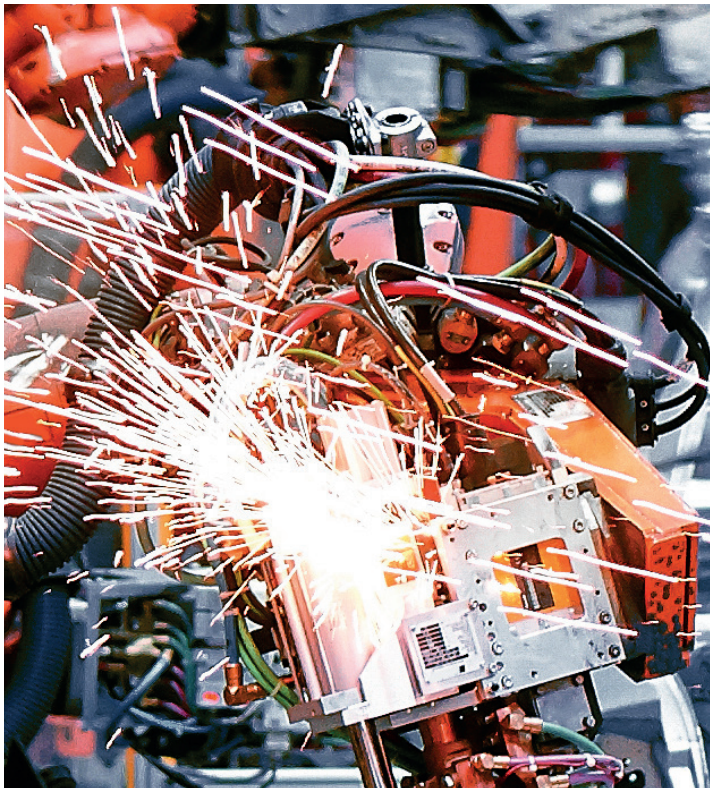
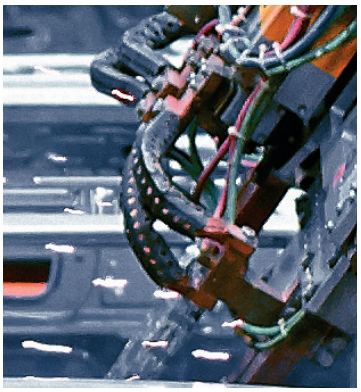


ACURO®
industry

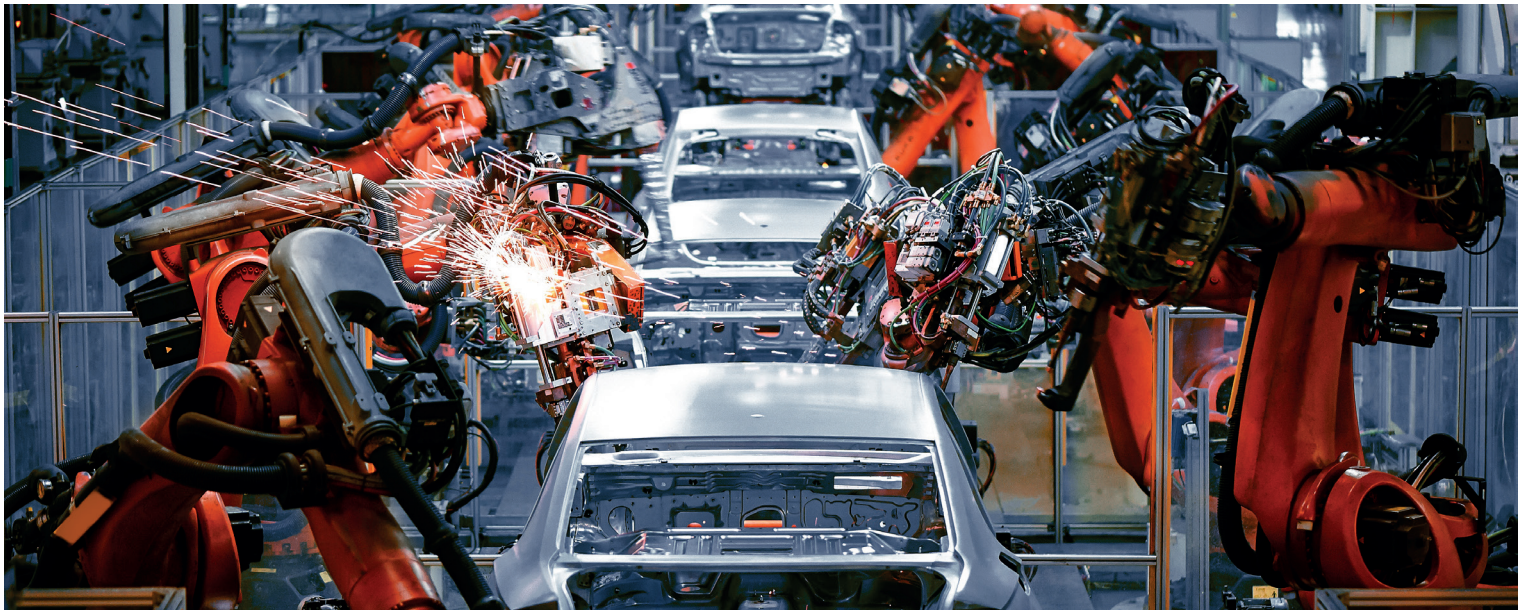
PROFI NET®



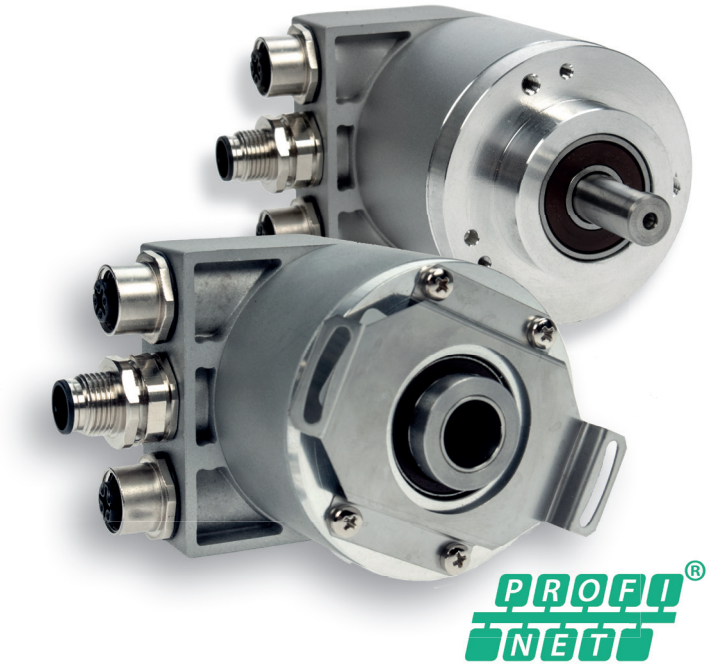
ACURO Profinet

Encoder performance that exceeds the industry standard
Now with Profinet interface

HENGSTLER



ACURO®-AC58 Profinet
industry



High Performance. Robust Design. High Flexibility.

- PROFINET - Encoder Profil PNO 3.162 Version 4.1 and 4.2
- Resolution up to 34 Bit (22 Bit Singleturn + 12 Bit Multiturn)
- Updating of values 125µs / Cycle time 31.25µs
- Diagnostic LEDs
- "Best in Class" shock and vibration specs
- Ambient temperature of -40°C … +85°C
- Device data: position, speed, acceleration, diagnostic data, alarms
- Device configuration: resolution, total measuring range, preset, offset, direction, scaling, residual value function, speed limits, acceleration limits
- Large number of variants available
- High energy efficiency

For Position Feedback in any kind of general machinery or factory automation application with an Profinet interface.

For example:
- Packaging Machines
- Injection Molding Machines
- Wood Processing Machines
- Assembly and Handling Technology
- Conveyor Technology
- Printing and Paper Machines

Simplifies the design process and ensures reliable communications.

We all know that no two industrial applications are alike. That's why the Hengstler AC58 absolute encoder is available with an incredible array of different options and features, including 22-bit single-turn resolution. But what if our standard variants don't meet your needs? Then Hengstler is able to offer custom versions to fulfill your requirements! Extended temperature range, greatly enhanced shock and vibration ratings, and custom shaft sizes and shapes are just a few of the features we've provided our customers recently. This flexibility makes the Hengstler AC58 one of the most versatile encoders on the market, in addition to being one of the most robust.

Now the AC58 product line has been expanded by the addition of the popular Profinet interface. Use of systems employing this open, high performance Ethernet-based system continues to grow rapidly. By offering the AC58 with Profinet, users can now integrate one of the best absolute encoders on the market with virtually any system using Profinet. This simplifies the design process and ensures reliable communications.

For further information, contact Hengstler today at encoder@hengstler.com, or by phone at +49 7424 89-0.

Technical Data

MECHANICAL

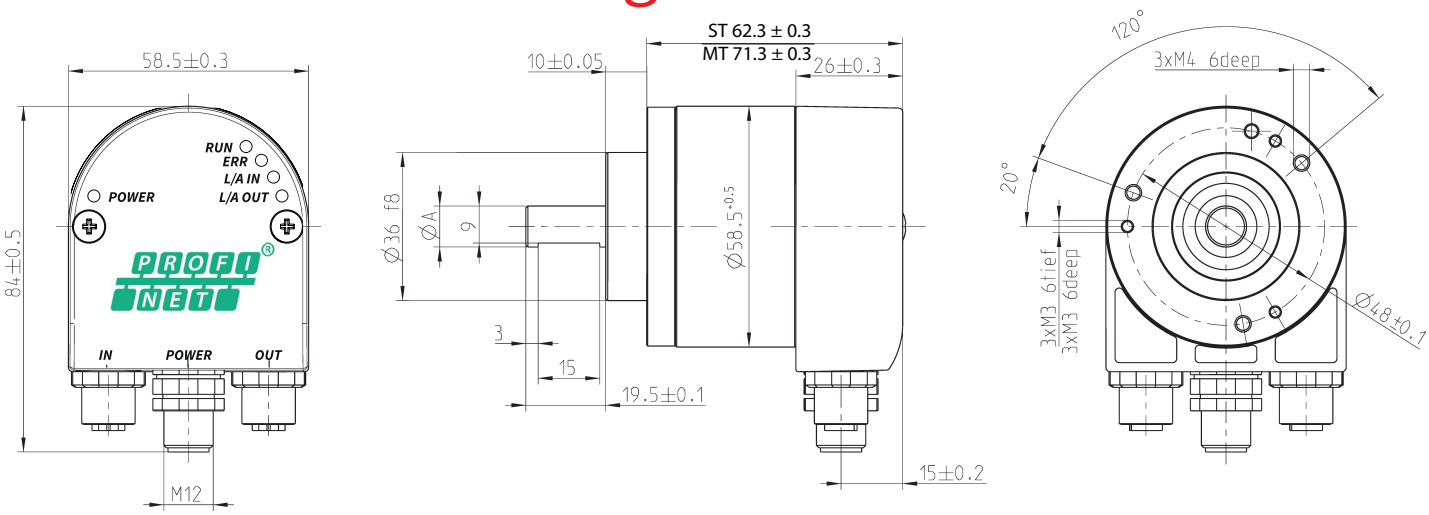
Housing diameter	58 mm
Shaft diameter (solid shafts) Shaft diameter (hub shafts)	6 mm / 8 mm / 9.52 mm (3/8 inch) / 10 mm / 12 mm 9.52 mm (3/8 inch) / 10 mm / 12 mm / 12.7 mm (1/2 inch) / 14 mm Other sizes available upon request.
Mounting Flange	Synchro flange, Clamping flange, Tether flange, Square flange
Protection class shaft input (EN 60529)	IP64 or IP67
Protection class housing (EN 60529)	IP65 and IP67
Shaft load axial / radial	40 N / 80 N
Max. speed	max. 10,000 U/min (continuous duty) max. 12,000 U/min (short term) (higher values available upon request)
Starting torque typ.	1 ≤ 0,05 Nm (lower values available upon request)
Moment of inertia	ca. 3.8 x 10-6 kgm2
Vibration resistance (DIN EN 60068-2-6)	300 m/s^2 (10 - 2000 Hz)
Shock resistance (DIN EN 60068-2-27)	4000 m/s^2 (6 ms)
Ambient temperature	-40 °C ... +85 °C
Storage Temperature	-40 °C ... +85 °C
Material Shaft	Stainless Steel
Material Housing	Aluminum (stainless steel as AC61 Profinet)
Weight	approx. 420 g (ST) / 450 g (MT)
Connection	Bus cover with 3x M12 connectors

ELECTRICAL

General design	As per DIN EN 61010-1, protection class III, contamination level 2, overvoltage class II
Supply voltage	DC 7 - 30 V
Current w/o load (typ.)	24V: 55 mA (ST) max; 65 mA (MT)
Power consumption	< 2W
Resolution Singleturn	10 - 22 Bit
Resolution Multiturn	12 Bit (total max. resolution 34 bits)
Output code	Binary
Profile/ protocol [1)]	Profinet IO
Linearity	±½ LSB up to 14 Bit
Absolute accuracy (typ.)	±35”
Repeatability (typ.)	±10”
Device data	position, speed, acceleration, diagnostic data, alarms
Device configuration	resolution, total measuring range, preset, offset, direction, scaling, residual value function, speed limits, acceleration limits
Updating of values / Cycle time	125µs / 31.25µs

[1)] Encoder profile 4.1 and 4.2 (according to the specification Encoder Version 4.1 Dec 2008 and Version 4.2 March 2017“

Dimensional Drawing



Options

Type	Resolution	Supply Voltage	Flange, Protection, Shaft	Interface	Connection
AC58	**0010** 10 Bit ST **0012** 12 Bit ST **0013** 13 Bit ST **0014** 14 Bit ST **0016** 16 Bit ST **0017** 17 Bit ST **0018** 18 Bit ST **0019** 19 Bit ST **0020** 20 Bit ST **0022** 22 Bit ST **1212** 12 Bit MT + 12 Bit ST **1213** 12 Bit MT **+** 13 Bit ST **1214** 12 Bit MT + 14 Bit ST **1216** 12 Bit MT + 16 Bit ST **1217** 12 Bit MT + 17 Bit ST **1218** 12 Bit MT **+** 18 Bit ST **1219** 12 Bit MT + 19 Bit ST **1220** 12 Bit MT **+** 20 Bit ST **1222** 12 Bit MT **+** 22 Bit ST others on request	**E** DC 7 - 30 V	**S.41 Synchro, IP65[1], 6 mm** **S.71 Synchro, IP67, 6 mm** **K.42 Clamping, IP65[1], 10 mm** **K.46** Clamping, IP65[1], 9.52 mm **K.47** Clamping, IP65[1], 12 mm **K.4C** Clamping, IP65[1], 8 mm **K.72 Clamping, IP67, 10 mm** **K.76** Clamping, IP67, 9.52 mm **K.77** Clamping, IP67**,** 12 mm **K.7C** Clamping, IP67, 8 mm **F.42 Spring tether, IP65[1], hub shaft 10 mm, mounting with front clam ping ring** **F.46** Spring tether, IP65[1], hub shaft 9.52 mm, mounting with front clamping ring **F.47 Spring tether, IP65[1], hub shaft 12 mm, mounting with front clamping ring** **F.49** Spring tether, IP65[1], hub shaft 14 mm, mounting with front clam ping ring **F.4E** Spring tether, IP65[1], hub shaft, 12.7 mm, mounting with front clamping ring **F.77** Spring tether, IP67, hub shaft, 12 mm, mounting with front clamping ring **Q.42** Square, IP65[1], 10 mm **Q.46** Square, IP65[1], 9.52 mm **Q.72** Square, IP67, 10 mm **Q.76** Square, IP67, 9.52 mm	**DN** Profinet	**R** Bus Cover with 3x M12 Connectors

Preferred versions are printed in bold type / “On-Request” versions (in regular type) may have longer lead times.
[1] Protection class shaft input IP64 (according to EN60529**)**

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