

C-884.4DC • C-884.6DC Motion Controllers for DC Motors

4 or 6 Axes, for Positioners with Closed-Loop DC Motor



- PID servo control with dynamic parameter switching
- Powerful macro programming language, e.g., for stand-alone operation
- Data recorder
- Integrated interfaces: USB, RS-232, Ethernet, SPI, I/O, joystick
- Trajectory support for 1 or 2-D motion patterns

Digital motion controller for DC servo motors

4 or 6 axes. Dual core architecture for increased performance and flexibility by separating command processing and PID position control. Simple adaptation / extension for OEM products possible. Motion control of PI positioning systems with DC motors: direct motor control, PWM control for PI positioning stages with integrated ActiveDrive amplifiers or for stages with integrated block commutation (brushless motors). Supports motor brake.

Motion profiles

Point-to-point, trapezoidal velocity profile. User-definable trajectories (e.g., circles, sine curves) from externally fed points.

Extensive functionality

Powerful macro command language. Nonvolatile macro storage, e.g., for stand-alone functionality with autostart macro. Data recorder. Parameter changing during operation. Extensive software support, e.g., for LabVIEW, shared libraries for Windows and Linux

Interfaces and communication

Interfaces: TCP/IP, USB and RS-232 for commands. A/B quadrature encoder input. TTL inputs for limit and reference point switches. I/O lines (analog/digital) for automation. USB interface for HID compliant devices.



Specifications

Preliminary data	C-884.4DC	C-884.6DC	
Function	Position control for closed-loop DC motors		
Processor	Dual core architecture. Controller on a DSP core, with extendable command interpreter in an ARM core under Linux		
Axes	4	6	
Motion and control			
Servo characteristics	PID controller, parameter changing during operation		
Servo cycle time	100 μs		
Profile generator	Trapezoid velocity profile		
Encoder input	A/B quadrature (TTL differential according to RS-422), 50 MHz; BiSS interface		
Stall detection	Servo off, triggered by programmable position error		
Limit switches	2 × TTL per axis (programmable polarity)		
Reference point switch	1 × TTL per axis		
Motor brake	1 × TTL per axis, can be switched per software		
Electrical properties			
Max. output voltage*	24 V		
Max. output power	240 W		
Current limitation	2.5 A per axis		
Interfaces and operation			
Interface / communication	TCP/IP: RJ45/Ethernet USB: Mini-USB type B RS-232: Sub-D 9 (m) SPI: DisplayPort		
Motor connector	4 × Sub-D 15 (f)	6 × Sub-D 15 (f)	
I/O lines	4 analog in (-10 to 10 V) 4 digital in (5 V TTL) 4 digital out (5 V TTL)		
Command set	PI General Command Set (GCS)		
User software	PIMikroMove, PITerminal		
Software drivers	LabVIEW driver, dynamic libraries for Windows and Linux		
Supported functions	Linear vector motion; point-to-point motion; user-definable trajectories; start-up macro; PI Python; data recorder for recording operating data such as motor voltage, velocity, position or position error		
Manual control	USB interface for HID compliant devices		
Miscellaneous			
Operating voltage	External power supply 24 V / 5 A (120 W) included in scope of delivery		
Max. current consumption	11 A	16 A	
Current consumption, no load	500 mA		
Operating temperature range	5 to 50 °C		
Mass	1.6 kg		



Preliminary data	C-884.4DC	C-884.6DC
Dimensions	312 mm × 153.4 mm × 59.2 mm (incl. mounting rails)	

^{*} The output voltage depends on the connected power supply.

Scope of Delivery

Scope of delivery includes wide-range-input power supply with adapter, USB and RS-232 cable, network cable

Ordering Information

C-884.4DC

Motion Controllers for DC Motors and Brushless DC Motors, 4 Axes

C-884.6DC

Motion Controllers for DC Motors and Brushless DC Motors, 6 Axes