KALEJA GmbH
D-73553 Alfdorf

Motor control for brush sticking direct current DC motors 24VDC

Model for switched currents up to 3A . The module protects the motor from unacceptably high currents in the event of locking. Current time is adjustable.

Snap-fit for DIN rail   EN 50022

Model width: 17,5mm
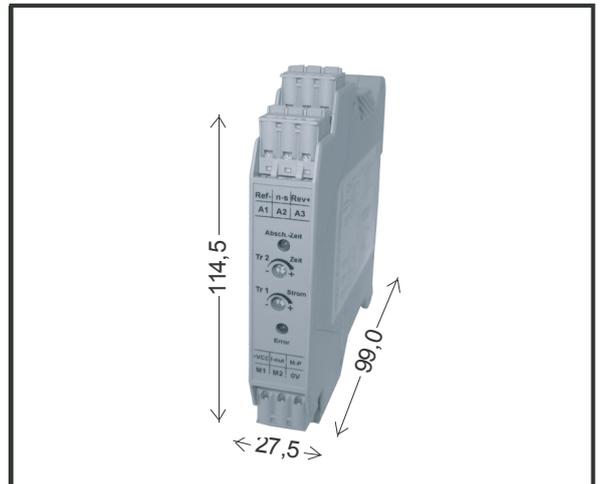
Short Designation Type	Nominal voltage 24VDC M-MRI-3-30
Order no. (Art.no)	**06.04.056**

Specifications: input circuit	
Nominal voltage / control voltage	**24 VDC**
Nominal voltage range min. / max.	**15V to 35VDC**
Input current at Un	**10mA**
Status indicator	**LED yellow, LED red**

Specifications: Output circuit	MOS-FET
Range of switching voltages	**19VDC to 35VDC**
Max. Rated load current	**3A**
Adjustable the opening time	**0,5 sec. to 2,0 sec.**
Adjustable the current control	**0,4A to 4A**
dynamic break	**yes**
Impulse current	**20A t=20msec.**
Power driver	**MOS- FET**

| Further specifications	
Allowable ambient temperature	**-20°C to + 50°C**
Vibration resistance a/r (10...500Hz)	**> 20 / 5**
Overload protection	**Yes**
DIN VDE-regulations	**VDE 0110, 0160 in sep. Parts**
Mounting position / installation	**Snap-fit, modular**
Type of connection: spring-type terminal	**Single wire 4mm², finely. 2,5mm²**
Case dimensions: w x h x d	**17,5mm x 114,5mm x 99mm**

The module protects the motor from unacceptably high currents in the event of locking. If the motor current exceeds the set value, the module switches off the motor after the time set at the trimmer under dynamic braking. To prevent the current evalution from responding during acceleration of the motor, a fixed time (approx. 300ms) is active. If the motor current exceeds the set value during operation, the motor is switched off after the time set at the trimmer and remains blocked up to the next RESET. Reset is released by LOW signal at A1 and at A2 or by HIGH signal at A3. If the motor has accelerated, and it needs current monitoring, A3 must receive a LOW signal. If the module switches off the motor because of excess current, this status is displayed by a red LED and I-out signal output jumps to +24VDC. This remains stored until the next RESET. A measuring point has been installed at a terminal to set always the same motor current for serial production. The setting can be read off at a voltmeter, The module is provided with a speed controller which can be set at a potentiometer or analog output SPS (0-10VDC). A multitude of applications is provided in this case, e.g.: protection for materials and tools against excessive pressure, protection for equipment against locking drive belts, conveyor belts, straps, trucks,...., cutout upon exceeding the motor shaft torque. The module can be used as a substitute for mechanical reversing relays by de-activating the current monitoring.

Measuring (mV)	Current (A)
40	0,65
60	1,0
85	1,5
110	2,0
135	2,5
160	3,0
185	3,5
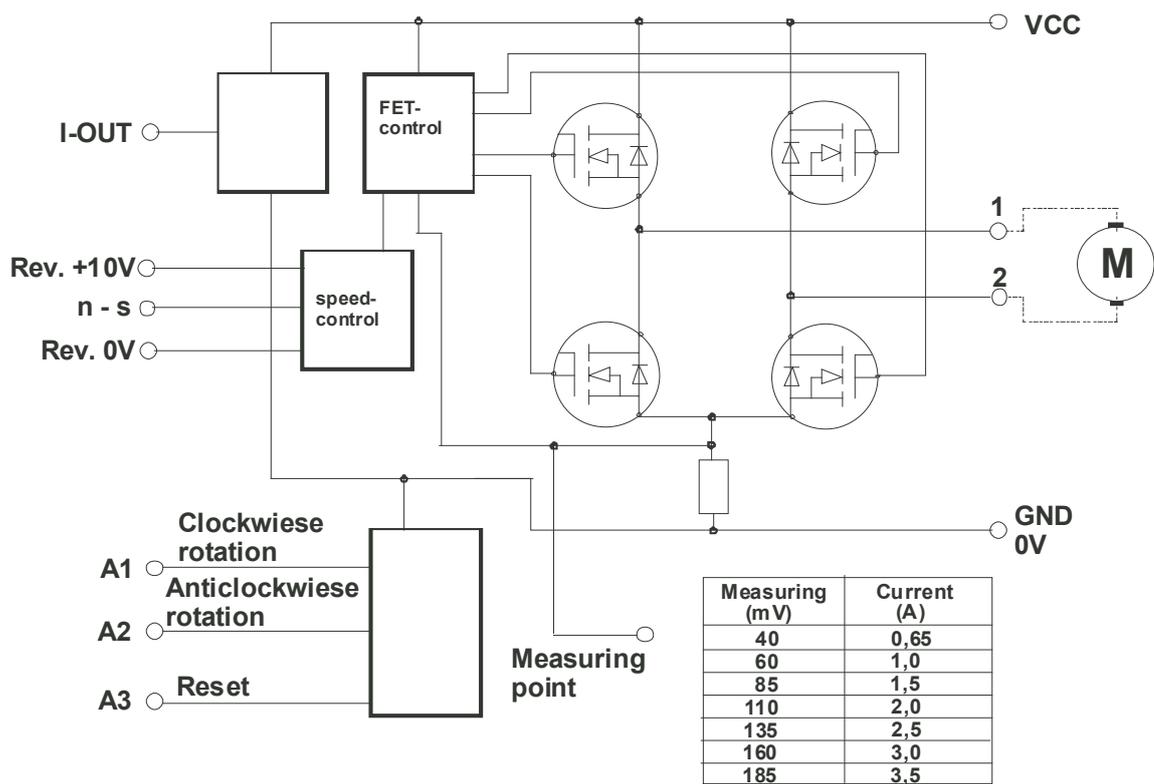
Direction of Travel	Polarity	
Clockwiese (A1)	M1 -	M2 +
Anticlockwiese (A2)	M1 +	M2 -