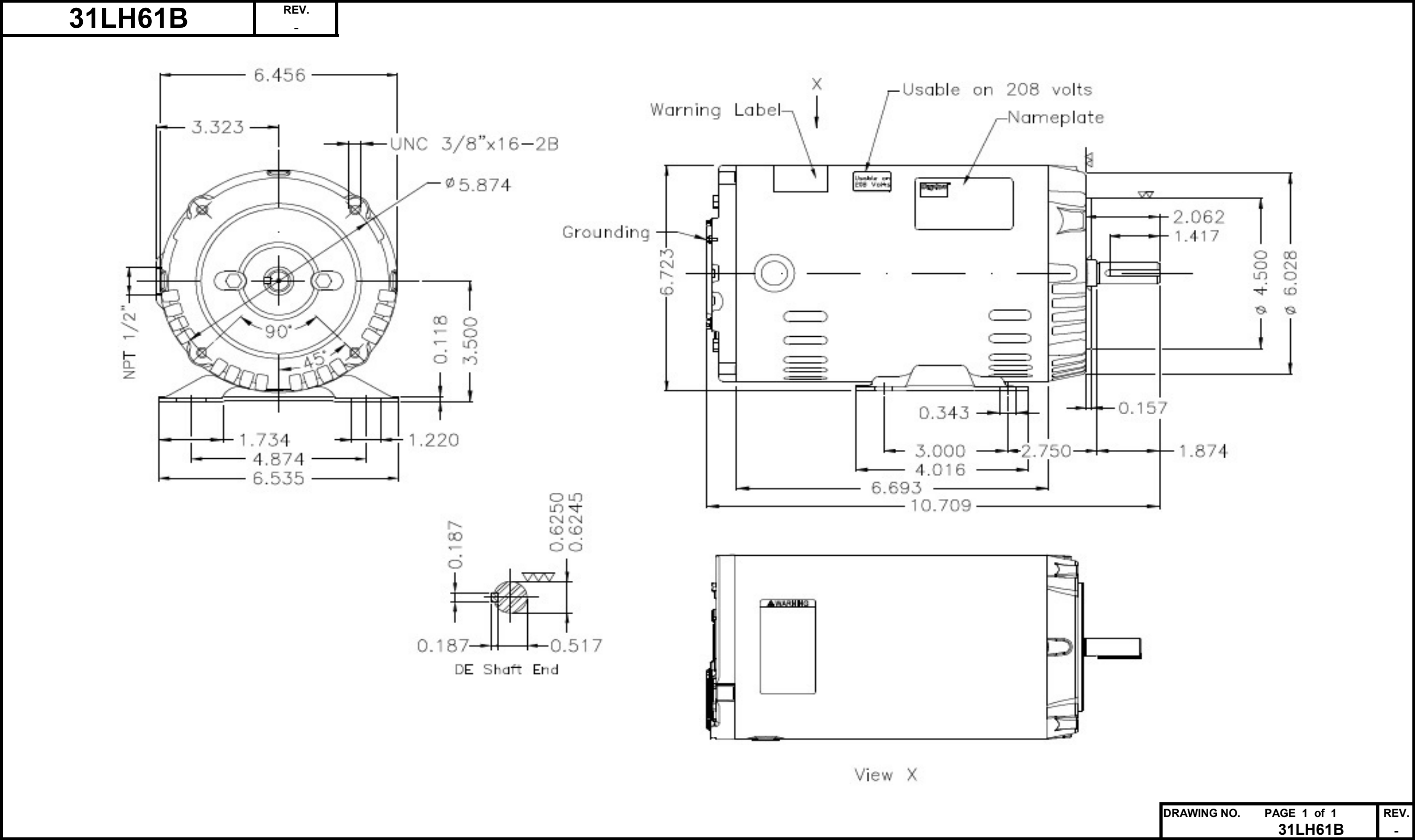


# Dimensional Drawing



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

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# DATA SHEET



## Three Phase Induction Motor - Squirrel Cage

Customer

Product line : W01 - ODP - Premium Efficiency

Frame	: 56C	Locked rotor time	: 28 s (hot) 50 s (cold)
Output	: 0.5 HP (0.37 kW)	Temperature rise <sup>4</sup>	: 80 K
Poles	: 6	Duty cycle	: Cont.(S1)
Frequency	: 60 Hz	Ambient temperature	: -20 °C to +40 °C
Rated voltage	: 208-230/460 V	Altitude	: 1000 m.a.s.l
Rated current	: 2.06-1.87/0.934 A	Cooling method	: IC01 - ODP
L. R. Amperes	: 9.53/4.76 A	Mounting	: F-1
LRC (p.u.)	: 5.1 Code J	Direct of rotation <sup>1</sup>	: Both
No load current	: 1.50/0.750 A	Noise level <sup>2</sup>	: 50.0 dB(A)
Rated speed	: 1155 rpm	Starting method	: Direct On Line
Slip	: 3.75 %	Weight <sup>3</sup>	: 9.6 kg
Rated torque	: 0.314 kgfm	Design	: B
Locked rotor torque	: 200 %		
Pull up torque	: 170 %		
Breakdown torque	: 260 %		
Insulation class	: F		
Service factor	: 1.15 (1.00 at 208V)		
Moment of inertia (J)	: 0.0037 kgm <sup>2</sup>		

Output	Start	50%	75%	100%	Load type	: -
Efficiency (%)	-	68.0	74.0	75.3	Load torque	: 0.314 kgfm
Power factor	0.70	0.43	0.56	0.66	Load inertia (J=GD <sup>2</sup> /4)	: 0.0037 kgm <sup>2</sup>

	Drive end	Non drive end	Foundation loads
Bearing type	6203-ZZ	6202-ZZ	Maximum traction : 24 kgf
Lubrication interval	-	-	Maximum compression : 34 kgf
Lubricant amount	-	-	
Lubricant type	MOBIL POLYREX EM		

Notes:  
 Dayton # 31LH61B  
 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	marian			181467/2016-A	
Checked by	esalazar			Page	Revision
Date	31/10/2016			1/2	0

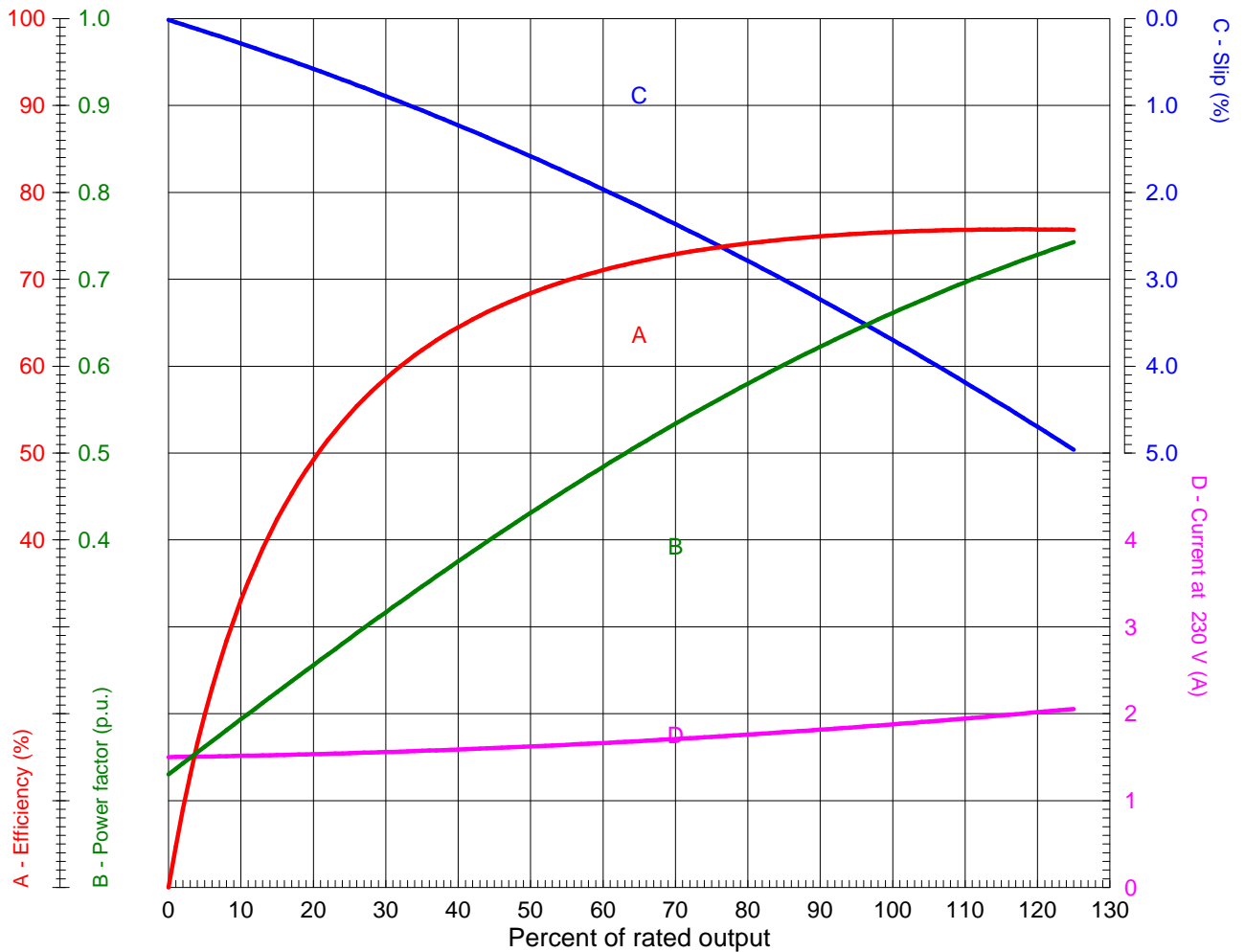
# LOAD PERFORMANCE CURVE



## Three Phase Induction Motor - Squirrel Cage

Customer

Product line : W01 - ODP - Premium Efficiency



Performance : 0.5 HP (0.37 kW) 208-230/460 V 60 Hz 6P 56C

Rated current	: 2.06-1.87/0.934 A	Moment of inertia (J)	: 0.0037 kgm <sup>2</sup>
LRC (p.u.)	: 5.1 Code J	Duty cycle	: Cont.(S1)
Rated torque	: 0.314 kgfm	Insulation class	: F
Locked rotor torque	: 200 %	Service factor	: 1.15 (1.00 at 208V)
Breakdown torque	: 260 %	Temperature rise	: 80 K
Rated speed	: 1155 rpm	Design	: B

Rev.	Summary of changes		Performed	Checked	Date
Performed by	marian			181467/2016-A1	
Checked by	esalazar			Page	Revision
Date	31/10/2016			1/1	0

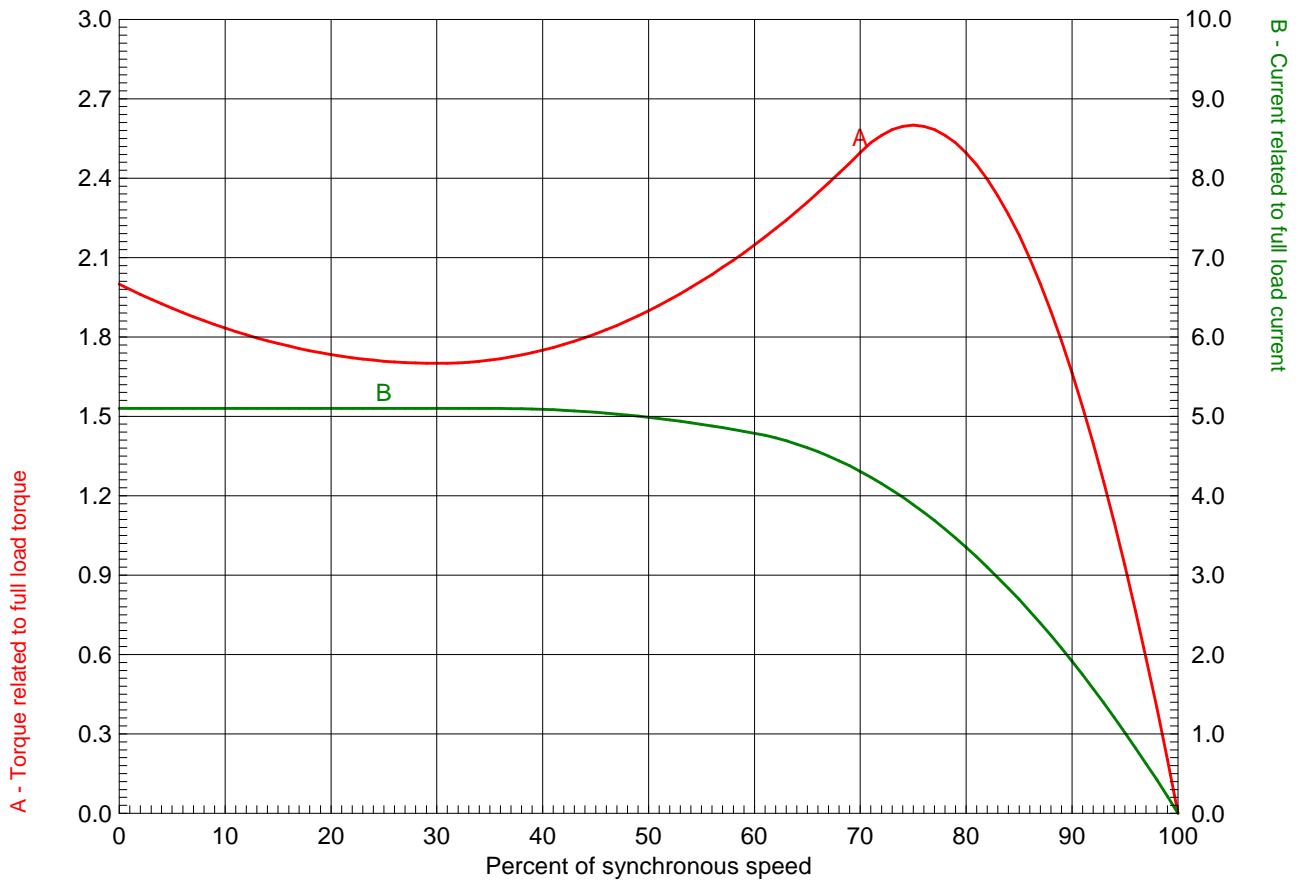
# TORQUE AND CURRENT X SPEED CURVE



## Three Phase Induction Motor - Squirrel Cage

Customer

Product line : W01 - ODP - Premium Efficiency



Performance : 0.5 HP (0.37 kW) 208-230/460 V 60 Hz 6P 56C

Rated current	: 2.06-1.87/0.934 A	Moment of inertia (J)	: 0.0037 kgm <sup>2</sup>
LRC (p.u.)	: 5.1 Code J	Duty cycle	: Cont.(S1)
Rated torque	: 0.314 kgfm	Insulation class	: F
Locked rotor torque	: 200 %	Service factor	: 1.15 (1.00 at 208V)
Breakdown torque	: 260 %	Temperature rise	: 80 K
Rated speed	: 1155 rpm	Design	: B

Locked rotor time 100% : 28 s (hot) 50 s (cold)  
 Load inertia (J=GD<sup>2</sup>/4) : 0.0037 kgm<sup>2</sup>

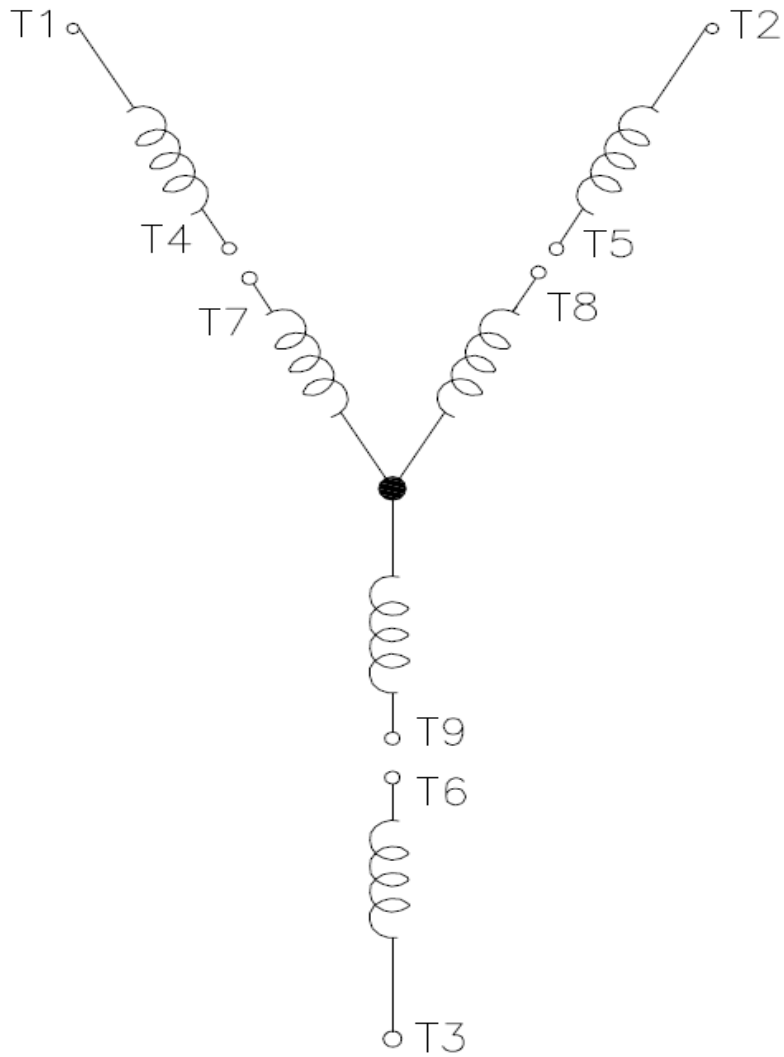
Rev.	Summary of changes	Performed	Checked	Date
Performed by	marian	181467/2016-A1		
Checked by	esalazar	Page	Revision	
Date	31/10/2016	1/1	0	

# Wiring Diagram

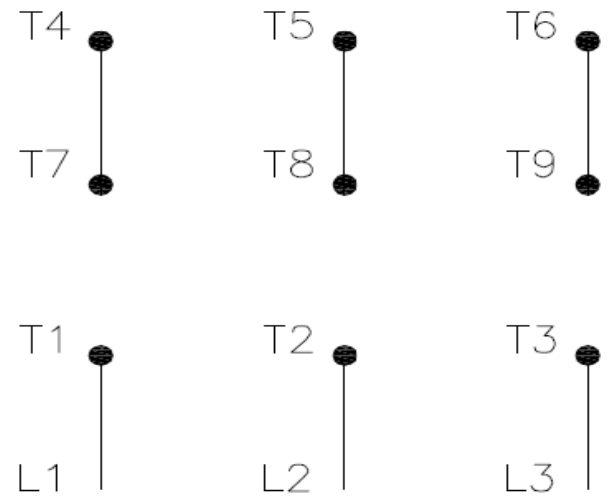


**31LH61B**

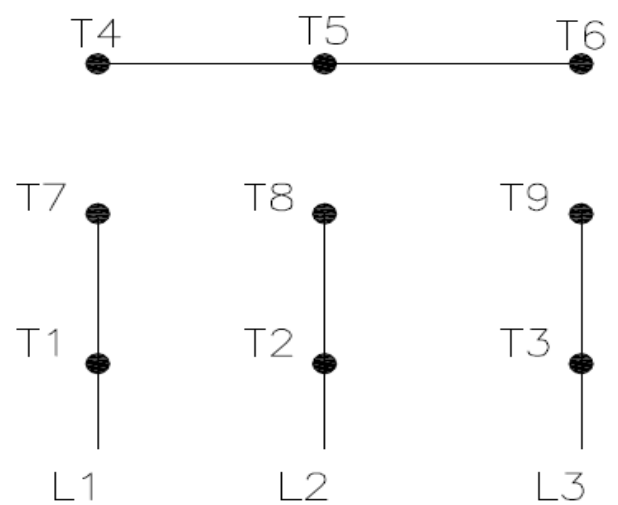
REV.  
0



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.
31LH61B		0

27 JUL 18

**Dayton**

MADE IN MEXICO

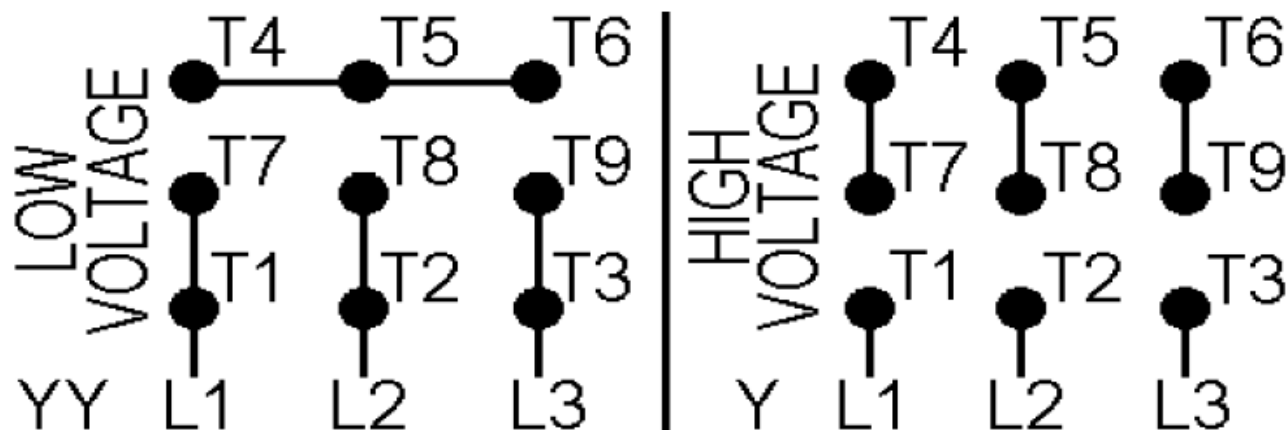
**NEMA**  
**Premium**

MODEL NO.

**31LH61B**

T00IC0X0X0000900355

MAT: 13800056

PH **3** HP (kW) **0.5(0.37)**HZ **60** V **230/460**RPM **1155** A **1.87/0.93**FR **56C** DES **B**IP **21** ENCL **ODP**AMB **40 °C** CODE **J**SF **1.15** INS **F**  $\Delta T$  **80 K**SFA **2.15/1.07A** PF **0.66**DUTY **CONT**AVG. F.L. EFF. **75.3%**

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**  
**0.5HP 2.08-1.96/1.04-1.04 A 935 RPM S.F. 1.15**

S/N:

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