

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 NEMA Premium Efficiency Three-Phase Product code : 14188920
Catalog # : DT020504NPW22

Frame	: 254/6TD	Locked rotor time	: 32s (cold) 18s (hot)
Output	: 20 HP (15 kW)	Temperature rise	: 80 K
Poles	: 4	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	: 19.3 A	Protection degree	: IP55
L. R. Amperes	: 125 A	Cooling method	: IC411 - TEFC
LRC	: 6.5x(Code G)	Mounting	: F-1
No load current	: 7.68 A	Rotation ¹	: Both (CW and CCW)
Rated speed	: 1770 rpm	Noise level ²	: 64.0 dB(A)
Slip	: 1.67 %	Starting method	: Direct On Line
Rated torque	: 59.3 ft.lb	Approx. weight ³	: 291 lb
Locked rotor torque	: 240 %		
Breakdown torque	: 260 %		
Insulation class	: F		
Service factor	: 1.25		
Moment of inertia (J)	: 3.10 sq.ft.lb		
Design	: B		

Output	50%	75%	100%	Foundation loads	
Efficiency (%)	91.7	92.4	93.0	Max. traction	: 574 lb
Power Factor	0.68	0.79	0.84	Max. compression	: 905 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)
7.5	6.5	6.0	3.5	2.5	1.6	1.2

		<u>Drive end</u>	<u>Non drive end</u>
Bearing type	:	6309 C3	6209 C3
Sealing	:	V'Ring	V'Ring
Lubrication interval	:	20000 h	20000 h
Lubricant amount	:	13 g	9 g
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

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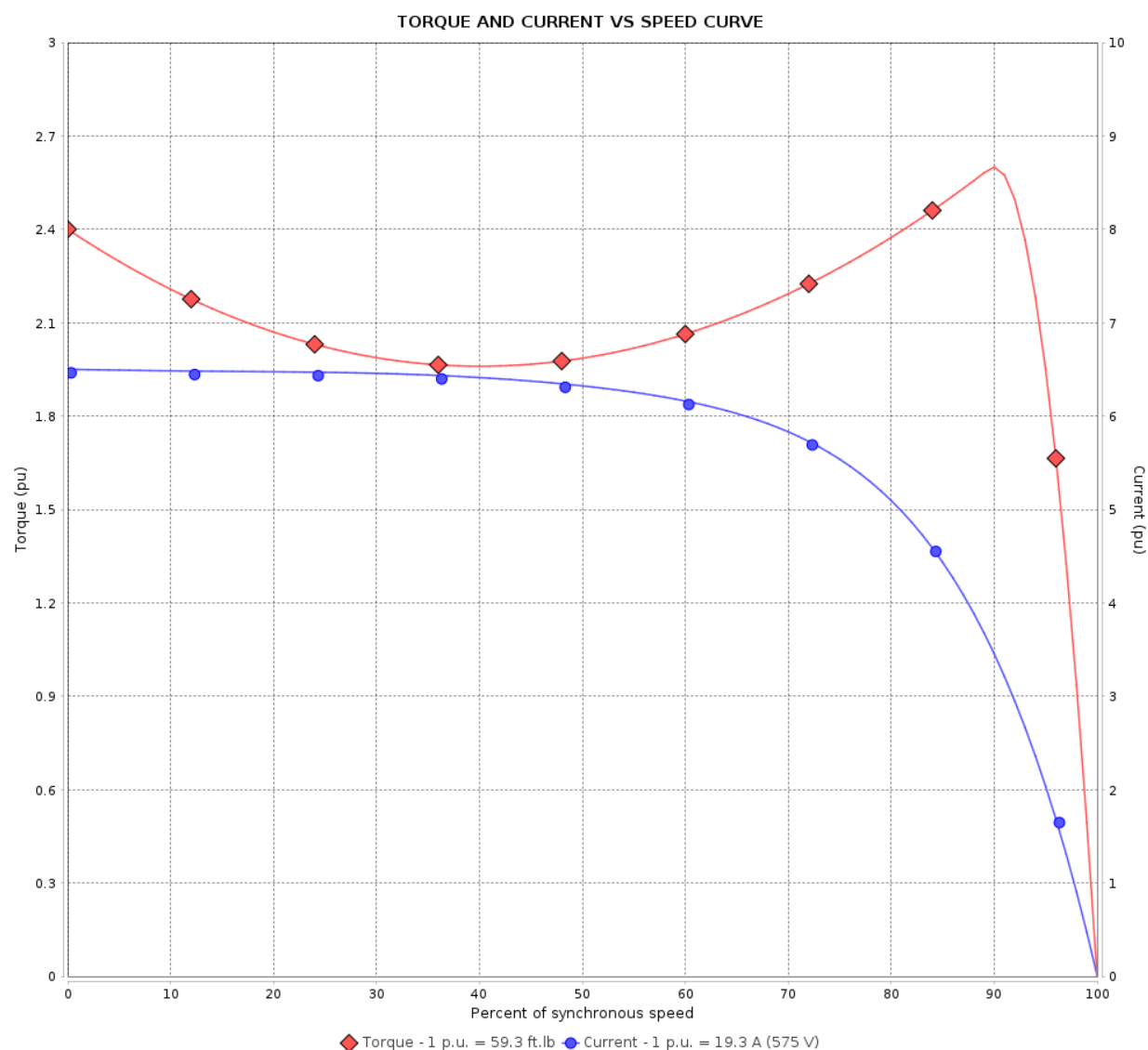


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Locked rotor torque : 240 %
Breakdown torque : 260 %
Rated speed : 1770 rpm

Moment of inertia (J) : 3.10 sq.ft.lb
Duty cycle : Cont.(S1)
Insulation class : F
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Temperature rise : 80 K
Design : B

Locked rotor time : 32s (cold) 18s (hot)

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LOAD PERFORMANCE CURVE

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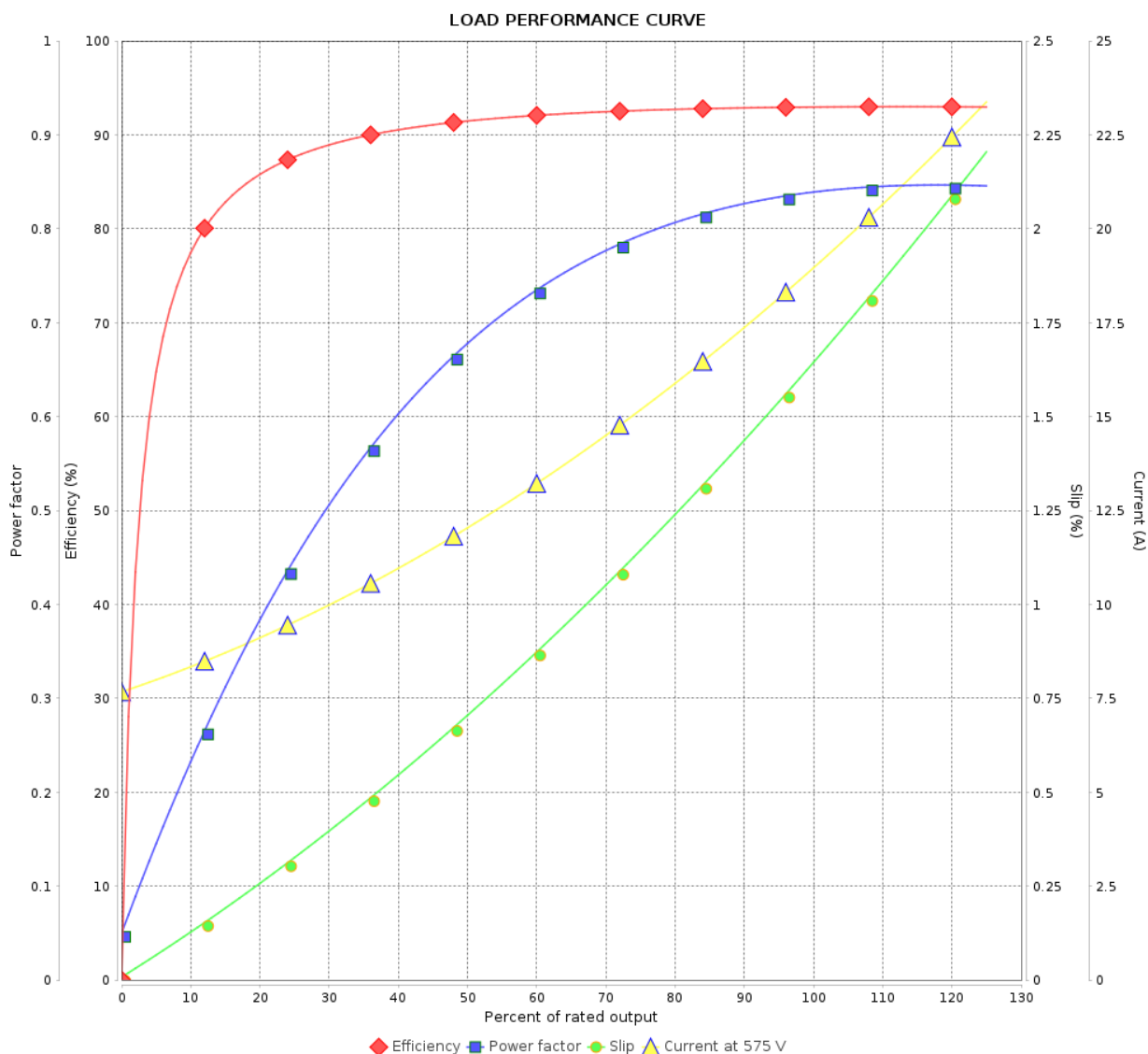


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THERMAL LIMIT CURVE

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Locked rotor torque	: 240 %	Service factor	: 1.25
Breakdown torque	: 260 %	Temperature rise	: 80 K
Rated speed	: 1770 rpm	Design	: B

Heating constant

Cooling constant

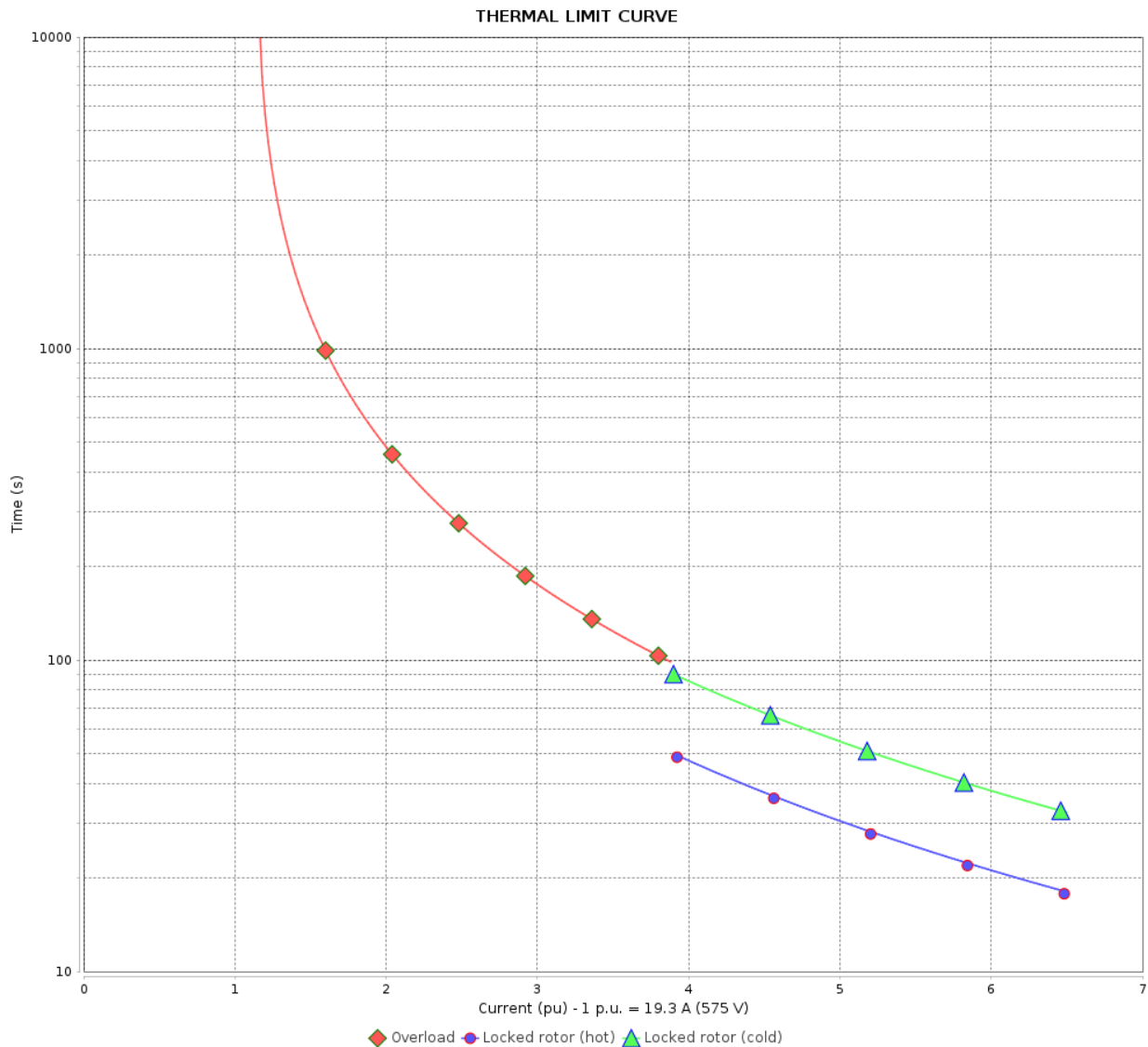
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THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

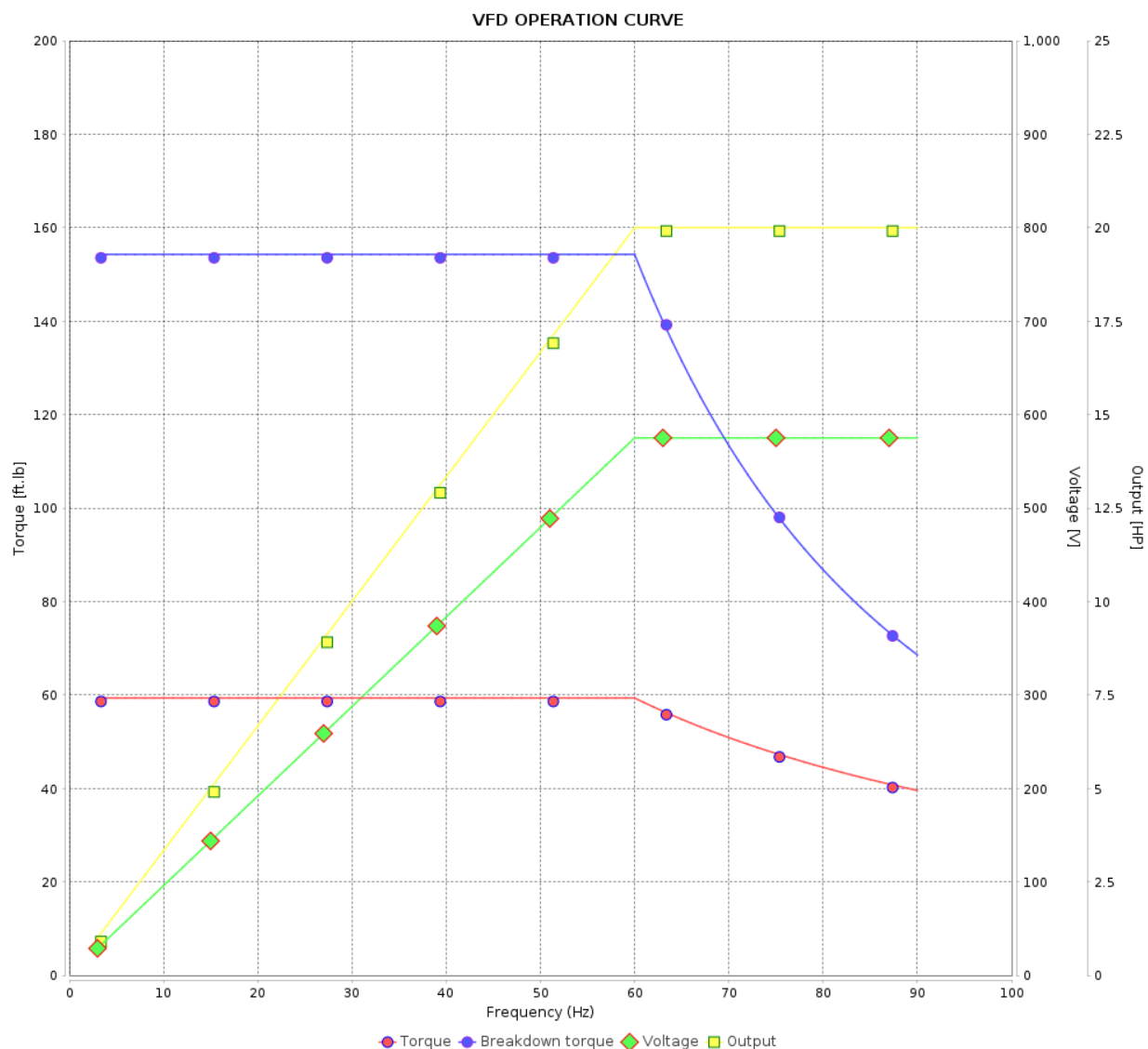


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