

Converter

CC-75-400



Summary

- Converter for driving permanent-magnet synchronous motors (PMSM) and brushless DC motors (BLDC)
- Sensorless speed control from 5,000 rpm up to 500,000 rpm
- Maximum output power of 400 W
- No output filter required
- User definable setup for different motor parameters
- Torque- and speed-control
- Highest possible efficiency
- Integrated braking chopper
- Mountable on a DIN-rail
- Parallel connection of several converters to one dc-bus possible
- User-friendly PC control software (CelerotonPilot)

Specifications

Input voltage U_{in} (dc)	24 – 75 V
Maximum output power	400 W
Output voltage (peak value phase-phase)	0 – 0.95 U_{in}
Maximum phase current (PAM-operation)	4.7 Arms / 6.6 Apeak ¹
Maximum frequency/ speed	8.3 kHz / 500,000 rpm
Operating range	4-Quadrant
Communication interface	USB
Communication interface (optional)	RS232, RS485, CAN
PC control software	CelerotonPilot
Weight	0.5 kg
Dimensions	150 x 95 x 35 mm
Operating temperature	0 – 40 °C

¹Fundamental of the PAM-block current

I/O connections

Connector X2 – I/O interface (6 pins)

1 x analog input	0 – 10 V
1 x analog output	0 – 10 V
1 x temperature measurement input	Thermocouple type K
1 x temperature measurement input	PTC or NTC
1 x GND	
1 x power supply	10 V, 200 mA

Connector X3 – I/O interface (6 pins)

1 x COM	Common rail for digital outputs
2 x digital outputs	0 – 24 V (relay, normally open contacts)
1x GND	
2 x digital inputs	0 – 24 V (software adjustable thresholds)

Options

CC-75-400.SLx.COx

Sensorless SLx

- **SL1 (Standard):**
 - o Speed constants between 550 and 18,250 rpm/V
 - o Sensorless speed control from 7,000 rpm
- **SL2:**
 - o Speed constants between 400 and 7,900 rpm/V
 - o Sensorless speed control from 5,000 rpm

Communication interfaces COx

	USB	CAN	RS232/RS485
CO1 (Standard)	x		
CO2	x	x	
CO3	x		x

Safe operating area (SOA)

The maximum output power (P_{out}) of the converter CC-75-400 depends on the ambient temperature (T_{amb}). The average power losses in the braking chopper ($P_{chopper}$) are limited by the output power and the ambient temperature. The respective relation is depicted in Figure 1.

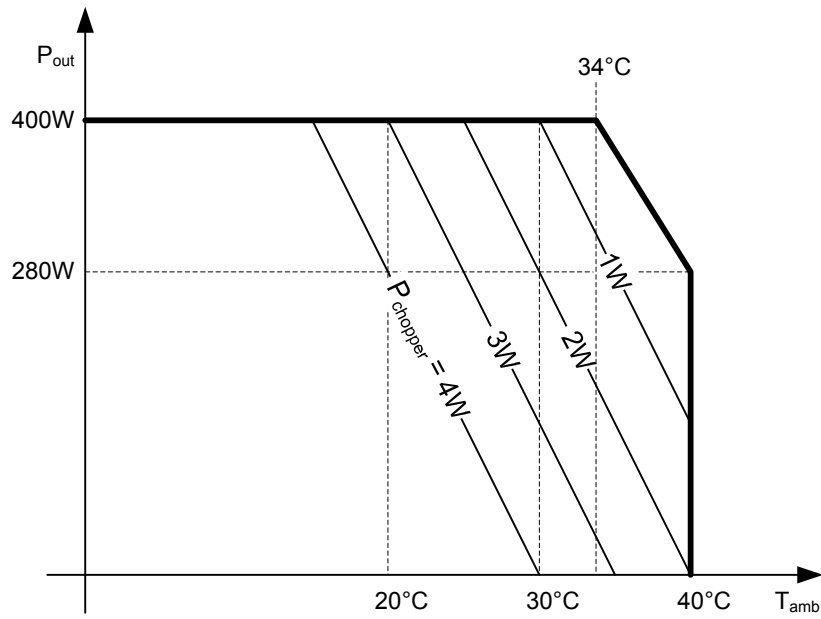
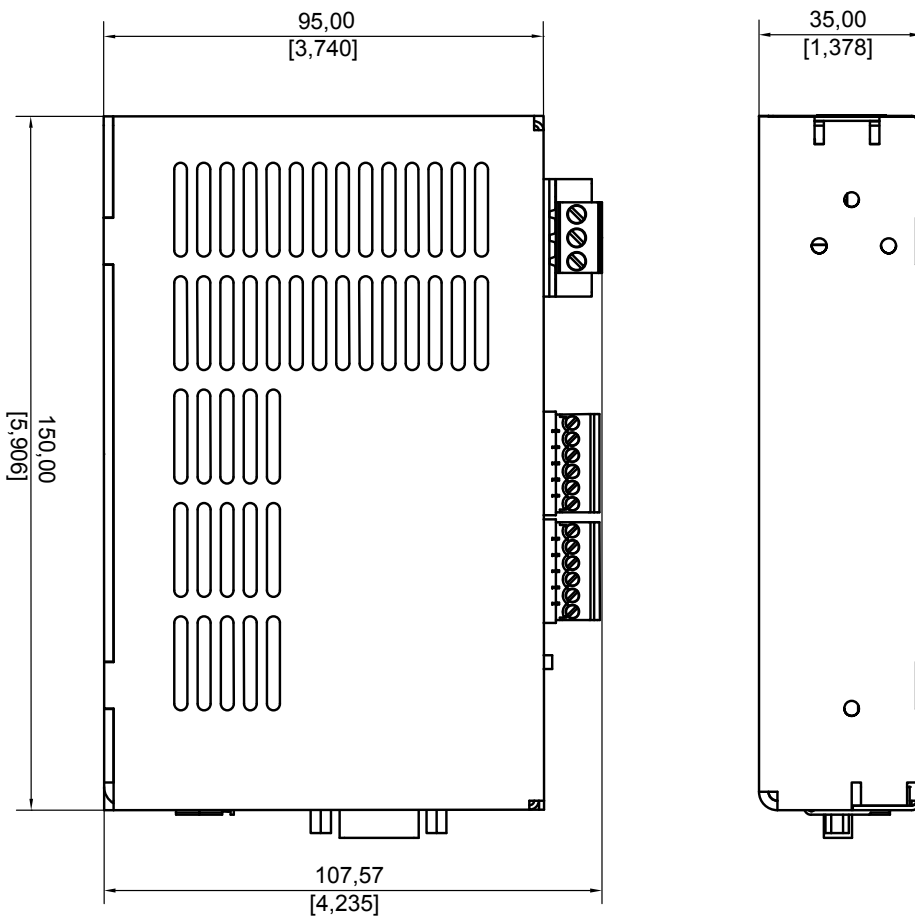


Figure 1: Safe operating area (SOA) of the converter CC-75-400 versus ambient the temperature (T_{amb}) and the allowed average power losses in the breaking chopper ($P_{chopper}$).

Dimensions in mm (inch)



Contact

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