

# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W50 Three-Phase

Product code : 13299562  
Catalog # : 35012ET3X5009-W50MV

Frame : 5009/10  
Insulation class : F  
Duty cycle : Cont.(S1)  
Ambient temperature : -20°C to +40°C  
Altitude : 1000 m.a.s.l.  
Protection degree : IP55  
Design : A

Cooling method : IC411 - TEFC  
Mounting : F-1  
Rotation<sup>1</sup> : Both (CW and CCW)  
Starting method : Direct On Line  
Approx. weight<sup>3</sup> : 4339 lb  
Moment of inertia (J)

Output [HP]	350	350
Poles	6	6
Frequency [Hz]	60	60
Rated voltage [V]	2300	4160
Rated current [A]	87.0	48.7
L. R. Amperes [A]	496	307
LRC [A]	5.7x(Code G)	6.3x(Code H)
No load current [A]	38.0	24.0
Rated speed [RPM]	1184	1185
Slip [%]	1.33	1.25
Rated torque [ft.lb]	1550	1550
Locked rotor torque [%]	170	180
Breakdown torque [%]	229	250
Service factor	1.00	1.00
Temperature rise	80 K	80 K
Locked rotor time	36s (cold) 20s (hot)	36s (cold) 20s (hot)
Noise level <sup>2</sup>	77.0 dB(A)	77.0 dB(A)
Efficiency (%)	25%	93.0
	50%	93.6
	75%	94.5
	100%	95.0
Power Factor	25%	0.40
	50%	0.64
	75%	0.75
	100%	0.79

### Notes

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).
- (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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Revision

# TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



Customer :

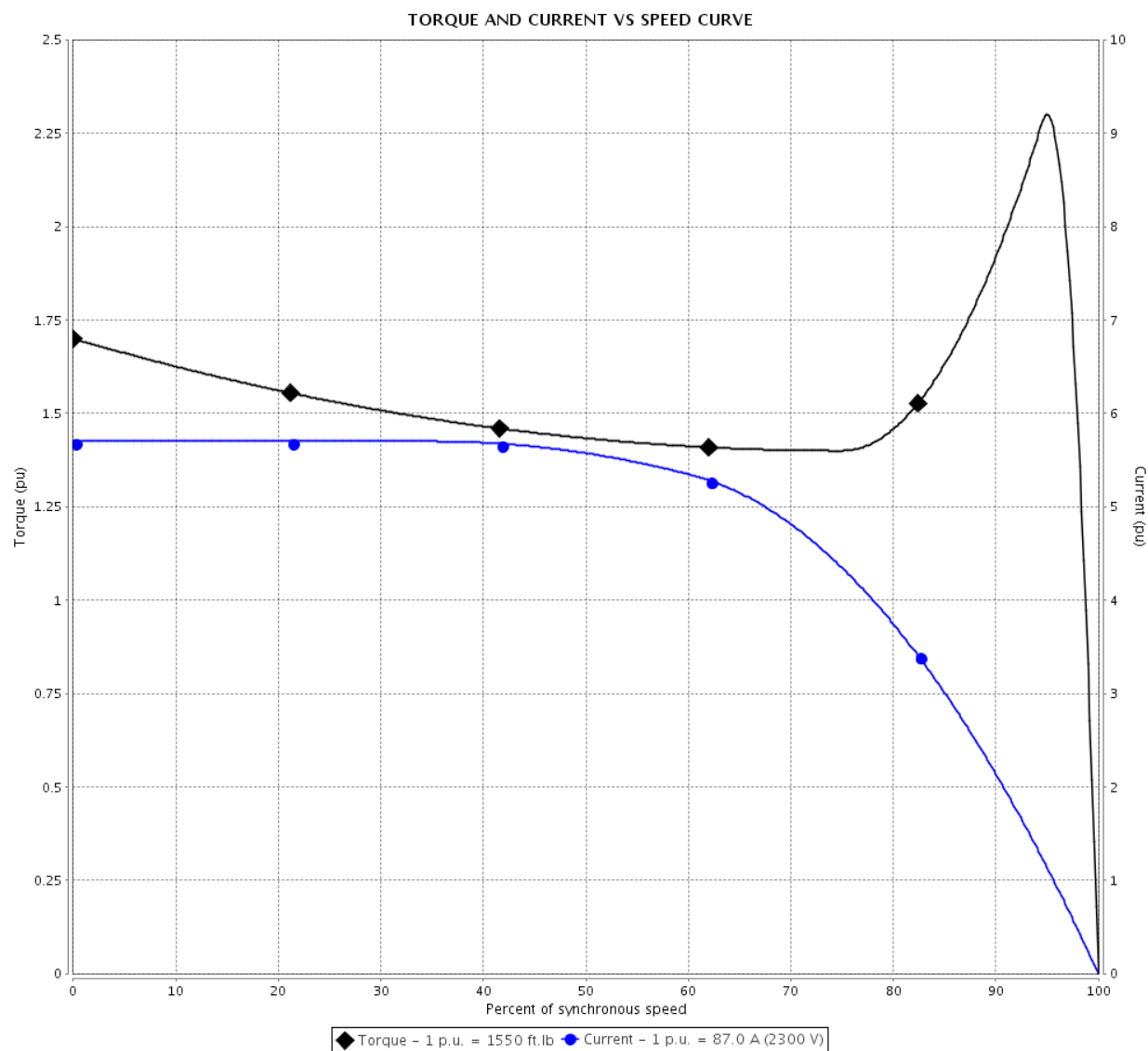
Product line : W50 Three-Phase

Product code :

13299562

Catalog # :

35012ET3X5009-W50MV



Performance : 2300 V 60 Hz 6P

Rated current : 87.0 A  
 LRC : 5.7  
 Rated torque : 1550 ft.lb  
 Locked rotor torque : 170 %  
 Breakdown torque : 229 %  
 Rated speed : 1184 rpm

Moment of inertia (J)  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.00  
 Temperature rise : 80 K  
 Design : A

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

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# TORQUE AND CURRENT VS SPEED CURVE

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Customer :

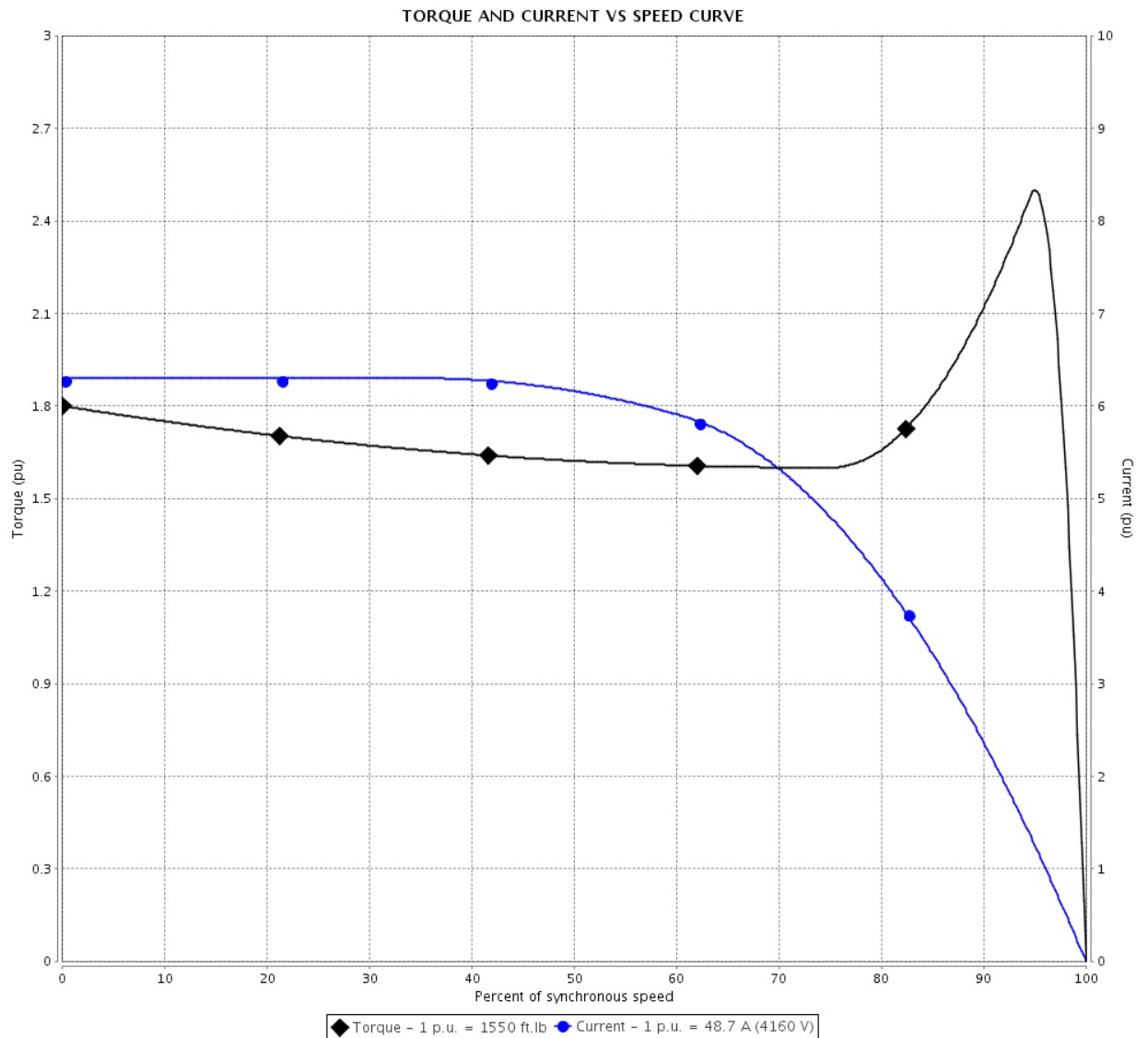
Product line : W50 Three-Phase

Product code :

13299562

Catalog # :

35012ET3X5009-W50MV



Performance : 4160 V 60 Hz 6P

Rated current	: 48.7 A	Moment of inertia (J)	
LRC	: 6.3	Duty cycle	: Cont.(S1)
Rated torque	: 1550 ft.lb	Insulation class	: F
Locked rotor torque	: 180 %	Service factor	: 1.00
Breakdown torque	: 250 %	Temperature rise	: 80 K
Rated speed	: 1185 rpm	Design	: A

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

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# LOAD PERFORMANCE CURVE

## Three Phase Induction Motor - Squirrel Cage



Customer : \_\_\_\_\_

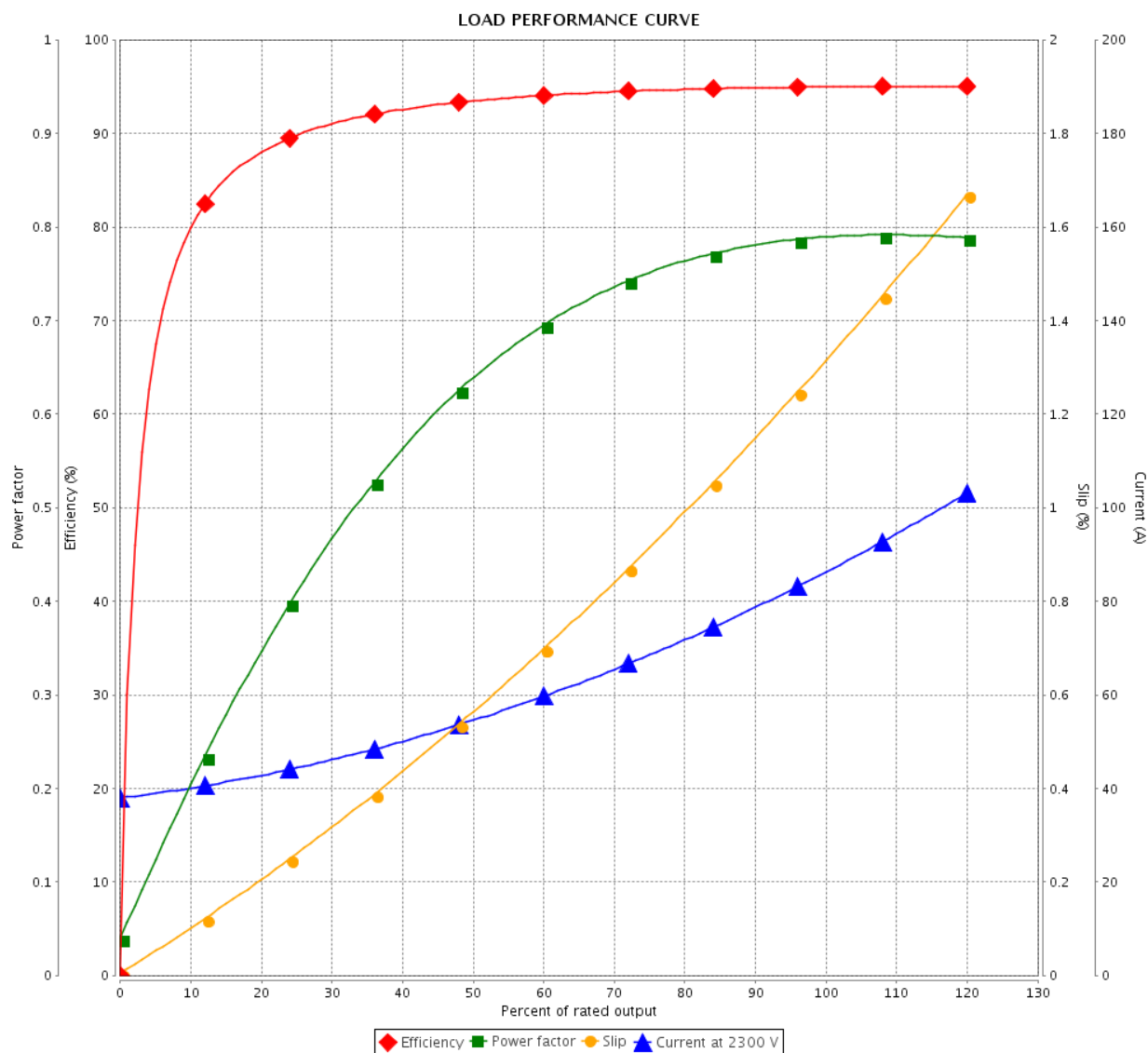
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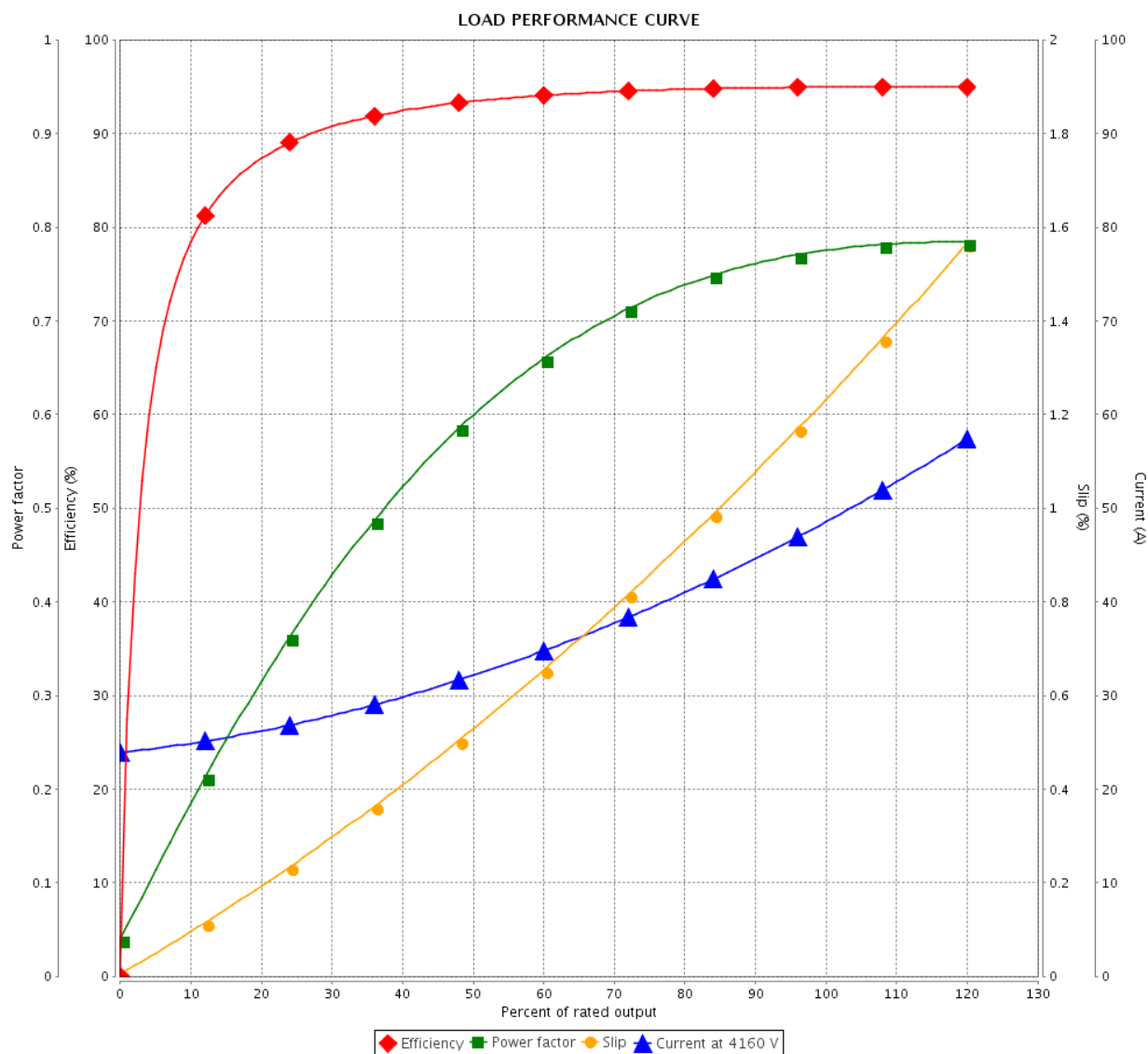
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# THERMAL LIMIT CURVE

## Three Phase Induction Motor - Squirrel Cage



Customer :

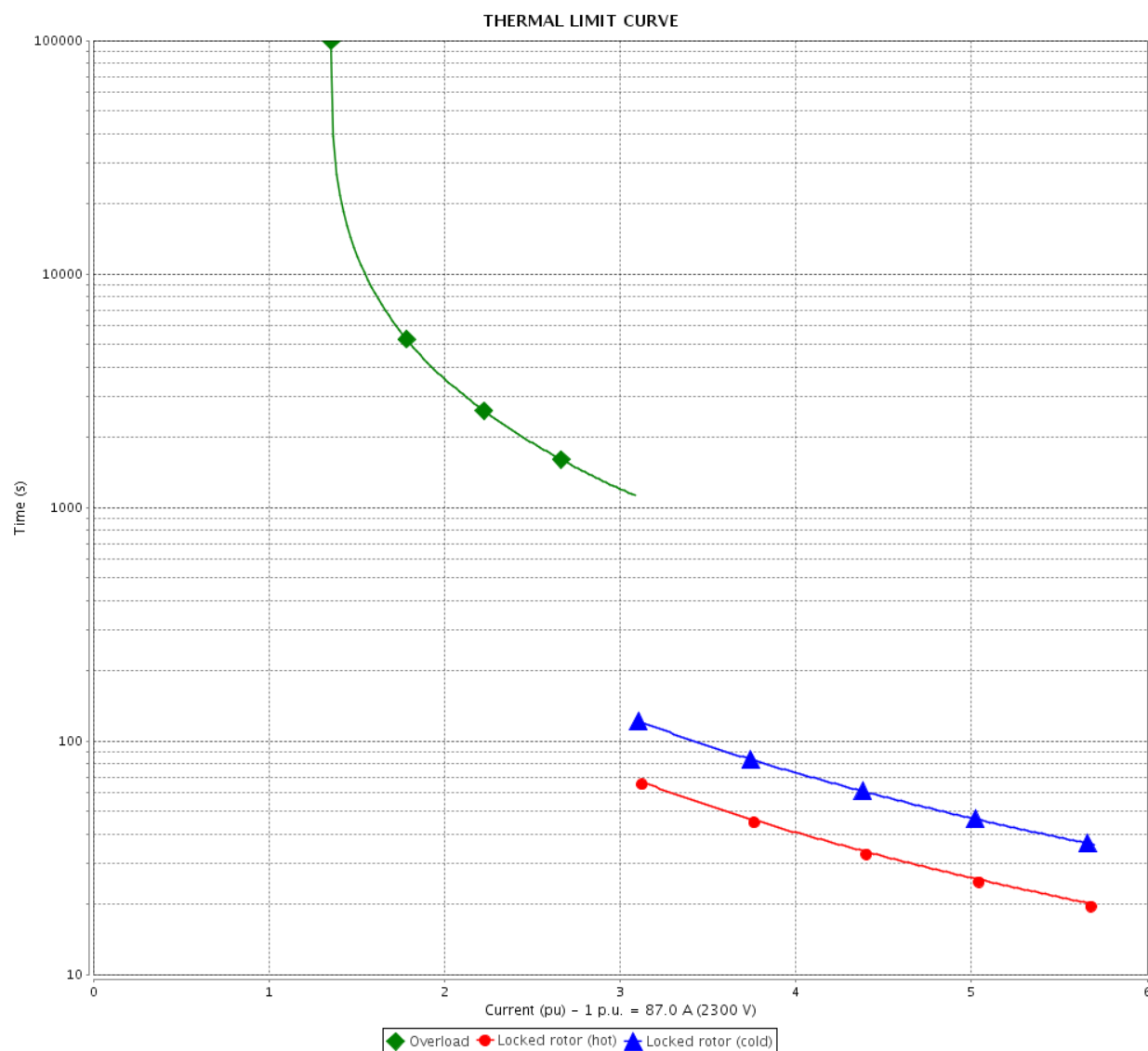
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Moment of inertia (J)  
 Duty cycle : Cont.(S1)  
 Insulation class : F  
 Service factor : 1.00  
 Temperature rise : 80 K  
 Design : A

Heating constant

Cooling constant

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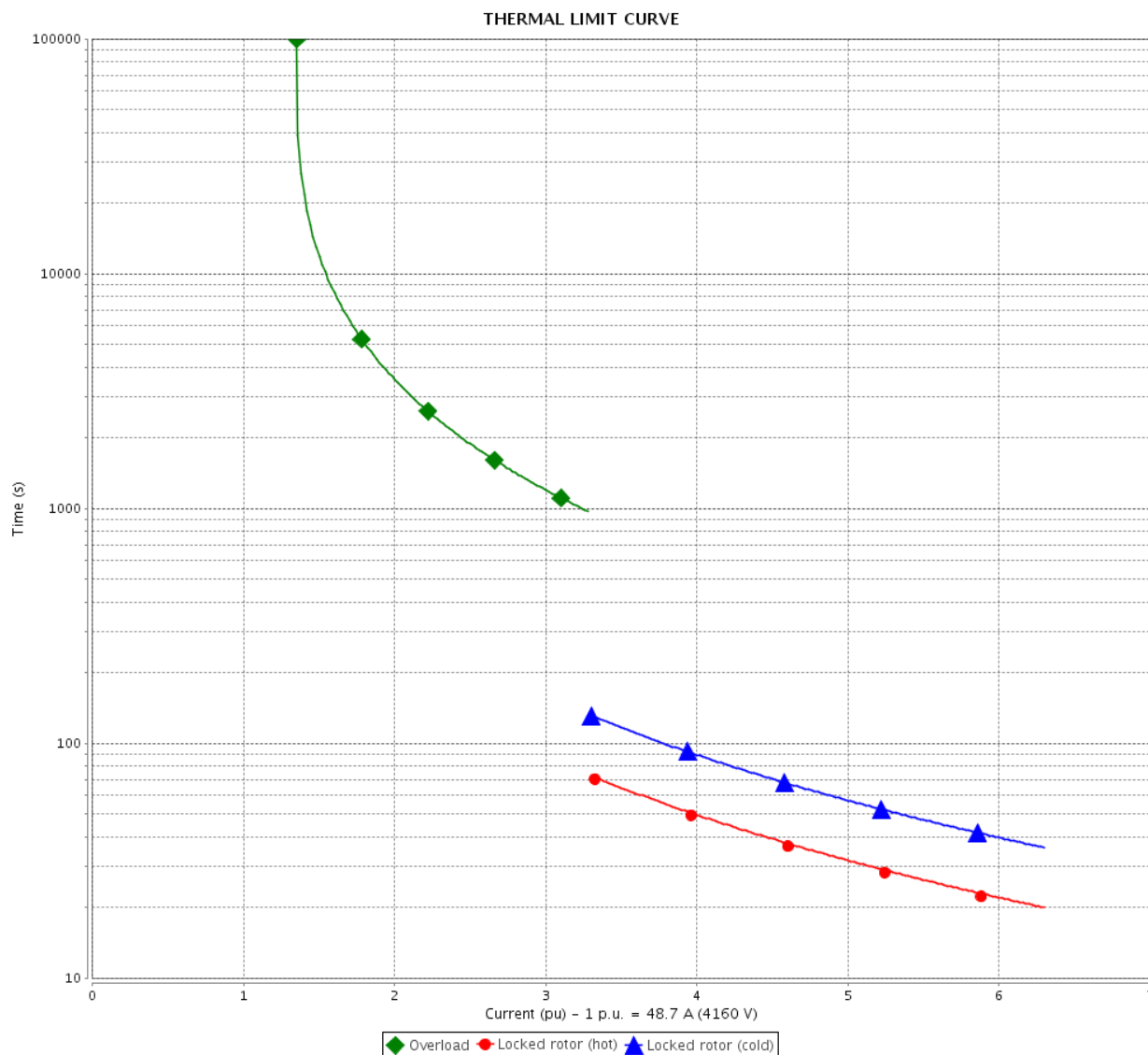
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Heating constant

Cooling constant

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# VFD OPERATION CURVE

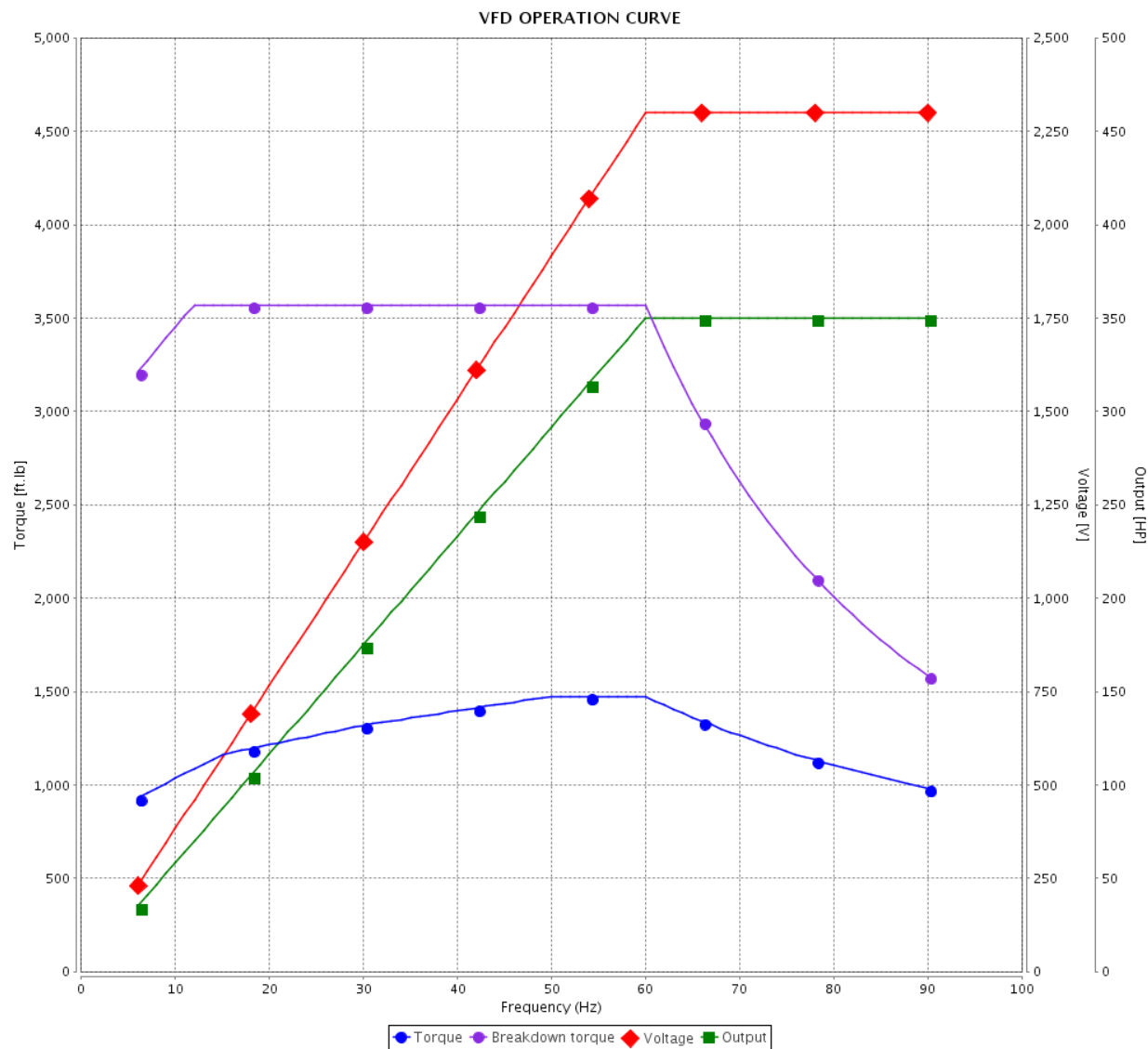
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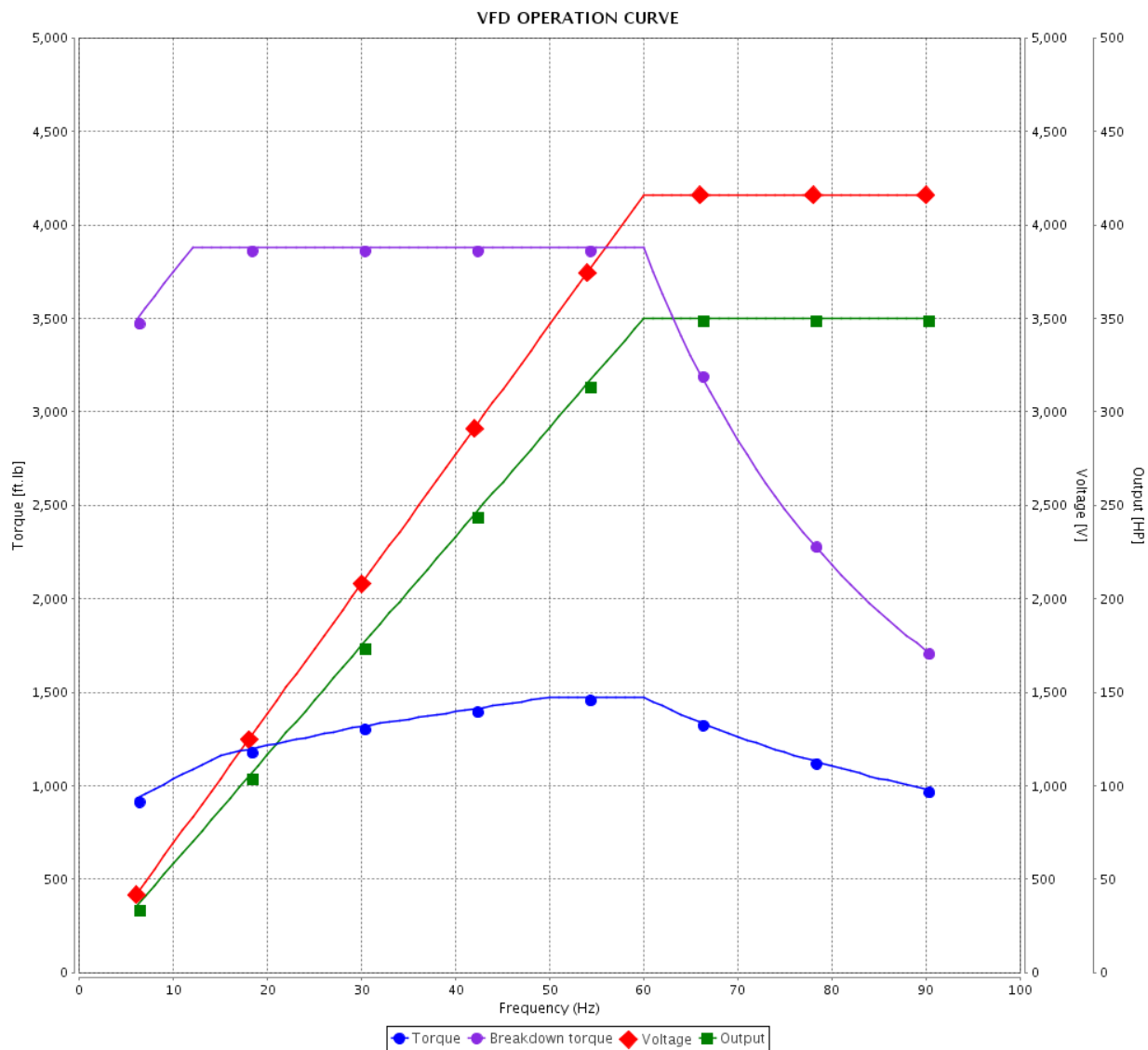
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1 2 3 4 5 6 7 8 9 10

EIXO/SHAFT

PADRÃO/STANDARD

OPCIONAL/OPTIONAL

ESPECIAL/SPECIAL

Dimensões em polegadas

Dimensions in inches

X

Ø17

Terminal box for accessories  
3xNPT 3/4"

Center Hole

DUNC 7/8"-9 WEG TBG-12

Grounding for leads 25-185mm<sup>2</sup>

CGz 36.118

11.120

11.120

1.575

38.585

Accessories terminal box detail

Space heaters terminal box detail

Scale 1:5

Temperature detector-02 per phase (PT100-03 leads)

130°C - Alarm

155°C - Switch Off

X2-1-1RT1

X2-2-1RT2

X2-3-1RT2

X2-4-2RT1

X2-5-2RT2

X2-6-2RT2

X2-7-3RT1

X2-8-3RT2

X2-9-3RT2

X2-10-4RT1

X2-11-4RT2

X2-12-4RT2

X2-13-5RT1

X2-14-5RT2

X2-15-5RT2

X2-16-6RT1

X2-17-6RT2

X2-18-6RT2

Bearing (PT100 - 3 Leads)

DE

X2-19-1RTb1

X2-20-1RTb2

X2-21-1RTb2

Bearing (PT100 - 3 Leads)

NDE

X2-22-2RTb1

X2-23-2RTb2

X2-24-2RTb2

110°C - Alarm

120°C - Switch Off

Grounding for leads 25-185mm<sup>2</sup>

View X

Section A-A

Stator terminal box  
1xNPT 3"

3xSPM Nipple

2xSPM Nipple

Grounding for leads 25-185mm<sup>2</sup>

CGx 0.311

CGy 0.538

WEG ELECTRIC CORPORATION - WEC

10003177469

000 | 03

350 HP

06 Poles

60Hz

2300/4160V

413621272

ELET/MEC

13299562


MADE IN BRAZIL



W50

MODEL 35012ET3X5009-W50MV



3 ~ 5009/10			350(260) HP(kW)			<div>2300 V</div> <div><div><div>T6</div><div>T1</div><div>L1</div></div><div>T4</div><div>T2</div><div>L2</div></div> <div><div>T5</div><div>T3</div><div>L3</div></div> <div>4160 V</div> <div><div>T6</div><div>T1</div><div>L1</div></div> <div>T4</div> <div>T2</div> <div>L2</div> <div><div>T5</div><div>T3</div><div>L3</div></div>		
2300/4160		V	SF 1.00		60	Hz		
87.0/48.7		A	INS. CL. F		$\Delta$ T 80	K		
RPM 1184/1185		NEMA NOM. EFF.			95.0	%		
DUTY CONT.		P.F.0.79/0.78		IP55				
CODE H	ENCL. TEFC		AMB		40°C	<div><div></div><div>→6320-C3(51g)</div><div>→6316-C3(34g)</div></div> <div>MOBIL POLYREX EM</div> <div>4500 h</div>		
DES	ALT 1000 m.a.s.l.		WEIGHT		4415	Lbs		