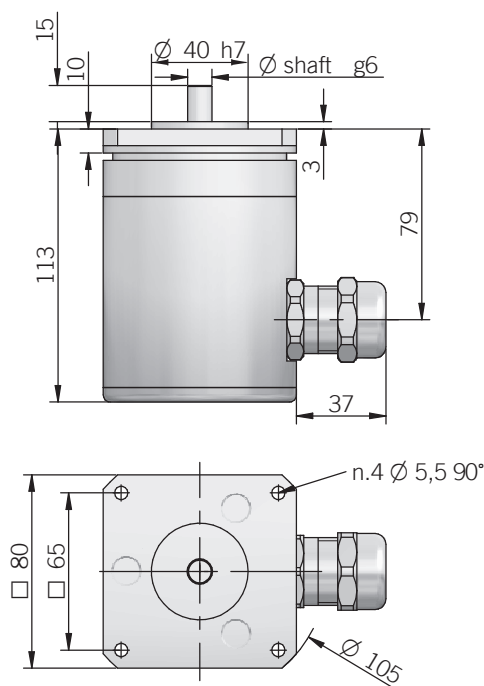
II: group II: different than mines  
 2: category 2: high level of protection  
 GD: areas containing gas (G) and dust (D)

**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

**EX 80 D**

**MECHANICAL SPECIFICATIONS**

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

**CONNECTIONS**

Function	Cable output N / C / P / PC	Cable output Line driver
+V DC	brown	brown
0 V	gray	gray
Ch. A	green	green
Ch. A-	/	red
Ch. B	yellow	yellow
Ch. B-	/	pink
Ch. Z	white	blue
Ch. Z-	/	white
⊥	shield	shield

**RESOLUTIONS**

**100 - 200 - 360 - 400 - 500 - 1000 - 1024 - 1440 - 2000 - 2048 - 2500 - 3000 - 3600 - 4000 - 4096 - 5000 - 6000 - 7200 - 8000 - 8192 - 9000 - 10000**

*please directly contact our offices for other pulses, preferred resolutions in bold*