

N3

Compact AC Drive



N3 Compact Variable Speed Drive

*We have made **BACnet Protocol** a standard for this product!*

The N3 series variable speed drives feature a compact design, sensorless vector operation, auto-cycle capabilities, Modbus RTU communication, and direct BACnet capabilities. With 2 to 3 parameter settings, users can now talk BACnet to other control devices through either the RS485 connection or the RS-232 connection port.

- Full level of information can be accessed via BACnet
- Operate and control through BACnet or locally with BACnet in a monitor only mode
- Selection via parameter between BACnet or Modbus RTU

BACnet Applications

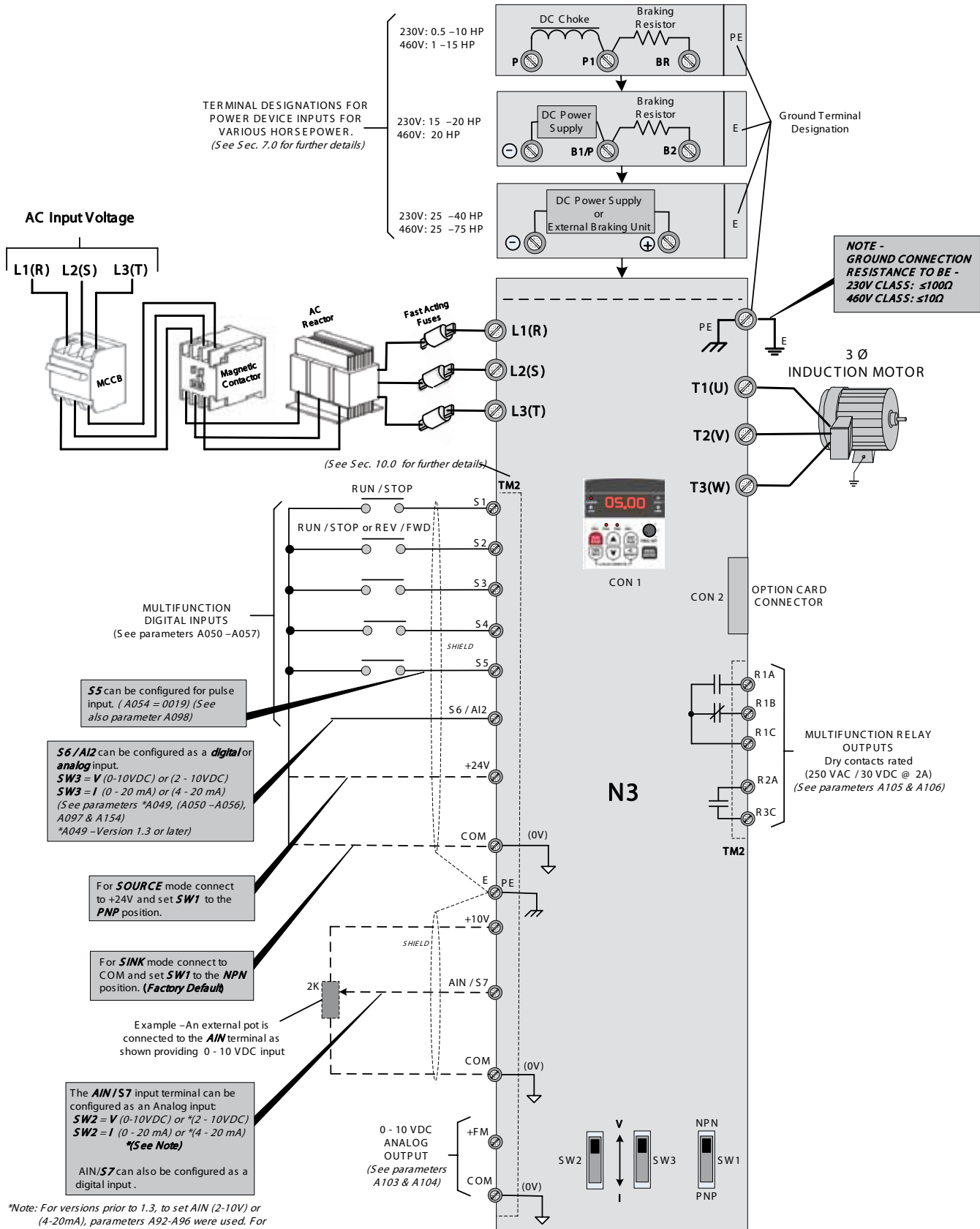
- Energy Management
- Building Management
- HVAC
- Wastewater Industries



Wiring Diagrams

1-2 hp

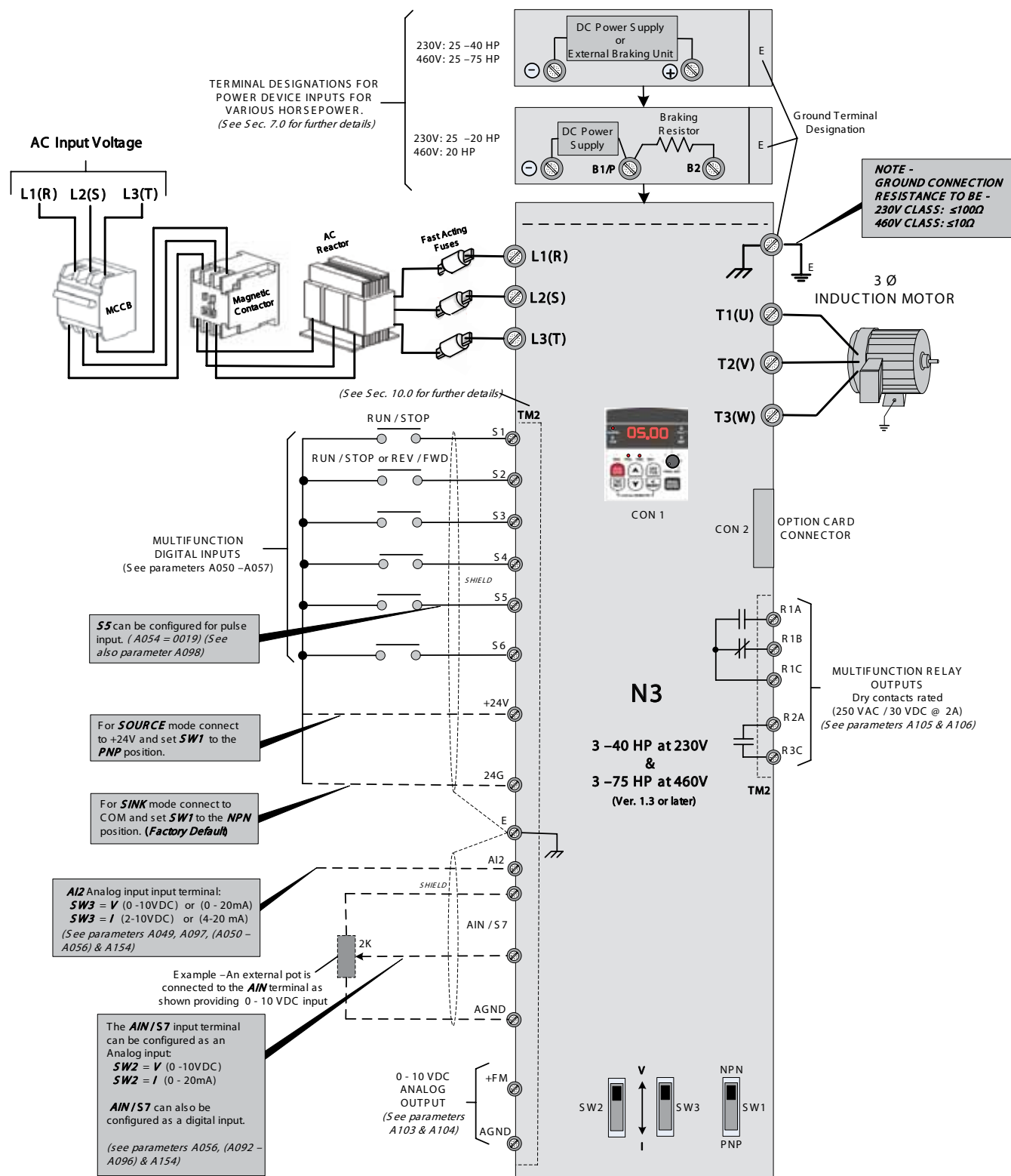
3-75 hp (Prior to Firmware Version 1.3)



*Note: For versions prior to 1.3, to set AIN (2-10V) or (4-20mA), parameters A92-A96 were used. For versions 1.3 or higher it can be set directly with parameter A154. Also see parameters A050 - A056.

Wiring Diagrams - Continued

3-75 hp (Firmware Version 1.3 or Later)



N3 Compact Drive Features

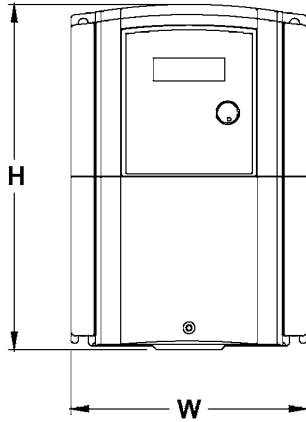
- **Sensorless Vector AC Drive**
- **BACnet and Modbus RTU Protocols Embedded**
- **PID Control with Sleep Mode**
- **PC Programming Software (Available at No Charge)**
- **RS 485 Interface Option**
- **.5-3 hp, 200-240V, 50/60Hz, 1-Phase/ 3-Phase Output**
- **.5-40 hp, 200-240V, 50/60Hz, 3-Phase/ 3-Phase Output**
- **1-75 hp, 380-480V, 50/60Hz, 3-Phase/ 3-Phase Output**
- **UL, cUL, and CE Approved**
- **EEPROM Program Copy Unit (Optional)**

N3 Compact Drive Operator Interface Features

- **Configuration Mode Indication**
- **LEDs Indicate Mode Sequence**
- **Bright 4-Digit LED Display**
- **LEDs Indicate Units of Measure**
- **On-Board Speed Potentiometer**
- **Can choose to operate remotely (PLC Driven) or locally**
- **Removable Keypad can be installed up to 16 ft from the N3 drive**



Dimensions and Weights

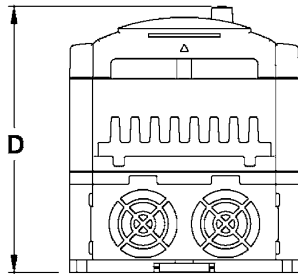


230V 1-Phase Input / 3-Phase Output

MODEL NO.	HP	DRIVE AMPS	DIMENSIONS (INCHES)			APPROX. WT. (lbs)
			HEIGHT	WIDTH	DEPTH	
*N3-2P5-CS	.5	3.1	6.42	3.54	5.79	3
*N3-201-CS	1	4.5	6.42	3.54	5.79	3
*N3-202-CS	2	7.5	7.36	5.04	5.83	4
*N3-203-CS	3	10.5	7.36	5.04	5.83	5

230V 3-Phase Input/ 3-Phase Output***

MODEL NO.	HP	DRIVE AMPS	DIMENSIONS (Inches)			APPROX. WT. (lbs)
			HEIGHT	WIDTH	DEPTH	
*N3-2P5-C	.5	3.1	6.42	3.54	5.79	3
*N3-201-C	1	4.5	6.42	3.54	5.79	3
*N3-202-C	2	7.5	6.42	3.54	5.79	3
*N3-203-C	3	10.5	7.36	5.04	5.83	4
*N3-205-C	5	17.5	7.36	5.04	5.83	5
*N3-207-C	7.5	26.0	10.24	7.32	7.68	13
*N3-210-C	10	35.0	10.24	7.32	7.68	13
*N3-215-N1	15	48.0	14.17	10.43	9.70	27
*N3-220-N1	20	64.0	14.17	10.43	9.70	27
N3-225-N1	25	80.0	14.17	10.43	9.70	29
**N3-230-N1	30	96.0	25.45	10.60	12.00	67
**N3-240-N1	40	130.0	25.45	10.60	12.00	67



460V 3-Phase Input/ 3-Phase Output

MODEL NO.	HP	DRIVE AMPS	DIMENSIONS (Inches)			APPROX. WT. (lbs)
			HEIGHT	WIDTH	DEPTH	
*N3-401-C	1	2.3	6.42	3.54	5.79	3
*N3-402-C	2	3.8	6.42	3.54	5.79	3
*N3-403-C	3	5.2	7.36	5.04	5.83	4
*N3-405-C	5	8.8	7.36	5.04	5.83	4
*N3-407-C	7.5	13.0	10.24	7.32	7.68	13
*N3-410-C	10	17.5	10.24	7.32	7.68	13
*N3-415-C	15	25.0	10.24	7.32	7.68	13
*N3-420-N1	20	32.0	14.17	10.43	9.70	27
N3-425-N1	25	40.0	14.17	10.43	9.70	29
N3-430-N1	30	48.0	14.17	10.43	9.70	29
**N3-440-N1	40	64.0	25.45	10.60	12.00	67
**N3-450-N1	50	80.0	25.45	10.60	12.00	67
**N3-460-N1	60	96.0	29.39	12.13	15.20	102
**N3-475-N1	75	128.0	29.39	12.13	15.20	102

Note: Suffix CS = Chassis Unit 1-Phase
C = Chassis Unit 3-Phase
N1 = NEMA 1

All Chassis Units will Ship with NEMA 1 Boxes for Field Installation

- * Includes Dynamic Braking Transistor
- ** Includes DC Bus Link Reactor
- *** Do Not Apply Single Phase Input Power to these Models.

SPECIFICATIONS

Control Mode	Sensorless Vector and V/Hz
Input Voltage Rating	230V 1-Phase and 3-Phase; 460V 3-Phase
Input Voltage Tolerance	+10%, -15Hz
Frequency Control Range	0 to 400 Hz
Speed Control Accuracy	+/- 0.5% (Sensorless Vector Mode)
Speed Commands	0 to 10VDC, 0 to 20mA, Pulse Input
Overload Capacity	150% Current of Drive Rating for 1 Minute
Braking	DC Injection Braking; Dynamic Braking (optional)
Protective Functions	Motor and Inverter Overload, Overvoltage, Overheating, Peak Overcurrent
Programmable I/O	6 Digital Inputs (NPN or PNP), 2 Relay Outputs, 2 Analog inputs (0-10V or 4-20mA), 1 Analog Output (0-10V)
Ambient Temperature	-10°C to +50°C, (14°F to 122°F)
Enclosure	IP20 Protective Chassis/ NEMA 1



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