

Converter	CC-32-100	CC-75-500	CC-100-1000	CC-120-1000	CC-230-3500	CC-550-7500	CC-400-12000
Maximum output power	100 W	500 W (800 W option HC)	1 kW	1 kW	3.5 kW	7.5 kW	12kW
Input voltage	24 – 32 VDC	24–75 VDC	24–100 VDC	40 – 120 VDC (120 – 240 VDC available upon request)	110–240 VAC, 1~ rms, 50 - 60 Hz, PFC No DC (available upon request)	100 – 550 VDC (100 – 800 VDC available upon request)	200 – 420 VDC
Minimum input voltage for output power	24 VDC	67 VDC	95 VDC	40 VDC	220 V rms	300 VDC	200 VDC
Auxiliary input voltage	-	-	24 VDC	8 – 32 VDC (battery)	-	8 – 36 VDC (battery)	9 – 16 VDC (battery)
Motor operation from auxiliary input voltage	-	-	No	Yes	-	10 – 36 VDC	No
Output voltage (peak value phase-phase)	0 – 0.95 U <sub>in</sub>	0 – 0.95 U <sub>in</sub>	0 – 0.93 U <sub>in</sub>	0 – 100 V independent from the input voltage	0 – 360 V independent from the input voltage	0 – 0.95 U <sub>in</sub> , max. 460 V	0 – 0.95 U <sub>in</sub> , max. 400 V
Output current (rms)	4.7 A	6.2 A (10.9 A w option HC)	8.7 A	8.5 A	14.2 A	24 A	85 A
Maximum efficiency	95%	97%	98%	96%	96%	97%	96%
Internal brake chopper	No	Yes (max. 3 W)	Yes (max. 3 W)	Yes (max. 3 W)	Yes (max. 30 W continuous, max. 60 W puls)	No	No
External brake chopper	-	Yes (max. 430 W, 6 A)	Yes (max. 420 W, 4.5 A)	-	Yes (max. 3,500 W, 6 A)	No	No
Output filter required	No	No	No	No	No	No	No
Power flow	bidirectional	bidirectional	bidirectional	unidirectional	bidirectional with external brake chopper	unidirectional	unidirectional
Electronics temperature measurement	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Modulation	PAM	PAM / PWM	PAM / PWM	PAM	PAM / PWM	PAM	PWM with Sine Filter
Maximum speed PAM	80,000 rpm	1,000,000 rpm	500,000 rpm	500,000 rpm	500,000 rpm	300,000 rpm	-
Maximum speed PWM	-	150,000 rpm	150,000 rpm	-	150,000 rpm	-	180,000 rpm
Flux linkage $\Psi_{PM}$ range for sensorless control <sup>1</sup>	SL1: 0.3–18.4 mVs	SL1: 0.3–9.2 mVs SL2: 0.7–13.5 mVs	SL1: 0.3–9.2 mVs SL2: 0.7–13.5 mVs	0.8–5.3 mVs	SL1: 1.5–45.5 mVs	1.6–100 mVs	upon request

<sup>1</sup>adaptable upon request  
Converter comparison chart

Converter	CC-32-100	CC-75-500	CC-100-1000	CC-120-1000	CC-230-3500	CC-550-7500	CC-400-12000
Minimum speed (electrical)	1,000 rpm	5,000 rpm 0 rpm (available upon request)	5,000 rpm	5,000 rpm	7,000 rpm	7,000 rpm	3,500 rpm
Sensorless control PMSM (PAM)	Yes	Yes	Yes	Yes	Yes	Yes	-
Sensorless control PMSM (PWM)	-	Yes	Yes	-	Yes	-	Yes
Sensorless control ASM	No	Yes	No (available upon request)	No (available upon request)	No (available upon request)	No	No
Hall sensors	-	Yes	-	-	Yes	-	-
Torque control	No (available upon request)	Yes	Yes	No (available upon request)	Yes	No (available upon request)	No
Weight	0.02 kg	1 kg	0.28 kg	1.4 kg	4.5 kg	5.4 kg	12 kg
Dimensions	68 x 38 x 6.6 mm	215 x 135 x 35 mm	195 x 125 x 24 mm	150 x 130 x 45 mm	267 x 205 x 80 mm	300 x 190 x 80 mm	335 (382) x 214.5 x 90 mm
Mountable on a DIN-rail	No	Yes	No	No	No	No	No
External heat sink required	For output power > 50 W	No	for output power > 280 W	Yes	No	No	No
International protection (IP) code	IP 00	IP 20	IP 00	IP 67	IP 20	IP 67	IP 67
Operating temperature	0 – 40 °C	0 – 40 °C	0 – 40 °C	0 – 80 °C	0 – 40 °C	-30 – 65 °C	-30 – 65 °C
Control software	Yes	Celeroton Pilot	Celeroton Pilot	Celeroton Pilot (with USB-RS232 adapter)	Celeroton Pilot	Celeroton Pilot (with USB-RS422 adapter)	Celeroton Pilot (with USB-RS422 adapter)
USB	Yes	Yes	Yes	No	Yes	No	No
CAN	No	Yes	Yes	Yes	Yes	Yes	Yes
RS232	UART LVTTTL 3.3 V	Yes	Yes	No	Yes	No	No
RS485	No	Yes	No	No	Yes	No	No
Variable user interface <sup>2</sup>	-	Yes	-	-	-	-	-
Power supply 5 V, 100 mA	-	1	-	-	1	-	-
Power supply 24 V, 100 mA	-	-	-	-	1	-	-
Hall sensor inputs	-	3 <sup>3</sup>	-	-	3	-	-

<sup>2</sup> The I/O configuration is defined by the extension board, standard option is E01.

<sup>3</sup> Not available with E08 Extension board

Converter	CC-32-100	CC-75-500	CC-100-1000	CC-120-1000	CC-230-3500	CC-550-7500	CC-400-12000
Temperature measurement Thermocouple Type K	-	1	-	-	1	-	-
Temperature measurement PTC	-	1	1	1	1	1	1
Power supply 12–24 V adjustable, 200 mA	-	1	-	-	-	-	-
Digital inputs	3 (LVTTTL 3.3 V)	2	2	-	4	-	-
Digital outputs (potentially separated)	1 (LVTTTL 3.3 V)	2	3	-	4	-	-
Analog power supply 10 V, 100 mA	1	1	1	-	1	-	-
Analog inputs (0–10 V)	1	2	1	-	4	-	-
Analog outputs (0–10 V)	-	2	1	-	4	-	-
Position output motor phases	-	Yes, with E08 <sup>2</sup>	-	-	Yes	-	-
Connector set	Yes	Yes	Yes	Yes	Yes	Yes	Yes
USB-serial adapter	No	No	No	Yes	No	Yes	Yes
Chopper-Module	No	Yes	Yes	No	No	No	No