

SM PLUS SUB-MICRO INVERTER DRIVES

BIG performance from an ultra-compact design. Provides 18 isolated I/O terminals plus RS485 Modbus® serial communication. Other features include:

- Removable electronic programming module allows off-line set-up and program replication.
- Input line voltage calibration—optimizes over and under voltage trip levels
- Current limit to 180% with frequency foldback
- Adjustable carrier frequency (4 to 10 kHz)
- Adjustable V/Hz
- Output frequency to 240 Hz
- Seven preset speeds
- Automatic restart after fault
- Control via drive face, terminal strip or optional remote keypad
- Coast or ramp to stop
- Independent Accel and Decel adjustment
- Forward only or forward and reverse direction
- Adjustable DC injection braking
- Speed reference: Keypad, 0-10 VDC, or 4-20 mA
- Speed reference calibration
- Speed and load indicating output signal selection: 0-10 VDC or 4-20mA
- Output signal calibration
- I²t motor thermal overload protection; meets UL requirements for motor protection in single motor applications
- Fixed boost for high starting torque
- Accel boost for high torque accelerating at any speed
- Slip compensation
- Three-digit LED display
- Password protection
- Fault history: Stores eight previous trips
- Terminal status indication
- Default parameter reset
- IP20 enclosure with finger safe terminals
- Dynamic braking and remote keypad kits available on pages 207 and 208

☆ User programmable for 50Hz and other voltage inputs



DIMENSIONS ON PAGE 115

PDF file of Manual available at www.leeson.com/Technical Information



SM PLUS

SINGLE PHASE INPUT/THREE PHASE OUTPUT

(Use with three phase 230V motor)

Volts	HP	Output Amps	Input Voltage ☆	Catalog Number	App. Wgt.(lbs.)	Dimension Key
115/230	1	4.2	115/230	174492.00	4	B1
	1 1/2	6.0	115/230	174445.00	5	B1

SINGLE OR THREE PHASE INPUT/THREE PHASE OUTPUT

(Use with three phase 230V motor)

Volts	HP	Output Amps	Input Voltage ☆	Catalog Number	App. Wgt.(lbs.)	Dimension Key
200-240	1/4	1.4	200-240	174452.00	2	A1
	1/2	2.2	200-240	174453.00	2	A1
	1	4.2	200-240	174454.00	3	A2
	1 1/2	6.0	200-240	174493.00	4	B1
	2	6.8	200-240	174494.00	5	B2
	3	9.6	200-240	174495.00	5	B2
	5	15.2	200-240	174444.00	8	C1

THREE PHASE INPUT/OUTPUT

Volts	HP	Output Amps	Input Voltage ☆	Catalog Number	App. Wgt.(lbs.)	Dimension Key
200-240	1	4.2	200-240	174455.00	3	A2
	1 1/2	6.0	200-240	174456.00	3	A3
	2	6.8	200-240	174457.00	4	A3
	3	9.6	200-240	174458.00	4	A3
	5	15.2	200-240	174446.00	4	B2
	7 1/2	22.0	200-240	174438.00	8	C1
	10	28.0	200-240	174439.00	8	C1
	15	42.0	200-240	174429.00	13	D1
	20	54.0	200-240	174430.00	14	D1
	400-480	1/2	1.1	400-480	174459.00	2
1		2.1	400-480	174460.00	3	A2
1 1/2		3.0	400-480	174461.00	3	A3
2		3.4	400-480	174462.00	4	A3
3		4.8	400-480	174463.00	4	A3
5		7.6	400-480	174447.00	5	B2
7 1/2		11.0	400-480	174440.00	8	C1
10		14.0	400-480	174441.00	8	C1
15		21.0	400-480	174431.00	13	D1
20		27.0	400-480	174432.00	14	D1
480-590	25	34.0	400-480	174433.00	14	D1
	30	40.0	400-480	174500.00	14	D1
	1	1.7	480-590	174464.00	3	A2
	2	3.0	480-590	174491.00	4	A3
	3	4.2	480-590	174497.00	5	B2
	5	6.6	480-590	174448.00	5	B2
	7 1/2	9.9	480-590	174442.00	8	C1
480-590	10	12.2	480-590	174443.00	8	C1
	15	19.0	480-590	174434.00	8	D1
	20	24.0	480-590	174435.00	14	D1
	25	27.0	480-590	174436.00	14	D1

SPECIFICATIONS:

Storage Temperature	-20° to 70° C
Ambient Operating Temperature	0° to 50° C
Ambient Humidity	<95% (non-condensing)
Maximum Altitude	3300 ft (1000m) above sea level
Input Line Voltages	115/230 VAC, 200-230 VAC, 460-480 VAC, and 550-575 VAC
Input Voltage Tolerance	+10%, -15%
Input Frequency Tolerance	48 to 62 Hz
Output Wave Form	Sine Coded PWM
Output Frequency	0-240 Hz
Carrier Frequency	4 kHz to 10 kHz

Enclosure	IP20
Service Factor	1.0
Efficiency	up to 98%
Power Factor (displacement)	>0.96
Overload Current Capacity	150% for 60 seconds 180% for 20 seconds
Speed Reference Follower	0-10 VDC, 4-20 mA
Control Voltage	15 VDC
Analog Outputs	0-10 VDC or 2-10 VDC: Proportional to frequency or load
Digital Outputs	Open-collector: 40 mA at 30 VDC
Power Supply for Aux. Relays	40 mA at 12 VDC

Specifications are subject to change without notice