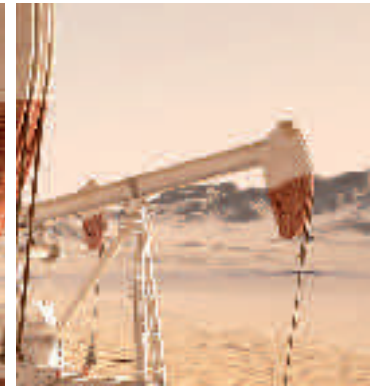# ACURO®
Xproof

ACURO AX73

Making encoder installations in hazardous environments easy

HENGSTLER

ACURO®- AX73
Xproof

Ex certified, high performance, userfriendly installation concept and robust design

> ATEX and IECEx certification for Gas and Dust explosion proof
> Robust design
> Easy and fast field installation
> Extreme corrosion resistance: high grade stainless steel housing (1.4404 / AISI 316L)
> Profibus Interface
> High precision standard as ACURO Industry
> Resolution up to 14 Bit Singleturn + 12 Bit Multiturn
> Optical encoder with a true geared multiturn
> Protection class IP67

Applications: Winches, Cranes, Drills, other Oil and Gas Applications, Paint Plants, Petrochemical Facilities, Bottling Plants, Mixers, Silos, Grain Mills

Making encoder installations in hazardous environments easy

In the development of equipment for use in hazardous environments, selecting the right sensor plays a crucial role. First and foremost, explosion protection of the sensor itself is critical. Additional harsh requirements, such as the ability to withstand severe shock and vibration, and the need for corrosion resistance due to the working atmosphere, are placed on the encoder by the application itself. And, of course, an accurate and high-resolution sensor signal is required in spite of all other demands.

Hengstler has incorporated all these requirements into our new, explosion-proof, absolute encoder AX73 with Profibus interface. With the addition of AX73, our explosion-proof product range is complete!

The optical scanning system of the AX73 encoder provides a highly accurate, high-resolution sensor signal that is also resistant to the strongest external magnetic fields.

The connection concept of the AX73 allows the routing of cabling and the final encoder installation to be done in separate steps. This provides significant cost and time savings during installation, as cabling can be done in advance. Emergency servicing can also be done more quickly, due to the ability to simply unplug the encoder cable and plug it into the replacement encoder.

With its ATEX and IECEx approvals, the Hengstler AX73 is certified and approved for international use, thus providing the user a global guarantee of safety and reliability in hazardous areas.

For further information, contact Hengstler today at info@hengstler.com, or by phone at +49 (0) 7424 89201.

Technical Data

MECHANICAL

Housing Diameter	73.5 mm / 76 mm
Shaft Diameter	10 mm
Flange (Mounting of Housing)	Clamping Flange, Bores 3xM6
Protection Class Shaft Input (EN 60529/ A1:2000-02)	IP67
Protection Class Housing (EN 60529/ A1:2000-02)	IP67
Shaft Load axial / radial max.	100 N / 40 N
Speed max.	3000 rpm
Nominal Speed	1500 rpm
Starting Torque typ.	≤ 1 Ncm
Moment of Inertia	approx. 14 gcm^2
Vibration Resistance (DIN EN 60068-2-6:2008)	100m/s^2 (60 ... 2000Hz)
Shock Resistance (DIN EN 60068-2-27:2010)	1000m/s^2 (6ms)
Ambient Temperature	-40 °C ... +70 °C
Storage Temperature	-20°C ... +85°C
Material Housing	Stainless Steel (1.4404 / 316L)
Weight	approx. 2200g
Connection	Terminal box with 2 x M20 x 1,5 screw thread, radial
Interface	Profibus

ELECTRICAL

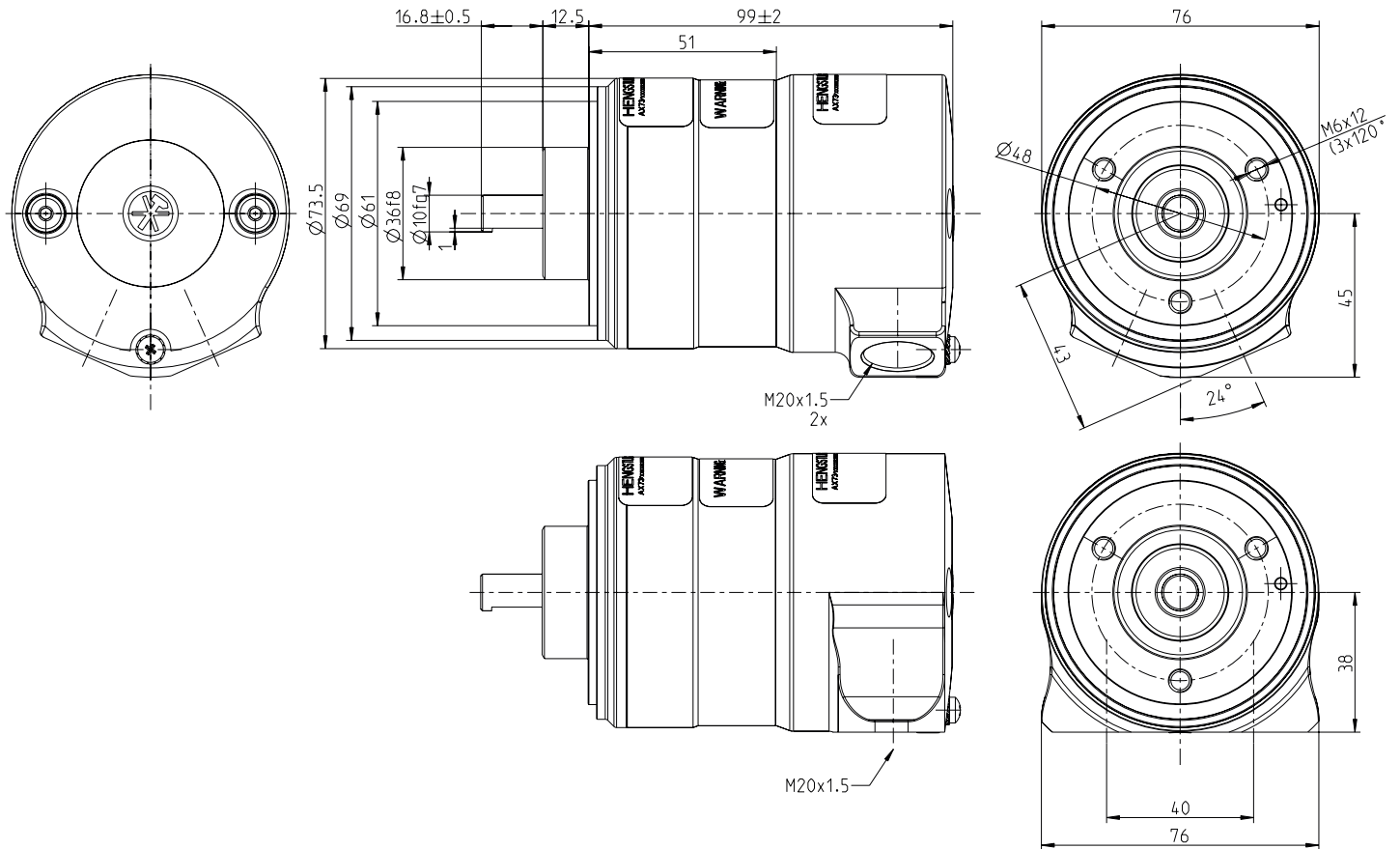|	
Supply Voltage	10 - 30 VDC
Current w/o Load max.	230 mA
Recommended External Fuse	T 0.25 A
Power Consumption max.	1.5 W to 2W
Resolution Singleturn	10 -14 Bit
Resolution Multiturn	12 Bit
Drives	RS485
Protocol	Profibus - DP with encoder profile class C2 (can be parameterized)
Baud Rate	automatically adjusted in a range from 9.6 kBaud up to 12 MBaud
Device Address	adjustable by DIP switches or bus (by DPM2 device)
Linearity	± 0.5 LSB (±1 LSB with resolution 13, 14, 25, 26 Bit)
Output Code	Binary

CLASSIFICATION

The absolute shaft encoder line ACURO-Xproof 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. Therefore it is approved for the following explosive areas:

Gas:	Ex II 2 G Ex d IIC T4 Gb
Dust:	Ex ll 2D Ex tb IIIC T130 Db

Dimensional Drawing

Type	Resolution		Supply Voltage		Flange, Protection, Shaft		Interface		Connection	
AX73	0010	10 Bit ST	E	DC 10 - 30 V	K.72	Clamping Flange, IP67, 10 mm	DP	Profibus	2	2 x M20 x 1.5 screw thread, radial
	0012	12 Bit ST							3	2 x M20 x 1.5 screw thread, radial parallel
	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								

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