EM-185A DC-MOTOR SPEED REGULATOR 12/24Vdc 3A

FEATURES:

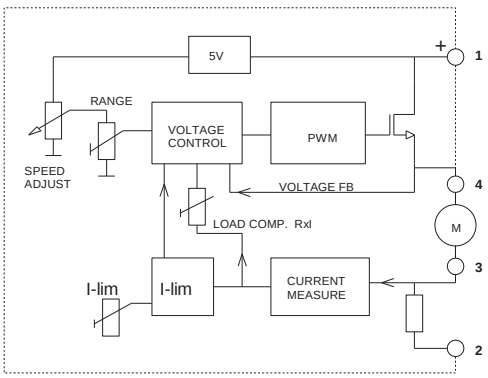
- **1-quadrant**
- **Panel mountable**
- **Small size**
- **Motor size 5-80W**
- **Good speed regulation**
- **Load comp. adjustable RxI**
- **Adjustable current limit**
- **EMC tested (CE marked)**
- **EM-185A replaces EM-185**
- **Changes in the wiring instruction**

EM-185A is a PWM-based DC-motor driver. The materials and features meet the industrial environment requirements. The device is CE marked and has been tested through EMC measurements required by industrial environment. Motor voltage is regulated against supply voltage changes, and there is also a load compensation (RxI) adjustment. Thanks to these features EM-185A offers good performance in motor speed control applications. The current limit and the rpm range are adjustable with trimmer potentiometers. EM-185A is easy to mount in a 10mm hole in an assembly panel.

TECHNICAL DATA

Supply voltage	12-24Vdc (10...35V)
Idle current max.	20mA
Motor current cont.	max 3A (Ta<50°C)
Motor current peak	max 6A (10s.)
Short circuit current	External Fuse
Current limit adj.	0.5-6A
PWM motor-frequency	25kHz
Motor and supply connectors	1.5mm
EMC	EN 50081-2 EN 50082-2
Weight	75g
Operating temp (Ta)	0-60°C

EM-185A BLOCK DIAGRAM



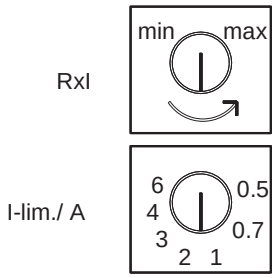
EM-185A OPERATING INSTRUCTIONS

Supply should be filtered 10-35Vdc,
max. ripple <20% on full load.

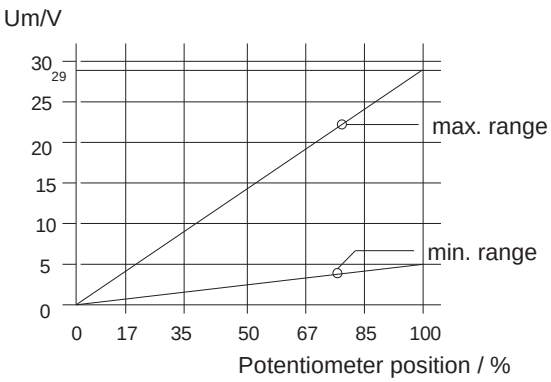
We recomended the use of fuse for supplyline.
Fuse max 6.3A

Current limit (I-lim) limits the motor current, in other words the motor torque. This adjustment is set according to the motor nominal current or within application.

RxI is always set to minimum in the beginning. After this set a motor rpm of 20-30%, slowly increase the compensation and try loading the motor simultaneously. When motor rpm is no longer affected by the loading, the compensation adjustment is in balance. If motor starts to twitch or accelerate when loading is applied, there is too much compensation.

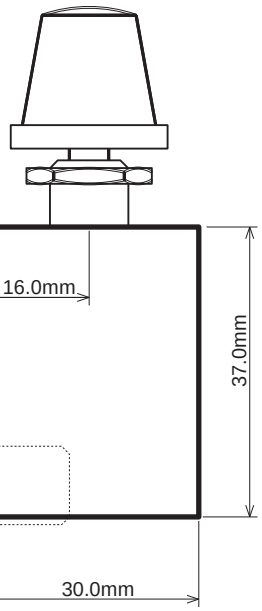


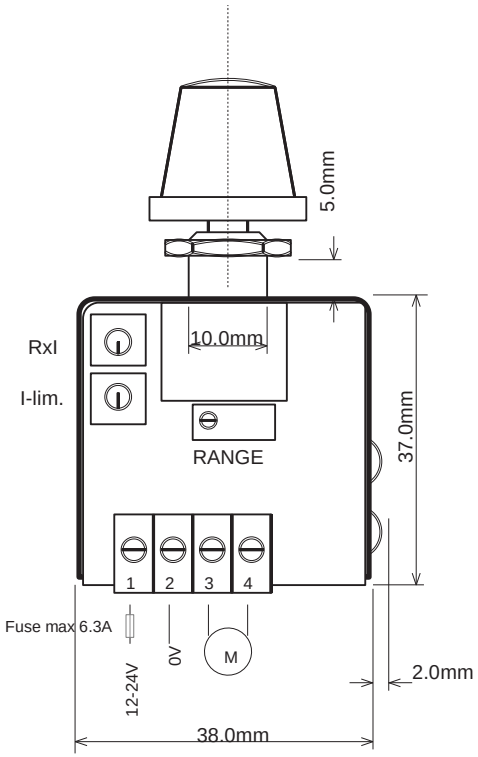
Potentiometer position / Motor voltage



Range is adjustable with range trim

0% = potentiomer full counter clockwise
100% = potentiometer full clockwise





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