Automation by innovation.

KeConnect C2

C2-MM 240/A Encoder Interface Module

- 2 Incremental encoder inputs with 32 Bit resolution
- 2 Latch inputs, operatable as SINK- or SOURCE-input

Brief description

The C2-MM 240/A is a motor control module from the Keba module system. The module is added directly on to a central processor module. A bus link module is used to operate this module with all product lines of the KeControl system.

Overview of functions

The MM 240/A provides the following functions:

- Position measurement: Up/down counter of increments (position measurement) with quadrature input (A/B, 90°), 32 Bit resolution
- Pulse counter on track A, 32 Bit resolution
- Pulse counter on track A with direction evaluation track B, 32 Bit resolution
- Velocity measurement through sampling with internal time basis
- Rotary encoder monitoring via zero track information
- Latch function of counter status via an external latch input 24V (Sink and Source)
- Latch function of counter status via zero pulse
- Sensor failure monitor of tracks A, B and zero (in 5 V diff. mode)
- Simulation mode for testing the application when incremental encoder is not connected

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Technical Data

General information

Power supply voltage:	+5 V DC from K Bus
Addressing at K-Bus:	Via 16-digit address switch, on the side
Connection terminals:	Open terminals, grid dimensions 5.08 mm
Power consumption at K-Bus:	max. 0.6 W

Incremental encoder inputs

Number of inputs	2
Input range	Configurable 5V differential and 24V
Maximum input frequency	250kHz
Evaluation	Single, double and quadruple evaluation configurable
	Counter function with and without direction evaluation
Resolution	32 Bit
Galvanic isolation	no

Speed measurement

Measurement process:	Dead time measurement with internal 50MHz tact
Counter depth:	24 Bit
Minimum recordable velocity:	Pulse duration over 0.33s = velocity 0

Position counter

Counter depth:	32 Bit

Transducer supply

Supply 24V	Looped through from 24V input terminal
Load capacity	500mA overall
Secured against	overload and short circuit
Supply 5V	Generated by 24V input terminal
Nominal voltage	5.05V +/- 4%
Load capacity	100mA per transducer

Latch inputs

Number of inputs	2
Response time latch input	20µs
Input type	Sink input in accordance with IEC61131 or source input configurable
Galvanic isolation	no

Time stamp for latch event

Resolution	1µs
Max. cycle time	16 Bit counter -> unique up to 65ms cycle time

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System interface

K Bus:	Parallel Bus-interfaces, plug-in on side

Diagnosis possibilities

Sensor failure and sensor short circuit at 5V differential input configuration
Zero pulse monitoring
Counter overflow
Track error: Signal frequence at inputs outside specifications (max. 250 kHz)

Dimensions:

Footprint:	
Module height:	120 mm
Mounting depth:	100 mm
Front panel width:	22.5 mm
Module width (incl. K-Bus plug):	32.5 mm
Weight	135 g

Standards:

The module conforms to the norms:

General information	
UL 508	In preparation
Product standard for programmable controllers:	
IEC 61131-1:2003	General information
IEC 61131-2:2003	Hardware

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