**HEIDENHAIN Rotary Encoders with DRIVE-CLiQ Interface:**

**Communicate with Siemens Controls Safely and Directly**

*HEIDENHAIN offers absolute rotary encoders with DRIVE-CLiQ interface\* for position measurement in machines and production facilities with Siemens controls. These encoders supply operating and position data to the control safely and directly. Since each application has specific requirements, such as the data interface and demands on the mechanics or the accuracy of the rotary encoder, numerous variants are available for optimum connectivity.*

One interface, very many possibilities—that is a brief description of the range of absolute rotary encoders from HEIDENHAIN featuring the DRIVE-CLiQ interface from Siemens. Manufacturers of machines and facilities can easily choose from this range the perfect solutions for their demands regarding feedback control. This particularly includes the choice between rotary encoders with optical or inductive scanning.

Optical and inductive rotary encoders are compatible in their mounting dimensions in many cases. Whereas optical rotary encoders make higher accuracy grades possible, inductive rotary encoders impress with their greater sturdiness and insensitivity to contamination as well as their smaller sizes. This means that manufacturers of machines and facilities can, for example, increase the system accuracy of a motor or optimize its overall length, depending on the encoder they choose to integrate.

Additionally, one can choose between singleturn rotary encoders and multiturn versions with gears capable of counting the number of complete revolutions. As variants with and without integral bearing as well as with various shaft types and diameters, they complete the range of HEIDENHAIN rotary encoders with DRIVE-CLiQ interface.

Many rotary encoders with DRIVE-CLiQ interface have special additional properties:

* In order to measure the temperature, the KTY 84-130 semiconductor sensor and the PT 1000 sensors can be connected to the ECN 1324S and EQN 1336S optical rotary encoders with integral bearing as well as to the ECI 1319S, EQN 1331S, and ECI 4090S inductive rotary encoders without integral bearing. Furthermore, not only has the firmware for these rotary encoders been updated, but additionally the memory area for motor data and other manufacturer-specific data has been expanded.
* The sturdy ECI 1319S and EQI 1331S inductive rotary encoders without integral bearing are particularly well suited for applications with high mechanical loads of the rotor up to 600 m/s², and of the stator up to 400 m/s².
* In addition to the ROC 424S and ROQ 436S optical rotary encoders with integral bearing and solid shaft there are also the ECN 424S and EQN 436S optical rotary encoders with integral bearing and hollow shaft.

All rotary encoders with DRIVE-CLiQ interface are certified for safety-related applications in conformity with SIL 2 (as per EN 61508) or Category 3, Performance Level d (as per EN ISO 13849). Fault exclusion for the mechanical connection is available for the variants with solid shaft and hollow shaft.

HEIDENHAIN also offers various connecting cables and a diagnostic tool for encoders with DRIVE-CLiQ interface—namely, the adjusting and testing package made up of the PWM 21 and the ATS software. With this package, the condition of the encoder can be comprehensively tested during machine operation (online diagnostics during active operation of the axis) and as part of mounting or repair work (offline diagnostics). With absolute rotary encoders this adjusting and testing package makes it possible to electronically shift the datum in order to align the singleturn position of the rotary encoder with the preferred position of the motor.

Along with this wide range of absolute rotary encoders, there are also sealed linear encoders with DRIVE-CLiQ interface. And, every encoder with EnDat 2.2 interface can be connected to subsequent electronics for DRIVE-CLiQ interfaces through the EIB 2391S external interface electronics unit.

\*) DRIVE-CLiQ is a registered trademark of SIEMENS AG.

|  |  |
| --- | --- |
|  | *Open for additional data:*  *ECN 1324S (top left) and EQN 1336S (top right) optical rotary encoders as well as the ECI 4090S inductive rotary encoder from HEIDENHAIN permit the connection of external temperature sensors.* |
|  | *Sturdy: The ECI 1319S (left) and EQI 1331S inductive rotary encoders from HEIDENHAIN are designed for applications with particularly high mechanical loads, and also permit the connection of external temperature sensors.* |
|  | *Mounting alternatives from HEIDENHAIN: solid shaft with the ROC 424S rotary encoder (top), hollow shaft with the ECN 424S rotary encoder.* |
|  | *Turns every HEIDENHAIN angle encoder with EnDat 2.2 interface into a DRIVE-CLiQ encoder: the EIB 2391S interface electronics unit, here connected to an RCN angle encoder.* |

***For more information, visit:***

[www.heidenhain.de](http://www.heidenhain.de)

***Contact for the trade press:***

Frank Muthmann

DR. JOHANNES HEIDENHAIN GmbH

83292 Traunreut, GERMANY

Tel.: +49 8669 31-2188

[muthmann@heidenhain.de](mailto:muthmann@heidenhain.de)