



MAIN FEATURES

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 V DC with several electrical interfaces available
- · Up to 500 kHz output frequency
- · 10 mm solid shaft diameter
- · Mounting by syncronous 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 60079-1:2014
- · EN 60079-31:2014

The UE declaration is available on www.eltra.it





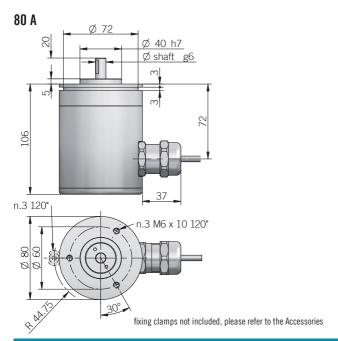






ORDERING CODE	EX	80A	500	S	5/28	P	10	Х	3	PR	. XXX
	SERIES										
	explosion proof encoder series EX										
	ouneranous flance d AC	MODEL									
	syncronous flange ø 40 centering square flange ø 40	mm 80D									
		RES	OLUTION								
		from 100 e available									
	reier to th	e available		RO PULSE							
		V	vithout zer	o pulse S							
			with zer	o pulse Z	R SUPPLY						
		(wit	h L electrica	al interface)	5 V DC 5						
					DC 5/28						
						ollector C					
					pι	ısh-pull P					
			power sup	ply 5/28V -		e driver L S-422 RS					
				. ,	·		IAMETER				
							mm 10				
							ENCLOSUR	IP 65 X			
							MA	X ROTATIO			
								30	00 rpm 3	PUT TYPE	
							radial c	able (stand			
			prefe	rred cable le	engths 2 / 3	3 / 5 / 10 m,		after OUTP		g. PR5)	
											VARIANT

custom version XXX



ELECTRICAL SPECIFICATIONS				
Resolution	from 100 to 10000 ppr			
Power supply ¹	$5 = 4.5 \dots 5.5 \text{ V DC}$ $5/28 = 4.5 \dots 30 \text{ V DC}$ (reverse polarity protection)			
Current consumption without load	80 mA max			
Max load current	C / P = 50 mA / channel L / RS = 20 mA / channel			
Electrical interface ²	NPN open collector (AEIC-7273, pull-up max +30 V DC) push-pull / line driver HTL (AEIC-7272) line driver RS-422 (AELT-5000 or equivalent)			
Max output frequency	250 kHz up to 6000 ppr 500 kHz from 7200 ppr			
Counting direction	A leads B clockwise (shaft view)			
Electromagnetic compatibility	according to 2014/30/EU directive			
RoHS	according to 2015/863/EU directive			
UL / CSA	certificate n. E212495			

- $^{\rm 1}\,\text{as}$ 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

EPL 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 mistsIIC: group of gas IIC

T6: max surface temperature +85°C of the device for atmospheres with gas

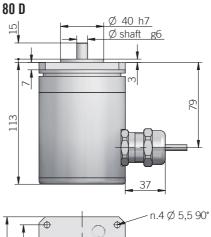
Gb: product with a high level of protection **Ex tb IIIC T85°C Db**

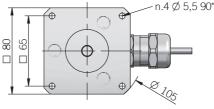
Ex tb: flameproof enclosure safety type

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





dimensions in mm

MECHANICAL SPECIFICATIONS			
Shaft diameter	Shaft diameter ø 10 mm		
Enclosure rating	IP 65 (IEC 60529)		
Max rotation speed	3000 rpm		
Max shaft load ³	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 kgm ² (36 x 10 ⁻⁶ lbft ²)		
Starting torque (at +20°C / +68°F)	< 0,06 Nm (8,50 Ozin)		
Bearing stage material	anodized aluminum		
Shaft material	1.4305 / AISI 303 stainless steel		
Housing material	anodized aluminum		
Bearings	n.2 ball bearings		
Bearings life	10° revolutions		
Operating temperature ^{4, 5}	-20° +50°C (-4° +122°F)		
Storage temperature ⁵	-20° +70°C (-4° +158°F)		
Weight	1200 g (42,33 oz)		

CONNECTIONS		
Function	Cable C / P	Cable L / RS
+V DC	brown	brown
0 V	gray	gray
A+	green	green
A-	/	red
B+	yellow	yellow
В-	/	pink
Z+	white	blue
Z-	1	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



