KALEJA GmbH
D-73553 Alfdorf

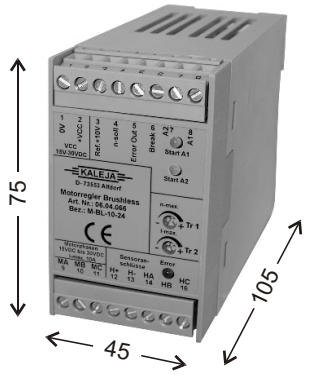
Motor control for brush sticking direct current DC motors 48VDC

Model for switched currents up to 10A

Multifunction controller with following applications: - speed control - ramp function - current control - current adjustment

Snap-fit for DIN rail EN 50022

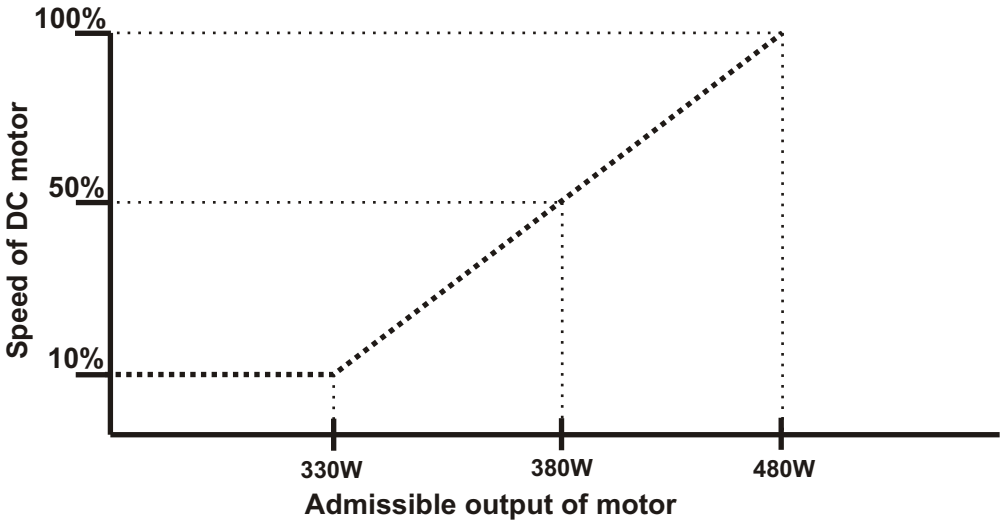
Construction width: 45mm



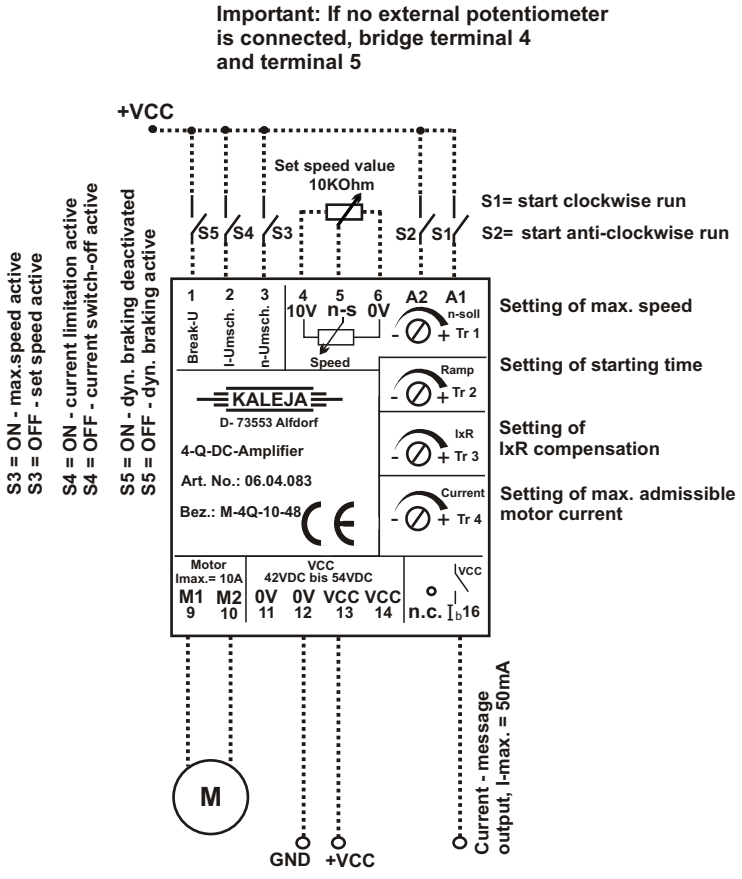
Short Designation Type	**Rated voltage: 48VDC** **M-4Q-10-48**
Order no. (Art.no)	**06.04.083**
Specifications: input circuit	
Nominal voltage / control voltage	48 VDC
Nominal voltage range min. / max.	42V to 54VDC
Input current at Un	10mA
Analogue input rotational speed control	0V to 10VDC
External potentiometer for speed control	10 Kohm
Specifications: Output circuit	**MOS-FET**
Starting ramp Tr2 soft start	0,1 sec. to 5sec. adjustable
Max. Rated load current	10A
Current limitation Tr. 3 min. / max.	1A to 10A
Signal output current monitor	I-max. 50mA
dynamic break	yes switching ON/OFF
IxR amplification (speed compensation by increasing resitance	120°
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: screwed connection / plug-in	Single wire 4mm², finely. 2,5mm²
Case dimensions: w x h x d	45mm x 75mm x 105mm

Description

Module M-4Q-10-48 is a four-quadrant motor control system with soft start / speed regulation for DC motors.It ensures switching ON / OFF as well as the controlled and defined driving of motors. Speed regulation of motors can be set via a potentiometer or an analog voltage 0 - 10 VDC. The trimmer Tr2 (ramp) is used to set the starting time of the motors from 0,1s to 5s. Trimmer Tr3 (IxR) is used to set IxR compensation, i.e., in case of load variations at the motor, the IxR compensation tries to keep the speed of the motor constant. Trimmer 4 (current) is used to set the admissible total current. At terminal2 (I change-over) it is possible to change over to current limitation (motor is not switched off but limited to the current set) by applying a high signal from the current monitor (motor switches off as soon as the over-current set is reached). As soon as the over-current is reached, the LED lights up and the output (rerminal 16) is changed over to VCC. At the control input (terminal 3) it is possible to change over from the speed set to the full speed. If (terminal 1) is controlled, there is no dynamic braking.



Standard wiring



SPS - wiring