

# ROTACOD

ATEX absolute multi-turn encoder

Series

**XAC77**



- Absolute single & multiturn encoders
- ATEX II 2G Ex d IIC T6 Gb, II 2D Ex tb IIIC T85°C Db certification
- Installation in zones 1, 2, 21 and 22
- Point-to-point Profibus, CANopen, DeviceNet communication
- SSI or Bit parallel output
- Fully programmable analogue output (V/I)



XAC77

## ENVIRONMENTAL SPECIFICATIONS

Shock:	100 g, 6 ms
Vibrations:	10 g, 10-2000 Hz
Protection:	IP65
Environmental temperature max.:	40°C max.
Operating temperature range:	-20°C +40°C (-4°F +104°F)
Storage temperature range:	-20°C +85°C (-4°F +185°F) (98% R.H. without condensation)

## MECHANICAL SPECIFICATIONS

Protection mode:	ATEX II 2G Ex d IIC T6 Gb, II 2D Ex tb IIIC T85°C Db
Dimensions:	see drawing
Shaft diameter:	Ø 14 mm
Shaft loading (axial, radial):	60 N max.
Shaft rotational speed:	6000 rpm max.
Starting torque (at 20°C):	< 5 Ncm
Bearings life:	400x10 <sup>6</sup> rev. min. (10 <sup>9</sup> rev. min. with shaft loading of 20 N max.)
Electrical connections:	cable output 3 m (9.8 ft)
Weight:	~ 1 kg (35,2 oz)
Option:	• additional cable

## ELECTRICAL SPECIFICATIONS

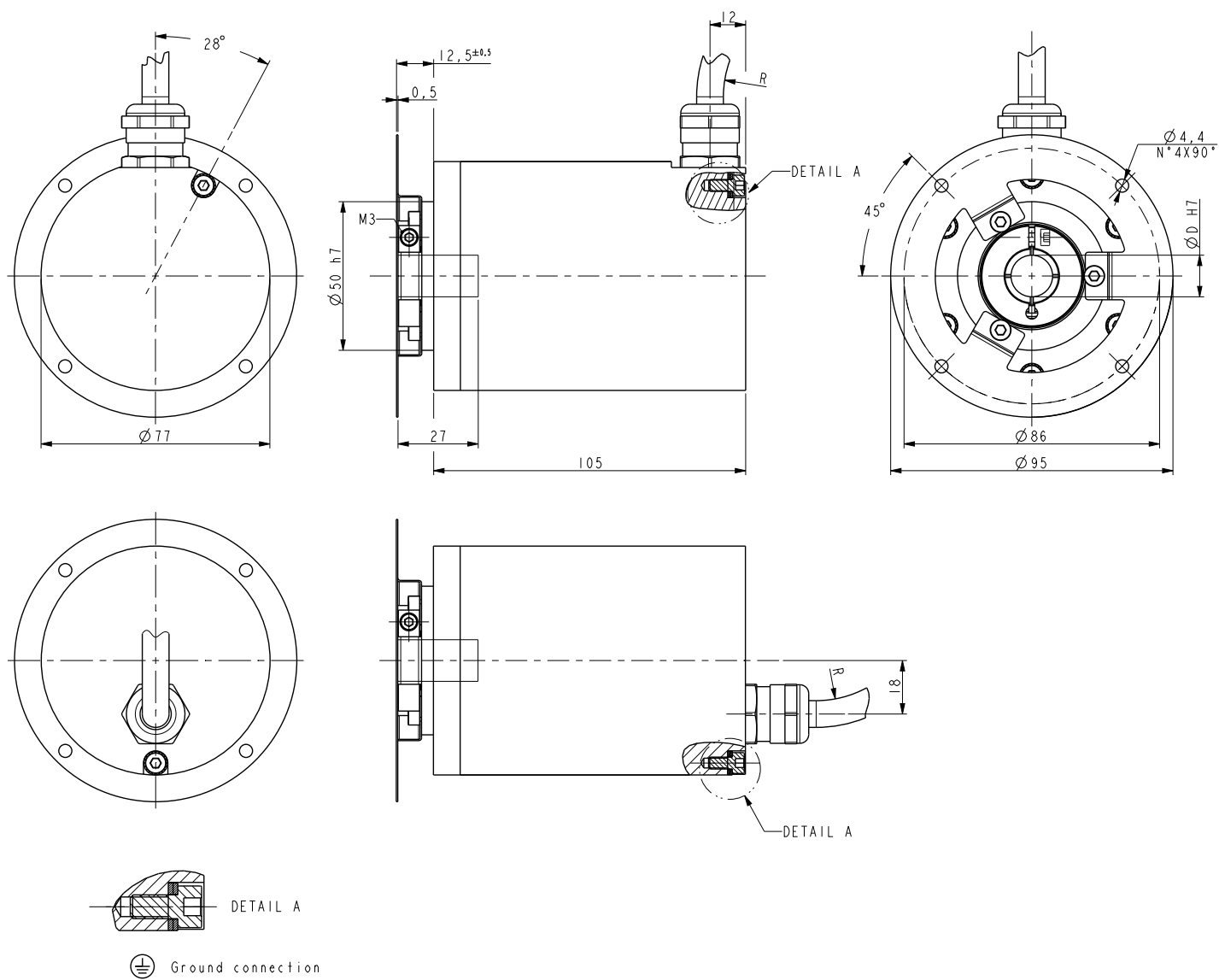
Resolution:	SSI, Bit Parallel: 8192 cpr max. or 8192 cpr x 4096 turns max. Analogue output: 12 bit or 13 x 14 bit Profibus, CANopen, DeviceNet: 262144 cpr or 65536 cpr x 16384 turns
Accuracy:	± 0,04°
Output circuits:	SSI (RS422), Bit Parallel NPN, Push Pull gray or binary coded Profibus-DP, CANopen, DeviceNet 0-5V, 0-10V, -5/+5V, -10/+10V 4-20mA, 0-20mA, 0-24mA
Counting frequency:	> 150 kHz
Power supply:	+10Vdc +30Vdc
Power consumption:	2,2 W max.
Protection:	against inversion of polarity and short circuit
EMC:	electro-magnetic immunity, according to: EN 61000-4-2 EN 61000-4-4
Functions:	• Counting direction (input) • Zero setting / Preset (input) <i>Profibus, CANopen, DeviceNet functions refer to HM58 FB series</i> <i>Analogue functions refer to EM58 PA series</i>
Optoelectronic life:	100.000 hrs min.

## MATERIALS

Flange:	anticorodal, EN AW-6082 (UNI EN 573)
Housing:	anticorodal, EN AW-6082 (UNI EN 573)
Bearings:	ABEC 5
Shaft:	1.4305 (UNI EN 10088-1)

## ACCESSORIES

LKM-1758:	Ø 10 mm solid shaft extension
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XAC77

## Order code - Profibus, CANopen, DeviceNet

XAC77	XX/XXXXX Ⓐ	XX Ⓑ	-	XX Ⓒ	-	X Ⓓ	XX Ⓔ	/Sxxx /AABT Ⓕ
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## Ⓐ RESOLUTION

18/1 = 262144 cpr single turn  
16/16384 = 65536 cpr x 16384 turns

## Ⓑ OUTPUT

PB = Profibus-DP V1  
CB = CANopen DS301, DS406  
FD = DeviceNet (*/AABT selection is mandatory*)

## Ⓒ SHAFT DIAMETER

14 = 14 mm

## Ⓓ CONNECTION POSITION

- = axial  
R = radial

## Ⓔ CABLE LENGTH

L3 = cable output 3 m  
L7 = cable output 7 m  
Lx = cable output x m (3 m min.)

## Ⓕ CUSTOM VERSION or FACTORY SETTING

## AA: address

00h ÷ 7Dh = addr. 00 ÷ 125 for PB output <sup>(1)</sup>  
01h ÷ 7Fh = addr. 01 ÷ 127 for CB output <sup>(2)</sup>  
00h ÷ 3Fh = addr. 00 ÷ 63 for FD output

<sup>(1)</sup> order code 7Eh (dec 126) allows software setting of device addr.

<sup>(2)</sup> order code 00h (dec 0) allows software setting of device addr.

## B: baud rate

A = 20 Kb/s (only CB)  
B = 50 Kb/s (only CB)  
C = 100 Kb/s (only CB)  
D = 125 Kb/s (CB and FD)  
E = 250 Kb/s (CB and FD)  
F = 500 Kb/s (CB and FD)  
G = 800 Kb/s (only CB)  
H = 1000 Kb/s (only CB)  
Z = 00 (for PB and CB programmable Baud rate)

## T: bus termination

0 = Termination deactivated  
1 = Termination activated

## Order code - SSI and Bit Parallel

XAC77	XX Ⓐ	/	XXXXX Ⓑ	X Ⓒ	XX Ⓓ	-	XX Ⓔ	-	X Ⓕ	XX Ⓖ	/Sxxx Ⓗ
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## Ⓐ RESOLUTION

12 = 4096 cpr  
13 = 8192 cpr

## Ⓑ REVOLUTIONS

1 = single turn  
4096 = 4096 turns  
16384 = 16384 turns

## Ⓒ OUTPUT CODE

B = Binary  
G = Gray

## Ⓓ OUTPUT CIRCUITS

N = NPN o.c.  
Y = Push-Pull  
R = SSI, tree format  
B = SSI, LSB aligned

## Ⓔ SHAFT DIAMETER

14 = 14 mm

## Ⓕ CONNECTION POSITION

- = axial  
R = radial

## Ⓖ CABLE LENGTH

L3 = cable output 3 m  
L7 = cable output 7 m  
Lx = cable output x m (3 m min.)

## Ⓗ CUSTOM VERSION

## Order code - Analogue output (programmable)

XAC77	XX/XXXXX Ⓐ	XX Ⓑ	-	XX Ⓒ	-	X Ⓓ	XX Ⓔ	/Sxxx Ⓕ
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## Ⓐ RESOLUTION

12/1 = 12 bit single turn  
12/16384 = 12 x 14 bit

## Ⓑ OUTPUT

PA = Programmable analogue

## Ⓒ SHAFT DIAMETER

14 = 14 mm

## Ⓓ CONNECTION POSITION

- = axial  
R = radial

## Ⓔ CABLE LENGTH

L3 = cable output 3 m  
L7 = cable output 7 m  
Lx = cable output x m (3 m min.)

## Ⓕ CUSTOM VERSION