

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 High Efficiency Three-Phase Product code : 11815977

Frame	: 143/5TC	Locked rotor time	: 28s (cold) 16s (hot)
Output	: 2 HP (1.5 kW)	Temperature rise	: 80 K
Poles	: 2	Duty cycle	: Cont.(S1)
Frequency	: 60 Hz	Ambient temperature	: -20°C to +40°C
Rated voltage	: 575 V	Altitude	: 1000 m.a.s.l.
Rated current	: 2.11 A	Protection degree	: IP55
L. R. Amperes	: 15.6 A	Cooling method	: IC411 - TEFC
LRC	: 7.4x(Code J)	Mounting	: F-1
No load current	: 0.840 A	Rotation ¹	: Both (CW and CCW)
Rated speed	: 3450 rpm	Noise level ²	: 68.0 dB(A)
Slip	: 4.17 %	Starting method	: Direct On Line
Rated torque	: 3.04 ft.lb	Approx. weight ³	: 41.9 lb
Locked rotor torque	: 250 %		
Breakdown torque	: 300 %		
Insulation class	: F		
Service factor	: 1.25		
Moment of inertia (J)	: 0.0427 sq.ft.lb		
Design	: B		

Output	50%	75%	100%	Foundation loads	
Efficiency (%)	81.5	84.0	84.0	Max. traction	: 53 lb
Power Factor	0.69	0.80	0.85	Max. compression	: 105 lb

Losses at normative operating points (speed;torque), in percentage of rated output power

P1 (0,9;1,0)	P2 (0,5;1,0)	P3 (0,25;1,0)	P4 (0,9;0,5)	P5 (0,5;0,5)	P6 (0,5;0,25)	P7 (0,25;0,25)
18.3	15.1	13.4	9.1	5.7	3.7	2.4

	Drive end	Non drive end
Bearing type	: 6205 ZZ	6204 ZZ
Sealing	: V'Ring	V'Ring
Lubrication interval	: -	-
Lubricant amount	: -	-
Lubricant type	Mobil Polyrex EM	

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).
- (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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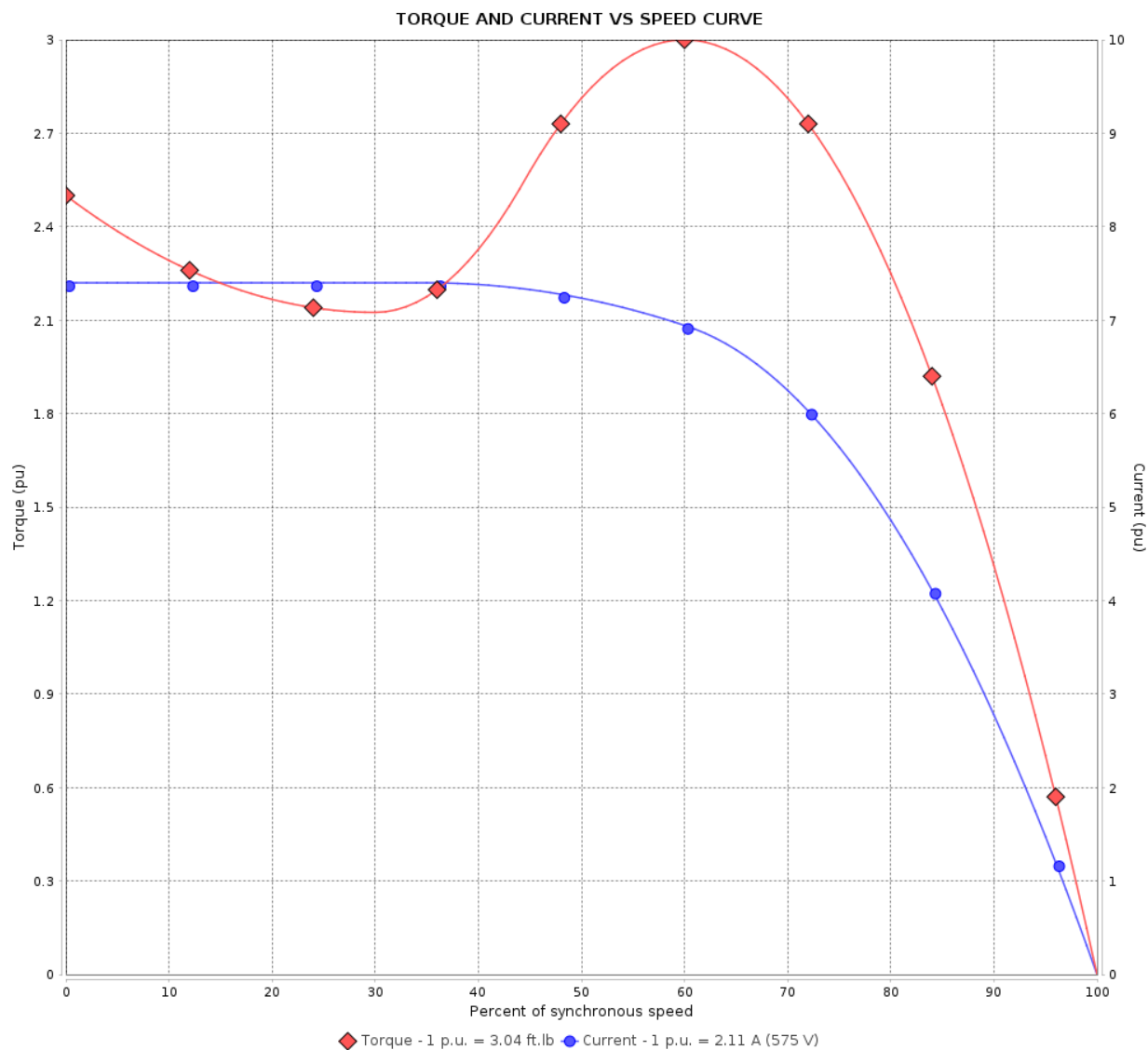
TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



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Product line : W22 High Efficiency Three-Phase Product code : 11815977



Performance : 575 V 60 Hz 2P

Rated current	: 2.11 A	Moment of inertia (J)	: 0.0427 sq.ft.lb
LRC	: 7.4	Duty cycle	: Cont.(S1)
Rated torque	: 3.04 ft.lb	Insulation class	: F
Locked rotor torque	: 250 %	Service factor	: 1.25
Breakdown torque	: 300 %	Temperature rise	: 80 K
Rated speed	: 3450 rpm	Design	: B

Locked rotor time : 28s (cold) 16s (hot)

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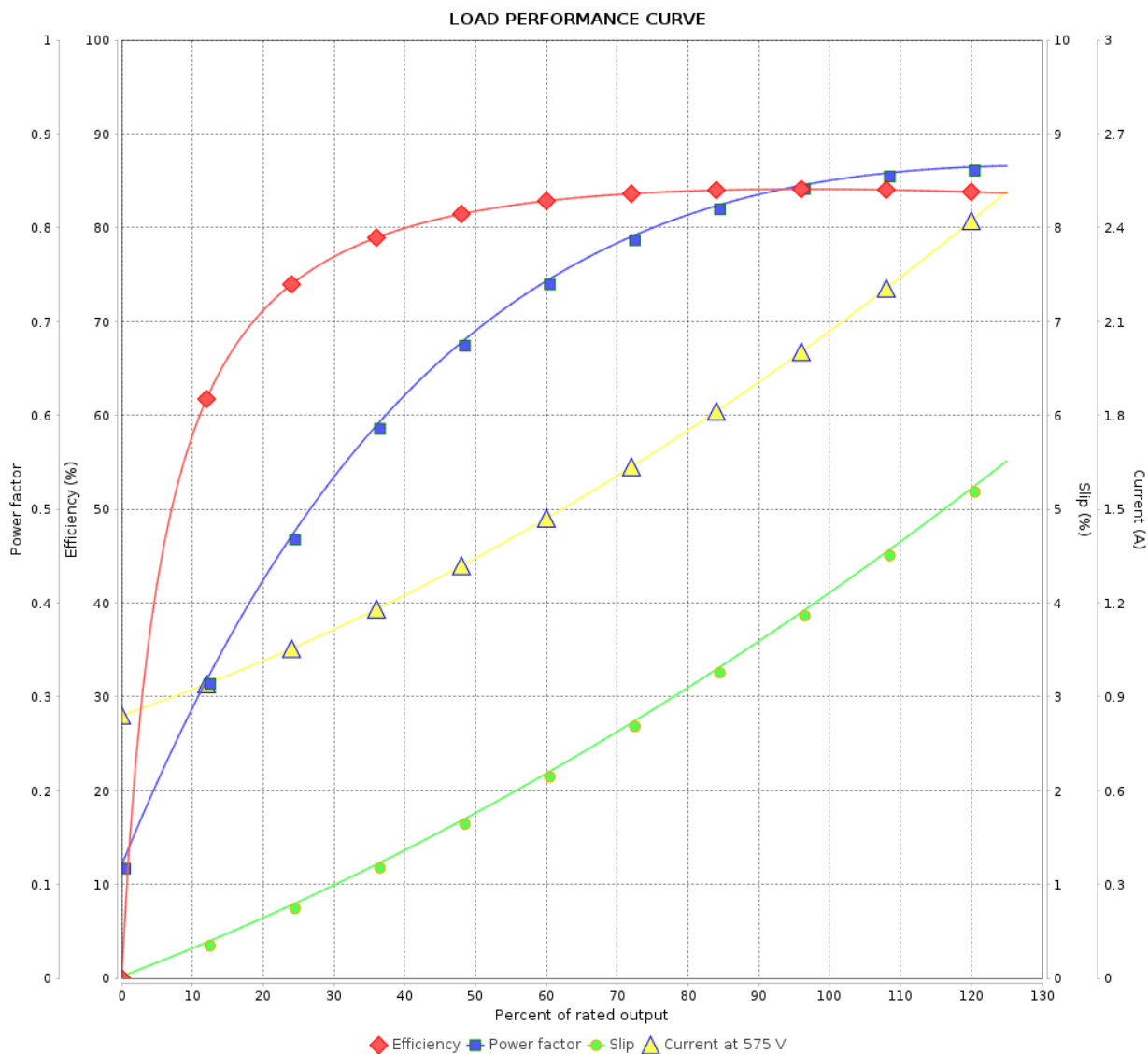
LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage



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Rated torque : 3.04 ft.lb
Locked rotor torque : 250 %
Breakdown torque : 300 %
Rated speed : 3450 rpm

Moment of inertia (J) : 0.0427 sq.ft.lb
Duty cycle : Cont.(S1)
Insulation class : F
Service factor : 1.25
Temperature rise : 80 K
Design : B

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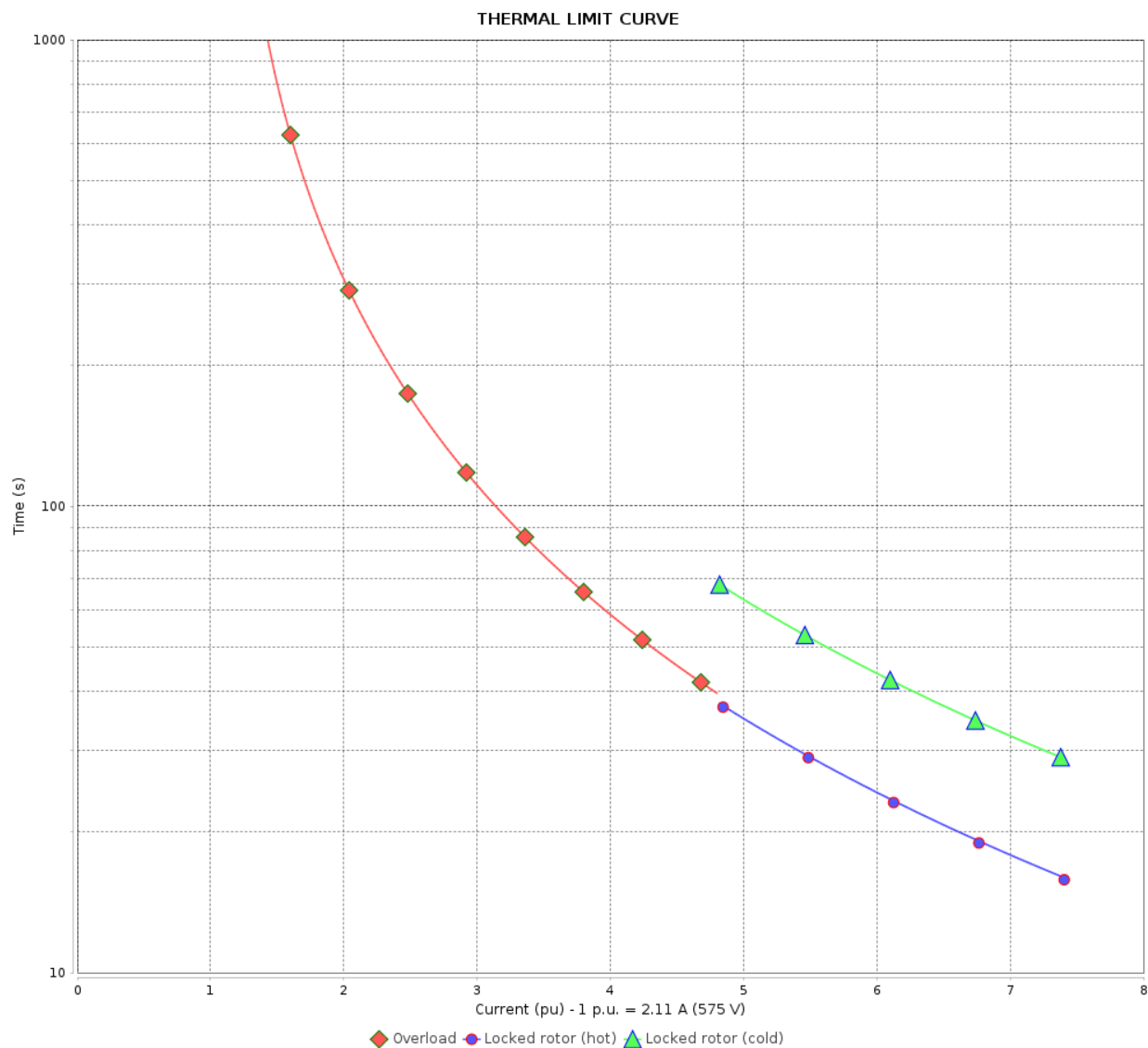
THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



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LRC	: 7.4	Duty cycle	: Cont.(S1)
Rated torque	: 3.04 ft.lb	Insulation class	: F
Locked rotor torque	: 250 %	Service factor	: 1.25
Breakdown torque	: 300 %	Temperature rise	: 80 K
Rated speed	: 3450 rpm	Design	: B

Heating constant

Cooling constant

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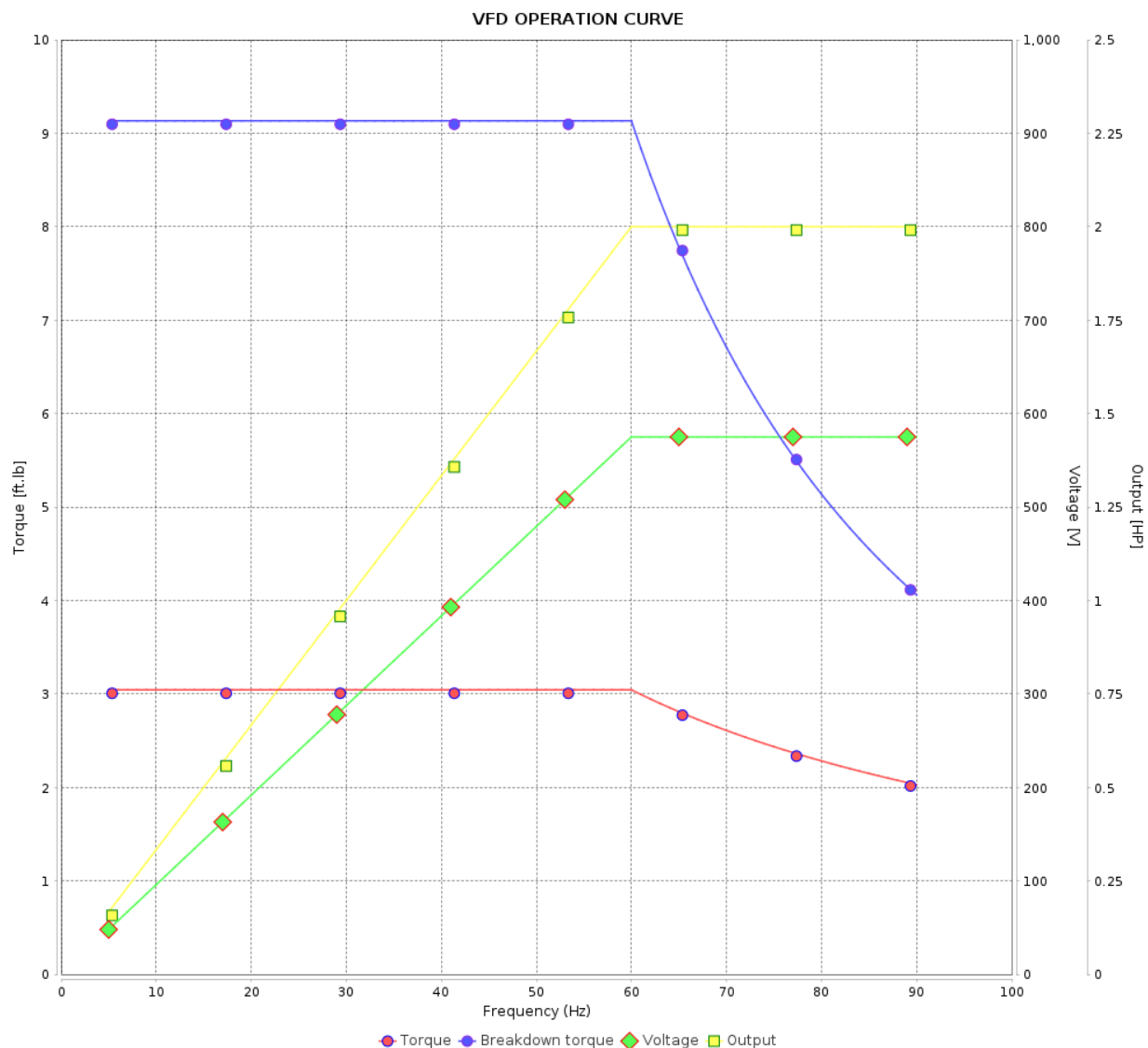
VFD OPERATION CURVE

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LRC : 7.4
Rated torque : 3.04 ft.lb
Locked rotor torque : 250 %
Breakdown torque : 300 %
Rated speed : 3450 rpm

Moment of inertia (J) : 0.0427 sq.ft.lb
Duty cycle : Cont.(S1)
Insulation class : F
Service factor : 1.25
Temperature rise : 80 K
Design : B

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