

INCREMENTAL  
ENCODER

**0Q80EXS**

EXPLOSION-PROOF ENCODER, CERTIFIED BY ISSeP, ATEX Ex d II C T6/T5,  
ACCORDING TO CENELEC RULES. 'SIZE 25' SQUARE FLANGE. FIT TO BE USED  
ON WORKING ENVIRONMENTS WITH EXPLOSIVE ATMOSPHERE (EXCEPT GRISU).

ATEX  
(DIRECTIVE 94/9/EC)

CE  $\text{Ex}$  II 2 G D

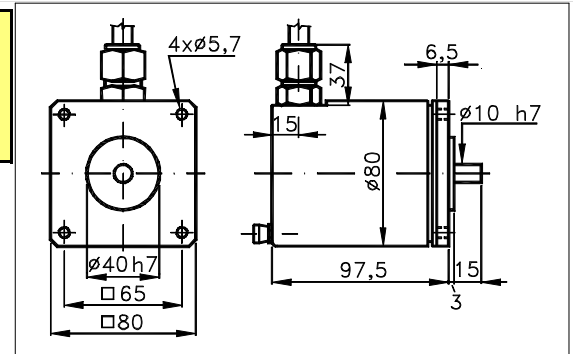
Sized draw standard version: CV1 R Measures without tolerance according to UNI ISO 2768-mk



CE  $\text{Ex}$  II 2 G Ex d IIC T6  
D Ex tD A21 IP6X T85°C

CE  $\text{Ex}$  II 2 G Ex d IIC T5  
D Ex tD A21 IP6X T100°C

**GAS "G"  
and  
DUST "D"**



**Ex** Encoder built with certification ATEX explosion-proof rules, according to armonized standards EN60079-0/EN60079-1/EN61241-0/EN61241-1. Certified by ISSeP ISSeP07ATEX018X and notified by CESI CESI02ATEX138Q. Special conditions for safe use: symbol X.  
The apparatus is fitted with a cable suitable with temperature of 100°C minimum permanently connected to it; an appropriate connection of the free end of the cable shall be foreseen. The quality of the assembly screws shall be 8.8 at least.

Ex : It means that manufacturing is done in accordance with one or more Cenelec security Standards.  
d/tD: It means explosion-proof case.  
A21 : Zone 21, practice A.  
II : Built for use in potentially explosive working environments, except for mines with grisul'.

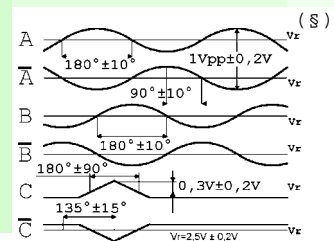
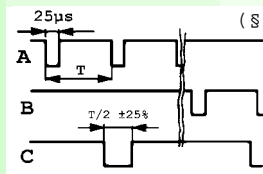
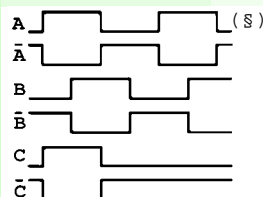
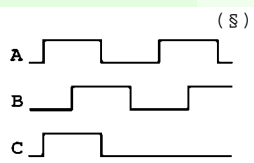
C : Maximum security (MESG) experimental gap type.  
IP6X: Degree of protection (IP code).  
T5 : Maximum temperature of the case surface: 100°C.  
T6 : Maximum temperature of the case surface: 85°C (standard).

**TECHNICAL FEATURES AND POSSIBLE CONFIGURATIONS**

- Base.....: ANODIZED ALUMINIUM (\*)
  - Cover.....: ANODIZED ALUMINIUM (\*)
  - Weight.....: 1300 g
  - Shaft.....: ø 10 STAINLESS STEEL (\*)
  - Max.rad/axial load.: 10 kg
  - IP output side.(°)..: see 'CONNECTIONS' of page 2
  - IP shaft side..(°)..: std. 65 sealed 66 low torq. -  
opt. type (page 2): standard Z
  - Contin. max RPM(\*\*): 6000 3000 -
  - Starting torque gcm: 18 50 -
  - Ball bearings life....: 1,5 x 10<sup>9</sup> revolutions
  - Impact resistance....: 50 G x 11ms
  - Vibration resistance..: 12 G (10 ÷ 2000 Hz)
  - Power supply.....: 5÷30V (see page 2)
  - Ambient temperature..: (T5)-20÷60°C, (T6)-20÷40°C
  - Operating temperature: 0 ÷ 70 °C (\*)
  - Storage temperature..: -30 ÷ 85 °C
  - N° of pulses/rev.....: 1 ÷ 10000
  - Max frequency.....: 100 kHz (300 option)
  - Max consumption mA....: std 120 line driver 180 (\*)
  - Light source.....: LED with >= 100000 h life
- (°) IP according to CEI EN 60529, EN 60529, IEC 529  
(\*) custom options  
(\*\*) intermittent max RPM + 30% of continuous max RPM

**ELECTRONICS**

CODE	DESCRIPTION	mA	CODE	DESCRIPTION	mA	CODE	DESCRIPTION	mA	CODE	DESCRIPTION	mA
	STANDARD NPN	10	N	DRIVER 26LS31	30	D	DISCRIMINAT.	70	Y	SINUSOID.1Vpp	10
K	NPN OPEN COLL	10	T	TTL 7404	10						
Q	NPN	70	C	DRIVER 88C30	20						
R	NPN OPEN COLL	70	L	2x PUSH-P.PRO	70						
P	PNP	70	M	2x PUSH-PULL	70						
U	PNP OPEN COLL	70									
B	PUSH-PULL PRO	70									
H	PUSH-PULL	70									



Tolerance between phases ± 25°, symmetry ± 15°

(§) Clock-wise output rotation (see shatf).

POSSIBLE OPTIONS				POSSIBLE CONNECTIONS								
CODE	DESCRIPTION	CODE	DESCRIPTION									
Y	Unbreak. disk (only T6)			CABLE (5)				OUTPUT				
Z	Sealed ball bearing			CV1				AX RAD				
S	160 KHz frequency			CONNECTOR				OUTPUT				
W	300 KHz frequency											
C	Low consumption			CABLE END CONNECTOR (4)				OUTPUT				
K	Invert. phase A,B,Zero.			VM	TM	VL	TL	VD	VH	VH5	VI	AX
J	Zero logic combination			VE	VK	TK	VN	VH6	VM5	VM9	VS	RAD
G	Tropicalization			VD5								
N	Stainless steel cover			TERMINAL BOX				OUTPUT				
X	Custom options											

### ORDERING CODE

MAX °C CLASS (CASE)	STANDARD NPN	CABLE (5)	CONNECTOR	CABLE END CONNECT. (4)
( 5 ) T5/T100°C	( K ) NPN OPEN COLL	IP66		IP65 encoder output
( 6 ) T6/T85°C	( Q ) NPN	( )	( )	(VM ) 7c normal
( )	( R ) NPN OPEN COLL	( CV1 ) 1 m long	( )	(TM ) 7c sealed
( )	( P ) PNP	( )	( )	(VL ) 10c normal
( )	( U ) PNP OPEN COLL	( )	( )	(TL ) 10c sealed
( )	( B ) PUSH-PULL PRO		( )	(VD ) 9c
( )	( H ) PUSH-PULL	TERMINAL BOX	( )	(VH ) 12c anticlock.
( )	( N ) DRIVER 26LS31		( )	(VH5) 12c clock-wise
( )	( T ) TTL 7404		( )	(VI ) 12c crimped
( )	( C ) DRIVER 88C30		( )	(VE ) 5c
( )	( L ) 2x PUSH-P.PRO		( )	(VK ) 17c normal
( )	( M ) 2x PUSH-PULL		( )	(TK ) 17c sealed
( )	( D ) DISCRIMINAT.		( )	(VN ) 12c
( )	( Y ) SINUSOID.1Vpp		( )	(VH6) 12c clock-wise
( )	( X ) SU SPECIFICA		( )	(VM5) 26c
( )			( )	(VM9) 16c
( )			( )	(VS ) 12c
( )			( )	(VD5) 9c screened

OPTIONS	MODEL	PULSES/REVOL. (1)	POWER SUPPLY	VERSION (2)	ELECTRONIC (2)	CONNECTION (3)	OUTPUT
( )	( )	1 ÷ 10000	(Vcc)	(M) Monodirectional	(N)	CV1	AX ( )
( Y )	( )		( 5 ) 5 V ±5%	(B) Bidirectional			RAD (R)
( Z )	( )		( 824 ) 8÷24 V	(BZ) Bidirectional + zero			
( S )	( )		( 1828 ) 18÷28 V	(MZ) Monodirectional + zero			
( W )	( )		( 815 ) 8÷15 V				
( C )	( )		( 12 ) 12 V ±5%				
( K )	( )		( 24 ) 24 V ±5%				
( J )	( )		( 1230 ) 12÷30/12 V				
( G )	( )		( 8245 ) 8÷24/5 V				
( N )	( )		( 1030 ) 10÷30 V				
( )	( )		( 18285 ) 18÷28/5 V				
( X )	( )		( 1530 ) 15÷30/15 V				

Product manufactured according to UNI EN ISO 9001:2000, supplied with CHECKING and CONFORMITY declaration with CE mark and with TWO (2) YEARS WARRANTY starting from delivery date.

NOTE: FOR 88C30 MAX 15 Vdc

- (1) For further information see PULSES/REVOL. data sheet
- (2) For further information see ELECTRONIC data sheet
- (3) For further information see CONNECTION data sheet
- (4) Only outside the area with explosive atmosphere

- (5) The junction has to be made with Ex junction box or outside potentially explosive environments.

ELCIS company has the right to make any changing without previous notice. data sheet . II 101 EB0 page: 11.0Q80EXS 2/2

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