

## Technical Specifications

Input Ratings	Supply Voltage	100 – 115V ± 10% 200 – 240V ± 10%
	Supply Frequency	48 – 62Hz
	Displacement Power Factor	> 0.98
	Phase Imbalance	3% Maximum allowed
	Inrush Current	< rated current
	Power Cycles	120 per hour maximum, evenly spaced

Output Ratings	Output Power	110V 1 Ph Input: 0.5–0.75HP 230V 1 Ph Input: 0.37–1.1kW (0.5–1.5HP)
	Overload Capacity	150% for 60 Seconds 175% for 2.5 seconds
	Output Frequency	0 – 500Hz, 0.1Hz resolution
	Typical Efficiency	> 98%

Ambient Conditions	Temperature	Storage: -40 to 60°C Operating: -10 to 50°C
	Altitude	Up to 1000m ASL without derating Up to 2000m maximum UL approved Up to 4000m maximum (non UL)
	Humidity	95% Max, non condensing
	Vibration	Conforms to EN61800-5-1

Enclosure	Ingress Protection	IP20, IP66
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Programming	Keypad	Built-in keypad as standard Optional remote mountable keypad
	Display	7 Segment LED
	PC	OptiTools Studio

Control Specification	Control Method	V/F Voltage Energy Optimised V/F	
	PWM Frequency	4 – 32kHz Effective	
	Stopping Mode	Ramp to stop: User Adjustable 0.1 – 600 secs Coast to stop	
	Braking	Motor Flux Braking Built-in braking transistor (frame size 2)	
	Skip Frequency	Single point, user adjustable	
	Setpoint Control	Analog Signal	0 to 10 Volts 10 to 0 Volts 0 to 20mA 20 to 0mA 4 to 20mA 20 to 4mA
		Digital	Motorised Potentiometer (Keypad) Modbus RTU CANopen

Fieldbus Connectivity	Built in	CANopen	125–1000 kbps
		Modbus RTU	9.6–115.2 kbps selectable

I/O Specification	Power Supply	24 Volt DC, 100mA, Short Circuit Protected 10 Volt DC, 10mA for Potentiometer
	Programmable Inputs	4 Total 2 Digital 2 Analog / Digital Selectable
	Digital Inputs	8 – 30 Volt DC, internal or external supply Response time < 4ms
	Analog Inputs	Resolution: 12 bits Response time: < 4ms Accuracy: ± 2% full scale Parameter adjustable scaling and offset
	Programmable Outputs	2 Total 1 Analog / Digital 1 Relay
	Relay Outputs	Maximum Voltage: 250 VAC, 30 VDC Switching Current Capacity : 6A AC, 5A DC
Analog Outputs	0 to 10 Volt	

Application Features	Fire Mode	Selectable Speed Setpoint (Fixed / PI / Analog / Fieldbus)
	PI Control	Internal PI Controller Standby / Sleep Function

Maintenance & Diagnostics	Fault Memory	Last 4 Trips stored with time stamp
	Data Logging	Logging of data prior to trip for diagnostic purposes: Output Current Drive Temperature DC Bus Voltage
	Monitoring	Hours Run Meter

Standards Compliance	Low Voltage Directive	Adjustable speed electrical power drive systems. EMC requirements
	EMC Directive	2014/30/EU 230V 1Ph. Filtered Units : Cat C1 according to EN61800-3:2004
	Machinery Directive	2006/42/EC
	Conformance	CE, UL, RCM