

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 NEMA Premium Efficiency Three-Phase Product code : 14161576
Catalog # : DT020402NPW22

Frame	: 254/6TD	Locked rotor time	: 25s (cold) 14s (hot)
Output	: 20 HP (15 kW)	Temperature rise	: 80 K
Poles	: 2	Duty cycle	: Cont.(S1)
Frequency	: 60 Hz	Ambient temperature	: -20°C to +40°C
Rated voltage	: 230/460 V	Altitude	: 1000 m.a.s.l.
Rated current	: 46.5/23.3 A	Protection degree	: IP55
L. R. Amperes	: 284/142 A	Cooling method	: IC411 - TEFC
LRC	: 6.1x(Code G)	Mounting	: F-1
No load current	: 11.2/5.60 A	Rotation ¹	: Both (CW and CCW)
Rated speed	: 3530 rpm	Noise level ²	: 72.0 dB(A)
Slip	: 1.94 %	Starting method	: Direct On Line
Rated torque	: 29.8 ft.lb	Approx. weight ³	: 269 lb
Locked rotor torque	: 200 %		
Breakdown torque	: 240 %		
Insulation class	: F		
Service factor	: 1.25		
Moment of inertia (J)	: 1.54 sq.ft.lb		
Design	: B		

Output	25%	50%	75%	100%	Foundation loads	
Efficiency (%)	0.000	90.7	91.0	91.0	Max. traction	: 239 lb
Power Factor	0.00	0.79	0.86	0.89	Max. compression	: 556 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)
9.5	7.9	7.3	4.4	2.7	1.5	1.0

	Drive end	Non drive end
Bearing type	: 6309 C3	: 6209 C3
Sealing	: V'Ring	: V'Ring
Lubrication interval	: 19000 h	: 20000 h
Lubricant amount	: 13 g	: 9 g
Lubricant type	: Mobil Polyrex EM	

Notes

USABLE @208V 51.3A SF 1.15 SFA 59.0A

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

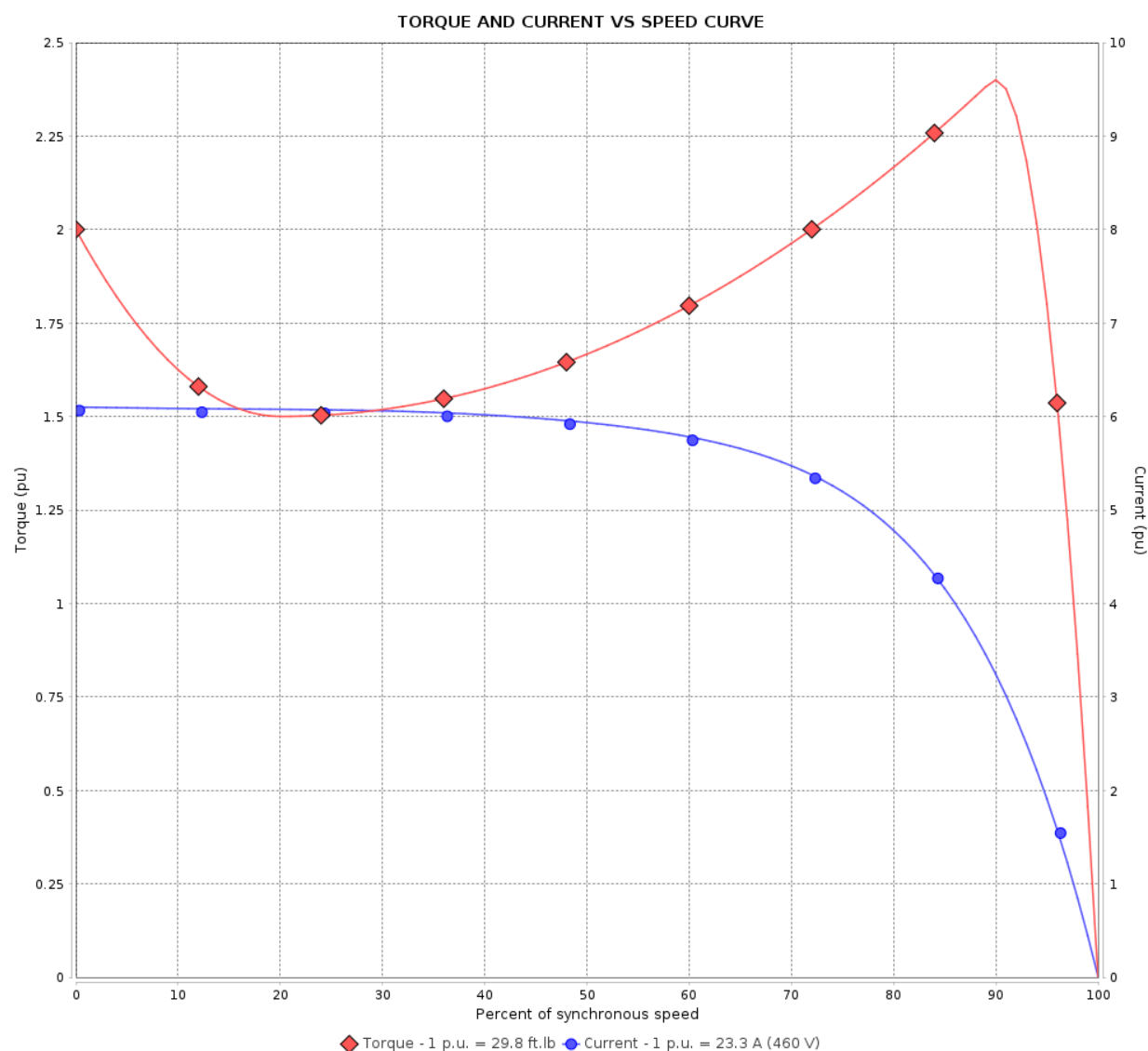


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LOAD PERFORMANCE CURVE

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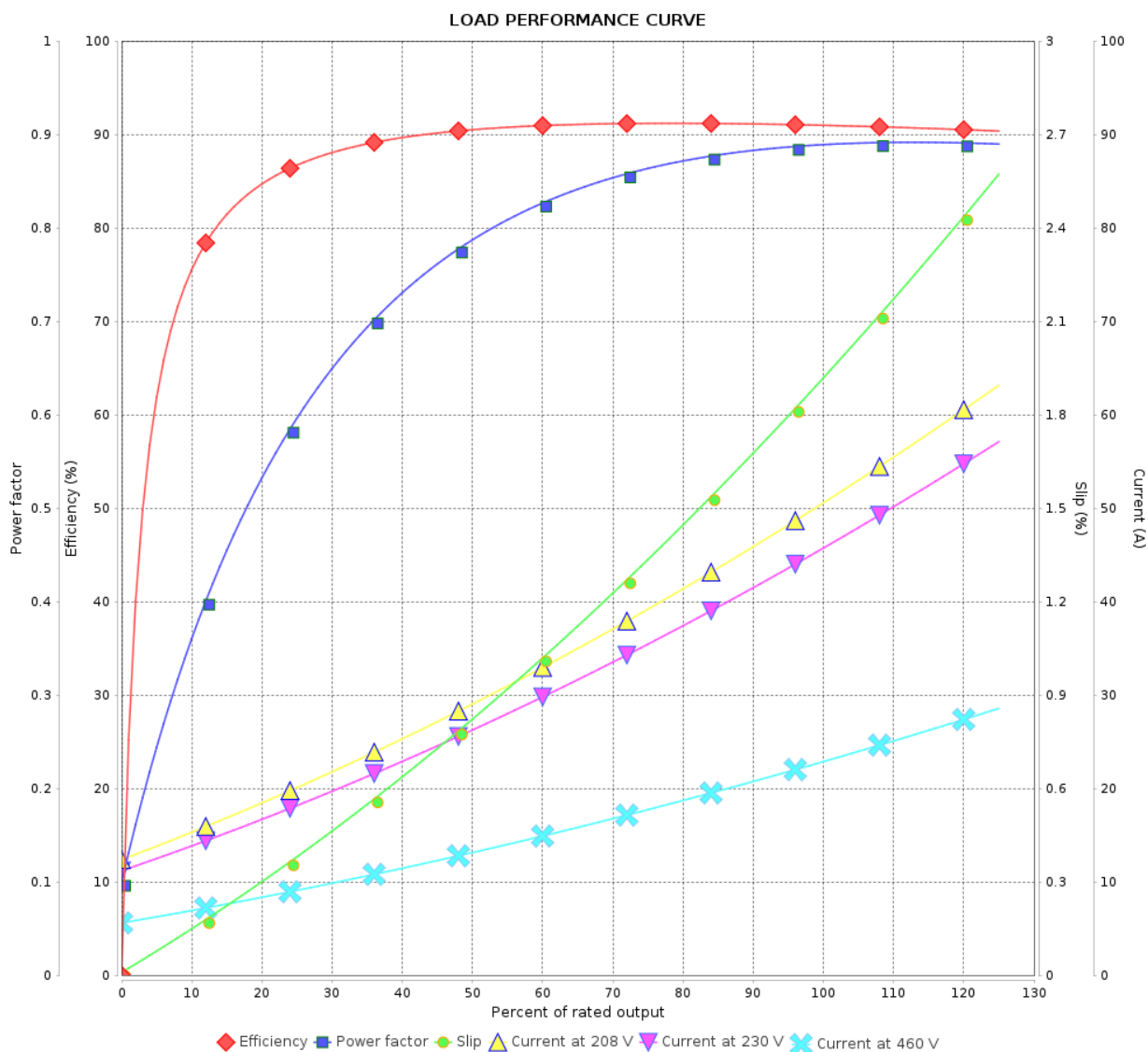


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THERMAL LIMIT CURVE

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Heating constant

Cooling constant

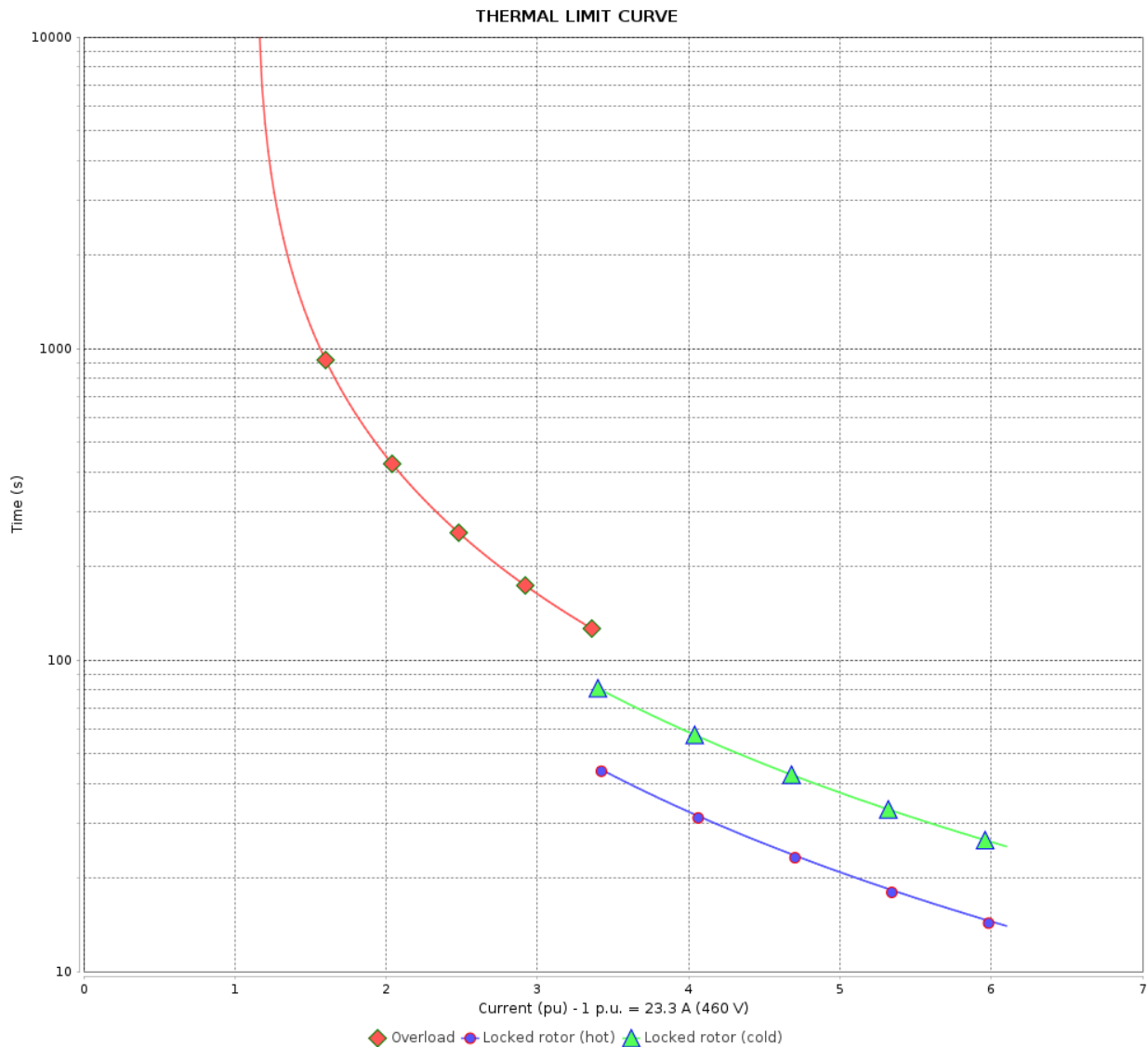
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THERMAL LIMIT CURVE

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VFD OPERATION CURVE

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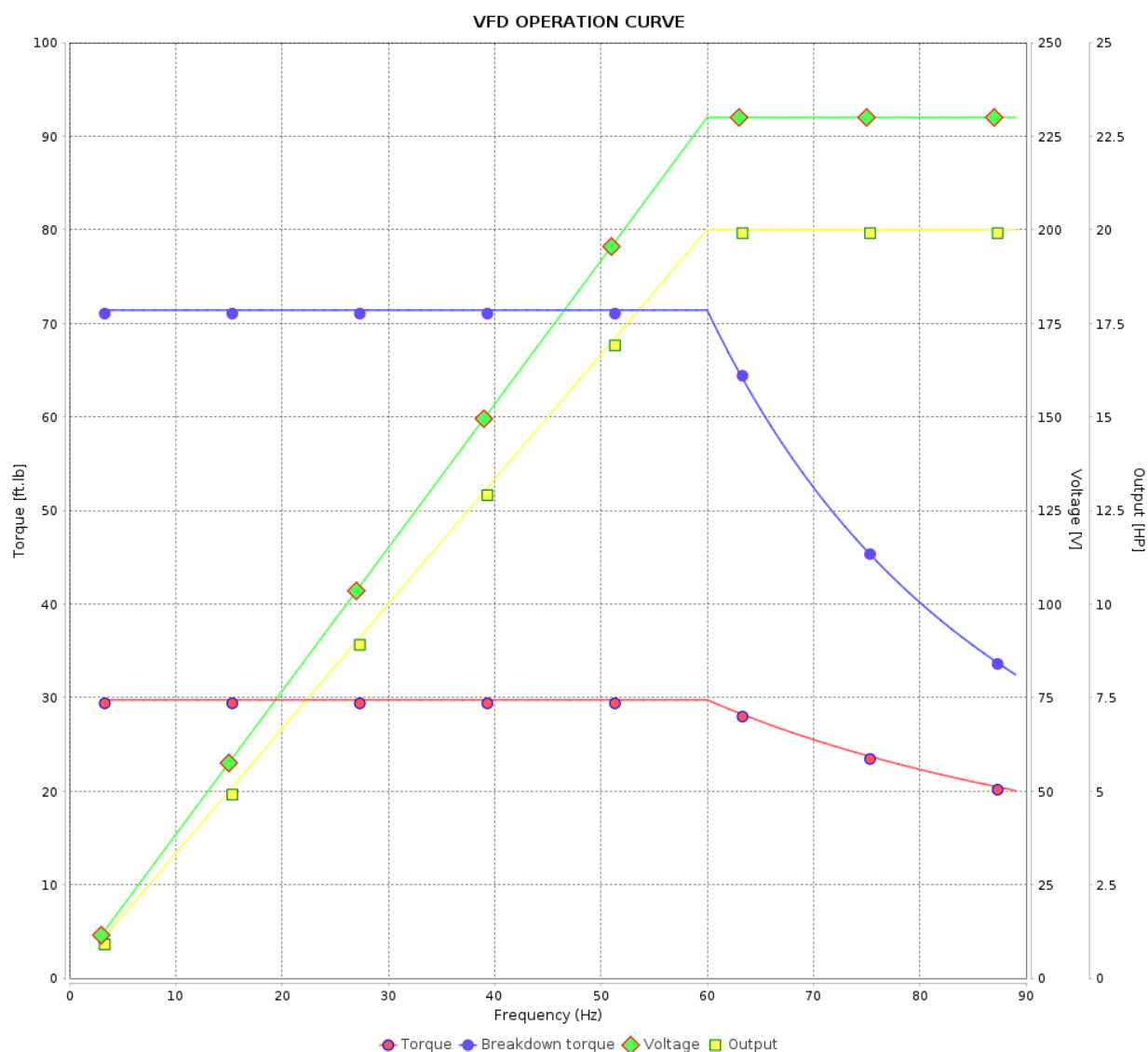


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