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
  - protected against wrong polarization
  - fused with 1.0 A mini-fuse
- USB-powered (not suitable if LAN- or rotor-card-option is used)
- current consumption (at 13.8V)
  - stand-by
    - without any options: max. 10mA, with all options (LAN, LCD): max. 110mA
  - 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℃ to 70℃

Measurement input circuits (rotor feedback voltage)
- range : 0 to15V 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)
- CW, CCW, UP, DOWN, AUX 1, AUX 2 : Open collector-outputs against ground
  - max. current per output with 4 outputs simultaneously at 100% duty-cycle and 70° C: 180mA
- AUX reverse 1, AUX reverse 2: Open collector-outputs against internal +5VDC
  - Max. current per output: 100mA
- No freewheeling diodes used inside ERC-M (e.g. for relays)

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
  - subset of Yaesu GS232A / GS232B and DUAL-AZ extensions for GS232 by VE2DX
  - 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
  - Windows 2000 and XP
  - Windows Vista, 7, 8, 10 (32 bit and 64 bit)