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**This product family has been replaced by the following new product:**

**>> C-863 Mercury Servo Controller**

# C-862

## Mercury™ II DC-Motor Controller/Driver



Mercury™ II Palm-Top Controller front and back view. Euro and dollar coins for size comparison.

- **High Performance at Low Cost**
- **Integrated Driver, no External Amplifier Required**
- **Stand-Alone Functionality**
- **Daisy-Chain Network for Multi-Axis Applications**
- **Easy Address Setting**
- **Macro Command Language**
- **Non-Volatile EEPROM for Macros and Parameters**
- **Parameters can Be Changed On-the-Fly**
- **TTL Inputs for Limit & Origin Switches**
- **Motor-Brake Control**
- **Additional TTL I/O Lines**

The Mercury™ Palm-Top DC-Motor Controller is the perfect solution for motion control applications where a precision positioner is to be controlled by a PC or PLC (programmable logic controller).

### Integrated Amplifier and PWM Outputs

The unique Mercury™ concept combines a high-performance motion controller and an inte-

grated power amplifier in a small package. Additional PWM control outputs allow the direct operation of any DC-motor-driven PI micro-positioning system—even high-speed stages such as the M-500 ActiveDrive™ Translation Stages—reducing costs, increasing reliability and simplifying the setup.

### Dual Processor Architecture

The Mercury™ II controller employs a highly specialized processor providing high-performance PID motion control with many options for trajectory generation and filter settings. Position, velocity and other motion parameters can be changed on-the-fly. For increased system safety and performance, all communica-

tion and command parsing activity is handled by a second, independent processor. Any quadrature TTL incremental encoder can be used for position feedback (linear scales, rotary encoders, interferometers).

Limit and origin switch inputs and a motor-brake output are also standard.

### Macro Command Language

The Mercury™ II controller offers a high-level mnemonic command language with macro and compound command functionality. Macros can be stored in the non-volatile EEPROM for later recall. An autostart macro is available to run automation tasks at power up (no run-time computer communication required!).

### Network Capability

Up to 6 Mercury™ II controllers can be daisy-chained for multi-axis motion control applications.

### Ordering Information

- C-862.00**  
Mercury™ II Palm-Top DC-Motor Controller Set, Including Power Supply
- C-890.PS**  
Wide-Range Power Supply for Mercury Controller
- C-862.CN**  
Additional Network Connecting Cable
- C-862.IO**  
I/O Connecting Cable with Open End for C-862 Mercury™ Controller
- C-862.PB3**  
Pushbutton Box for C-862
- C-662.00**  
Mercury™-Step Stepper Motor Controller, Including Power Supply

Each controller includes software, an RS-232 communications cable and a network cable. The C-862.00 set also includes the C-890.PS wide-range power supply, network-cable and a null modem cable for PC connection.

### Stepper Motors

A stepper motor version of the C-862 is available as part number C-662.



Combination of 6 networked Mercury® Controllers

### Application Examples

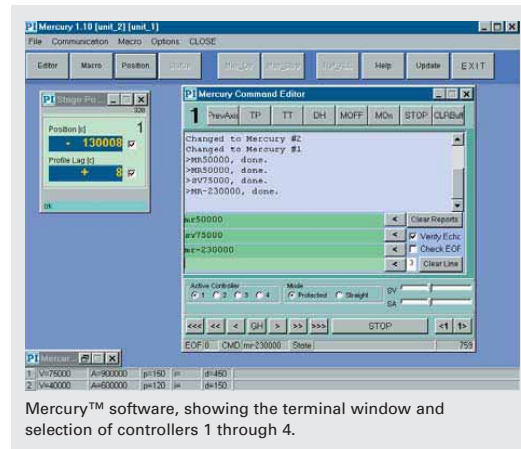
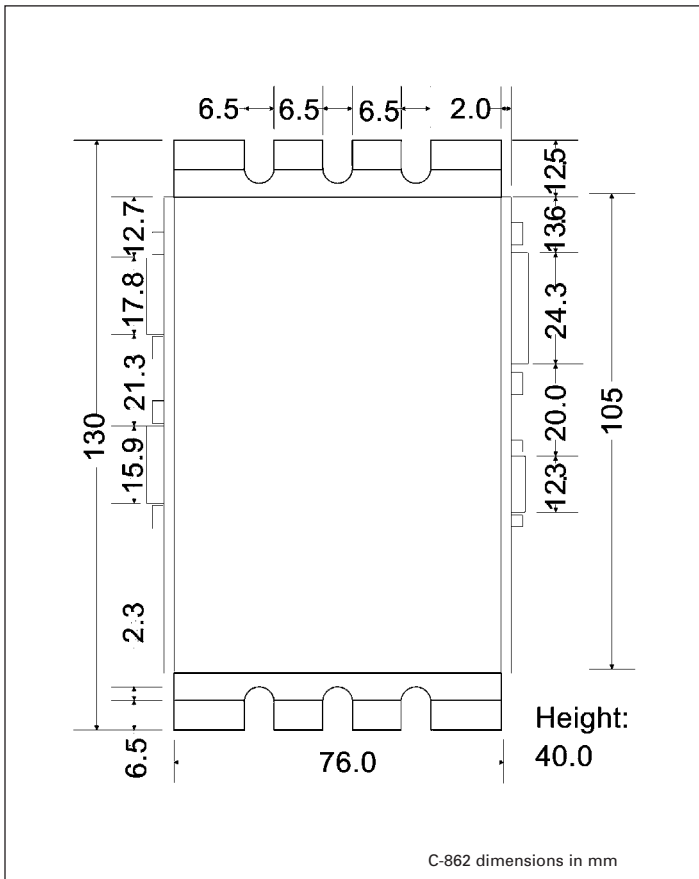
- Flexible automation
- Quality control
- Test equipment
- Photonics packaging
- Fiber alignment

This product family has been replaced by the following new product:

>> C-863 Mercury Servo Controller

Piezo • Nano • Positioning

PI



## Technical Data

Models	C-862
Function	Stand-alone DC-servo-motor controller
Servo characteristics	31-bit velocity, acceleration & position registers, 16-bit programmable PID, 256 $\mu$ s, parameter changes on-the-fly
Output power	15-watt PWM on-board, additional output for PWM drivers
Encoder input	A/B (quadrature) TTL signals (single-ended or RS-422 differential mode), max. 10 <sup>6</sup> counts / sec
Stall detection	Motor stop, servo off, triggered by programmable position error
Limit switches	2 TTL (pull-up/pull-down, programmable)
Origin switches	1 TTL (pull-up/pull-down, programmable), real-time position capture
Motor brake output	5 V TTL , software controllable
Additional I/O Lines	5 V TTL
Interface / Communication	RS-232, 9-pin (m) sub-D (cable included)
Command Set:	40 high-level mnemonic commands, ASCII format, compound & macro command capability (non-volatile EEPROM)
Motor connector	15-pin (f) sub-D
Internal safety features	Watchdog timer
Operating voltage	12 - 15 V, 1 - 2 A
Weight	0.3 kg

Piezo Actuators

Nanopositioning & Scanning Systems

Active Optics / Steering Mirrors

Tutorial: Piezo-electrics in Positioning

Capacitive Position Sensors

Piezo Drivers & Nanopositioning Controllers

Hexapods / Micropositioning

Photonics Alignment Solutions

**Motion Controllers**

Ceramic Linear Motors & Stages

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