

SERIES AX65

HENGSTLER

Explosion Proof Absolute Multi-Turn Encoder

Key Features

- Explosion Proof Absolute
- 12 Bit of Singleturn, 12 or 16 Bit of True Multiturn Absolute Positioning
- ATEX and IECEX certification for Mining, Gas and Dust
- Extreme Corrosion Resistance: High Grade Stainless Steel Housing
- Protection class up IP66/ IP67
- CANopen or SSI Communications

HAZ
Hazardous Duty



Ex II 2G Ex db IIC T4 Gb
Ex II 2D Ex tb IIIC T135 °C Db
Ex I M2 Ex db I Mb

SPECIFICATIONS

STANDARD OPERATING CHARACTERISTICS:

Code: Absolute, Magnetic

Resolution Single-turn: 12 Bit

Resolution Multi-Turn (CANOpen Only):
12 Bit, 16 Bit

Absolute Accuracy: $\pm 1^\circ$

Repeatability: $\pm 0.2^\circ$

ELECTRICAL:

Interface: CANopen, SSI

Input Power: DC 10 -30V

Current w/o Load:

(CANOpen) 100mA typ.

(SSI) 200mA typ.

Recommended External Fuse: T 0.2 A

Power Consumption: Max. 2 W

Noise Immunity: Tested to EN61326-1

Electrical Immunity: Tested to EN61326-1

Termination (without cable gland):

Terminal box with 1 x M20X1.5 screw thread,
axial or radial

Terminal box with 2 x M20X1.5 screw thread,
radial

Mating Connector: Cable Exit

Interface: CANopen

Output Code: Binary

Protocol: CANopen according to DS 301 with
profile DSP 406

Programmable: Resolution, Preset, Offset,
Direction

Parametrization: Speed, Acceleration, Limit
values, Operating time

Bus Termination Resistor:

Set via DIP switches

Interface: CANopen (Cont.)

Updating of Values: Every millisecond (adjust-
able), on request

Basic Identifier (11 Bit): Set via DIP switches
or Software

Frequency Response (Baud Rate): Set via
DIP switches in the range of 10 to 1.000 Kbit/s
(standard setting EX-Works: 250 Kbit/s)

Max. Speed: at +60 °C Ambient temperature:
700 rpm, 6000 rpm (short term <1sec), at +40
°C Ambient temperature: 2200 rpm, 6000 rpm
(short term <1sec)

Interface: SSI

Output Code: Gray or Binary

Drives: Clock and Data /RS422

Control Inputs 2: Preset, Direction

Max. Speed:

3000 rpm (6000 rpm short term <1sec)

SSI RECOMMENDED DATA TRANSFER RATE

The max. data transfer rate depends on the
cable length. For Clock / Clock and Data / Data
please use twisted pairs. Use shielded cable.

Cable Length	Frequency
<25m	< 800 kHz
<50m	< 400 kHz
<100m	< 300 kHz
<200m	< 200 kHz
<400m	< 100 kHz

MECHANICAL

Shaft Diameter: 10 mm (Solid shaft)

Shaft Material: Stainless Steel

Maximum Shaft Load Axial: 300 N axial

Maximum Shaft Load Radial: 300 N radial

Starting Torque: ≤ 4.5 Ncm typ.

Nominal Speed: 1500 rpm

Moment of inertia: approx. 25 gcm²

Housing Material: Stainless Steel

Weight: 2.86 lbs. (1300g) approx. without
cable

ENVIRONMENTAL

Standard Ambient Temperature:

-40 °C ...+60 °C Ex db IIC T4 Gb

-40 °C ...+60 °C Ex tb IIIC Db / Ex db I Mb

Storage Temperature: -20 °C ...+85 °C

Shock (DIN EN 60068-2-27:2010):

2000m/s² (3ms)

Vibration (DIN EN 60068-2-6:2008): 300m/s²
(50 ... 2000Hz)

Humidity: Up to 75%, (no condensation allowed)

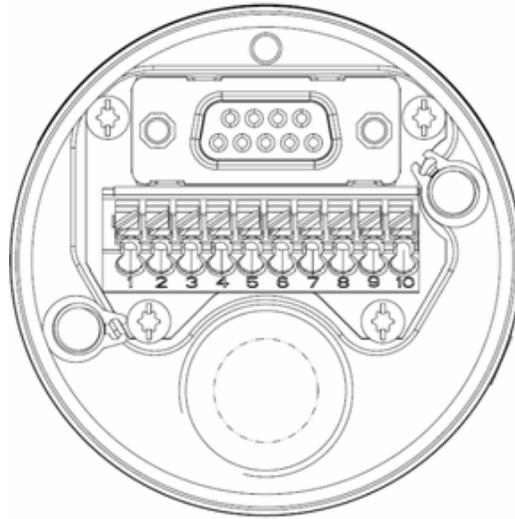
Enclosure Rating: IP66/67 (housing & Shaft)

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WIRING - CANopen

Color / Printed Numbers	Terminal Block	Signal
White / 1	1	U in 10...30V DC
Brown / 2	2	0V(GND Power supply)
Green / 3	3	CAN in -
Yellow / 4	4	CAN in +
Grey / 5	5	CAN out -
Pink / 6	6	CAN out +
Blue / 7	7	GND in
Red / 8	8	GND out
	9	Not connected
	10	PE
Screen		Cable Screen Connected to Housing
Terminal screw		For Additional Connection of an Earth Conductor



WIRING - SSI

Color / Printed Numbers	Terminal Block	Signal
White / 1	1	U in 10...30V DC
Brown / 2	2	0V(GND Power supply)
Green / 3	3	$\overline{\text{Clock}}$
Yellow / 4	4	Clock
Grey / 5	5	$\overline{\text{Data}}$
Pink / 6	6	Data
Blue / 7	7	Direction
Red / 8	8	Preset (set to zero)
	9	Not connected
	10	PE
Screen		Cable Screen Connected to Housing
Terminal screw		For Additional Connection of an Earth Conductor

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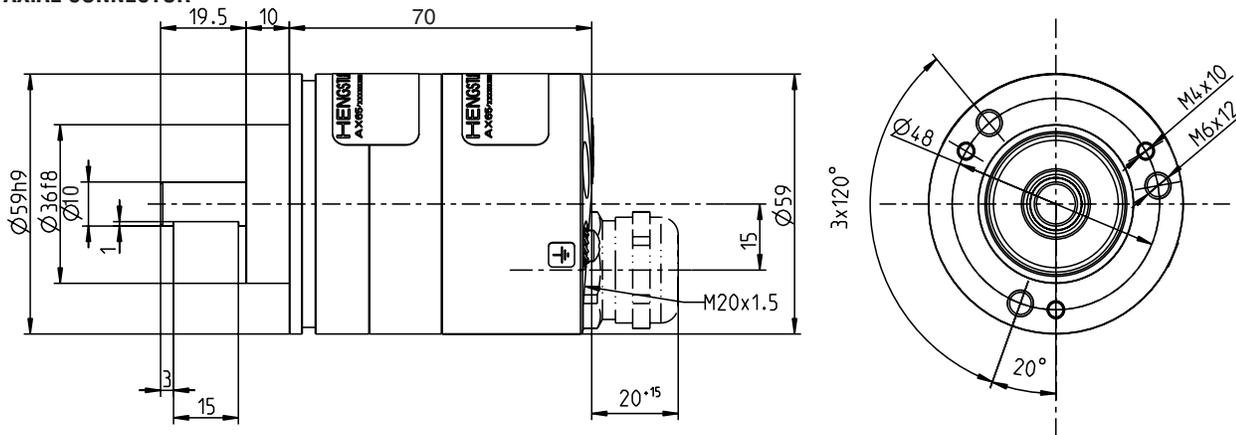
Ordering Information

To order, complete the model number with code numbers from the table below:

Code 1: Model	Code 2: Resolution	Code 3: Supply Voltage	Code 4: Flange, Protection, Shaft	Code 5: Interface	Code 6: Connection
Ordering Information					
AX65	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Series AX65 Hazardous Duty Absolute Encoder	0012 12 Bit ST Available only when Code 5 is OL 1212 12 Bit ST +12 Bit MT 1612 12 Bit ST +16 Bit MT	E 10-30VDC	L.72 Synchro-Clamping, IP66/ IP67, 10mm	SB SSI-Binary SG SSI-Gray OL CANopen	0 1 x M20x1.5 screw thread, axial 1 1 x M20x1.5 screw; thread, radial 2 2 x M20x1.5 screw; thread, radial

DIMENSIONS mm

AXIAL CONNECTOR



Recommended thread length of cable gland: 14mm

