

# EM-185 DC-MOTOR SPEED REGULATOR

## 12/24Vdc 3A



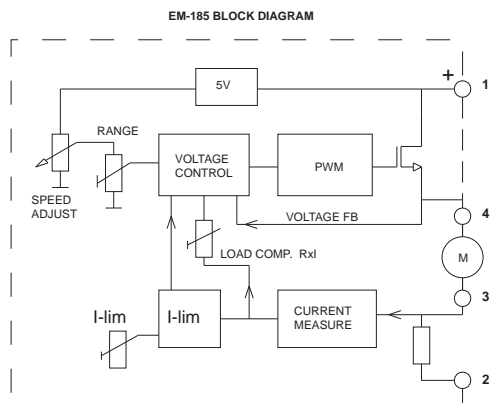
### FEATURES:

- 1-quadrant
- Panel mountable
- Small size
- Motor size 5-80W
- Good speed regulation
- Load comp. adjustable Rxl
- Adjustable current limit
- EMC tested (CE marked)
- Overload and short-circuit protected

EM-185 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 (Rxl) adjustment. Thanks to these features EM-185 offers good performance in motor speed control applications. The current limit and the rpm range are adjustable with trimmer potentiometers. The power stage of the device is protected against short-circuit and overload (over temp.). EM-185 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	max 30A
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

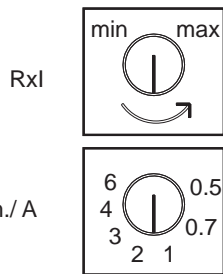


# EM-185 OPERATING INSTRUCTIONS

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

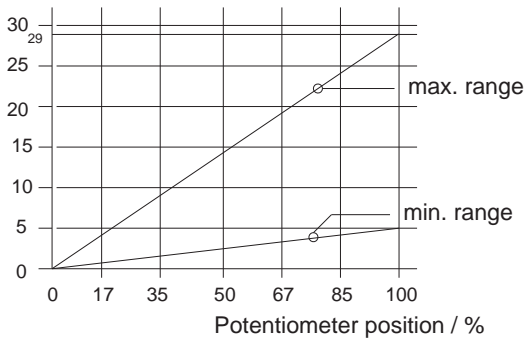
Current limit (I-lim) limits the motor current, in other words the motor torque. This adjustment is set according to the motor nominal current or within application.

Rxl 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

Um/V



Range is adjustable with range trim

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

