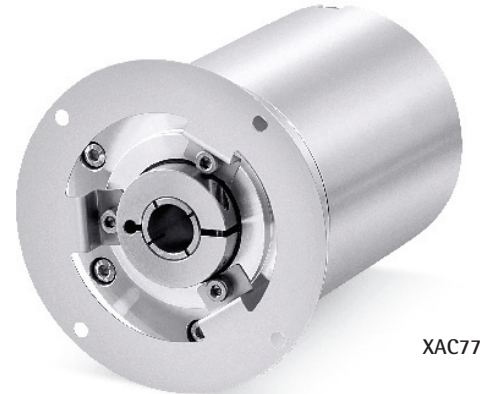


- Absolute single & multiturn encoders
- ATEX II 2G Ex d IIC T6 Gb, II 2D Ex tb IIIC T85°C Db certification
- Installation in zones 1, 2, 21 and 22
- Point-to-point fieldbus communication
- SSI or Bit parallel output
- Fully programmable analogue output (V/I)



XAC77

ENVIRONMENTAL SPECIFICATIONS

Shock:	250 g, 6 ms acc. to CEI EN 60068-2-27
Vibrations:	10 g, 5-2000 Hz acc. to CEI EN 60068-2-6
Protection:	IP65
Environmental temperature:	max. 40°C with 6000 rpm continuous operation (max. surface temp. +85°C)
Encoder operating temperature range:	-25°C +85°C (-13°F +185°F)
Storage temperature range:	-25°C +85°C (-13°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 ⁶ rev. min. (10 ⁹ rev. min. with shaft loading of 20 N max.)
Electrical connections:	cable output 3 m (9,8 ft) (max. 8 m for Ethernet versions)
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 Profinet, EtherCAT, Powerlink, Ethernet/IP, Modbus TCP/IP: 262144 cpr or 65536 cpr x 16384 turns
Output circuits:	SSI (RS422), Bit Parallel NPN, Push Pull gray or binary coded Profibus-DP, CANopen, DeviceNet Profinet, EtherCAT, Powerlink, Ethernet/IP, Modbus TCP/IP 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> <i>Profinet, EtherCAT, Powerlink, Ethernet/IP, Modbus refer to relevant user manual</i>

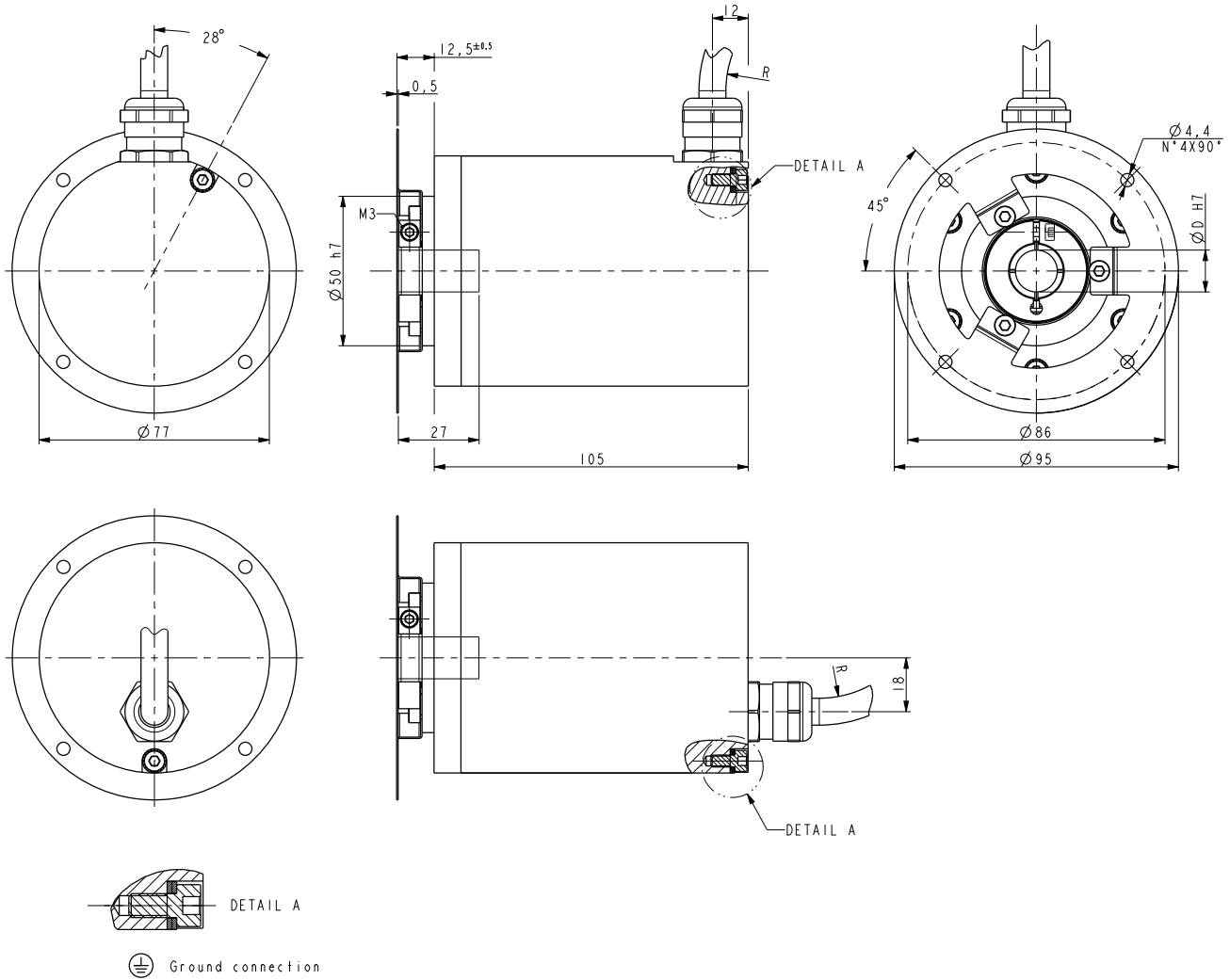
MATERIALS

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 - SSI and Bit Parallel

XAC77	XX	-	XX	-	XXX	-	XX	-	XX	X	-	X	XXXX	/Sxxx
	(a)		(b)		(c)		(d)		(e)	(f)		(g)	(h)	(h)

<p>(a) BIT SINGLETURN 12 = 4096 cpr 13 = 8192 cpr</p> <p>(b) BIT MULTITURN 00 = singleturn 12 = 4096 turns 14 = 16384 turns</p> <p>(c) OUTPUT CIRCUIT/POWER SUPPLY BN2 = Binary, NPN, +10Vdc +30Vdc BY2 = Binary, Push-Pull, +10Vdc +30Vdc GN2 = Gray, NPN, +10Vdc +30Vdc GY2 = Gray, Push-Pull, +10Vdc +30Vdc BS2 = Binary, SSI, tree format, +10Vdc +30Vdc BA2 = Binary, SSI, LSB aligned, +10Vdc +30Vdc GS2 = Gray, SSI, tree format, +10Vdc +30Vdc GA2 = Gray, LSB aligned, +10Vdc +30Vdc</p>	<p>(d) SHAFT DIAMETER 14 = 14 mm</p> <p>(e) PROTECTION P = IP65</p> <p>(f) AMBIENT TEMPERATURE (*) X = -20°C + 40°C (-4°F +104°F) (*) max. ambient temp. 40°C at 6000 rpm continuous operation</p>	<p>(g) CONNECTION POSITION A = axial R = radial</p> <p>(h) CONNECTION TYPE & CABLE LENGTH L030 = cable output 3 m L050 = cable output 5 m Lxx0 = cable out. x m (max. length 10m) L100 = cable output 10 m</p>
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(h) CUSTOM VERSION

Order code - Profinet, EtherCAT, Powerlink, Ethernet/IP, Modbus

XAC77	XX-XX Ⓐ	-	XXX Ⓑ	-	XX Ⓒ	-	X Ⓓ	X Ⓔ	-	X Ⓕ	XXXX Ⓖ	/Sxxx Ⓗ
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Ⓐ RESOLUTION (BIT SINGLETURN-BIT MULTITURN) 18-00 = 18 bit (262144 cpr singleturn) 16-14 = 16 x 14 bit (65536 cpr x 16384 turns)	Ⓒ SHAFT DIAMETER 14 = 14 mm	Ⓕ CONNECTION POSITION A = axial R = radial
Ⓑ OUTPUT CIRCUIT/POWER SUPPLY PT2 = Profinet IO, +10Vdc +30Vdc EC2 = EtherCAT, +10Vdc +30Vdc PL2 = Ethernet Powerlink V2.0, +10Vdc +30Vdc EP2 = Ethernet/IP, +10Vdc +30Vdc MT2 = Modbus TCP/IP, +10Vdc +30Vdc	Ⓓ PROTECTION P = IP65	Ⓖ CONNECTION TYPE & CABLE LENGTH L030 = cable output 3 m L050 = cable output 5 m L080 = cable output 8 m (max. length)
Ⓔ AMBIENT TEMP. (*) X = -20°C + 40°C (-4°F + 104°F) (*) max. ambient temp. 40°C at 6000 rpm continuous operation	Ⓗ CUSTOM VERSION	

Order code - Profibus, CANopen, DeviceNet

XAC77	XX-XX Ⓐ	-	XXX Ⓑ	-	XX Ⓒ	-	X Ⓓ	X Ⓔ	-	X Ⓕ	XXXX Ⓖ	/Sxxx /AABT Ⓗ
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Ⓐ RESOLUTION (BIT SINGLETURN-BIT MULTITURN) 18-00 = 18 bit (262144 cpr singleturn) 16-14 = 16 x 14 bit (65536 cpr x 16384 turns)	Ⓒ SHAFT DIAMETER 14 = 14 mm	Ⓕ CONNECTION POSITION A = axial R = radial
Ⓑ OUTPUT CIRCUIT/POWER SUPPLY PB2 = Profibus-DP V1, +10Vdc +30Vdc CB2 = CANopen DS301, DS406, +10Vdc +30Vdc FD2 = DeviceNet (<i>/AABT selection is mandatory</i>), +10Vdc +30Vdc	Ⓓ PROTECTION P = IP65	Ⓖ CONNECTION TYPE & CABLE LENGTH L030 = cable output 3 m L050 = cable output 5 m L100 = cable output 10 m (max. length)
Ⓔ AMBIENT TEMP. (*) X = -20°C + 40°C (-4°F + 104°F) (*) max. ambient temp. 40°C at 6000 rpm continuous operation	Ⓗ CUSTOM VERSION or FACTORY SETTING	
AA: address 00h ÷ 7Dh = addr. 00 ÷ 125 for PB output (default = 7D)* 01h ÷ 7Fh = addr. 01 ÷ 127 for CB output (default = 01)* 00h ÷ 3Fh = addr. 00 ÷ 63 for FD output **	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) (default) G = 800 Kb/s (only CB) H = 1000 Kb/s (only CB) Z = 00 (only PB)	T: bus termination 0 = Termination deactivated 1 = Termination activated
* For PB and CB: address and baud rate are pre-programmed according to /AAB factory setting ** For FD: address and baud rate are hardware fixed according to /AAB factory setting		

Order code - Analogue output (programmable)

XAC77	XX-XX Ⓐ	-	XXX Ⓑ	-	XX Ⓒ	-	X Ⓓ	X Ⓔ	-	X Ⓕ	XXXX Ⓖ	/Sxxx /Pxxx Ⓗ
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Ⓐ RESOLUTION (BIT SINGLETURN-BIT MULTITURN) 12-00 = 12 bit (4096 cpr x 1 turn) 12-14 = 12 x 14 bit (4096 cpr x 16384 turns)	Ⓓ PROTECTION P = IP65	Ⓖ CONNECTION TYPE & CABLE LENGTH L030 = cable output 3 m L050 = cable output 5 m L100 = cable output 10 m (max. length)
Ⓑ OUTPUT CIRCUIT/POWER SUPPLY PA2 = Programmable analogue, +10Vdc +30Vdc	Ⓔ AMBIENT TEMP. (*) X = -20°C + 40°C (-4°F + 104°F) (*) max. ambient temp. 40°C at 6000 rpm continuous operation	Ⓗ /Sxxx: Custom version /Pxxx: Factory programmed encoder on customer request
Ⓒ SHAFT DIAMETER 14 = 14 mm	Ⓕ CONNECTION POSITION A = axial R = radial	

Document release	Date	Description
1.2	11.03.2024	New order code
1.1	14.04.2021	Analogue output, order code review - Custom version