

BISS-C Encoder interface

This page describes the **BISS-C encoder interface** of the Green Drive ISO tubular linear motor. The BISS-C option provides an absolute single-turn position, which is useful for applications that need a defined reference after power-on.

Please contact NILAB to buy the programming cable and software to change the standard configuration.

The encoder BISS-C position corresponds to a single-turn absolute value, where the single turn is related to 60 mm of linear displacement.

Standard configuration

The interpolator is set to 8192 pulses/revolution, corresponding to $60/8192 = 7.32 \mu\text{m}$ of resolution. This resolution is on the AB TTL 5V digital output signal.

The screenshot displays the BISS-C Encoder interface software. At the top, there are tabs for 'Read Sensor', 'Period Counter', 'Singleturn Data', 'Error', 'Warning', 'Stop on Error', 'Continuous Read', 'Data Display', 'Save to File', and 'Cycle Count'. Below these are four main configuration panels: 'Signal Conditioning', 'Interpolator Setup', 'Interface Setup', and 'Hex Editor'. The 'Signal Conditioning' panel includes 'Converter Functions' (Resolution: 8192, Hysteresis: 0.7031°), 'Signal Monitoring' (Amplitude Monitoring: 1.0<->4.5 Vpp, Frequency Error: Enable, Amplitude Error: Enable), 'Incremental Signals' (Output A, B, Z: Normal, Zero Signal Position: 0.00°, Zero Signal Length: 90°, Zero Signal Logic: B=1, A=1), and 'Maximum Possible Converter Frequency' (FCTR: 0x0004, Max. Input Frequency: 170.90 Hz, Min. Transition Distance: 0.44 μsec, Oscillator Frequency: 56.0 min. to 90.0 max. MHz). At the bottom, there are buttons for 'Read RAM', 'Write RAM', 'Write Immediately', 'CRC', 'Save Config', 'Load Config', and 'Write EEPROM'. A status bar at the very bottom shows 'Interaction Feedback' (1. Loading configuration succeeded, 0. GUI initialized) and 'Online Help'.

Additional resolution can be selected: 4096, 2048, 1024 pulses/revolution.

Read Sensor Period Counter Singleturn Data Error Warning Stop on Error Continuous Read Data Display Save to File Cycle Count

Decimal 0 0 On On On On On 1

Signal Conditioning Interpolator Setup Interface Setup Hex Editor

Interface Setup

Protocol Version: BiSS C 0x00 Protocol Options: BiSS C 0x01 Period Counter: none 0x00

SSI Data Format: binary coded 0x00 Timeout TIMO: ca. 20 μ s 0x00 CRC Polynomial - Status Messages: 0x43 - nE, nW 0x01

Timeout TOA: adaptive 0x01 Zero Bit: no zero bit 0x01

BiSS Identifier ROM: 00 00 00 00 00 00 00 00

BiSS Identifier: 4E 51 43 35 C0 83 69 43 iC-NQC 5

Test Functions

Test Mode: OFF 0x00 Analog Test Mode: Enable

PIN A: A PIN B: B PIN SDA: SDA PIN SCL: SCL

Register Access Safety Level 0

Bank 0 Config. Dat: read / write Bank 1..7 EDS: read / write Bank 8..15 User Data: read / write 0x40..7F BiSS ID: read / write

Read RAM Write RAM Write Immediately On CRC 0xE4 Save Config Load Config Write EEPROM

Interaction Feedback: 1. Loading configuration succeeded 0. GUI initialized Online Help

BISS C with CDS

Notes

- The BiSS-C interface provides absolute position within one 60 mm turn. - The resolution can be changed with the programming cable and software from NILAB. - The digital output provides AB TTL 5V signals for the drive or controller. - For the connection and the encoder wiring, refer to the connection system page.

From:

<https://dokuwiki.nilab.at/> - **NiLAB GmbH Knowledgebase**

Permanent link:

https://dokuwiki.nilab.at/doku.php?id=en:green_drive_iso:biss_c

Last update: **2026/09/11 07:54**

