



ACURO®
Xproof



ACURO AX65

The explosion-proof absolute encoder that will fit where others won't

HENGSTLER



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There are some encoder applications that are just demanding. Incredibly challenging. Among these are applications where the encoder has to be explosion-proof due to the dangerous atmosphere in which it operates. Or those that involve continual exposure to salt water. Or where it experiences huge shock loads of over 100 G. Or shaft loads of hundreds of Newtons. But the MOST demanding applications are those where the encoder MUST meet ALL these requirements. And that is exactly where the Hengstler AX65 comes in.

Certified explosion-proof, built with marine-grade stainless steel, with a shock rating of 200 G and shaft load of 300 N, the AX65 is one tough encoder. The most compact absolute encoder in its class, its shallow depth and body diameter of only 59 mm allow it to fit where other explosion-proof enco-

Ex certified, highest flexibility with its compact size, userfriendly installation concept and robust design

- > ATEX certification for Mining, Gas and Dust
- > Most compact design of its class: 59 mm diameter; 70 mm mounting depth
- > Different terminal boxes with cage clamp terminals
- > Easy and fast field installation
- > Extreme shock and vibration resistant: 200 g shock; 30 g vibration
- > 300 N axial and radial load
- > Protection class up to IP66 / IP67
- > Extreme corrosion resistance: high grade stainless steel housing (1.4404 / 316L)
- > Wearless electronic Multiturn: contact- and battery-less, self-energetic

Applications: Winch, enamelling production line, petro chemistry, bottling machines, mixers, silo works, mills, cranes, drilling equipment

ders can't. The explosion-proof certification makes it ideal for offshore oil platforms, mines, chemical plants, etc., as does the marine grade stainless steel of which it's built. The shaft load rating eliminates the need for load modules, reducing costs. The AX65 can be installed quickly and easily due to its flexible, quick-connect terminal system. Rounding out the AX65 is the choice of SSI or CANopen interface, which can save wiring costs by allowing a ring network configuration.

So next time you have a demanding application, remember the Hengstler AX65... it is one tough encoder.

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

Technical Data

MECHANICAL

Housing Diameter	59 mm
Shaft Diameter	10 mm
Flange (Mounting of Housing)	Synchro Clamping Flange
Protection Class Shaft Input (EN 60529/ A1:2000-02)	IP66 / IP67
Protection Class Housing (EN 60529/ A1:2000-02)	IP66 / IP67
Shaft Load axial / radial max.	300 N / 300 N
Speed max. (CANopen)	at +60 °C Ambient Temperature: 700 rpm, 6000 rpm (short term < 1 sec) at +40 °C Ambient Temperature: 2200 rpm, 6000 rpm (short term < 1 sec)
Speed max. (SSI)	3000 rpm, 6000 rpm (short term < 1 sec)
Nominal Speed	1500 rpm
Starting Torque typ.	≤ 4.5 Ncm
Moment of Inertia	approx. 25 gcm ²
Vibration Resistance (DIN EN 60068-2-6:2008)	300 m/s ² (50 ... 2000 Hz)
Shock Resistance (DIN EN 60068-2-27:2010)	2000 m/s ² (3ms)
Ambient Temperature	-40 °C ... +60 °C Ex db IIC T4 -40 °C ... +60 °C Ex tb IIIC T135°C / Ex db I
Storage Temperature	-20 °C ... +85 °C
Material Housing	Stainless Steel (1.4404 / 316L)
Weight	approx. 1300g
Connection	Terminal Box with 1 x M20x1,5 screw thread, axial or radial Terminal Box with 2 x M20x1,5 screw thread, radial

ELECTRICAL

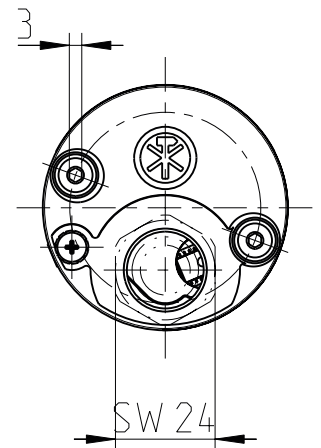
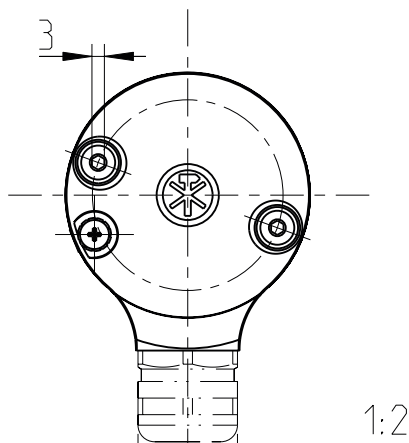
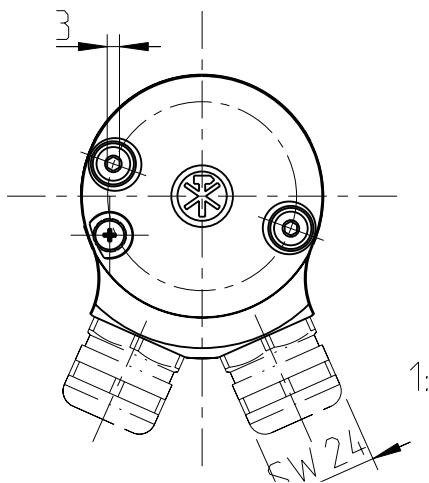
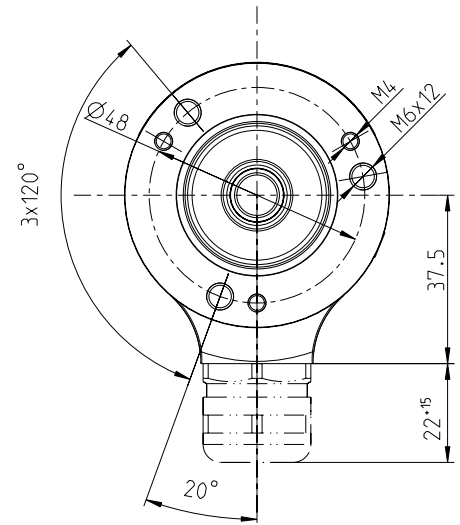
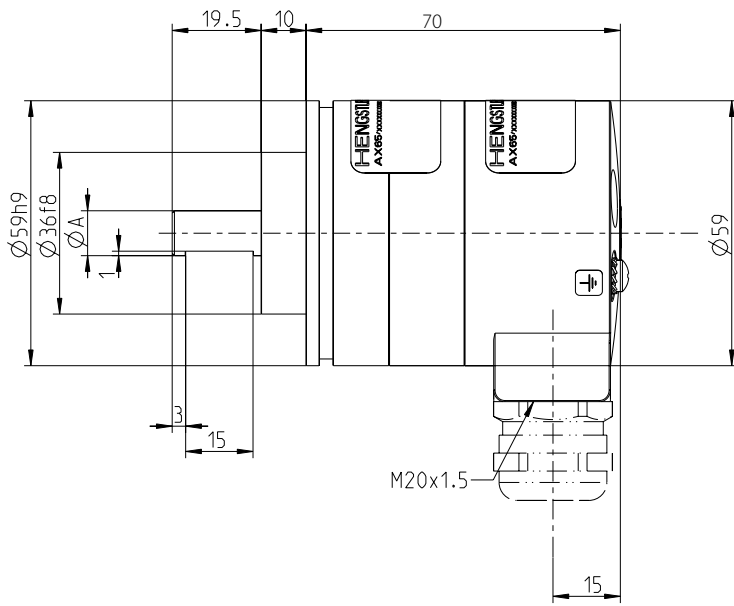
Interface	CANopen, SSI
Supply Voltage	10 - 30 VDC
Current w/o Load max.	200 mA
Recommended External Fuse	T 0.2 A
Power Consumption max.	2 W
Resolution Singleturn	12 Bit
Resolution Multiturn	12 Bit, 13 Bit, 16 Bit
Absolute Accuracy	± 1°
Repeatability	± 0.2°

-CLASSIFICATION

The robust absolute shaft encoder line ACURO-Xproof is available in explosion proof design with explosion proof enclosure "Ex d" under AX 65. It has been assured with the EC-TYPE-Examination Certificate IExU10ATEX1172 X that the AX65 meets the requirements of safety and health according to EN 60079-0:2009, EN 60079-1:2007 and EN 60079- 31:2010. Therefore it is approved for the following explosive areas:

Gas:	Ex II 2G Ex db IIC T4
Dust:	Ex II 2D Ex tb IIIC T135 °C
Mining:	Ex I M2 Ex db I

Dimensional Drawing



Type	Resolution	Supply voltage	Flange, Protection, Shaft	Interface	Connection
AX65	0012 12 Bit ST	E DC 10 - 30 V	L.72 Synchro clamping, IP66 / IP67, 10 mm	SG SSI Gray SB SSI Binary OL CANopen	0 1 x M20 x 1,5 screw thread, axial
	1212 12 Bit ST + 12 Bit MT				1 1 x M20 x 1,5 screw thread, radial
	1312 12 Bit ST + 13 Bit MT ¹				2 2 x M20 x 1,5 screw thread, radial
	1612 12 Bit ST + 16 Bit MT				

¹ SSI only