

# DATA SHEET



## Three Phase Induction Motor - Squirrel Cage

Customer : Automation Direct

Product line : Premium Efficiency Three-Phase  
Product code : 14786563  
Catalog # : 00156ET3E56CFL-S

Frame : 56C	Locked rotor time : 30s (cold) 17s (hot)
Output : 1.5 HP (1.1 kW)	Temperature rise : 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 : 3.74/1.87 A	Protection degree : IP55
L. R. Amperes : 34.0/17.0 A	Cooling method : IC411 - TEFC
LRC : 9.1x(Code L)	Mounting : F-1
No load current : 1.72/0.859 A	Rotation <sup>1</sup> : Both (CW and CCW)
Rated speed : 3520 rpm	Noise level <sup>2</sup> : 68.0 dB(A)
Slip : 2.22 %	Starting method : Direct On Line
Rated torque : 2.24 ft.lb	Approx. weight <sup>3</sup> : 32.7 lb
Locked rotor torque : 229 %	
Breakdown torque : 300 %	
Insulation class : F	
Service factor : 1.15	
Moment of inertia (J) : 0.1023 sq.ft.lb	
Design : B	

Output	25%	50%	75%	100%	Foundation loads
Efficiency (%)	78.4	80.0	82.5	84.0	Max. traction : 71 lb
Power Factor	0.44	0.71	0.82	0.88	Max. compression : 104 lb

	<u>Drive end</u>	<u>Non drive end</u>
Bearing type :	6204 ZZ	6202 ZZ
Sealing :	V'Ring	Without Bearing Seal
Lubrication interval :	-	-
Lubricant amount :	-	-
Lubricant type :	Mobil Polyrex EM	

Notes  
USABLE @208V 4.13A SF 1.00 SFA 4.13A

This revision replaces and cancel the previous one, which must be eliminated.

- (1) Looking the motor from the shaft end.
- (2) Measured at 1m and with tolerance of +3dB(A).
- (3) Approximate weight subject to changes after manufacturing process.
- (4) At 100% of full load.

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

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# TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



Customer : Automation Direct

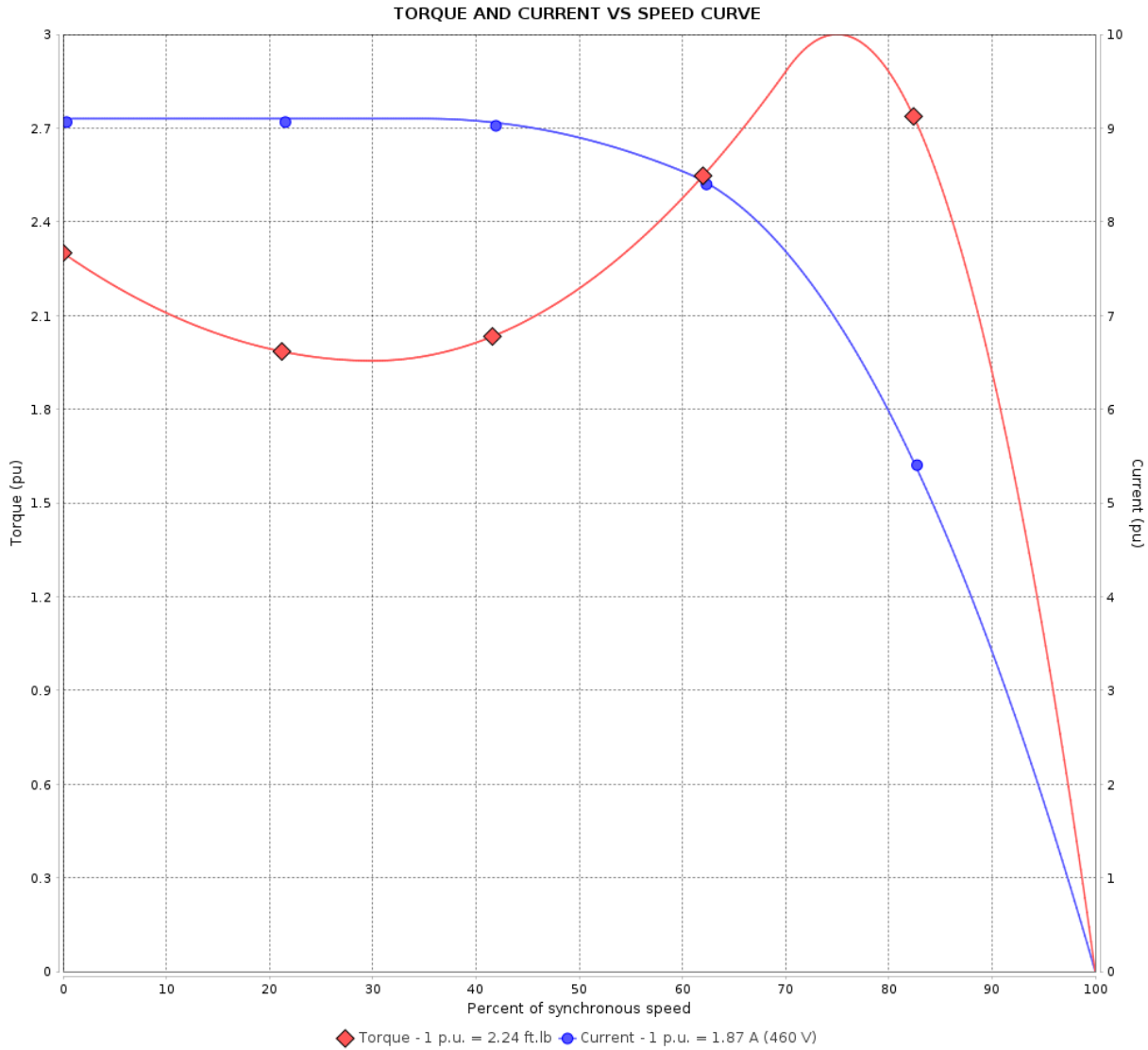
Product line : Premium Efficiency Three-Phase

Product code :

14786563

Catalog # :

00156ET3E56CFL-S



Performance : 230/460 V 60 Hz 2P

Rated current : 3.74/1.87 A  
 LRC : 9.1  
 Rated torque : 2.24 ft.lb  
 Locked rotor torque : 229 %  
 Breakdown torque : 300 %  
 Rated speed : 3520 rpm

Moment of inertia (J) : 0.1023 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor :  
 Temperature rise : 80 K  
 Design : B

Locked rotor time : 30s (cold) 17s (hot)

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Performed by			Page	Revision
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# LOAD PERFORMANCE CURVE

## Three Phase Induction Motor - Squirrel Cage



Customer : Automation Direct

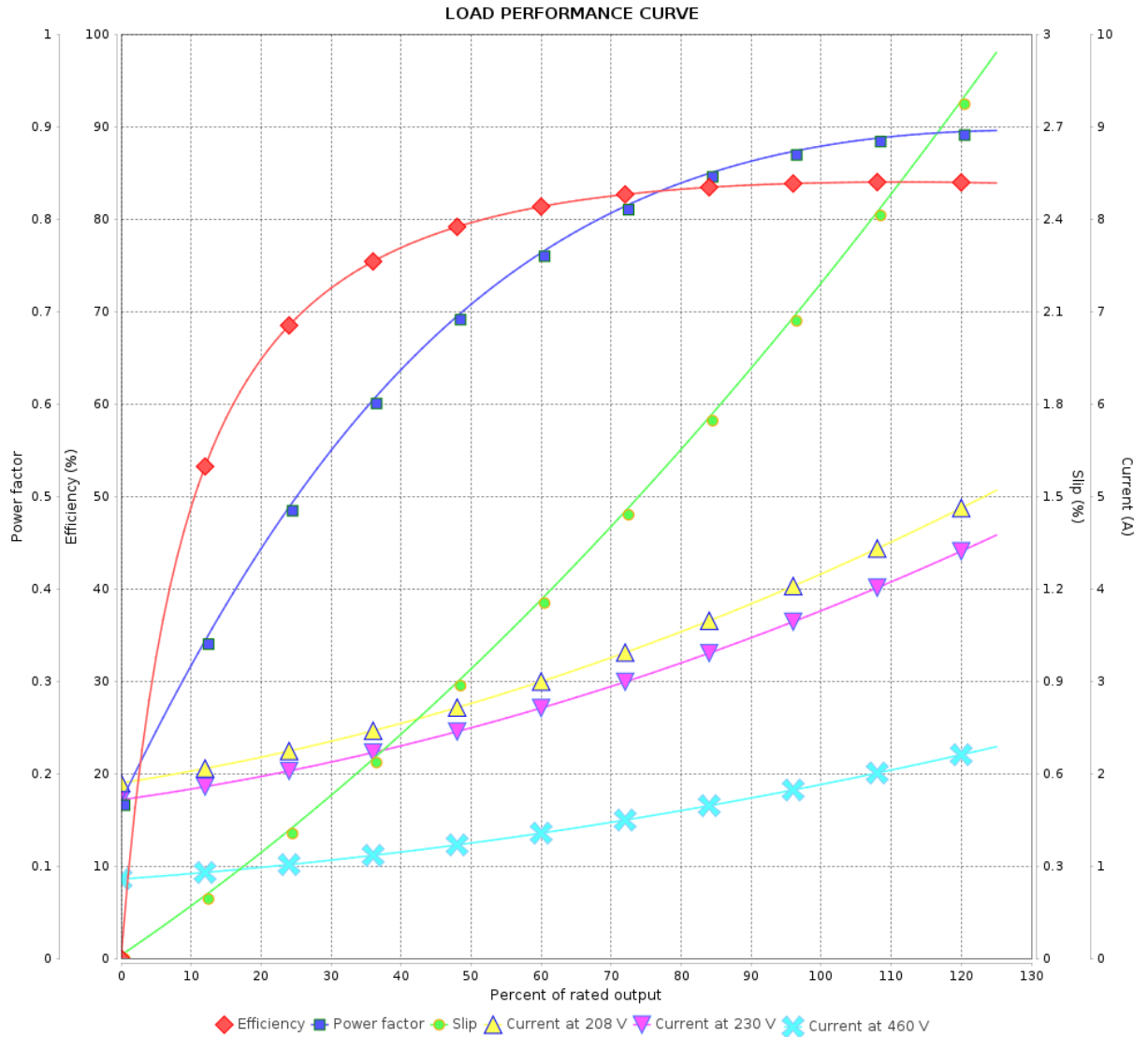
Product line : Premium Efficiency Three-Phase

Product code :

14786563

Catalog # :

00156ET3E56CFL-S



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 Rated speed : 3520 rpm

Moment of inertia (J) : 0.1023 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor :  
 Temperature rise : 80 K  
 Design : B

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# THERMAL LIMIT CURVE

## Three Phase Induction Motor - Squirrel Cage



Customer : Automation Direct

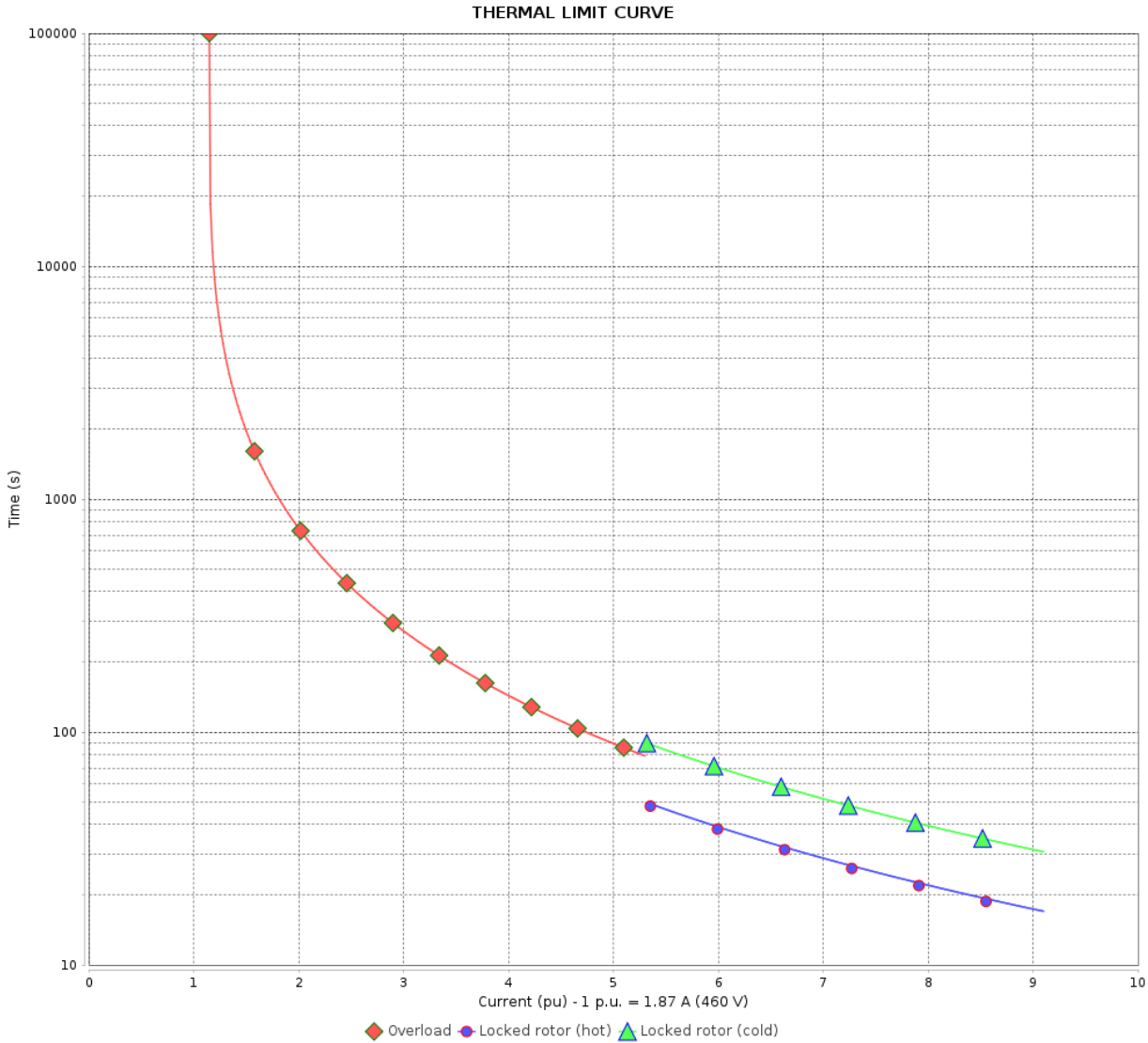
Product line : Premium Efficiency Three-Phase

Product code :

14786563

Catalog # :

00156ET3E56CFL-S



Performance : 230/460 V 60 Hz 2P

Rated current : 3.74/1.87 A  
 LRC : 9.1  
 Rated torque : 2.24 ft.lb  
 Locked rotor torque : 229 %  
 Breakdown torque : 300 %  
 Rated speed : 3520 rpm

Moment of inertia (J) : 0.1023 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor :  
 Temperature rise : 80 K  
 Design : B

Heating constant

Cooling constant

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# VFD OPERATION CURVE

## Three Phase Induction Motor - Squirrel Cage

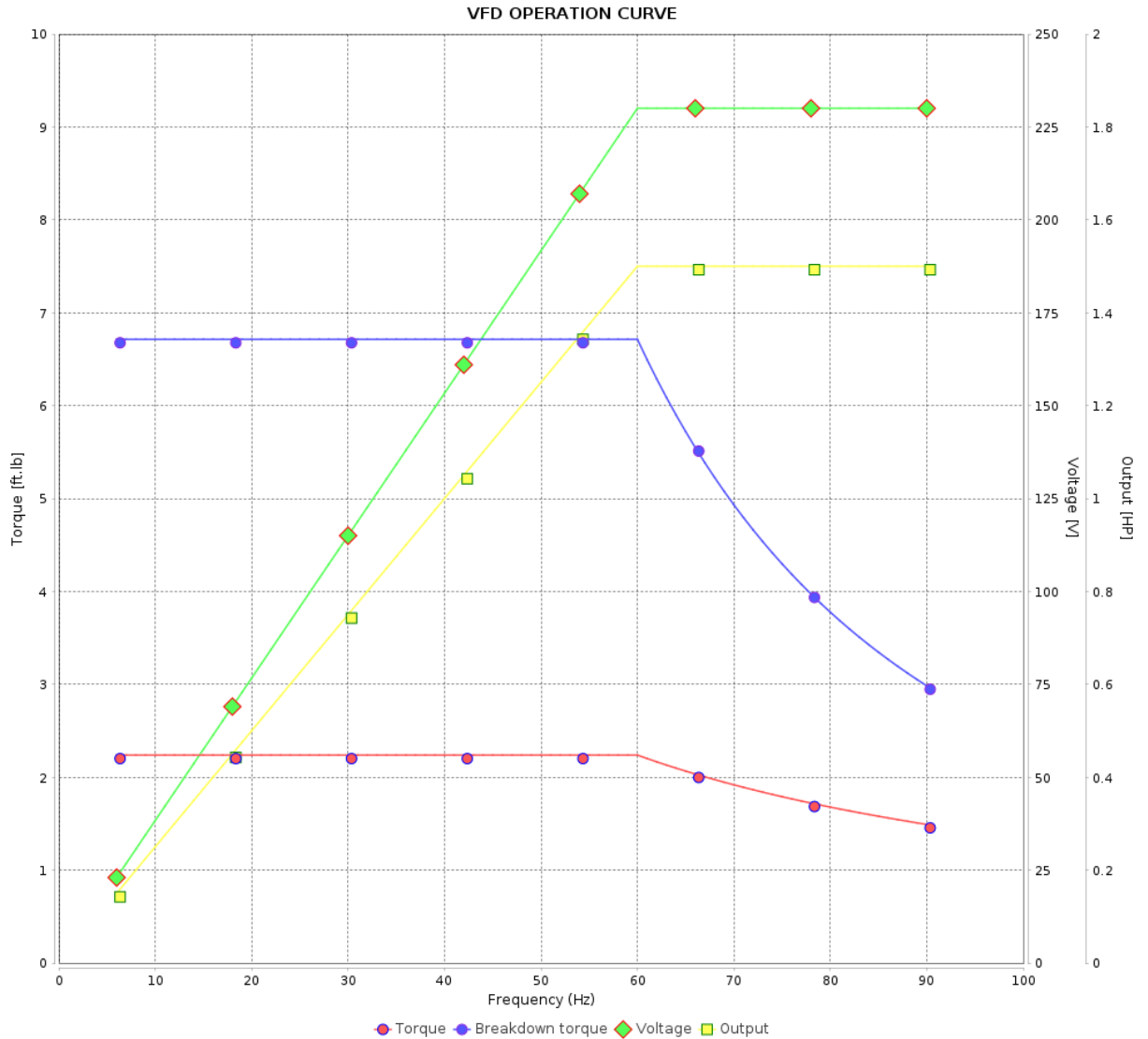


Customer : Automation Direct

Product line : Premium Efficiency Three-Phase

Product code :  
Catalog # :

14786563  
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Performance : 230/460 V 60 Hz 2P

Rated current : 3.74/1.87 A  
 LRC : 9.1  
 Rated torque : 2.24 ft.lb  
 Locked rotor torque : 229 %  
 Breakdown torque : 300 %  
 Rated speed : 3520 rpm

Moment of inertia (J) : 0.1023 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor :  
 Temperature rise : 80 K  
 Design : B

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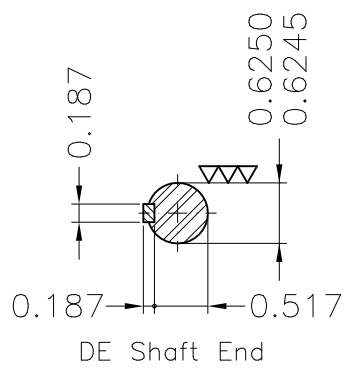
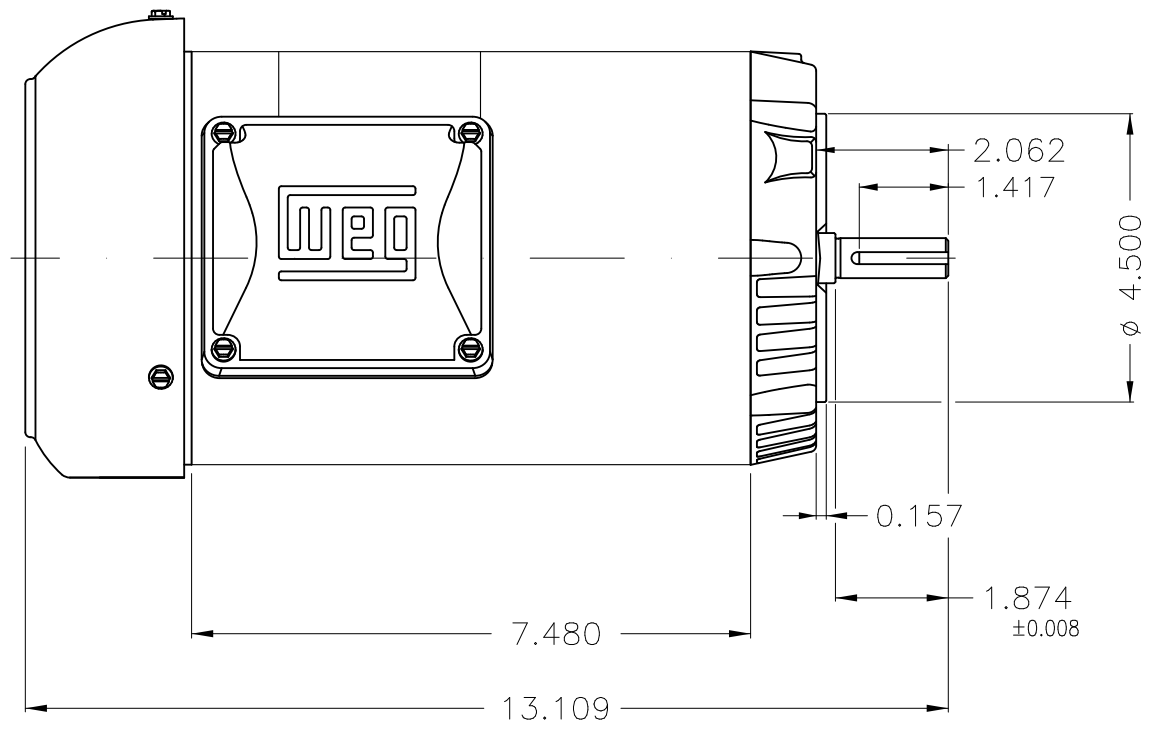
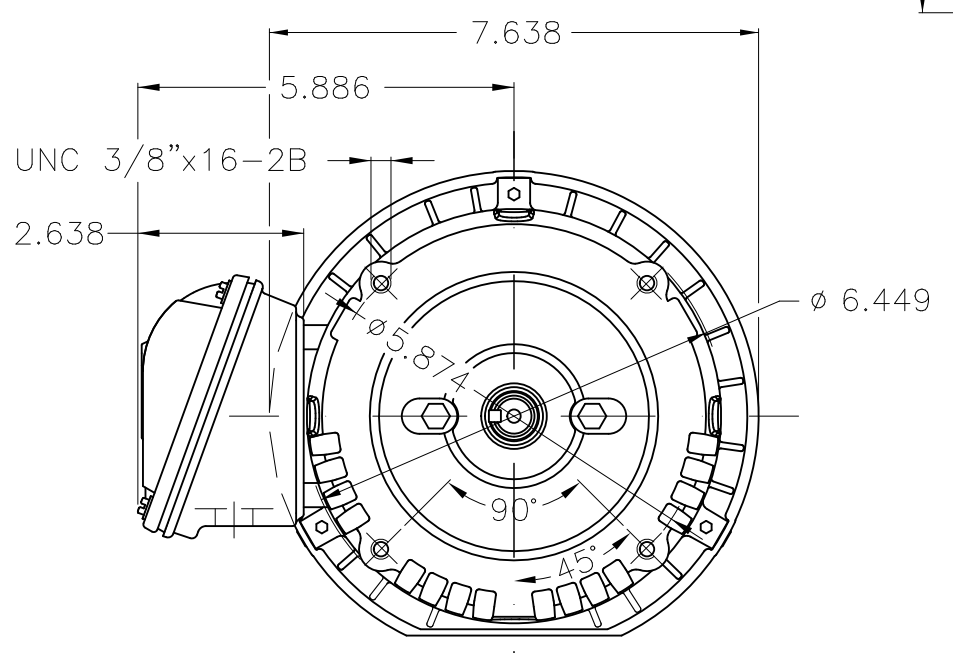
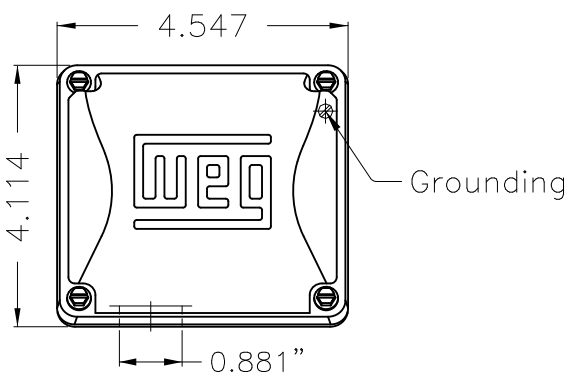
A

B

C

D

E



Fan cover - steel plate  
 Color Munsell N 1 matte black  
 Painting plan 207N  
 Mounting F-1/B14R(D)

ECM	LOC	SUMMARY OF MODIFICATIONS	EXECUTED	CHECKED	RELEASED	DATE	VER
EXECUTED	HYBRISUSER	THREE PH. MOTOR ROLLED STEEL PREM. EFF.					
CHECKED		FRAME 56C IP55 TEFC					
RELEASED							
REL DT.	WMO	Jaragua do Sul	Product Engineering	PREVIEW		WDD	
			SHEET		1 / 1		

1.5 HP 02 Poles 60 Hz

A





**NEMA**  
**Premium**



3PT9  
UL US LISTED  
FOR SAFE AREA



Energy Verified

MADE IN BRAZIL

**MAT: 14786563 CC029A**

**W01.TE0IC0X0X**

**MODEL 00156ET3E56CFL-S**

**18AUG2022 B/N:**

**For 60Hz: Class I, Zone 2, IIC  
Class I, Div.2, Gr. A,B,C,D - T3  
Div 2 Inverter Duty (SF1.00)**

**CT 2:1/VT 1000:1**

<b>PH 3</b>	<b>Hz 60</b>	<b>HP 1.5</b>
<b>FR 56C</b>		<b>KW 1.1</b>
<b>DUTY CONT.</b>		<b>V 230/460</b>
<b>ALT 1000 m.a.s.l.</b>		<b>A 3.74/1.87</b>
<b>INS CL F AT 80K</b>	<b>IP55</b>	<b>SFA 4.30/2.15</b>
<b>AMB 40°C</b>	<b>DES B</b>	<b>SF 1.15</b>
<b>ENCL TEFC</b>	<b>CODE L</b>	<b>PF 0.88</b>
<b>USABLE @ 208V 4.14A</b>		<b>RPM 3520</b>
<b>SF1.00</b>		<b>NEMA NOM. EFF 84.0%</b>

<b>ALTERNATE RATING: 1.5HP 50Hz 190-220/380-415V SF1.15</b>
<b>4.44-3.90/2.22-2.07A 2895RPM EFF 82.9% (IE3) IEC 60034-1</b>

For safe area-inverter duty motor For 60Hz use on VPWM 1000:1 VT, 5:1 CT

<b>DE 6204-ZZ</b>	<b>ODE 6202-ZZ</b>	<b>MOBIL POLYREX EM</b>
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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 THE ROTATION



**WARNING:** Motor must be grounded in accordance with local and national electrical codes to prevent serious electrical shocks. Disconnect power source before servicing unit.

**AVERTISSEMENT:** Le moteur doit être mis à la terre conformément aux codes électriques locaux et nationaux afin d'éviter tout choc électrique grave. Déconnectez l'alimentation avant l'entretien de la machine.

