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Phoenix DX Sensorless AC Vector Drive



"Size 0" - 3 HP to 40 HP

Standard Features:

- * *PRECISE CONTROL OF MOTOR SPEED AND TORQUE*
- * *EASY TO USE, SIMPLE SETUP*
- * *ENGLISH LANGUAGE DISPLAY - 2 LINE, 32 CHARACTER*
- * *50°C AMBIENT TEMPERATURE RATING*
- * *SHORT CIRCUIT AND GROUND FAULT PROTECTION*
- * *TOLERATES HIGH INPUT AC LINE VOLTAGES*
- * *BUILT IN LINE VOLTAGE SURGE PROTECTION*
- * *SPEED SENSITIVE MOTOR OVERLOAD PROTECTION, MEETS NEC 430*
- * *BUILT IN RFI NOISE FILTER*
- * *HIGH PERFORMANCE PID CONTROL*
- * *8 PRESET SPEEDS W/ ACCEL / DECEL CONTROL*
- * *BI-DIRECTIONAL FLYCATCHER (CATCH SPINNING MOTOR)*
- * *2 SECOND POWER DIP RIDE THROUGH*
- * *KW / KWH METERING*
- * *S CURVE ACCEL/DECEL CONTROL*
- * *PROGRAMMABLE THRESHOLD DETECTORS*
- * *MULTI FUNCTION I / O*
- * *CUSTOM V/Hz PROGRAMMING*
- * *AUTOLOGGING FAULT HISTORY*
- * *FIXED OR VARIABLE CARRIER FREQUENCY*
- * *AUTO RESTART*
- * *MUCH, MUCH, MORE*

THREE YEAR WARRANTY

MADE IN USA



ENGINEERING SPECIFICATIONS

ELECTRICAL

Rated Input Voltage: 200-250Vac, 380-500Vac, 500-600Vac
 -10% of minimum, +10% of maximum.
Rated Input Frequency: 48 to 63HZ.
Number of Phases: 3
Displacement Power Factor: .95 or greater.
Efficiency: 97% or greater at rated current.

CONTROL

Control Method: Sine coded PWM with programmable carrier.
 Space Vector control.
Output Voltage: 0 to rated voltage.
Output Frequency Range: 0 to 600 Hz.
Frequency accuracy: Analog reference: 0.1% of max frequency.
 Digital reference: 0.01% of max frequency.
Frequency resolution: Analog reference: 0.06Hz at 60Hz.
 Digital reference: 0.0005Hz at 60Hz.
Accel / Decel: Adjustable 0.1 to 3600 sec.
Drive Overload: High Overload Capacity Drives:
 150% of drive rated output for two (2) minutes.
 Normal Overload Capacity Drives:
 120% of drive rated output for two (2) minutes.
Inverse Time Overload: Programmable for class 10, 20 and 30 protection with speed sensitive
 protection to comply with N.E.C. Article 430.
Current limit: Proactive current limit programmable in % of motor rated current.
Braking torque: Approximately 20%.
V/Hz curves: Custom curve programming plus nine (9) preprogrammed standard patterns.
Control power ride-thru: Two (2) seconds or greater, depending on load.

ENVIRONMENTAL

Ambient Temperature: -10°C to 50°C (14°F to 122°F)
 Without derating.
Storage Temperature: -40°C to 70°C (-40°F to 158°F)
Altitude: Sea level to 3300 Feet [1000m]
 Without derating.
Humidity: 95% relative humidity
 non-condensing.
Vibration: 9.8m/sec² (1.0G) peak.
Surge Protection: Line Transients to 6000V
 IEEE C62.41-1991 Category B
Noise Immunity: Showering Arc - 2000V Peak
 EN50082 - 1, 2
Input R.F.I Filter: Standard on all models.

PHYSICAL ATTRIBUTES

Mounting: Wall Mount: Through hole or panel mount.
Nema Rating: Type 1 (IP20) as Standard.
 Type 12 (IP54) Optional.
 Type 4 Optional.
Construction: Steel Enclosure (Reduces E.M.I.).

"Size 0" - Phoenix DX Product Data									
Input Voltage	Part Number	Motor HP		Output Current		Input Current		Approximate Dimensions ¹	Approximate Weight
		High Overload Capacity (CT) ²	Normal Overload Capacity (VT) ³	High Overload Capacity (CT) ²	Normal Overload Capacity (VT) ³	High Overload Capacity (CT) ²	Normal Overload Capacity (VT) ³		
200 - 250 VAC (208/230/240)	D2-0005-N1	3	5	10	16	12	19	9.2" x 9.0" x 10.9"	26 Lbs.
	D2-0007-N1	5	7.5	16	22	19	26	9.2" x 9.0" x 10.9"	26 Lbs.
	D2-0010-N1	7.5	10	22	28	26	33	9.2" x 9.0" x 10.9"	26 Lbs.
	D2-0015-N1	10	15	28	42	33	50	16.8" x 9.0" x 10.9"	40 Lbs.
	D2-0020-N1	15	20	42	54	50	64	16.8" x 9.0" x 10.9"	40 Lbs.
	D2-0020CT-N1	20	-	54	-	64	-	16.8" x 9.0" x 10.9"	40 Lbs.
380 - 500 VAC (380/400/415/480)	D4-0007-N1	5	7.5	8	11	10	13	9.2" x 9.0" x 10.9"	26 Lbs.
	D4-0010-N1	7.5	10	11	14	13	17	9.2" x 9.0" x 10.9"	26 Lbs.
	D4-0015-N1	10	15	14	21	17	26	9.2" x 9.0" x 10.9"	26 Lbs.
	D4-0020-N1	15	20	21	27	26	33	9.2" x 9.0" x 10.9"	26 Lbs.
	D4-0025-N1	20	25	27	34	33	40	16.8" x 9.0" x 10.9"	40 Lbs.
	D4-0030-N1	25	30	34	43	40	46	16.8" x 9.0" x 10.9"	40 Lbs.
	D4-0040-N1	30	40	40	52	43	58	16.8" x 9.0" x 10.9"	40 Lbs.
D4-0040CT-N1	40	-	52	-	58	-	16.8" x 9.0" x 10.9"	40 Lbs.	
500 - 600 VAC (525/575/600)	D5-0007-N1	5	7.5	7	9	9	11	9.2" x 9.0" x 10.9"	26 Lbs.
	D5-0010-N1	7.5	10	9	12	11	13	9.2" x 9.0" x 10.9"	26 Lbs.
	D5-0015-N1	10	15	11	17	13	20	9.2" x 9.0" x 10.9"	26 Lbs.
	D5-0020-N1	15	20	17	22	20	26	9.2" x 9.0" x 10.9"	26 Lbs.
	D5-0025-N1	20	25	22	28	26	34	16.8" x 9.0" x 10.9"	40 Lbs.
	D5-0030-N1	25	30	27	34	33	41	16.8" x 9.0" x 10.9"	40 Lbs.
	D5-0040-N1	30	40	32	41	39	49	16.8" x 9.0" x 10.9"	40 Lbs.
D5-0040CT-N1	40	-	41	-	49	-	16.8" x 9.0" x 10.9"	40 Lbs.	

(1) All Dimensions in Inches (HxWxD)

(2) High Overload Capacity Drives produce 150% of Rated Drive Output Current for 2 minutes.

(3) Normal Overload Capacity Drives produce 120% of Rated Drive Output Current for 2 minutes.