

48 VDC External Commutation Unit CHG045-AA01-01

Dimensions : B 130 (118) mm x T 138 mm x H 61 mm

Electrical data of external commutation unit CHG045-AA01-01:

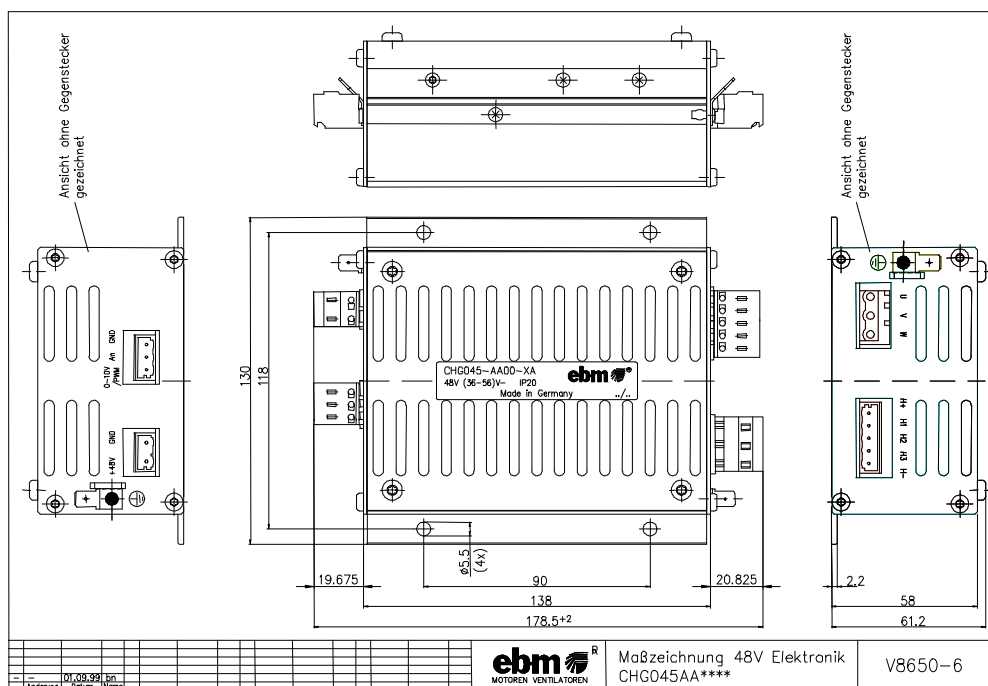
nominal supply voltage:	48 VDC
rated supply voltage	55.2 VDC
supply voltage range:	36- 60 VDC (reduced performance at input voltage < 48 VDC)
Interface board:	module no. 24.343/1
maximum power input:	450 W @ rated supply voltage
nominal input current:	9,5 Amps DC @ ambient temperature 60°C
max. output current to motor:	9,5 Amps RMS @ ambient temperature 60°C
motors / fans	ebm standard sizes 74 (8 poles) and 84 (6 poles) 3 core design / 60° hall-sensor signals
speed control input:	0-10VDC continuous $R_{in} = 100k\Omega$ alternatively PWM / 12V / 1 to 10 kHz
TACH output:	open collector (4 pulses (74 motor) or 3 pulses (84 motor) per rev.)
EMC:	ENV 50 121-3-2
RFI:	EN 55011 Class B
ESD:	EN 61000-4-2 Class 3
High frequency field:	EN 61000-4-3 20V/m
Fast transients:	EN 61000-4-4 2000V +/-
Surge:	EN 61000-4-5 Class 3 2000V +/-

Electrical data of external commutation unit CHG045-AA01-01 (continued):

soft start:	ebm standard (12 sec. from 0 rpm to max. rpm)
high voltage test:	600 VDC / 1 sec.
reverse polarity protection	ebm standard with FET in – power supply line
Ambient temperature:	-40°C to +60°C at nominal load
Humidity:	25% rH to 95% rH non condensing
Protection class	IP20 according EN 60529
moisture protection:	varnished transparent with SL1331
weight	0.8 kg

Mechanical data:

dimensions:	130 x 138 x 61
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Electrical connection 48 VDC- external commutation unit CHG045-AA01-01

supply side:



Electrical connections

Plug to KL1		Pin Nr.		Name	Use
	Supply GND	1		48 V	+ voltage supply
		2		GND	ground
Plug to KL2		Pin Nr.		Name	Use
	Control input Tach out GND	1		0-10 V	+ control input (0-10 V or PWM)
		2		An	Tacho out (open collector)
		3		GND	ground / reference

Electrical connection 48 VDC- external commutation unit CHG045-AA01-01

motor side:

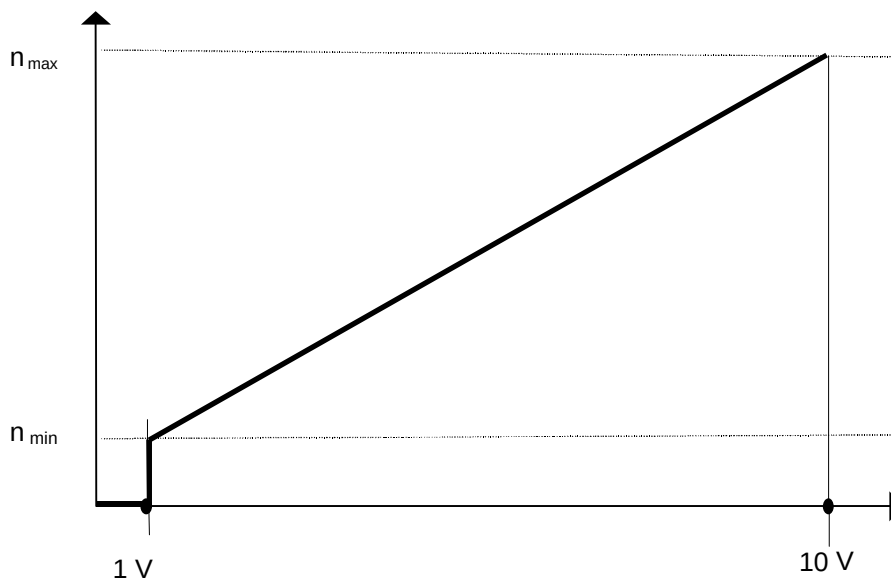


Electrical connections

colours correspond to series production motors

Plug to KL3		Pin Nr.		Name	Cable colours	Use
	Motor conn.	1		U	black	motor winding wy
		2		V	blue	motor winding yx
		3		W	brown	motor winding uz
Plug to KL4		Pin Nr.		Name	Cable colours	Use
	Hall-sensor	1		H+	red	+power supply for hall- sensors
		2		H1	orange	hall-sensor 1
		3		H2	brown	hall-sensor 2
		4		H3	yellow	hall-sensor 3
		5		H-	blue	-power supply for hall-sensors

Control characteristics



Picture : control voltage vs. fan speed

Interface Circuit

