

**Easy-Rotor-Control M specification****Mechanical Dimensions**

- controller-PCB: 80mm x 65mm
- rotor-card-PCB: 68mm x 44mm
- aluminium-housing: 84mm x 69mm x 24mm (without rubber-feet)
- desktop-housing: 128mm x 140mm x 44mm (without rubber-feet)

DC Supply

- 12 to 14 VDC through a 2.1mm by 5.5mm DC-Jack with (+)-pole on the inner contact
 - o protected against wrong polarization
 - o fused with 1.0 A mini-fuse
- USB-powered (not suitable if LAN- or rotor-card-option is used)
- current consumption (at 13.8V)
 - o stand-by
 - without any options: max. 10mA, with all options (LAN, LCD): max. 110mA
 - o working
 - without any options: max 10mA, with all options (LAN, LCD, LED, relay-cards): max 300mA (2 axis and aux-relays engaged)

Temperature-range

- 0°C to 70°C

Measurement input circuits (rotor feedback voltage)

- range : 0 to 15V against ground
- input-impedance : > 250KOhm
- 3 auto-range input stages
- protected against high voltage burst coming through the cable (protection on rotor-card)
- measurement-resolution: 10 Bit

Outputs (on ERC-M)

- each axis has open-collector-outputs for CW(UP), CCW(DOWN), AUX(speed or brake) and AUX-reverse

Outputs (with optional rotor-cards)

- each axis has DPDT relay-outputs for CW(UP), CCW(DOWN) and AUX
- 50VAC/3A or 30VDC/2.5A (230VAC/3A for AUX-relay only)

Primary interface (RS232 or USB)

- RS232 through 3.5mm phone-jack and adapter-cable to 9-pin DSUB
- USB through type B connector

Secondary interface (optional)

- LAN with COM-port-redirector

Controller

- 8-bit RISC-architecture
- bootloader to update firmware through RS232 or USB
- supported protocols for rotor-control
 - o subset of Yaesu GS232A
 - o subset of Yaesu GS232B
 - o DUAL-AZ extensions for GS232 by VE2DX
 - o subset of Hygain DCU-1 and extensions for position feedback

Firmware supported features

- delay before rotator starts moving
- programmable end stops
- antenna offset
- overshoot-correction
- support of overlap up to 180°
- speed- or brake-function for AUX-output
- speed function by angle or delay
- extended Calibration azimuth every 30°, elevation every 15°
- tolerance of position for tracking-mode
- software-calibration
- security stop if rotor doesn't move
- configurable communication-speed: 4800 -9600 -19200 – 38400 Baud
- save and load of all calibration- and configuration-data

Service-Tool and Rotor-Control M

- Supported operating systems
 - o Windows 2000 and XP
 - o Windows 7,8 and Vista (32 bit and 64 bit)