

# DATA SHEET



## Three Phase Induction Motor - Squirrel Cage

Customer	: Automation Direct				
Product line	: Standard Efficiency Three-Phase		Product code :	14796994	
			Catalog # :	.5018ES3E56C-S	
Frame	: 56C		Locked rotor time	: 36s (cold) 20s (hot)	
Output	: 0.5 HP (0.37 kW)		Temperature rise	: 80 K	
Poles	: 4		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	: 1.91-1.72/0.862 A		Protection degree	: IP55	
L. R. Amperes	: 13.3-12.1/6.03 A		Cooling method	: IC411 - TEFC	
LRC	: 7.0x(Code L)		Mounting	: F-1	
No load current	: 1.03-1.20/0.600 A		Rotation <sup>1</sup>	: Both (CW and CCW)	
Rated speed	: 1760 rpm		Noise level <sup>2</sup>	: 52.0 dB(A)	
Slip	: 2.22 %		Starting method	: Direct On Line	
Rated torque	: 1.49 ft.lb		Approx. weight <sup>3</sup>	: 21.8 lb	
Locked rotor torque	: 240 %				
Breakdown torque	: 300 %				
Insulation class	: F				
Service factor	: 1.15				
Moment of inertia (J)	: 0.0584 sq.ft.lb				
Output	25%	50%	75%	100%	
Efficiency (%)	65.4	68.0	74.0	77.0	
Power Factor	0.28	0.48	0.61	0.70	
	Foundation loads				
			Max. traction	: 43 lb	
			Max. compression	: 65 lb	
		<u>Drive end</u>	<u>Non drive end</u>		
Bearing type	:	6203 ZZ	6202 ZZ		
Sealing	:	V'Ring	Without Bearing Seal		
Lubrication interval	:	-	-		
Lubricant amount	:	-	-		
Lubricant type	:	Mobil Polyrex EM			
Notes					
USABLE @208V SF 1.00					
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.		
Rev.	Changes Summary		Performed	Checked	Date
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# TORQUE AND CURRENT VS SPEED CURVE

## Three Phase Induction Motor - Squirrel Cage



Customer : Automation Direct

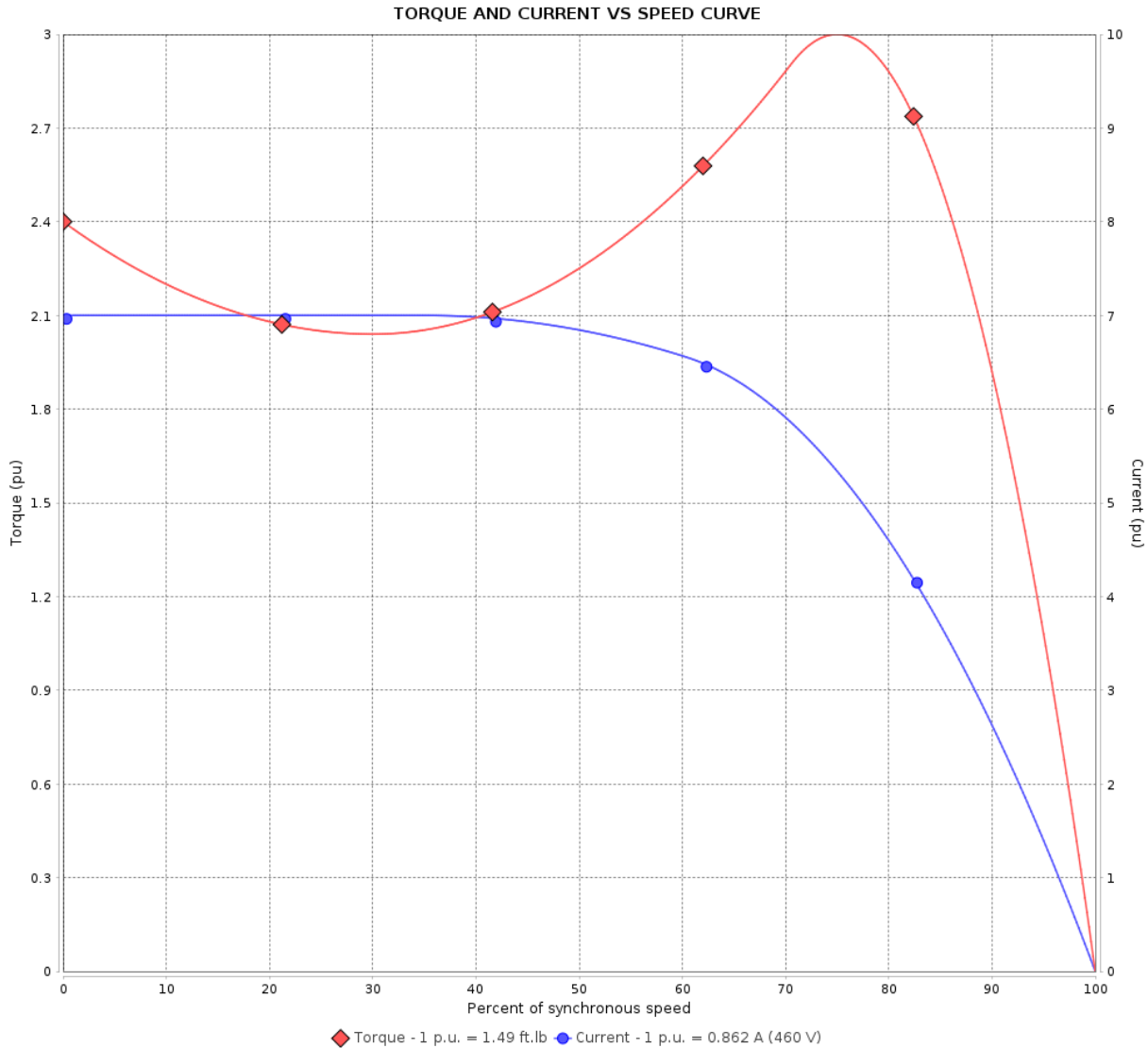
Product line : Standard Efficiency Three-Phase

Product code :

14796994

Catalog # :

.5018ES3E56C-S



Performance : 208-230/460 V 60 Hz 4P

Rated current : 1.91-1.72/0.862 A  
 LRC : 7.0  
 Rated torque : 1.49 ft.lb  
 Locked rotor torque : 240 %  
 Breakdown torque : 300 %  
 Rated speed : 1760 rpm

Moment of inertia (J) : 0.0584 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor :  
 Temperature rise : 80 K

Locked rotor time : 36s (cold) 20s (hot)

Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page		Revision
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Date	22/08/2022			

# LOAD PERFORMANCE CURVE

## Three Phase Induction Motor - Squirrel Cage



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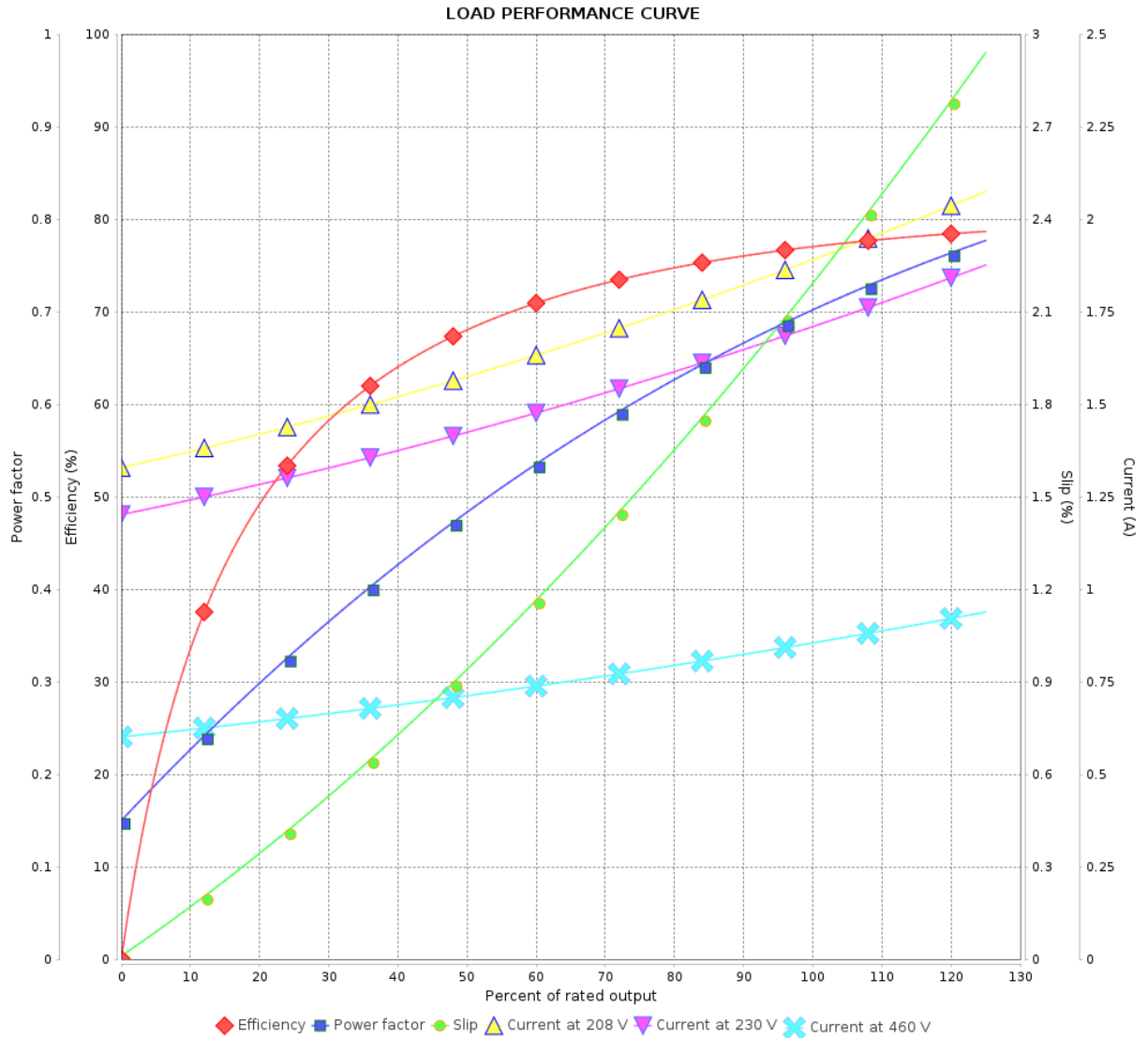
Product line : Standard Efficiency Three-Phase

Product code :

14796994

Catalog # :

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 Locked rotor torque : 240 %  
 Breakdown torque : 300 %  
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 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor :  
 Temperature rise : 80 K

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# THERMAL LIMIT CURVE

## Three Phase Induction Motor - Squirrel Cage



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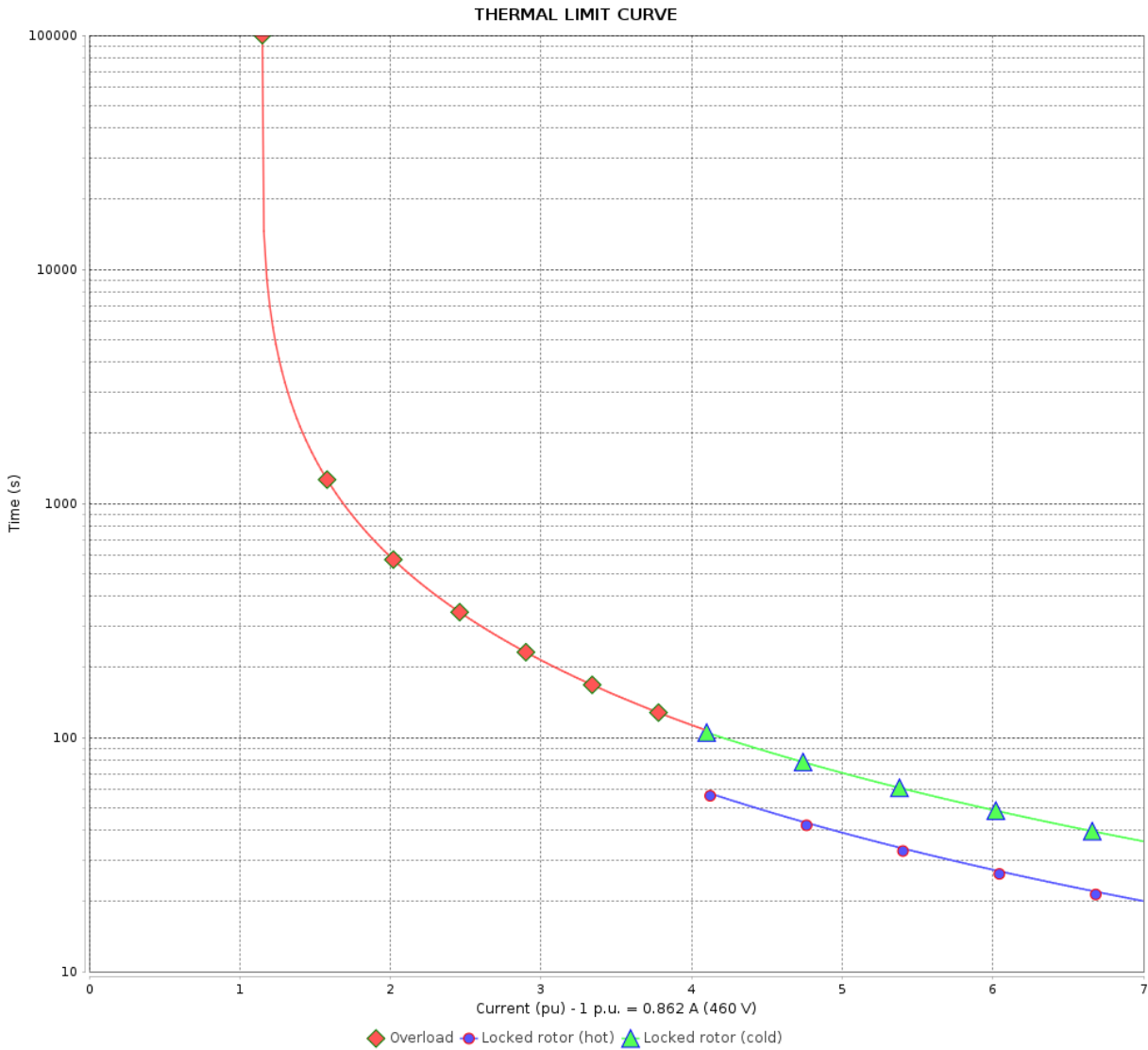
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Performance : 208-230/460 V 60 Hz 4P

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 LRC : 7.0  
 Rated torque : 1.49 ft.lb  
 Locked rotor torque : 240 %  
 Breakdown torque : 300 %  
 Rated speed : 1760 rpm

Moment of inertia (J) : 0.0584 sq.ft.lb  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor :  
 Temperature rise : 80 K

Heating constant

Cooling constant

Rev.	Changes Summary	Performed	Checked	Date
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# VFD OPERATION CURVE

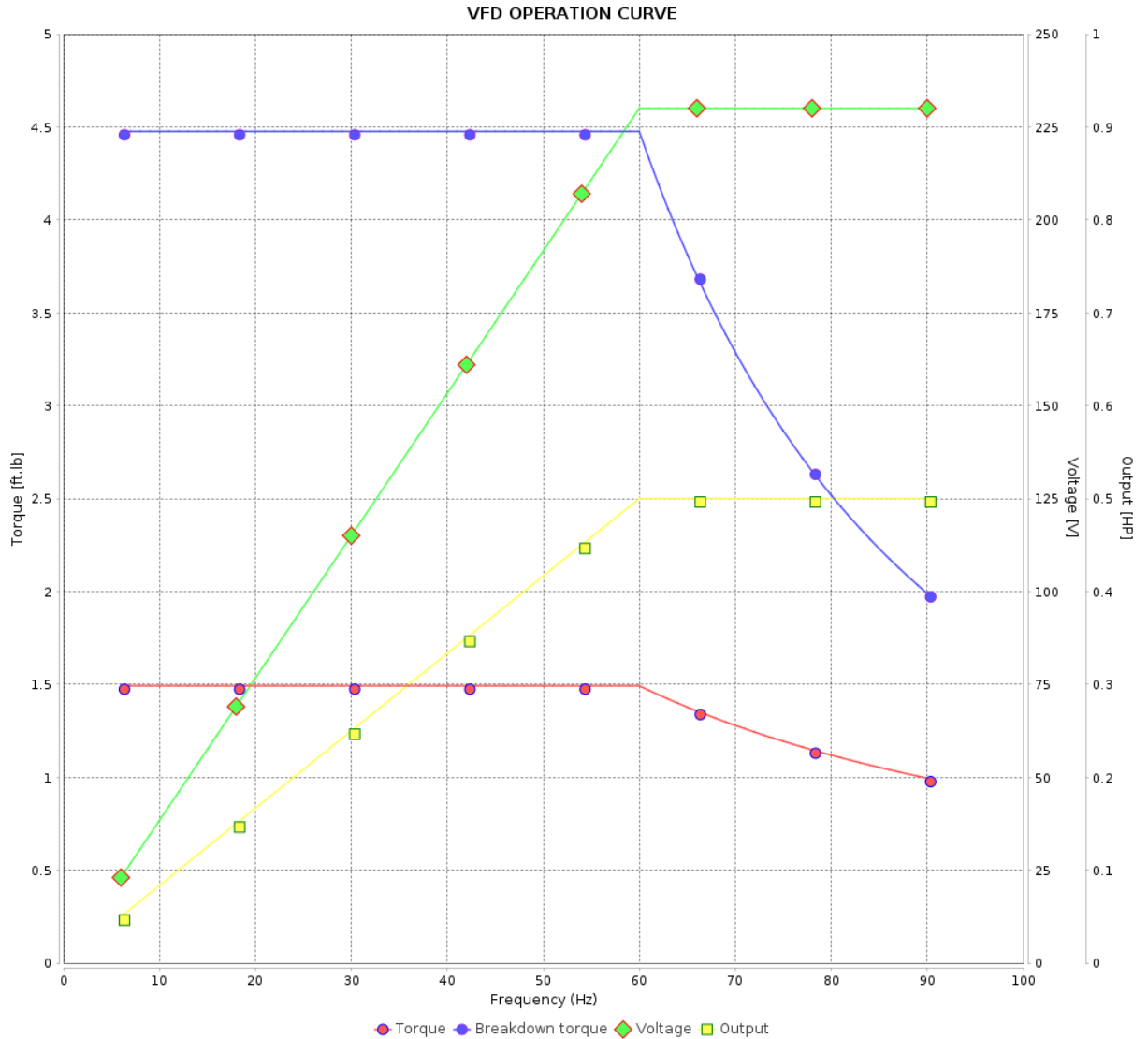
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MADE IN BRAZIL

**MAT: 14796994**

**W01.TE0IC0X0X**

**MODEL .5018ES3E56C-S**

**25AUG2022 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)**

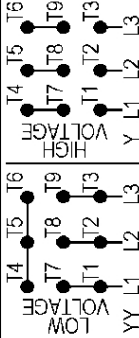
**CT 2:1/VT 1000:1**

PH 3	Hz 60	HP 0.50
FR 56C		KW 0.37
DUTY CONT.		V 208-230/460
ALT 1000 m.a.s.l.		A 1.91-1.72/0.862
INS CL F AT 80K	IP55	SFA 1.91-1.98/0.991
AMB 40°C	DES -	SF 1.15
ENCL TEFC	CODE L	PF 0.70
USABLE @ 208V SF1.00		RPM 1760
		NEMA NOM. EFF 77.0%

ALTERNATE RATING: 0.50HP 50Hz 190-220/380-415V SF1.15
1.90-1.81/0.950-0.962A 1445RPM EFF 75.4% (IE2) IEC 60034-1

For safe area-Inverter duty motor For 60Hz use on VPWM 1000:1 VT, 10:1 CT

DE 6203-ZZ	ODE 6202-ZZ	MOBIL POLYREX EM
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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.

