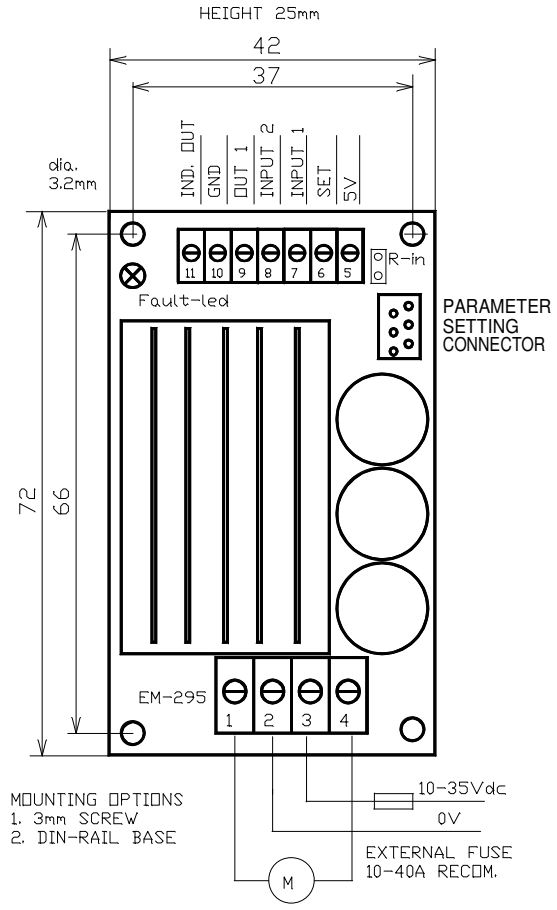
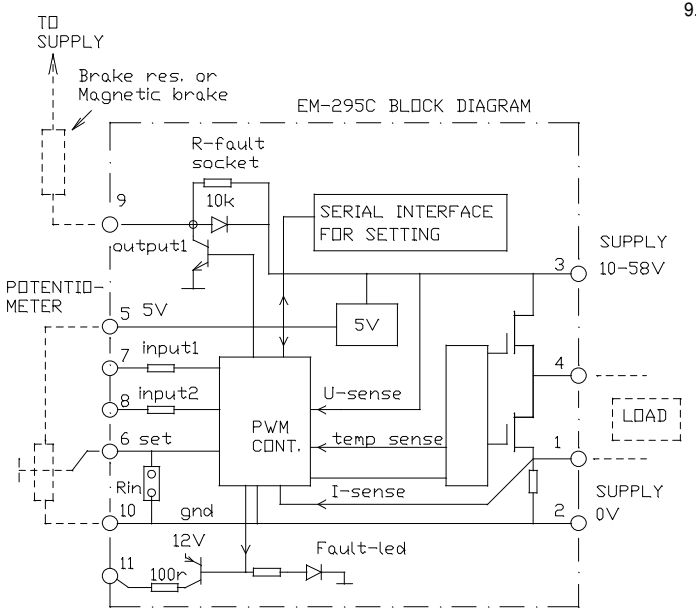


Settings can be done with serial interface unit EM-236 or EM328 series PC dongle for Ementool lite PC-program. Connect EM-236 interface unit to the red on-board connector of the device.

Output-1 can be used as a control output for magnetic brake unit or for brake resistor control. This output-1 can be set with par. 11
Notice! that max. output current is 3A
Brake res. should be > 4.7ohm at 12V,
> 10ohm at 24V and > 22ohm at 48V

Indication output pin 11 gives same signal as Fault led on board.



FEATURES

- DC motor speed controller, one direction
- Recom, motors up to 200W@12V, 300W@24V and 400W@48V
- Regenerative braking
- Braking resistor or Magnetic brake control output
- Voltage stabilized and Rxl load compensation

EM-295C is a one direction DC motor speed controller.
The controller uses PWM principle and works high efficiency.
The PWM frequency mode can be set to high or low freq .
This device has designed for speed control use. The rpm is regulated against supply voltage changes and the Rxl compensation improves rpm stability at low rpm.
The current limit limits the torque of motor or shutdown the motor
Device has also few auxliary I/O. The output can be used for fault indication or brake control. The inputs can be used as a end limits, stop, brake or freewheel control input.

PARAMETER LIST EM-295C prog v1.2

1. Pwm frequency 0-1-2 0=2khz, 1=16kHz (1)
2. Speed input range 0-1-2 0=0-5V, 1=0-10V, 2=1-5V (0)
3. Start ramp 0-2.5s 0-25 (10)
4. Stop ramp 0-2.5s 0-25 (5)
5. Current limit 0-40A 0-40 (30)
6. Brake current limit 2-20 A (10)
7. Load compensation 0-250 (0)
8. Overvoltage limit 15-60V (55)
9. Output max. 5-55V (50-550) (280)
10. Overcurrent trip (I-trip) 0=disabled, 1=enabled (1)
11. out 1 config. 0-3 (1)
    0=open if alarm,
    1=activates if alarm (pull down if alarm)
    2=activates when run (release magn. brake unit)
    3=activates if overvoltage exceed (see par. 8)
12. input 1 config. 0-5 (2)
    0 = start /stop with (with ramp)
    1 = start /stop toggle mode
    2 disable (with ramp)
    3 disable + freewheel
    4 current limit with analog voltage 0-5V
    5 current limit with analog voltage 0-10V
13 input 2 config. 0-3 (3)
    0 = start /stop with (with ramp)
    1 = start /stop toggle mode
    2 disable (with ramp)
    3 disable + freewheel

MONITOR

1. PWM 0-255 (255 = 100%)
2. Motor current 1 = 1A
3. Brake current 1 = 1A
4. Im ADC in 0.16A / digit
5. Supply voltage 0.078V / digit
6. Temp.
7. Set ADC input (1024 = 100% set value)
8. nc
9. nc

TECHNICAL DATA EM-295C v3

Supply voltage nom. 12-48V max. 10-58Vdc
Overvoltage shut down max. 60V (adjustable)
Motor cur. cont. max 25A (Ta<50°C & pwm 2kHz)
Motor cur.cont. max 20A (Ta<50°C & pwm 16kHz)
Motor cur. peak max 40A (10s.)
Voltage drop typ. 0.7V at full speed
PWM frequency 2kHz or 16kHz
Start ramp 0..2.5 s. adjustable
Stop ramp 0..2.5 s. adjustable
Control range 0-5V or 0-10V, adjustable
Output range 0-10V...0-55V
Output 1 NPN open col. with 2.2k pull up
Output 1 max. 3A (diode for ind. load)
Ind. output pin 11 PNP open. coll 12v max 10mA
Control input 1, PNP, Rin 100kohm
Control input 2, PNP, Rin 10kohm
Control input levels "low" 0-1V, "high" 4-30V
Connectors supply and power 2.5mm
Connectors control 1mm
EMC EN-50081-2 & EN-50082-2 (industrial)
Weight 80g
Operating temp (Ta) -40...70°C

COMPANY	ELECTROMEN OY	
DRAWN	DATE	TITLE 1 of 1
K.M.K file 295Cv12	21.3.2024	WIRING & DIMENSIONS EM-295c v1.2 DC-MOTOR DRIVER