

Technical data

Mains connection	
Voltage and power range	1-phase, 200 to 240 V \pm 10% 0.37 to 2.2 kW (0.5 to 3 hp) 3-phase, 200 to 240 V \pm 10% 0.37 to 2.2 kW (0.5 to 3 hp) 3-phase, 380 to 480 V \pm 10% 0.37 to 4 kW (0.5 to 5 hp)
Frequency	48 to 63 Hz
Motor connection	
Voltage	3-phase, from 0 to U_{supply}
Frequency	0 to 500 Hz
Continuous loading capability (constant torque at a max. ambient temperature of 40 °C)	Rated output current I_{2N}
Overload capability (at a max. ambient temperature of 40 °C)	At heavy duty use $1.5 \times I_{2N}$ for 1 minute every 10 minutes At start $1.8 \times I_{2N}$ for 2 s
Switching frequency	Default 4 kHz Selectable 4 to 16 kHz with 4 kHz steps
Acceleration time	0.1 to 1800 s
Deceleration time	0.1 to 1800 s
Braking	Built-in brake chopper as standard
Motor control method	Scalar U/f
Environmental limits	
Ambient temperature	-10 to 40 °C (14 to 104 °F), no frost allowed, 50 °C (122 °F) with 10% derating
Altitude	
Output current	Rated current available at 0 to 1000 m (0 to 3281 ft) reduced by 1% per 100 m (328 ft) over 1000 to 2000 m (3281 to 6562 ft)
Relative humidity	Lower than 95% (without condensation)
Degree of protection	IP20/Optional NEMA 1 enclosure
Enclosure colour	NCS 1502-Y, RAL 9002, PMS 420 C
Contamination levels	IEC 721-3-3
Transportation	No conductive dust allowed Class 1C2 (chemical gases) Class 1S2 (solid particles)
Storage	Class 2C2 (chemical gases) Class 2S2 (solid particles)
Operation	Class 3C2 (chemical gases) Class 3S2 (solid particles)

Chokes	
AC input chokes	External option. For reducing THD in partial loads and to comply with EN 61000-3-2.
AC output chokes	External option. To achieve longer motor cables.
Programmable control connections	
One analog input	
Voltage signal	0 (2) to 10 V, $R_{\text{in}} > 312 \text{ k}\Omega$
Current signal	0 (4) to 20 mA, $R_{\text{in}} = 100 \Omega$
Potentiometer reference value	10 V \pm 1% max. 10 mA, $R < 10 \text{ k}\Omega$
Resolution	0.1%
Accuracy	\pm 2%
Auxiliary voltage	24 V DC \pm 10%, max. 200 mA
Five digital inputs	12 to 24 V DC with internal or external supply, PNP and NPN, pulse train 0 to 16 kHz
Input impedance	2.4 k Ω
One relay output	
Type	NO + NC
Maximum switching voltage	250 V AC/30 V DC
Maximum switching current	0.5 A/30 V DC; 5 A/230 V AC 2
Maximum continuous current	A rms
Product compliance	
Low voltage Directive 2006/95/EC with supplements	
Machinery Directive 2006/42/EC	
EMC Directive 2004/108/EC with supplements	
Quality assurance system ISO 9001	
Environmental system ISO 14001	
UL, cUL, CE, C-Tick and GOST R approvals	
RoHS compliant	