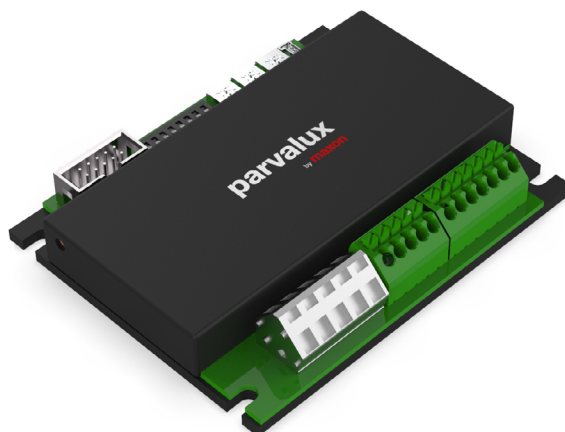




Electrical rating

1	Nominal power supply voltage $+V_{cc}$	VDC	12 - 50
2	Absolute supply voltage $+V_{min} / +V_{max}$	VDC	10 / 56
3	Output voltage (max.)	V	$0.98 \times +V_{cc}$
4	Output current $I_{cont} / I_{max} (< 10 \text{ s})$	A	15 / 30
5	Pulse width modulation frequency	kHz	53.6
6	Sampling rate PI speed controller	kHz	5.36
7	Max. efficiency	%	98
8	Max. speed - PMDC motor	Open loop: limited by max. permissible speed (motor) and max. output voltage (controller) Closed loop: 5000 to 15,000 rpm, dependent on configuration	
9	Max. speed - BLDC motor	2500 ... 30,000 rpm, dependent on configuration	
10	Built-in filter choke	nH; A	3 x 200; 15

Inputs and outputs

1	Digital input - «Enable»	Logic +2.1 ... +30 VDC
2	Digital input - «Direction»	Logic +2.1 ... +30 VDC
3	Digital input - «Stop»	Logic +2.1 ... +30 VDC
4	Digital output - «Ready»	Logic signal output, 3.3 VDC, Ri: 2.2 kΩ, Push-Pull
5	Analog input - «Speed set value»	PWM signal (fixed amplitude 0 ... 5 VDC, 1 kHz ... 10 kHz)
6	Digital hall sensors H1, H2, H3	+2.0 ... +24 VDC (internal pull-up)
7	Digital incremental encoder signals A, A\, B, B\	EIA RS422, max. 1 MHz, max. 100 kHz (single-ended)

Voltage outputs

1	Sensor supply voltage V_{sensor}	+5 VDC / $I_L \leq 100 \text{ mA}$
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Motor connections

1	PMDC motor	+ motor, - motor
2	BLDC motor	Motor winding 1, motor winding 2, motor winding 3

Configuration

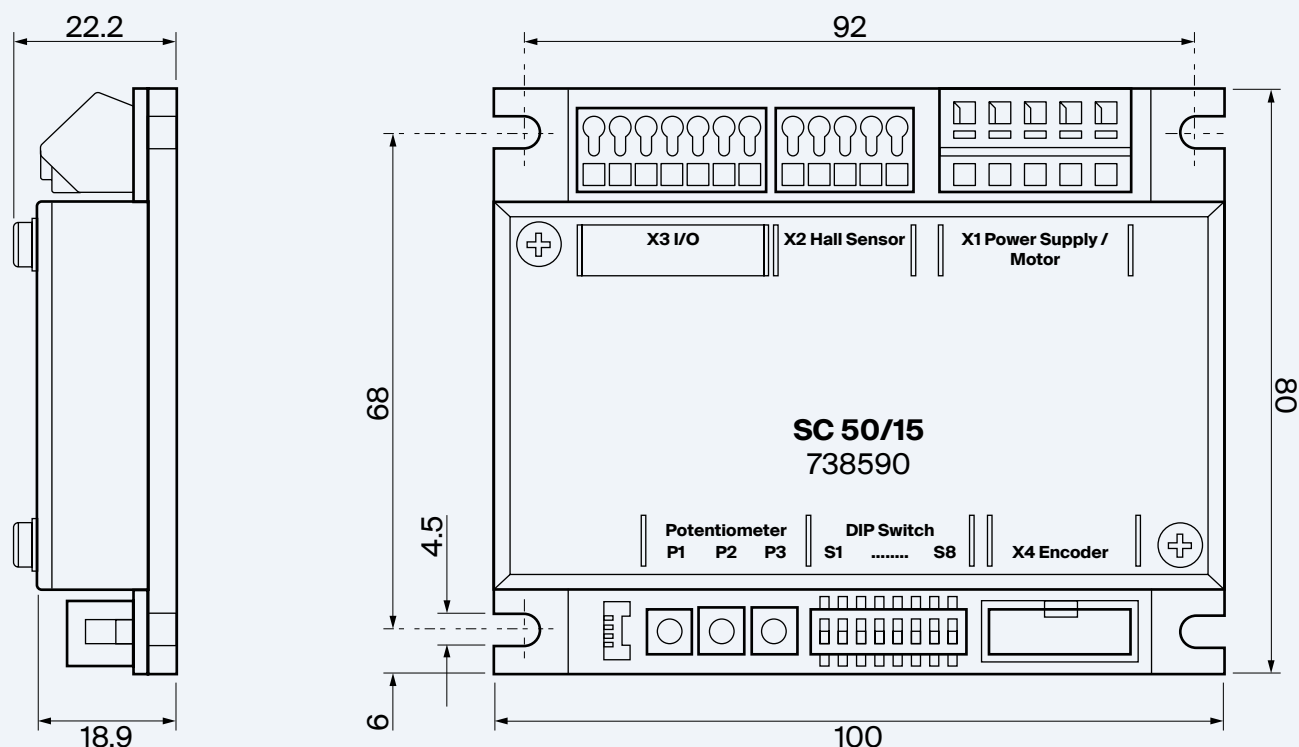
1	DIP switch	SMD type, 8 position for the setting of: • Motor Type • Control Mode • Speed Set Value Source • Speed Sensor Selection / Encoder Resolution • Hall Sensor Polarity • Speed Range Selection
2	Potentiometers	3 x angular type 210° for the setting of: • Speed Ramp/Speed Set Value • Continuous/Maximum Current Limit • Controller Gain

Status indicators

1	Device status - Operation	Green LED
2	Device status - Error	Red LED

Physical

1 Weight	g	151
2 Dimensions (L x W x H)	mm	100.0 x 80.0 x 22.2
3 Mounting		Slotted flange for M4 screws



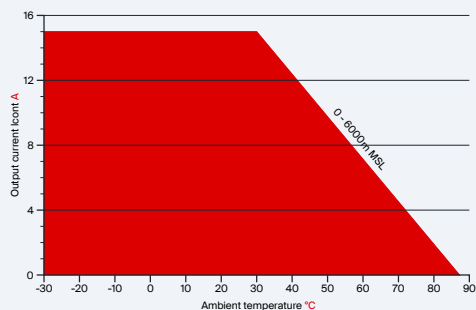
Environment

1 Temperature - Operation	°C	-30 ... +30
2 Temperature - Extended range [a]	°C	+30 ... +84; Derating: -0.278 A/°C
3 Temperature - Storage	°C	-30 ... +85
4 Altitude [b]	m	0 ... 6000 MSL
5 Humidity	%	5 ... 90 (condensation not permitted)

[a] Operation within the extended range is permitted. However, a respective derating (declination of output current I_{out}) as to the stated values will apply. [b] Operating altitude in meters above Mean Sea Level, MSL.

Thermal data

Derating of output current



Power dissipation and efficiency

