

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W50 Three-Phase

Product code : 13299660
Catalog # : 50012ET3X5809-W50MV

Frame : 5809/10
Output : 500 HP (370 kW)
Poles : 6
Frequency : 60 Hz
Rated voltage : 2300 V
Rated current : 124 A
L. R. Amperes : 744 A
LRC : 6.0x(Code G)
No load current : 50.2 A
Rated speed : 1191 rpm
Slip : 0.75 %
Rated torque : 2200 ft.lb
Locked rotor torque : 150 %
Breakdown torque : 210 %
Insulation class : F
Service factor : 1.00

Locked rotor time : 27s (cold) 15s (hot)
Temperature rise : 80 K
Duty cycle : Cont.(S1)
Ambient temperature : -20°C to +40°C
Altitude : 1000 m.a.s.l.
Protection degree : IP55
Cooling method : IC411 - TEFC
Mounting : F-1
Rotation¹ : Both (CW and CCW)
Noise level² : 77.0 dB(A)
Starting method : Direct On Line

Output	25%	50%	75%	100%
Efficiency (%)	93.6	94.1	94.5	95.0
Power Factor	0.40	0.63	0.73	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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Date	10/04/2020			

TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



Customer :

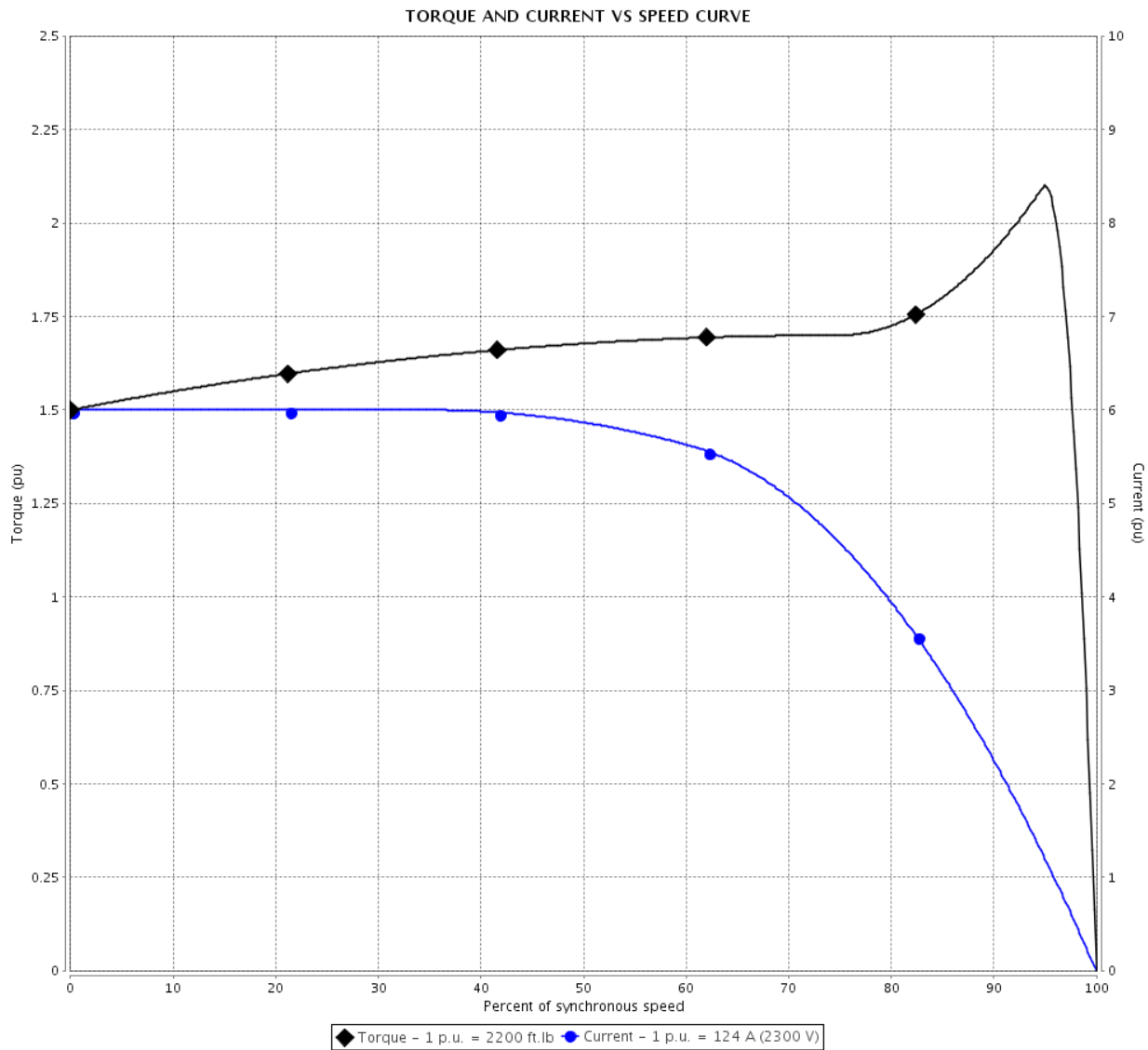
Product line : W50 Three-Phase

Product code :

13299660

Catalog # :

50012ET3X5809-W50MV



Performance : 2300 V 60 Hz 6P

Rated current	: 124 A	Moment of inertia (J)	
LRC	: 6.0	Duty cycle	: Cont.(S1)
Rated torque	: 2200 ft.lb	Insulation class	: F
Locked rotor torque	: 150 %	Service factor	: 1.00
Breakdown torque	: 210 %	Temperature rise	: 80 K
Rated speed	: 1191 rpm		

Locked rotor time : 27s (cold) 15s (hot)

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LOAD PERFORMANCE CURVE

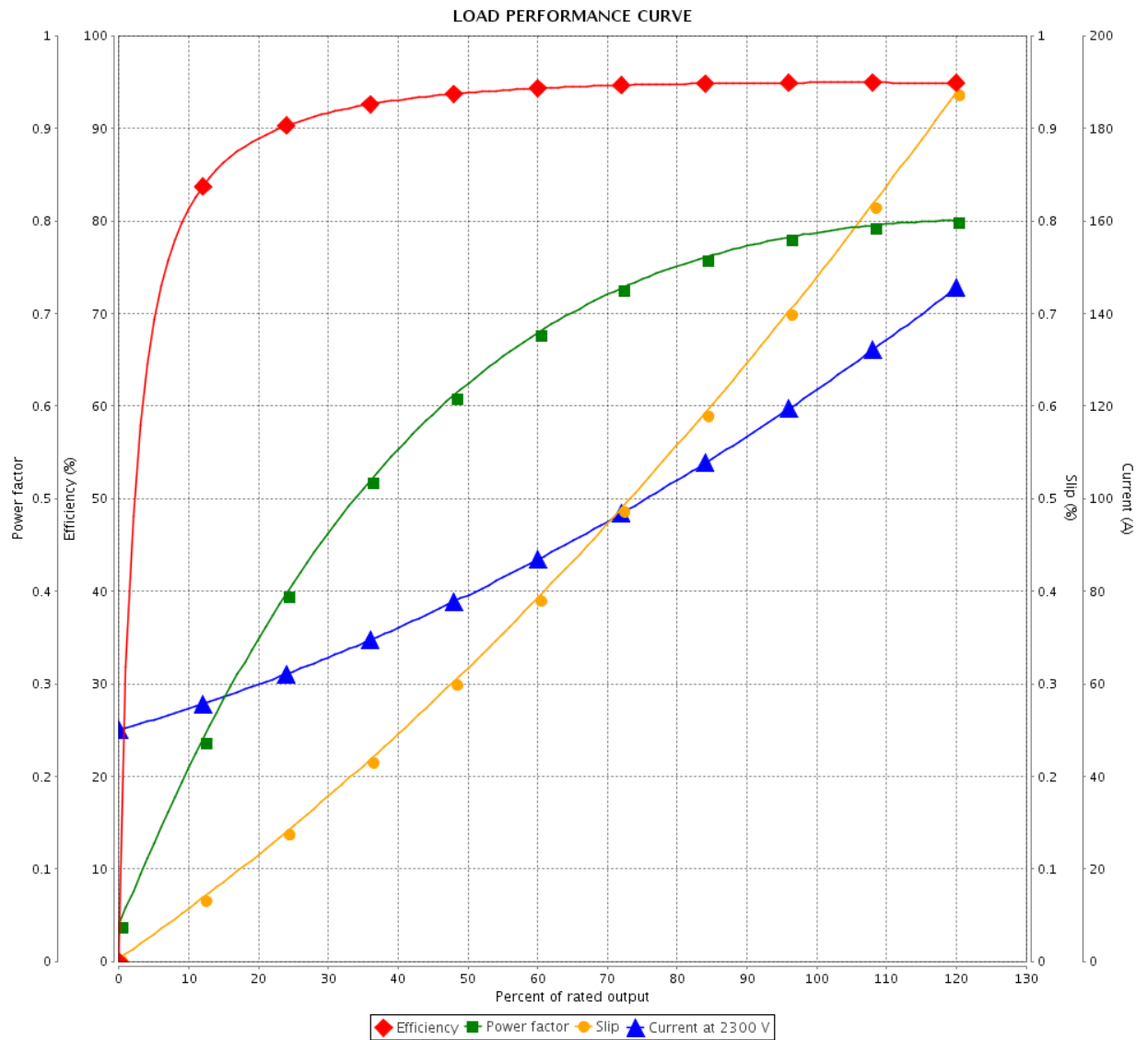
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Moment of inertia (J)
Duty cycle : Cont.(S1)
Insulation class : F
Service factor : 1.00
Temperature rise : 80 K

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THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



Customer :

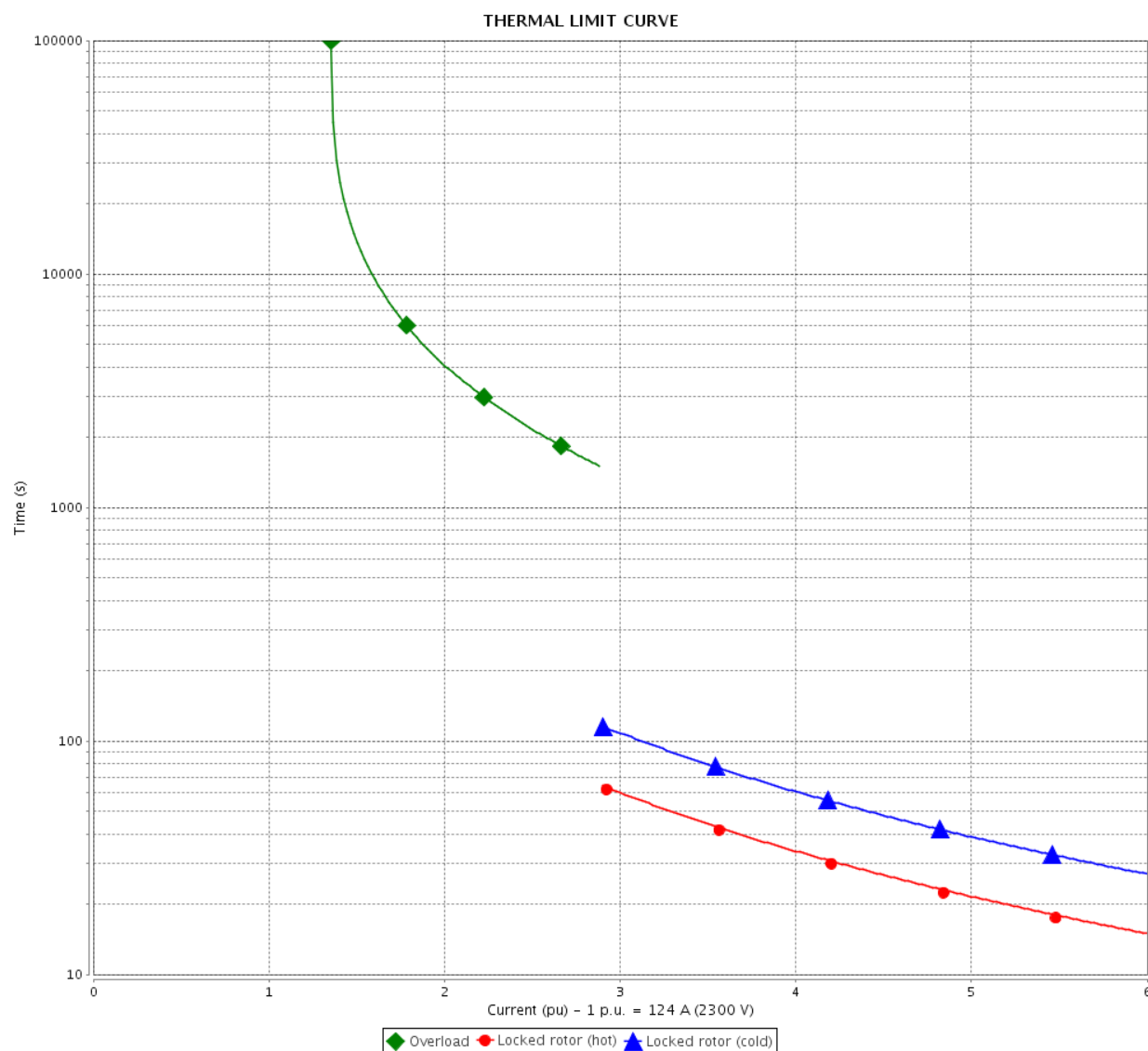
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Catalog # :

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 LRC : 6.0
 Rated torque : 2200 ft.lb
 Locked rotor torque : 150 %
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 Rated speed : 1191 rpm

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

Heating constant

Cooling constant

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VFD OPERATION CURVE

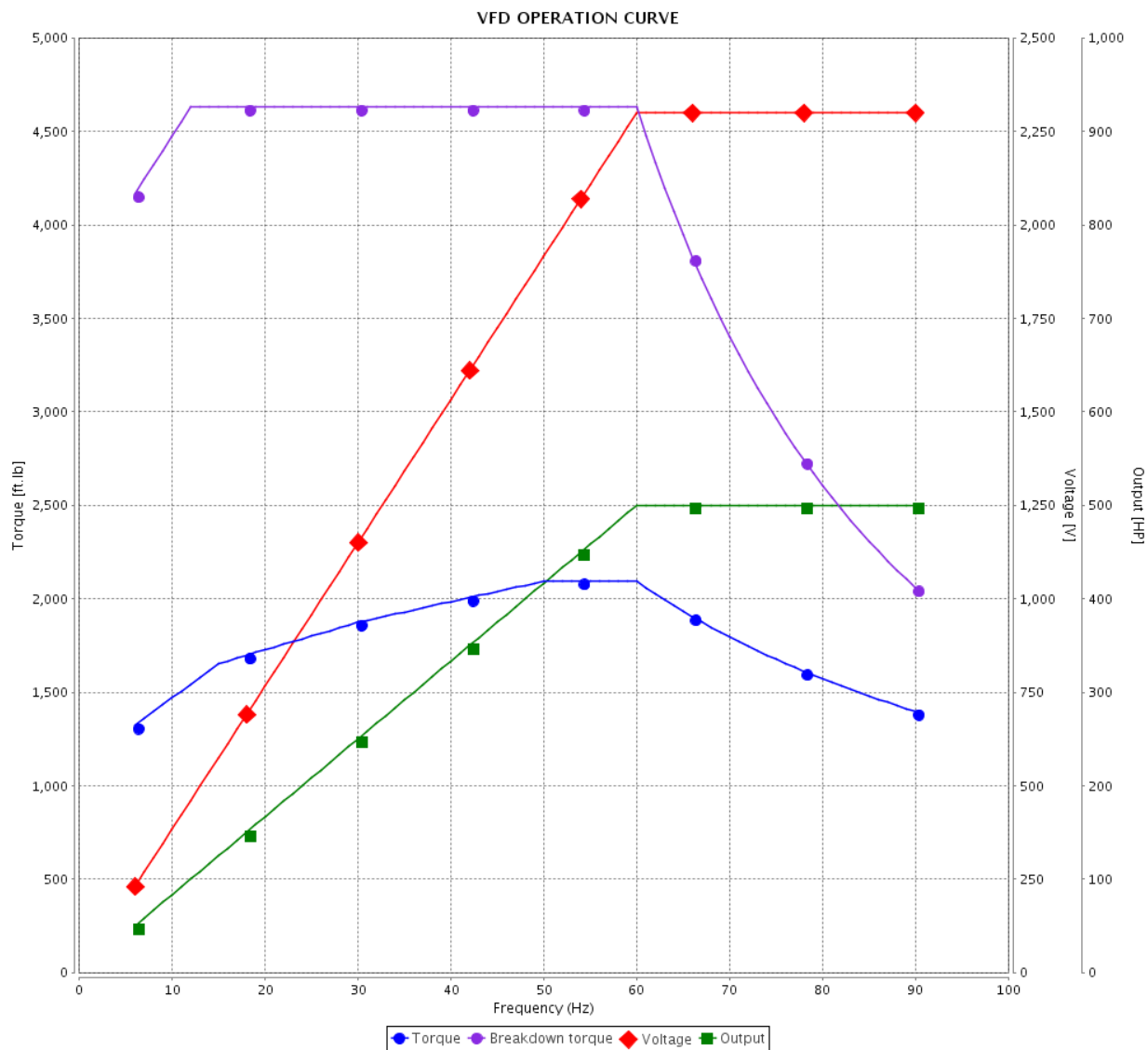
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Duty cycle : Cont.(S1)
Insulation class : F
Service factor : 1.00
Temperature rise : 80 K

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13299660

MADE IN BRAZIL



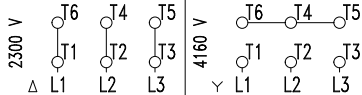
W50



MODEL 50012ET3X5809-W50MV



3 ~ 5809/10			500(370) HP(kW)		
2300 / 4160		V	SF 1.00	60 Hz	
124 / 70.2		A	INS. CL. F	ΔT 80	K
RPM 1191		NEMA NOM. EFF. 95.0		%	
DUTY CONT.		P.F. 0.79 / 0.77		IP55	
CODE H	ENCL. TEFC		AMB	40°C	
DES	ALT 1000 m.a.s.l.		WEIGHT	6009 Lbs	



→ 6322-C3(60g)

→ 6319-C3(45g)

MOBIL POLYREX EM

4500 h