

MiniMACS6-AMP-4/50/10-IF1 Data Programmable Motion Controller



MiniMACS6-AMP-4/50/10 OEM

Freely programmable, compact multi-axis motion controller with integrated high-performance power stages, without housing.

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MiniMACS6-AMP-4/50/10-IF1

Freely programmable, compact multi-axis motion controller with integrated high-performance power stages and a network option card (Ethernet/EtherCAT/ProfiNet in planning).

Controller versions	
	CANopen Master/Slave, EtherCAT Slave optional, Ethernet optional, Standalone with APOSS® win
Features	
Motion features	Trapezoidal, jerk limited, CAM, synchronous travel, path, kinematics
Profile generator cycle	1 kHz (1 ms)
Sampling rate of PID positioning controller with speed and acceleration feed-forward control	1 kHz (1 ms)
Maximum number of axes	6
Web server (visualization)	optional
Expandable memory	yes (datalogging on USB stick)
Electrical data	
Logic supply voltage V_C	18 - 30 VDC
Inputs	
Digital inputs	16 (PLC level, 4 latch capable)
Analog inputs	2 (12-bit resolution, 0...10 V)
Hall sensor signals	4 x (H1, H2, H3)
CAN-ID (CAN node identification)	configurable with DIP switch
Output	
Digital output	8 (max. 100 mA per output)
Analog output	-
Encoder voltage output	+5 VDC, max. 200 mA per output, total 1 A
Interfaces	
EtherCAT-Master / Profinet	on request
CAN	2 (max. 1 Mbit/s)
RS232 / RS485	-
EtherCAT-Slave	1
Ethernet	1
USB 2.0	1 Data+; Data- (High Speed)
Encoder inputs	
Digital incremental	4 (differential, max. 6.25 MHz)
SSI absolute	4 (39 kHz...5 MHz)
Analog incremental (sin/cos)	4 (differential, max. 150 kHz)
Hiperface/EnDat	-
Encoder outputs	
Encoder TTL outputs	-
Indicator	
LEDs	3 (status) / EtherCAT
Display	-
Environmental conditions	
Temperature – Operation	-30...+70°C
Temperature – Storage	-30...+85°C
Humidity (condensation not permitted)	5...90%
Mechanical data	
Weight	ca. 600 g
Dimensions (L x W x H)	141 x 110 x 34 mm
Mounting	Metal compact housing / OEM without housing
Ordering Information: Please contact your maxon sales engineer	
Amplifier	
Operating voltage V_{CC} : 12 - 60 VDC	
6 DC / 4 EC (BLDC) / 3 stepper motors / Twin Mode / Chopper	
Max. output voltage: $0.9 \times V_{CC}$	
Max. output current (per axis)	
I_{cont} : 10 A	
I_{max} : 30 A	
Switching frequency of power stage: 48 kHz	
Sampling rate of PI current controller: 24 kHz (41 µs)	
Sampling rate of PI speed controller: 8 kHz (125 µs)	
Sampling rate of PID positioning controller: 1 kHz (1 ms)	
Product variants	
Order no. 001755 MiniMACS6-AMP-4/50/10	
Order no. 001756 MiniMACS6-AMP-4/50/10 OEM	
Order no. 001757 MiniMACS6-AMP-4/50/10-IF1 EtherCAT	
Order no. 001784 MiniMACS6-AMP-4/50/10-IF1 Ethernet	