

# Multiple axis controller

iMD multiple axis controller for isel linear units

# iCU-DC / iCU-EC



iCU-DC  
Front view



iCU-DC  
Rear view

## General

The **CAN controllers** of the **iCU-DC** and **iCU-EC** series are compact, high-performance drive controllers for 2 - 6 DC servomotors and are offered at an optimal price / performance ratio.

The bench housing integrates all control components needed to solve a wide variety of automation tasks, ranging from the final stage via the I/O assembly to the safety controller.

The control computer has an integrated CANopen PCI card interface serving as CAN Master for the drive controller and I/O components. External upgrades are also possible, up to 128 CAN nodes. The connecting points at the rear of the control computer facilitate easy connection to (for example) a monitor. Peripherals such as a mouse and keyboard can be connected at the USB interfaces provided. LAN connection allows integration into an existing network and can be used for remote servicing.

The NC control core facilitates the interpolation of up to 6 axes (linear, circular, helical) as well as Online and Look Ahead machining. When using the ProNC software, individual axes can be controlled as handling axes (in addition to the interpolating axes).

All final stages have automatic jerk limitation and rest state monitoring (up to safety category 3).

## Features

- Drive controller for up to 6 brush or brushless DC servo motors
- NC control via CANopen field bus
- iMD10/iMD20 final output stages
  - 4-quadrant drive controller
  - Analysis for incremental encoder
  - Rest state monitoring
  - Over- and undervoltage protection,
  - Overtemperature protection, short-circuit proof
- Door control / hood control
- External emergency cut-out for integration into higher level safety circuits
- Connection for external control signals (START, STOP, RESET) via signal inputs
- Control computer connections:
  - VGA, 4 x USB (2 x front, 2 x rear),
  - RJ45 Ethernet (100 Mbit/s)
- Connection for milling spindle (100 -230V AC)
- 0 ...10 V output for external frequency converter for speed-controlled main spindle
- Front-sided control elements
- Industrial control computer based on Windows® with
  - CANopen PCI board
  - driver software for CNC control
- Programming/Operation
  - Remote (optional: ProNC)

## Technical specification

- Broadband mains supply
  - 115 V AC / 230 V AC, 50...60 Hz
- Switching power supply 1000 W / 48 V
- iMD10/iMD20 final output stages
  - Power supply: 24...80 V DC
  - Peak / nominal current: 25 A / 12 A
- Input/output of CAN E/A module
  - 4 digital inputs, 8 digital outputs
  - 1 relay output (230V AC, max. 6 A)
  - 1 analog output (not required with frequency converter option)
- CAN safety circuit module
  - up to safety category 3
  - door circuit control
  - spindle control
- Bench casing
  - W 630 x H 230 x T 400 mm
- Options:
  - frequency converter for iSA500 - iSA2200
  - additional CAN I/O module (16 x inputs, 16 x outputs)

## Ordering information

3 5 4 0 1 2 X 0 X 0

### Number of axes

- 2 = 2 axes
- 3 = 3 axes
- 4 = 4 axes
- 5 = 5 axes
- 6 = 6 axes

### Versions

- 1 = iCU DC\* (brush-type DC servomotors)
- 2 = iCU EC\* (brushless EC servomotors)

## Accessories

Motor lead M23 pin - M23 socket  
Part no.: **392759 0300** (3m)  
Part no.: **392759 0500** (5m)

Encoder lead SubD 15 plug - SubD15 socket  
Part no.: **392740 0300** (3m)  
Part no.: **392740 0500** (5m)

## Scope of delivery

- Controller
- Mating plug (I/O, pulse, remote)
- 230V AC mains lead
- Operating and programming instructions

Technical specifications subject to change.