

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



Customer : QUANTUM CONTROLS

Product line : W22 - IE3 Premium Efficiency Multivoltage Product code : 15832313

Frame	: 90L	Cooling method	: IC411 - TEFC
Insulation class	: F	Mounting	: B3T
Duty cycle	: S1	Rotation ¹	: Both
Ambient temperature	: -20 °C to +40 °C	Starting method	: Direct On Line
Altitude	: 1000 m.a.s.l	Approx. weight ³	: 24.5 kg
Protection degree	: IP55	Moment of inertia (J)	: 0.0026 kgm ²
Design	: N		

Output	2.2 kW	2.2 kW	2.2 kW
Poles	2	2	2
Frequency	50 Hz	50 Hz	50 Hz
Rated voltage	220/380 V	230/400 V	240/415 V
Rated current	7.81/4.52 A	7.70/4.43 A	7.56/4.37 A
L. R. Amperes	54.7/31.6 A	57.8/33.2 A	60.5/35.0 A
LRC	7.0	7.5	8.0
No load current	3.11/1.80 A	3.65/2.10 A	4.15/2.40 A
Rated speed	2850 rpm	2870 rpm	2880 rpm
Slip	5.00 %	4.33 %	4.00 %
Rated torque	7.38 Nm	7.32 Nm	7.30 Nm
Locked rotor torque	300 %	340 %	380 %
Pull up torque	255 %	285 %	320 %
Breakdown torque	300 %	340 %	380 %
Service factor	1.00	1.00	1.00
Noise level ²	62.0 dB(A)	62.0 dB(A)	62.0 dB(A)
Locked rotor time (hot)	12 s	12 s	12 s
Locked rotor time (cold)	22 s	22 s	22 s
Efficiency (%)	50%	85.0	85.3
	75%	85.5	86.0
	100%	85.9	86.5
Power Factor	50%	0.70	0.60
	75%	0.81	0.73
	100%	0.86	0.81

Bearing type	Drive end	Non drive end	Foundation loads	
	6205-ZZ	6204-ZZ		Max. traction
Lubrication interval	-	-	Max. compression	: 912 N
Lubricant amount	-	-	Load type	: -
Lubricant type	MOBIL POLYREX EM		Load torque	: -
			Load inertia (J=GD ² /4)	: -

Notes
See notes on page 2.

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 be changed 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 IEC 60034-1.

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Performed by	dang	1230918853		
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Thermal protection

ID	Application	Type	Quantity	Sensing Temperature
1	Winding	Thermistor - 2 wires	1 x Phase	155°C

Space heater information

Voltage: 110-127 V

Output: 9.2-12 W

Notes

Standards	Specification	: IEC 60034-1	Vibration	: IEC 60034-14
	Test	: IEC 60034-2	Tolerance	: IEC 60034-1
	Noise	: IEC 60034-9		

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THERMAL LIMIT CURVE

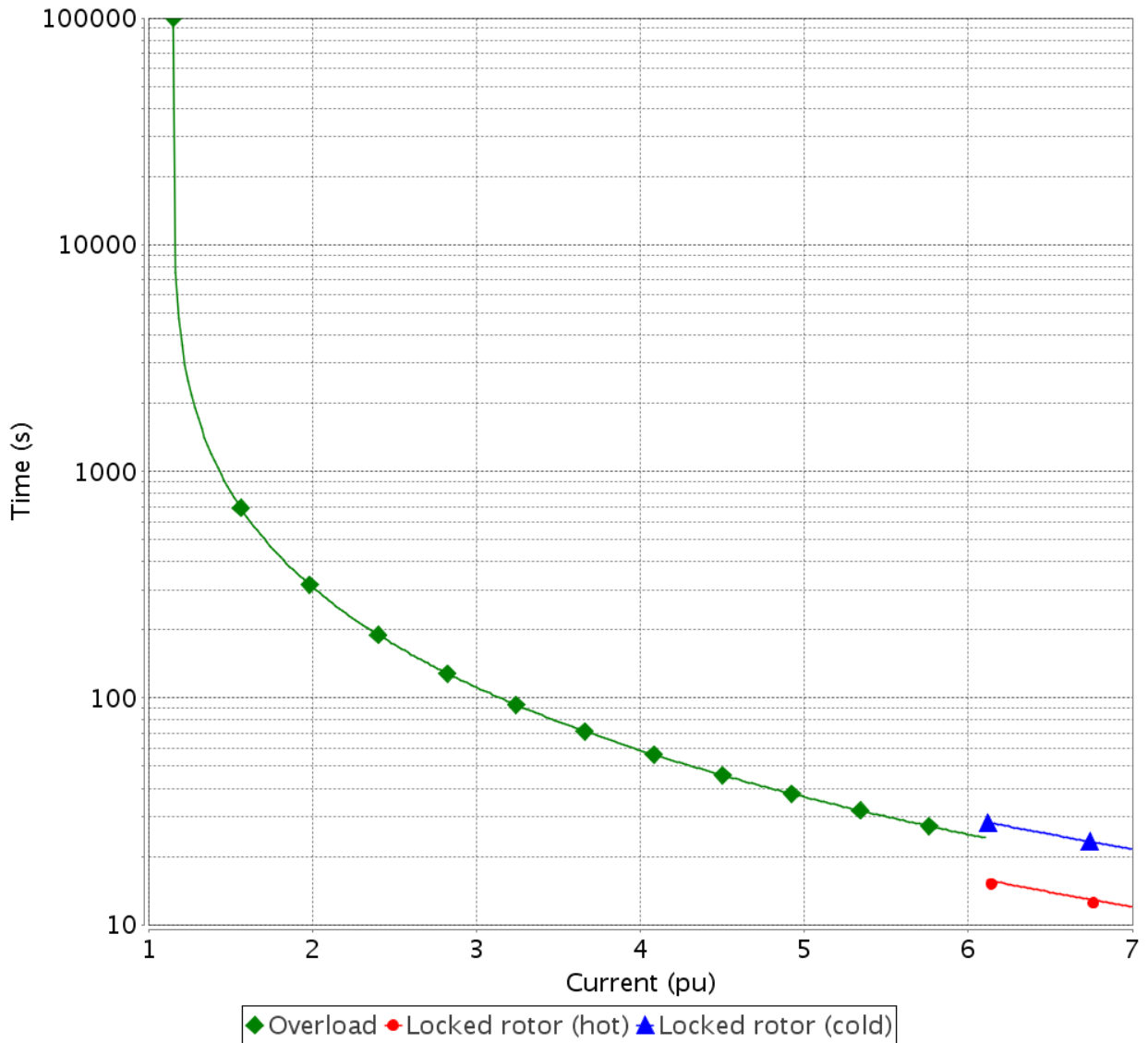
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Performance : 2.2 kW 220/380 V 50 Hz 2P 90L

Rated current : 7.81/4.52 A

Moment of inertia (J) : 0.0026 kgm²

LRC : 7.0

Duty cycle : S1

Rated torque : 7.38 Nm

Insulation class : F

Locked rotor torque : 300 %

Service factor : 1.00

Breakdown torque : 300 %

Temperature rise : 80 K

Rated speed : 2850 rpm

Design : N

Heating constant : 14.9 min

Cooling constant : 44.7 min

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LOAD PERFORMANCE CURVE

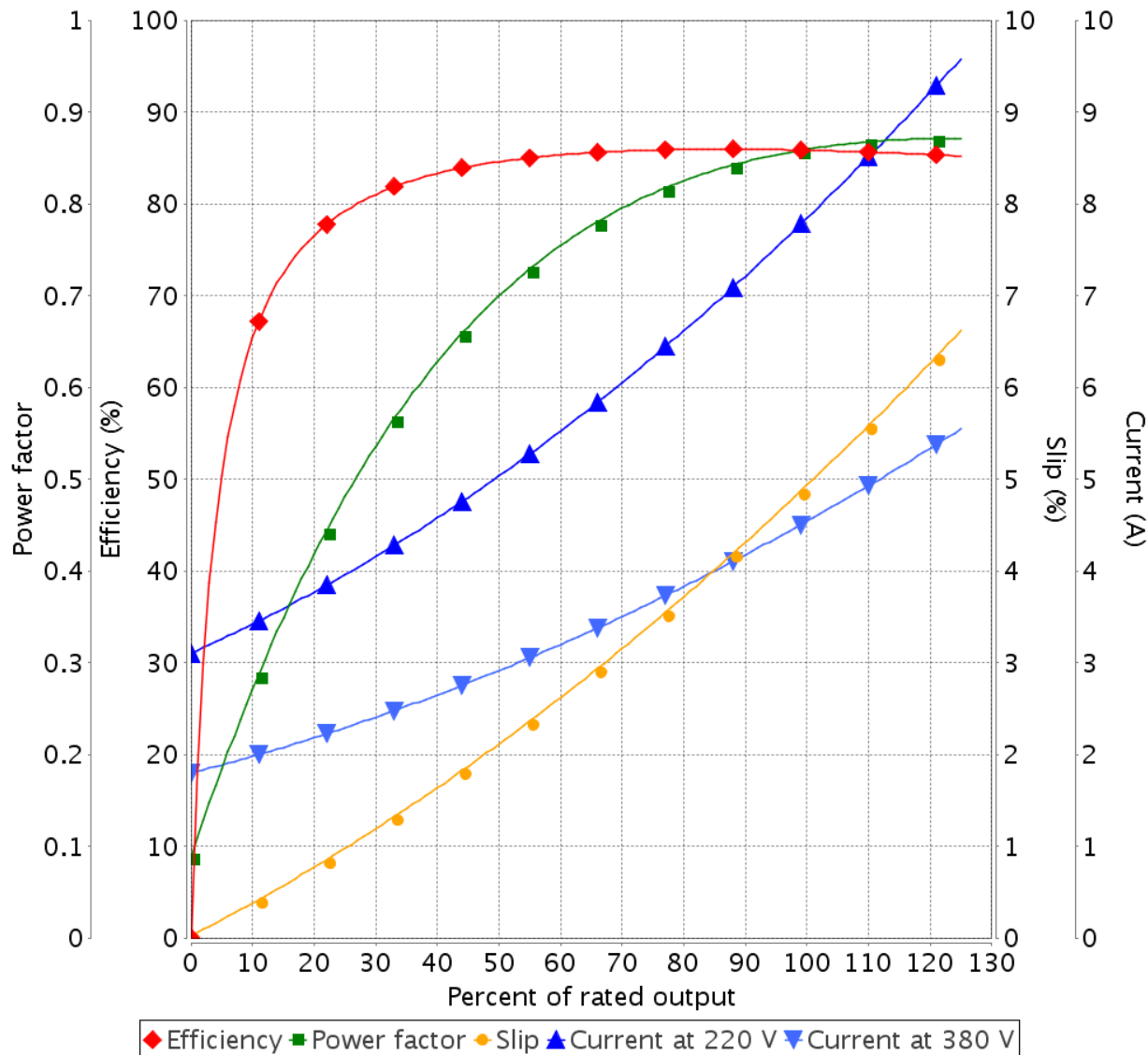
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VFD OPERATION CURVE

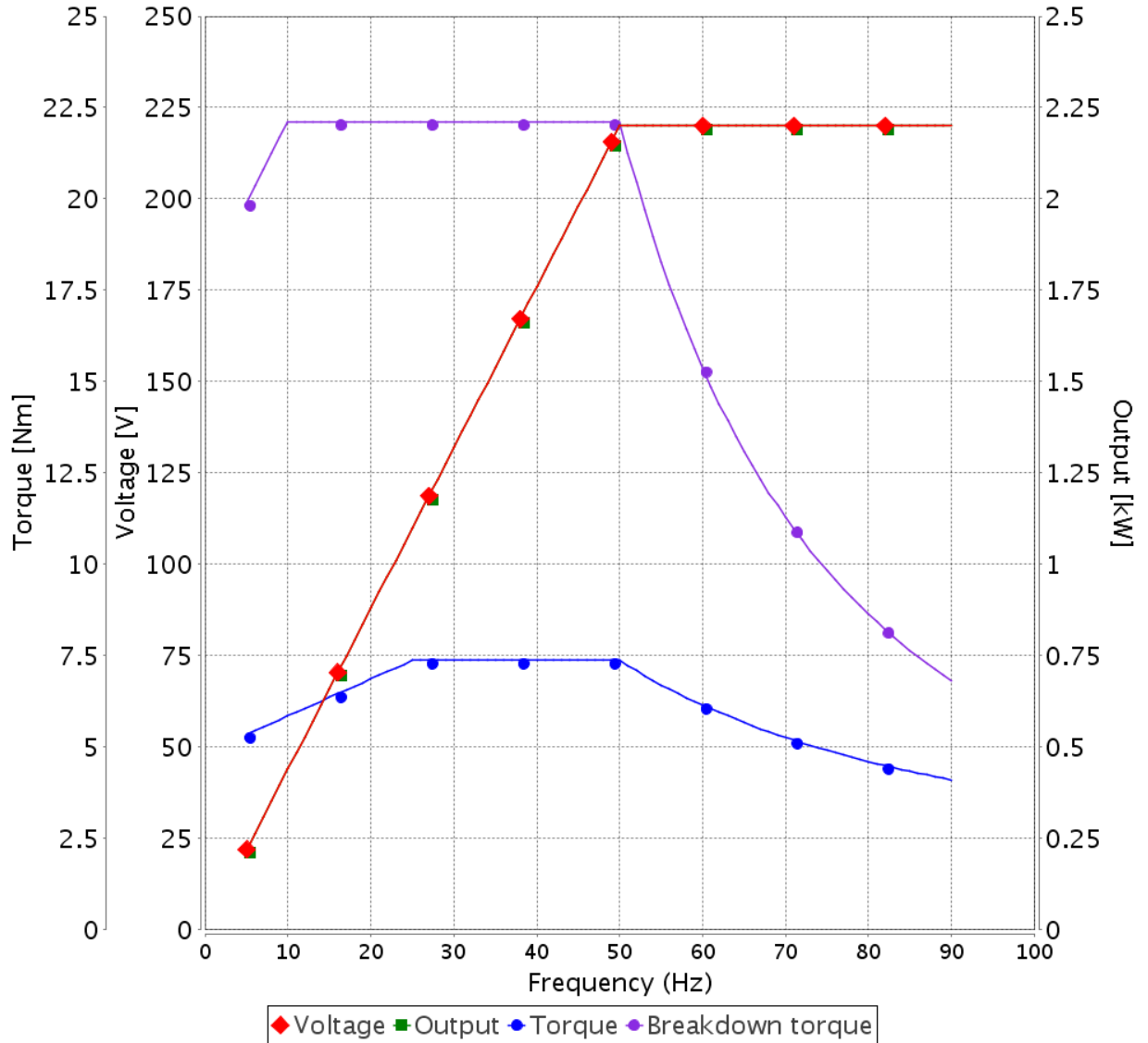
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 Service factor : 1.00
 Temperature rise : 80 K
 Design : N

Voltage Peak Phase-Phase = 2000.0
 dV/dt = 6500.0
 Rise time = 0.1

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TORQUE AND CURRENT VS SPEED CURVE

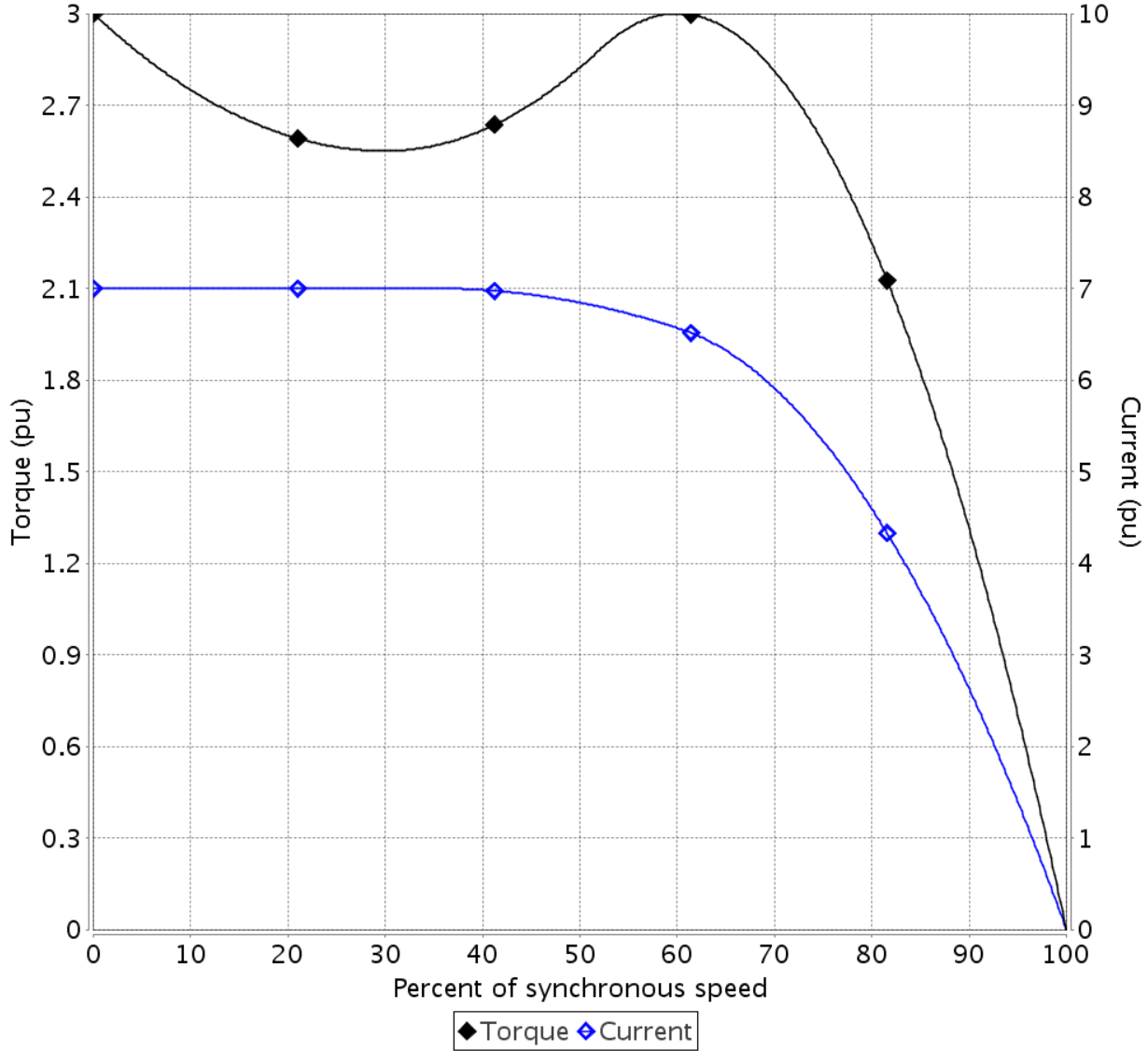
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Rated torque : 7.38 Nm

Insulation class : F

Locked rotor torque : 300 %

Service factor : 1.00

Breakdown torque : 300 %

Temperature rise : 80 K

Rated speed : 2850 rpm

Design : N

Locked rotor time 100% : 12 s (hot) 22 s (cold)

Load inertia (J=GD²/4) : 0.0026 kgm²

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