

ACURO®  
drive



# ACURO AD58DQ

Fast Installation AND survives harsh motor conditions?  
The AD58DQ with DRIVE-CLiQ does that and more!

**HENGSTLER**



## ACURO®- AD58DQ

drive



DRIVE-CLiQ

### DRIVE-CLiQ interface, highest flexibility with its compact size, robust design, fast and easy installation

- › High precision ACURO Drive Technology
- › DRIVE-CLiQ Interface
- › Simplified certification of the overall system
- › Resolution up to 24 Bit Single + 12 bit Multiturn
- › Optical encoder with gear based multiturn
- › Motor temperature sensor input
- › Encoder temperature monitoring
- › Simple and fast installation
- › Compact and robust design

**Applications:** Servo Motors for Machine Tool

### Fast Installation AND survives harsh motor conditions? The AD58DQ with DRIVE-CLiQ does that and more!

The newest addition to the Hengstler ACURO-Drive absolute encoder series has been developed specifically for integration in servo motors. It's an encoder designed for long-life operation in harsh environments where it is exposed to powerful vibrations, harsh shocks and high mechanical loads, but also an encoder that can continue to work with high precision in spite of these conditions. And it's the first of its kind with the popular DRIVE-CLiQ interface.

The AD58DQ is an encoder designed for integration into servo motors in single- and multiturn versions, and is equipped with the DRIVE-CLiQ interface of the SINAMICS drive family from Siemens. One of the most beneficial functions of DRIVE-CLiQ is the simplified commissioning and automated configuration of components in the overall system. Noise sensitive adapter boxes and tedious configuration work are eliminated. The AD58DQ offers all this and much more! An integral encoder

temperature sensor is used monitors encoder temperature. In addition, the AD58DQ has a separate connection for the KTY motor winding temperature sensor, bringing the motor winding temperature directly into the encoder, where this data can be supplied to the system via the DRIVE-CLiQ-telegram. This guarantees reliable function and increased availability of the engine at high winding temperatures, while eliminating the need to run two extra conductors.

Another highlight of the AD58DQ is that it meets the requirements of SIL 2 / PL d / Category 3 and, in conjunction with SINAMICS, the requirements of Safety Integrated Drive Systems.\* The AD58DQ provides new design freedoms in your application! (\* in preparation)

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

# Technical Data

## MECHANICAL

Housing Diameter	58 mm
Shaft Diameter	9.25 mm tapered Solid Shaft; Taper 1:10 10 mm tapered Hollow Shaft (optional)*
Flange (Mounting of Housing)	Spring Tether
Protection Class Shaft Input (EN 60529)	IP40 (IP50 on request)
Protection Class Housing (EN 60529)	IP40 (IP50 on request)
Shaft Load axial / radial max.	20 N / 55 N
Axial Endplay of Mating Shaft	± 0.5 mm
Radial Runout of Mating Shaft	± 0.08 mm
Speed max.	12,000 rpm
Starting Torque typ.	≤ 1 Ncm
Moment of Inertia	3.15 x 10 <sup>-6</sup> kgm <sup>2</sup>
Vibration Resistance (DIN EN 61800-2)	100 m/s <sup>2</sup> (50 ... 2000 Hz)
Shock Resistance (DIN EN 60068-2-17)	1000 m/s <sup>2</sup> (6 ms)
Operating Temperature	-15 °C ... +110 °C
Storage Temperature	-20 °C ... +80 °C
Material Shaft	Stainless Steel
Material Housing	Aluminum
Weight	approx. 260 g (ST) / 310 g (MT)
Connection	PCB Connector 8-pole Temperature Sensor 2-pole

## ELECTRICAL

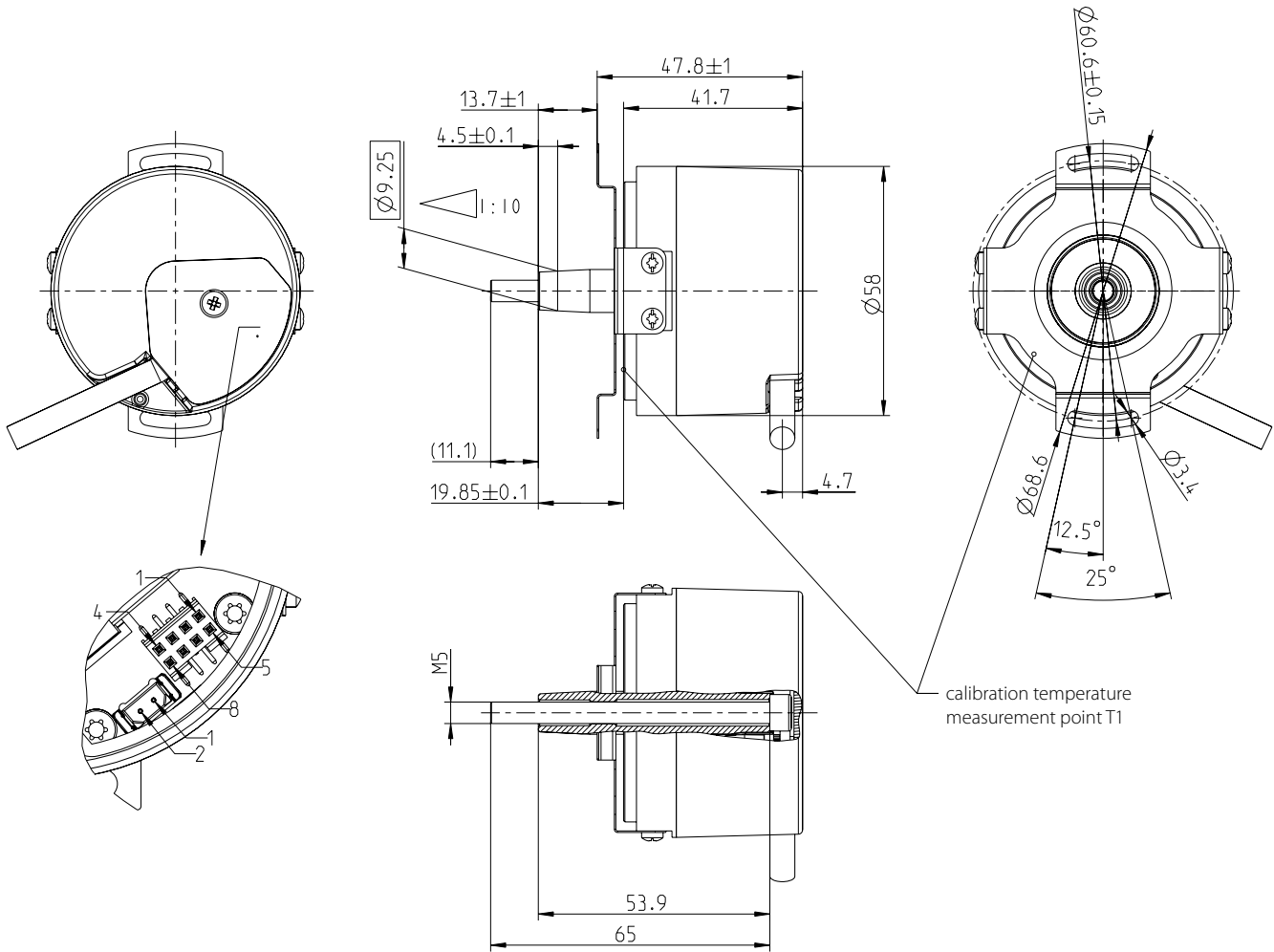
Supply Voltage	10-36 VDC
Power Consumption max.	24 VDC: 960 mW (ST); 1440 mW (MT)
Current Consumption typ.	24 VDC: 40 mA (ST); 60 mA (MT)
Interface / Protocol	DRIVE-CLiQ
Resolution Singleturn	20 Bit, 24 Bit
Resolution Multiturn	12 Bit
Ripple Rotation Speed Actual Value	20 Bit; < 1 rpm; Reference: 15 rpm 24 Bit; < 0.7 rpm; Reference: 15 rpm
Absolute Accuracy	± 35"
Cable Length (Motor to Drive)	≤ 95 m

## FUNCTIONAL SAFETY\*

Application Suitability	These encoders are suitable for use in safety-related systems up to SIL 2 acc. to EN 61508 Category 3, PL d acc. to EN ISO 13849-1:2008 in conjunction with controllers or evaluation units, which possess the necessary functionality.
Safety Functions	Safe Speed / Safe Position in Singleturn operation

\* In Preparation

# Dimensional Drawing



All specifications are subject to change without prior notice. DOC P3 PS1 EX AD58 DQ 2014-11-17 E

Type	Resolution	Supply voltage	Flange, Protection, Shaft	Interface	Connection
<b>AD58</b>	<b>0020</b> 20 Bit ST	<b>E</b> DC 10 - 30 V	<b>1.0K</b> Spring Tether, IP40, 10 mm, Taper 1:10	<b>DQ</b> DRIVE-CLiQ	<b>0</b> PCB Connector, axial
	<b>0024</b> 24 Bit ST				
	<b>1220</b> 12 Bit MT + 20 Bit ST				
	<b>1224</b> 12 Bit MT + 24 Bit ST				

# HENGSTLER

Uhlandstr. 49 | D-78554 Aldingen | Telefon: +49 (0) 7424-89-0 | info@hengstler.com | www.hengstler.com