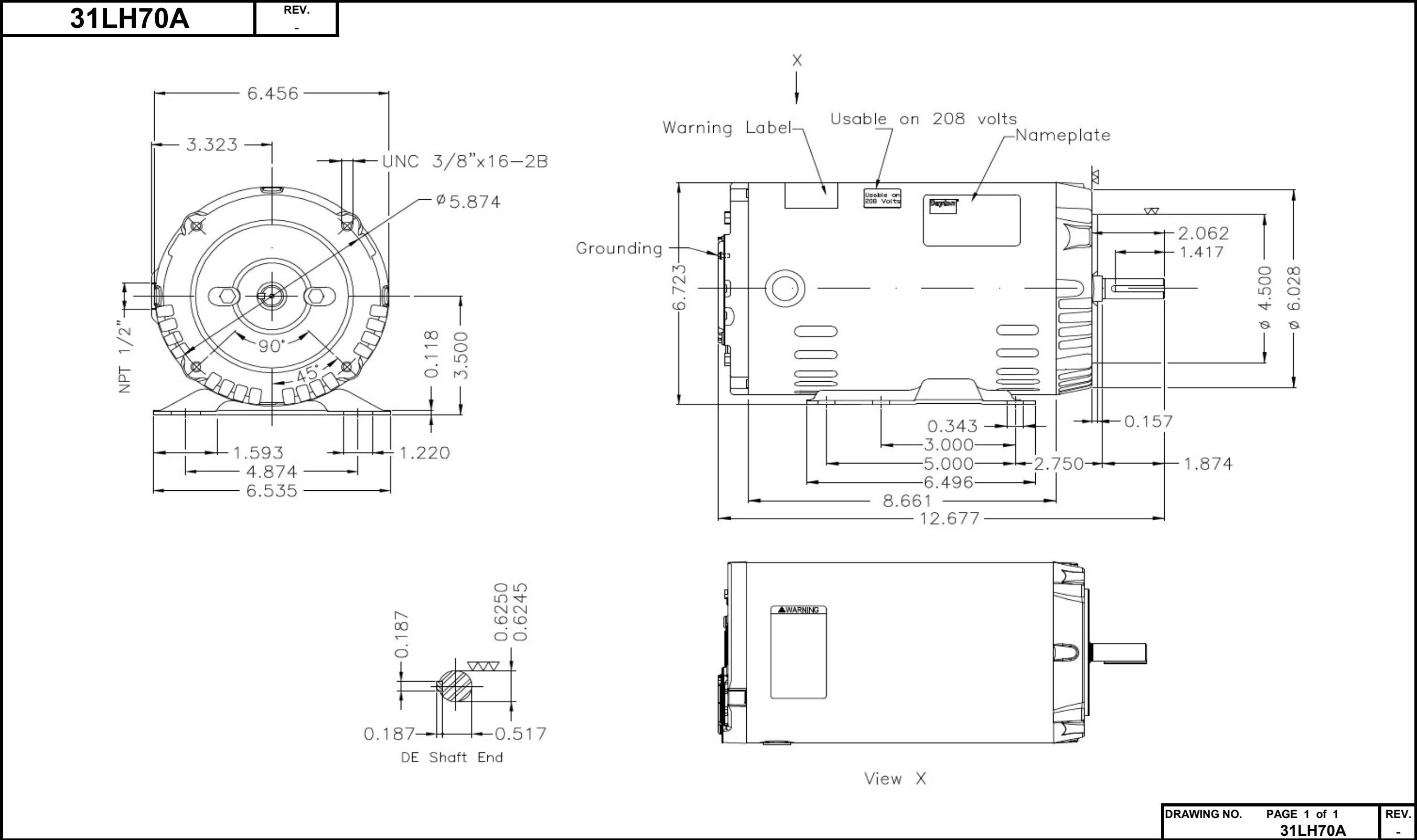


# Dimensional Drawing



DRAWING NO. PAGE 1 of 1 REV.  
31LH70A -

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# DATA SHEET



## Three Phase Induction Motor - Squirrel Cage

Customer

Product line : W01 - ODP - Premium Efficiency

Frame	: 56HC	Locked rotor time	: 14 s (hot) 25 s (cold)
Output	: 2 HP (1.5 kW)	Temperature rise <sup>4</sup>	: 80 K
Poles	: 2	Duty cycle	: Cont.(S1)
Frequency	: 60 Hz	Ambient temperature	: -20 °C to +40 °C
Rated voltage	: 230/460 V	Altitude	: 1000 m.a.s.l
Rated current	: 4.84/2.42 A	Cooling method	: IC01 - ODP
L. R. Amperes	: 43.1/21.5 A	Mounting	: F-1
LRC (p.u.)	: 8.9 Code K	Direct of rotation <sup>1</sup>	: Both
No load current	: 1.83/0.917 A	Noise level <sup>2</sup>	: 62.0 dB(A)
Rated speed	: 3510 rpm	Starting method	: Direct On Line
Slip	: 2.50 %	Approx. weight <sup>3</sup>	: 16.8 kg
Rated torque	: 0.414 kgfm	Design	: B
Locked rotor torque	: 220 %		
Pull up torque	: 185 %		
Breakdown torque	: 330 %		
Insulation class	: F		
Service factor	: 1.15		
Moment of inertia (J)	: 0.0049 kgm <sup>2</sup>		

Output	Start	50%	75%	100%	Load type: -
Efficiency (%)	-	84.0	85.5	85.5	Load torque: -
Power factor	0.67	0.77	0.86	0.91	Load inertia (J=GD <sup>2</sup> /4): -

	Drive end	Non drive end
Bearing type	6204-ZZ	6202-ZZ
Lubrication interval	-	-
Lubricant amount	-	-
Lubricant type	MOBIL POLYREX EM	

Notes:  
 \* Dayton # 31LH70A  
 \* Connection YY/Y - Document 10003174687

Standards	Specification	: MG1 - Part 10	Vibration	: MG1 - Part 7
	Tests	: MG1 - Part 12	Tolerance	: MG1 - Part 12
	Noise	: MG1 - Part 9		

This revision replaces and cancels the previous one, which must be eliminated.  
 (1) When viewed from the drive end.  
 (2) Measured at 1m and with tolerance of +3dB(A).  
 (3) Approximate weight subject to changes after manufacturing process.  
 (4) At the rated point.

These are average values based on tests with sinusoidal power supply, subject to the tolerances stipulated in NEMA MG 1-12.

Rev.	Summary of changes		Performed	Checked	Date
Performed by	mmoctezuma				206270/2016-A
Checked by	mrsanchez				Page Revision
Date	21/02/2018				1/2 1

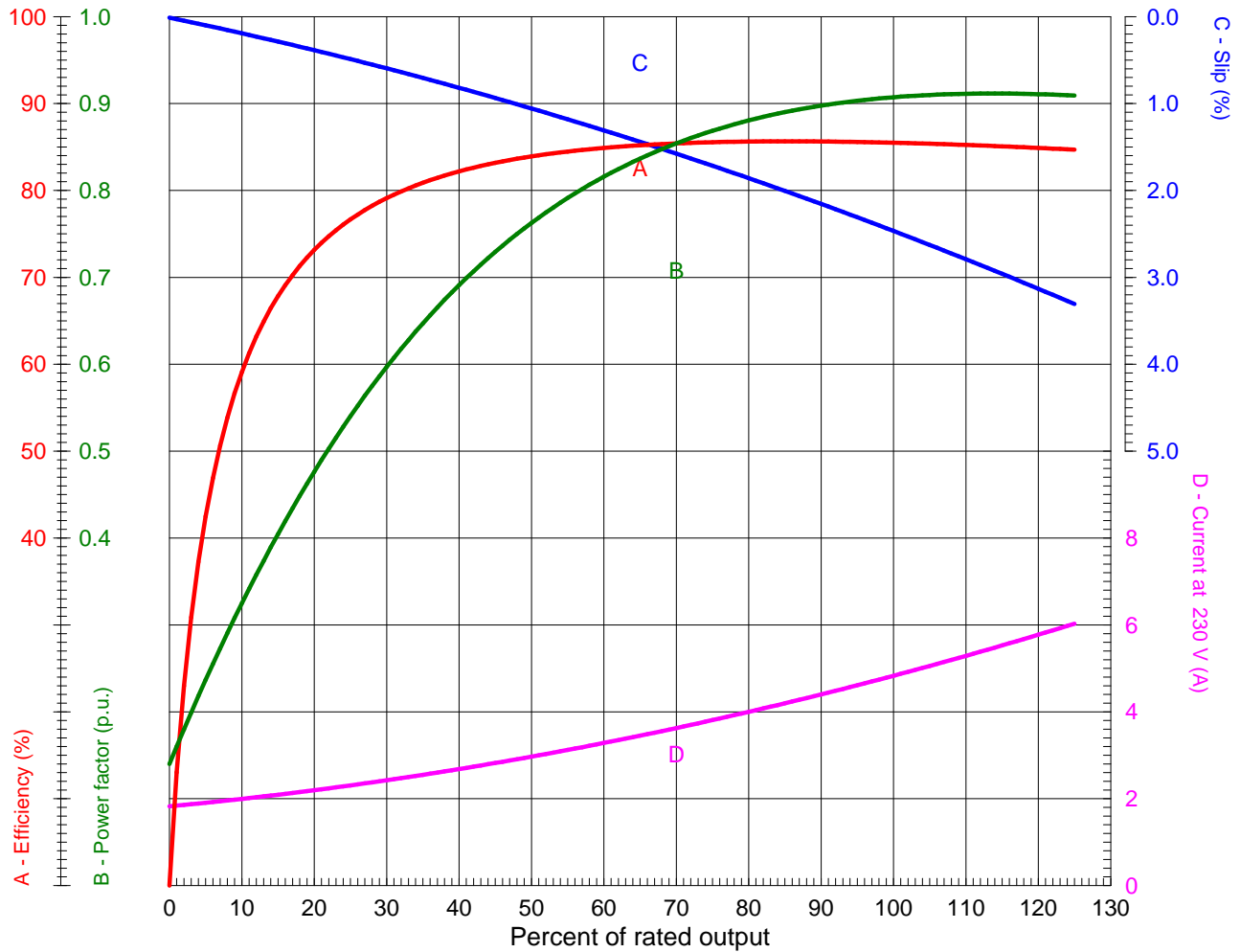
# LOAD PERFORMANCE CURVE



## Three Phase Induction Motor - Squirrel Cage

Customer

Product line : W01 - ODP - Premium Efficiency



Performance : 2 HP (1.5 kW) 230/460 V 60 Hz 2P 56HC

Rated current	: 4.84/2.42 A	Moment of inertia (J)	: 0.0049 kgm <sup>2</sup>
LRC (p.u.)	: 8.9 Code K	Duty cycle	: Cont.(S1)
Rated torque	: 0.414 kgfm	Insulation class	: F
Locked rotor torque	: 220 %	Service factor	: 1.15
Breakdown torque	: 330 %	Temperature rise	: 80 K
Rated speed	: 3510 rpm	Design	: B

Rev.	Summary of changes	Performed	Checked	Date
Performed by	mmoctezuma			206270/2016-A1
Checked by	mrsanchez			Page Revision
Date	21/02/2018			1/1 1

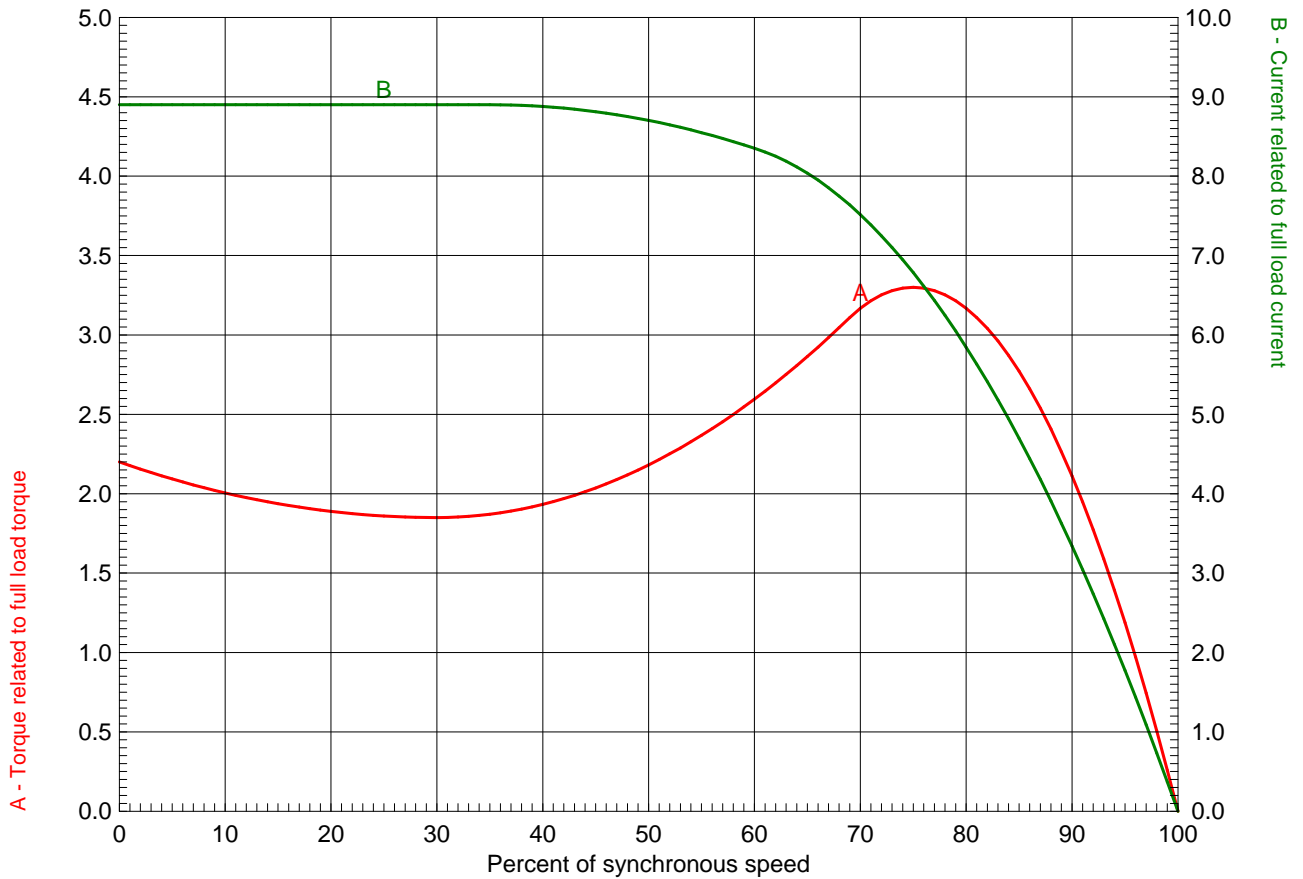
# TORQUE AND CURRENT X SPEED CURVE



## Three Phase Induction Motor - Squirrel Cage

Customer

Product line : W01 - ODP - Premium Efficiency



Performance : 2 HP (1.5 kW) 230/460 V 60 Hz 2P 56HC

Rated current	: 4.84/2.42 A	Moment of inertia (J)	: 0.0049 kgm <sup>2</sup>
LRC (p.u.)	: 8.9 Code K	Duty cycle	: Cont.(S1)
Rated torque	: 0.414 kgfm	Insulation class	: F
Locked rotor torque	: 220 %	Service factor	: 1.15
Breakdown torque	: 330 %	Temperature rise	: 80 K
Rated speed	: 3510 rpm	Design	: B

Locked rotor time 100% : 14 s (hot) 25 s (cold)  
 Load inertia (J=GD<sup>2</sup>/4) : 0.0049 kgm<sup>2</sup>

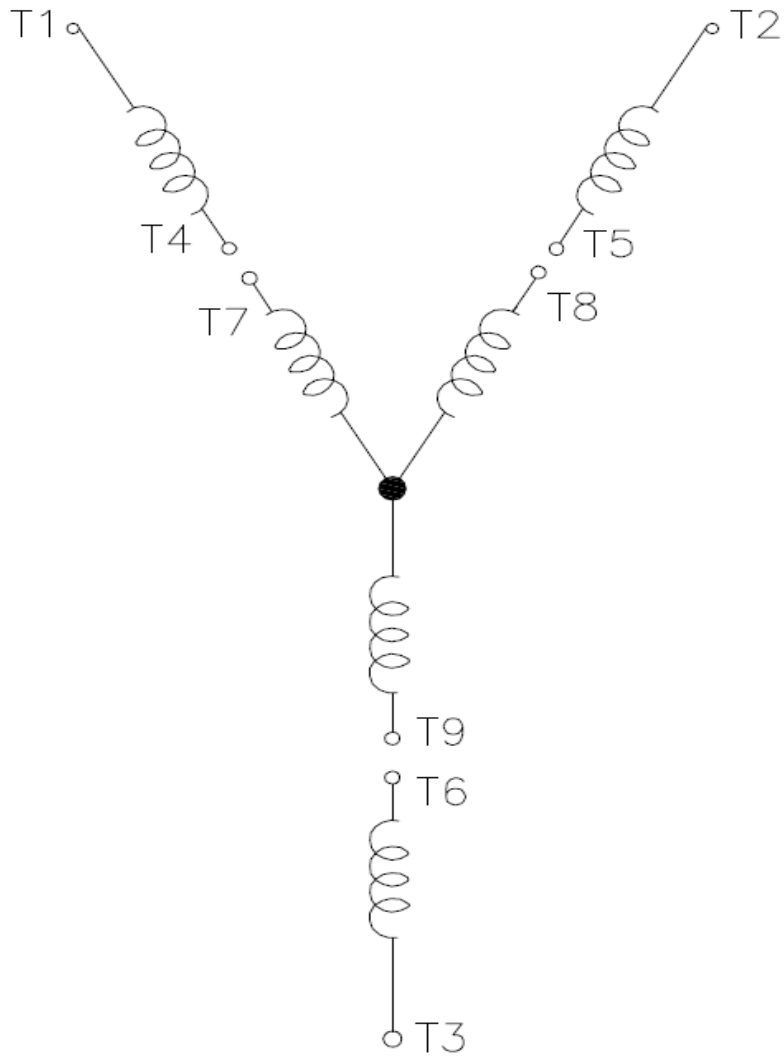
Rev.	Summary of changes	Performed	Checked	Date
Performed by	mmoctezuma	206270/2016-A1		Page 1/1
Checked by	mrsanchez			
Date	21/02/2018			
				Revision 1

# Wiring Diagram

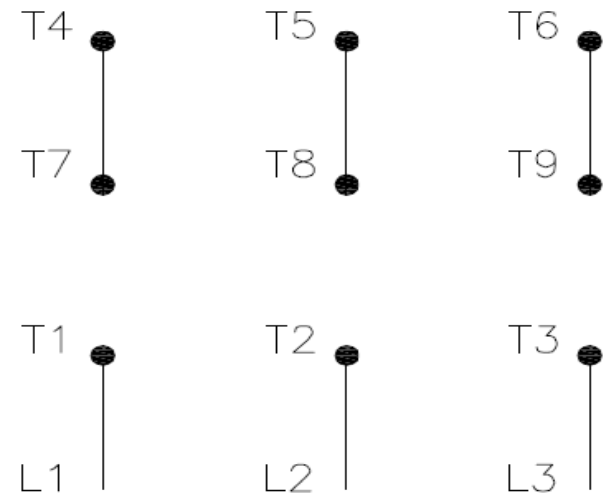


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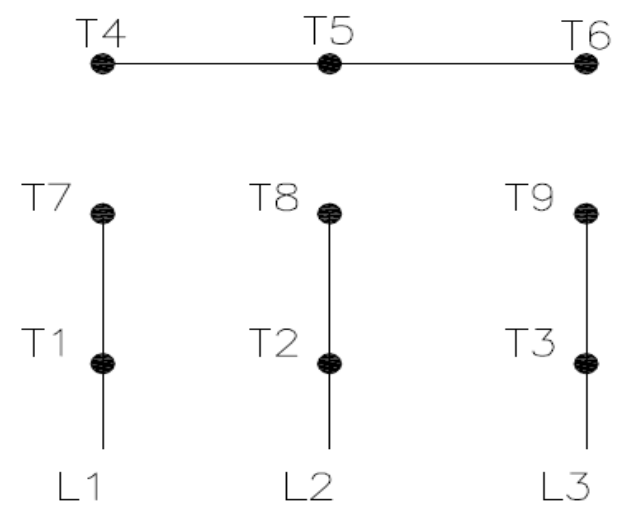
REV.  
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High Voltage ( Y )



Low Voltage ( YY )



- T1 — Blue
- T2 — White
- T3 — Orange
- T4 — Yellow
- T5 — Black
- T6 — Gray
- T7 — Pink
- T8 — Red
- T9 — Brick Red

Interchange any two line wires to reverse rotation.

DRAWING NO.	PAGE 1 of 1	REV.
31LH70A		0

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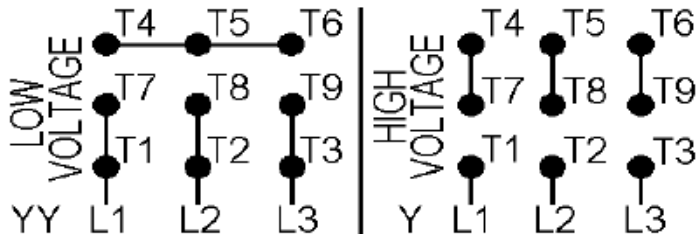
MODEL NO.

**CEC**® **US****CE****CSA**®  
C **US**  
Energy Verified**31LH70A**

TO0IC0X0X0000101746

MAT: 13827834

PH 3	HP (kW) <b>2.0(1.5)</b>
HZ <b>60</b>	V <b>230/460</b>
RPM <b>3510</b>	A <b>4.84/2.42</b>
FR <b>56HC</b>	DES <b>B</b>
<b>IP21</b>	ENCL <b>ODP</b>
AMB <b>40 °C</b>	CODE <b>K</b>
SF <b>1.15</b>	INS <b>F ΔT 80 K</b>
SFA <b>5.5/2.7 A</b>	PF <b>0.91</b>
DUTY <b>CONT</b>	
AVG F.L. EFF.	<b>85.5%</b>



**T1-BLU T2-WHT T3-ORG T4-YEL T5-BLK**  
**T6-GRY T7-PNK T8-RED T9-BRK RED**

INTERCHANGE ANY TWO LINE WIRES TO REVERSE ROTATION

**ALT. RATING: 190-220/380-415V 50Hz**  
**2.0HP 5.88-5.11/2.94-2.71 A 2890 RPM S.F.1.15**

S/N:

Mfd. for Dayton Electric Mfg. Co., Lake Forest, IL 60045 USA