NILAB EtherCAT Bus Interface

This gateway device, manufactured by NILAB GmbH, acts as an EtherCAT slave for connecting the NLi series to the EtherCAT fieldbus. It is intended for DIN-rail mounting.

This bus converter can manage up to 10 NLi motors with a CANopen interface with profile positioning, 2 NLi motors with interpolated positioning, and 10 NLi motors with a MODBUS RTU interface.



Two operating modes are programmable: EtherCAT to MODBUS RTU (for NLi motors without CANopen hardware) and EtherCAT to CANopen. Three inputs and three outputs as remote EtherCAT I/O are always available.

EtherCAT to CANopen DS402 gateway

In this mode, the NLi motors share information via PDI and PDO mapping with the EtherCAT fieldbus. The interpolated position point can be sent via EtherCAT PDOs to the CANopen PDOs. The control and status words of the NLi motors are mapped in PDOs synchronized with EtherCAT. Motion is based on the DS402 protocol: mode of operation 1 (profile positioning), and 7 or 8 (interpolated positioning) are available.

EtherCAT to CANopen gateway

In this mode, the NLi motors share information via PDI and PDO mapping with the EtherCAT fieldbus. The position table for motion tasks is mapped using SDO. The control and status words of the NLi motors are mapped in PDOs synchronized with EtherCAT. Motion synchronization is possible using the control word and I/Os.

EtherCAT to MODBUS RTU gateway

In this mode, the NLi motors share information using only SDO. Motion synchronization is possible using I/O only.

Status LED

Name	Description
ERR (RED)	EtherCAT Configuration Error - LED Blinking NO Error - LED off Unsolicited State Change - LED single flash Application Watchdog Timeout - LED Double flash PDI Watchdog Timeout - LED Active
RDY (GREEN)	EtherCAT Ready - LED Active PreOP state - LED flashing INIT state - LED off SafeOP - Single flash
LNK (BLU)	Timer Link - LED Blinking
CAN/MOD (GREEN)	CAN or MODBUS Communication Link activity - LED Blinking

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