



SyncBotic Robot Controller

Motor controllers for mobile and collaborative robots from MAB Robotics are advanced control systems designed to deliver precise and dynamic motion control. By combining innovative hardware design with high-performance control algorithms, these controllers ensure smooth operation, stability, and adaptability across a wide range of robotic applications. The integrated torque control enables advanced motion strategies such as force control and programmable compliance—without the need for mechanical...

Input Voltage Range	10 – 48 VDC
Nominal Input Voltage	24 VDC
Maximum Input Current	10 A
Maximum Continuous Phase Current	20 A
Maximum Peak Phase Current (t = 2 s)	80 A
Built-in Software-Controlled Termination Resistor	Optional
FDCAN Baud Rate (Selectable)	1 / 2 / 5 / 8 Mbps
Position PID Control Loop Frequency	1 kHz
Velocity PID Control Loop Frequency	5 kHz
Impedance Control Loop Frequency	40 kHz
Torque Control Loop Frequency	40 kHz
Torque Control Bandwidth (Adjustable)	50 Hz – 2.5 kHz
External Encoder Interface (SPI, RS422)	Yes
Maximum External 5 V Supply Current	150 mA
CANopen Interface	Available in MD80 2.1 version