

### Product Features

UL, cUL and CE, C-Tick, GOST-R  
 Motor Control  
 Scalar Control  
 One (1) Programmable Analog Input  
 Three (3) Digital Inputs  
 Input Speed Signals  
 One (1) Voltage  $\pm 0$  (2)- 10VDC, 0 (4) - 20 mA  
 One (1) Programmable Relay Output  
 Start/Stop  
 2 Wire Control (dry contact closure)  
 Adjustable Jog Speed  
 Electronic Reverse  
 Maximum Frequency Programmable up to 130 Hz  
 RoHS (verify RoHS label)  
 Coated Boards

### Specifications

#### Input Power Connection

Input Voltage (L/R, N/S)	110...120Vac 1-phase +10%/-15%
	200...240Vac 1-phase +10%/-15%
Input Frequency	48 to 63 Hz, maximum rate of change 17%/second
Line Imbalance	Max $\pm 3\%$ of nominal phase to phase input voltage
Fundamental Power Factor (cos phi)	0.98 (at nominal load)
Connection	Terminals L/R, N/S

#### Motor Connection

Output Voltage	0 to U <sub>1</sub> , 3-phase symmetrical
Output Frequency	0 to 130 Hz
Frequency Resolution	0.01 Hz
Continuous Current	Rated $I_{2N}$ for $f_{sw}=5\text{kHz}$
Short Term Overload Capacity	$1.5 * I_{2N}$ (at least 1 min / 10 min)
Field Weakening Point	60 to 130 Hz
Switching Frequency	5 or 16kHz
Efficiency	98% at nominal power level
Short circuit withstand rating	65,000 AIC
Connection	Terminals T1/U, T2/V, T3/W

#### Ambient Conditions, Operation

Air Temperature	-20°C (-4°F) to 40°C (104°F), no frost allowed, 50°C if continuous output current is maximum 85% of nominal output current.
Relative Humidity	Less than 95%, no condensation allowed
Contamination Levels	
IEC	60721-3-3
Chemical Gasses	3C2
Solid Particles	3S2
Installation Site Altitude	0 to 2000 m (6,600 ft) above sea level. At sites over 1000 m above sea level, the maximum power is de-rated 1% for every additional 100 m (330 ft).

#### Ambient Conditions, Storage & Transportation (in Protective Shipping Package)

Air Temperature	-40° to 70°C (-40° to 158°F)
Relative Humidity	Less than 95%, no condensation allowed
Vibration Max	In accordance with ISTA 1A

#### Cooling Information

Cooling Method	Convection cooling in frames A and B, fan cooled in frame C
Power Loss	Approximately 3% of rated power

#### Analog Inputs

One (1) Programmable Analog Input	
Current Reference	0 (4) to 20 mA, 100 Ohms, single ended
Voltage Reference	0 (2) to 10 V, 190 kOhm, single ended
Accuracy	$\pm 1\%$

#### Reference Power Supply

Voltage	+10 VDC, $\pm 2\%$
Maximum Load	10 mA
Applicable Potentiometer	1 kOhm to 10 kOhm

#### Digital Inputs

Three (3) Digital Inputs	
Signal Level	12 to 24VDC, (10 V Logic 0)
Internal 12 VDC Supply for Digital Inputs	
Voltage	12 VDC, $\pm 10\%$
Maximum Current	30 mA

#### Relay Output

One (1) Programmable Relay Output	
Switching Capacity	12-250VAC/30VDC
Current	10mA - 2 A

#### Protections

Overvoltage Trip Limit	$1.3 * V_{1\text{max}}$
Undervoltage Trip Limit	$0.65 * V_{1\text{min}}$
Overtemperature	95°C (203°F)
Auxiliary Voltage	Short Circuit Protected
Output Short Circuit	Protected
Output Overcurrent	Protected
Analog Input Loss	Protected
Motor Overload	Protected (I <sup>2</sup> t)
Inverter Overload	Protected

#### Preprogrammed Protections:

Overcurrent  
 Short Circuit  
 Overvoltage (Intermediate Circuit)  
 Undervoltage (Intermediate Circuit)  
 Loss of Analog Input  
 Motor Overload  
 Inverter Overload

#### Available options

Potentiometer and Start/Stop Switch Module