

TECHNICAL DATASHEET

Ex - Absolute Encoder AX 73 Profibus



- ATEX and IECEx certification for Gas and Dust explosion proof
- High precision standard as ACURO Industry
- Resolution up to 14 Bit singleturn + 12 Bit multiturn
- Optical encoder with a true geared multiturn
- Profibus Interface
- Easy and fast field installation
 - Access to control elements (DIP)
 - Free choice of cable in the field (terminal box with cage clamp technology)
 - In case of emergency service, encoder and cable can be removed separately
- Robust design
- Extreme corrosion resistance: high grade stainless steel housing (1.4404 / AISI 316L)
- Protection class IP66/IP67
- Applications: Drilling Equipment, Winches, Cranes, DrawWorks, Topdrive, Pipe Handling, Enamelling Production Line, Petro Chemistry, Bottling Machines, Mixers, Silo Works, Mills, Oil and Gas Application

ACURO®
Xproof



ATEX



EX-CLASSIFICATION

The absolute shaft encoder line ACURO is available in explosion proof design with explosion proof enclosure under AX73.

It has been assured with the **EC-TYPE-Examination Certificate ITS14ATEX17991X** that the AX73 meets the requirements of safety and health according to EN 60079-0:2012; EN 60079-1:2007 and EN60079-31:2009.

Additionally the encoder is certified according the IECEx standards IEC 60079-0:2011; IEC 60079-1:2007-04 and IEC 60079-31:2008. Assured according **IECEx ITS 14.0062X** certification.

It is approved in explosive areas:

Gas: II 2 G Ex d IIC T4 Gb

Dust: II 2 D Ex tb IIIC T130 Db

The AX73 comes with a stainless steel housing (1.4404). Its suitable for offshore applications, applications under tough environmental conditions and food industry.

TECHNICAL DATA mechanical

Housing diameter	73,5 mm / 76 mm
Shaft diameter	10 mm
Flange (Mounting of housing)	Clamping flange, bores 3xM6
Protection class (EN 60529/ A1:2000-02)	housing IP66/IP67, bearing IP67 ¹⁾
Shaft load radial / axial	max. 100 N / 40 N
Max. speed	3000 rpm
Nominal speed	1500 rpm
Starting torque typ.	≤ 4 Ncm
Moment of inertia	approx. 30 gcm ²

¹⁾ no standing water allowed at the shaft inlet or cable routing or at the bearing.

Specifications subject to change without notice.

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TECHNICAL DATASHEET

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**TECHNICAL DATA
mechanical (continued)**

Vibration resistance (DIN EN 60068-2-6:2008)	100m/s ² (60 ... 2000Hz ²⁾)
Shock resistance (DIN EN 60068-2-27:2010)	1000m/s ² (6ms)
Ambient temperature	-40°C ... +70°C
Storage temperature	-20°C ... +80°C
Material shaft	Stainless Steel 1.4104 / AISI 430F
Material housing	Stainless Steel 1.4404 / AISI 316L
Weight	approx. 2200g
Connection ²⁾	Terminal box with 2 x M20x1,5 screw thread, radial

²⁾ without cable gland

**TECHNICAL DATA
electrical**

General design	as per EN 61010 - 1, protection class III contamination level 2, overvoltage class II
Supply voltage	DC 10 - 30V with pole protection
Current w/o load max.	230 mA
Recommended external fuse	T 0.25 A
Power consumption	approx. 1.5 W to 2W
Resolution singleturn	10 -14 Bit
Resolution multiturn	12 Bit
EMC ³⁾	Noise emission as per EN 61326-1 Group 1, Class B; Noise immunity as per EN 61326 - 1 Class A
Drives	RS485
Protocol	Profibus - DP with encoder profile class C2 (can be parameterized)
Baud rate	automatically adjusted in a range from 9.6 Kbaud up to 12 MBaud
Device address	adjustable by DIP switches or bus (optional)
Linearity	± ½ LSB (±1 LSB with resolution 13, 14, 25, 26 Bit)
Output code	Binary

³⁾ with compliance with screening indications

⁴⁾ Class 2 Master

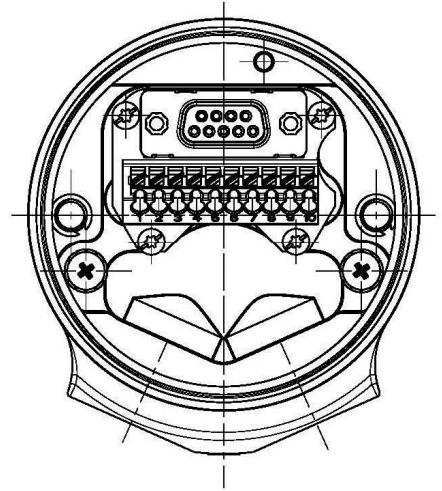
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TECHNICAL DATASHEET

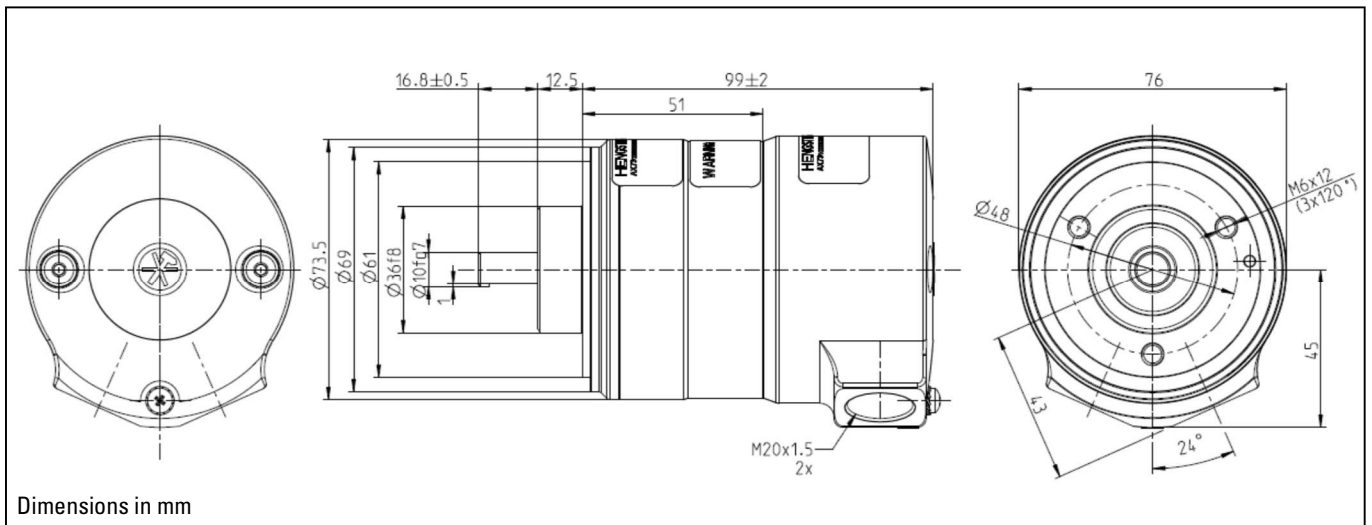
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ELECTRICAL CONNECTIONS

Terminal block	Signal
1	UB in 10 ... 30V DC
2	0V (GND Power supply)
3	UB out
4	0V out
5	B in
6	A in
7	B out
8	A out
9	not connected
10	PE
Screen	cable screen connected to housing
Terminal screw	for additional connection of an earth conductor



DIMENSIONED DRAWINGS



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Page

3/4

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ORDERING INFORMATION

Type	Resolution	Supply voltage	Flange, Protection, Shaft	Interface	Connection
<input type="checkbox"/> / <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
AX73	0010 10 Bit ST 0012 12 Bit ST 0013 13 Bit ST 0014 14 Bit ST 1212 12 Bit MT+12 Bit ST 1213 12 Bit MT+13 Bit ST 1214 12 Bit MT+14 Bit ST	E DC 10 - 30 V	K.72 Clamping flange, IP67, 10 mm	DP Profibus	2 2 x M20x1,5 screw thread, radial

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Edition: 3 241016TK		4/4