

# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W21 Explosion Proof NEMA Premium Efficiency Three-Phase Product code : 14255321

Frame : 143/5T	Cooling method : IC411 - TEFC
Insulation class : F	Mounting : F-1
Duty cycle : Cont.(S1)	Rotation <sup>1</sup> : Both (CW and CCW)
Ambient temperature : -20°C to +40°C	Starting method : Direct On Line
Altitude : 1000 m.a.s.l.	Approx. weight <sup>3</sup> : 30.0 kg
Protection degree : IP55	Moment of inertia (J) : 0.0041 kgm <sup>2</sup>
Design : B	

Output [HP]	1	1	1	1
Poles	4	4	4	4
Frequency [Hz]	60	50	50	50
Rated voltage [V]	230/460	380	400	415
Rated current [A]	2.94/1.47	1.73	1.68	1.66
L. R. Amperes [A]	25.3/12.6	11.6	12.4	13.1
LRC [A]	8.6x(Code M)	6.7x(Code J)	7.4x(Code K)	7.9x(Code L)
No load current [A]	1.88/0.940	0.920	0.990	1.06
Rated speed [RPM]	1755	1445	1450	1455
Slip [%]	2.50	3.67	3.33	3.00
Rated torque [kgfm]	0.414	0.502	0.501	0.499
Locked rotor torque [%]	280	210	240	260
Breakdown torque [%]	360	250	280	310
Service factor	1.15	1.00	1.00	1.00
Temperature rise	80 K	80 K	80 K	80 K
Locked rotor time	32s (cold) 18s (hot)	36s (cold) 20s (hot)	36s (cold) 20s (hot)	36s (cold) 20s (hot)
Noise level <sup>2</sup>	51.0 dB(A)	49.0 dB(A)	49.0 dB(A)	49.0 dB(A)
Efficiency (%)	25%			
	50%	80.0	81.5	81.0
	75%	82.5	82.5	82.5
	100%	85.5	82.5	84.0
Power Factor	25%			
	50%	0.57	0.62	0.58
	75%	0.68	0.74	0.70
	100%	0.75	0.80	0.78

	<u>Drive end</u>	<u>Non drive end</u>	Foundation loads
Bearing type :	6205 2RS	6204 2RS	Max. traction : 29 kgf
Sealing :	Oil Seal	Lip Seal	Max. compression : 59 kgf
Lubrication interval :	-	-	
Lubricant amount :	-	-	
Lubricant type :	Mobil Polyrex EM		

Notes  
USABLE @208V 3.16A SF 1.15 SFA 3.64A

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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## Three Phase Induction Motor - Squirrel Cage



Customer :

Thermal protection

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

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# LOAD PERFORMANCE CURVE

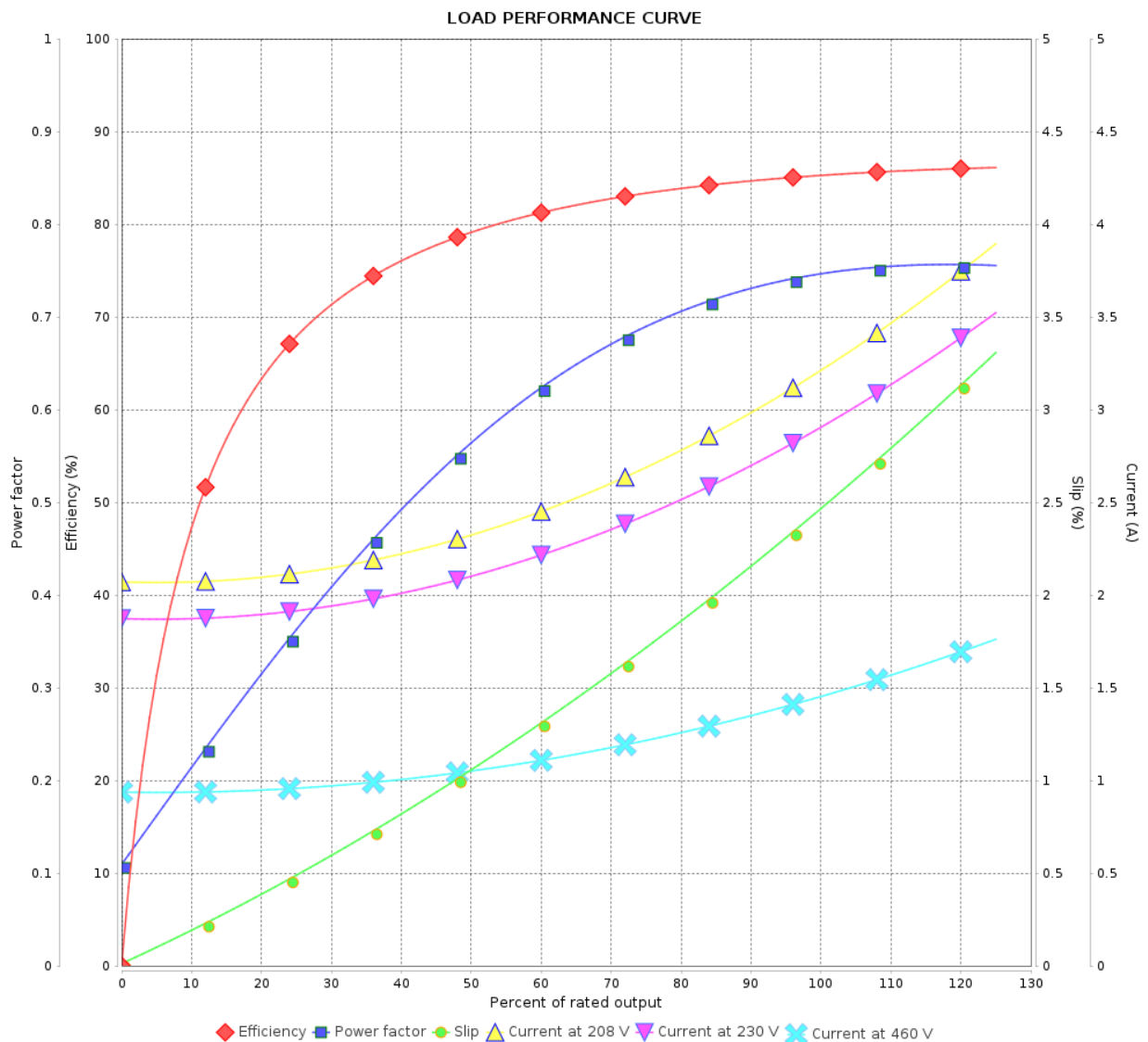
## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W21 Explosion Proof NEMA  
Premium Efficiency Three-Phase

Product code : 14255321



Performance : 230/460 V 60 Hz 4P

Rated current : 2.94/1.47 A  
LRC : 8.6  
Rated torque : 0.414 kgfm  
Locked rotor torque : 280 %  
Breakdown torque : 360 %  
Rated speed : 1755 rpm

Moment of inertia (J) : 0.0041 kgm<sup>2</sup>  
Duty cycle : Cont.(S1)  
Insulation class : F  
Service factor : 1.15  
Temperature rise : 80 K  
Design : B

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# LOAD PERFORMANCE CURVE

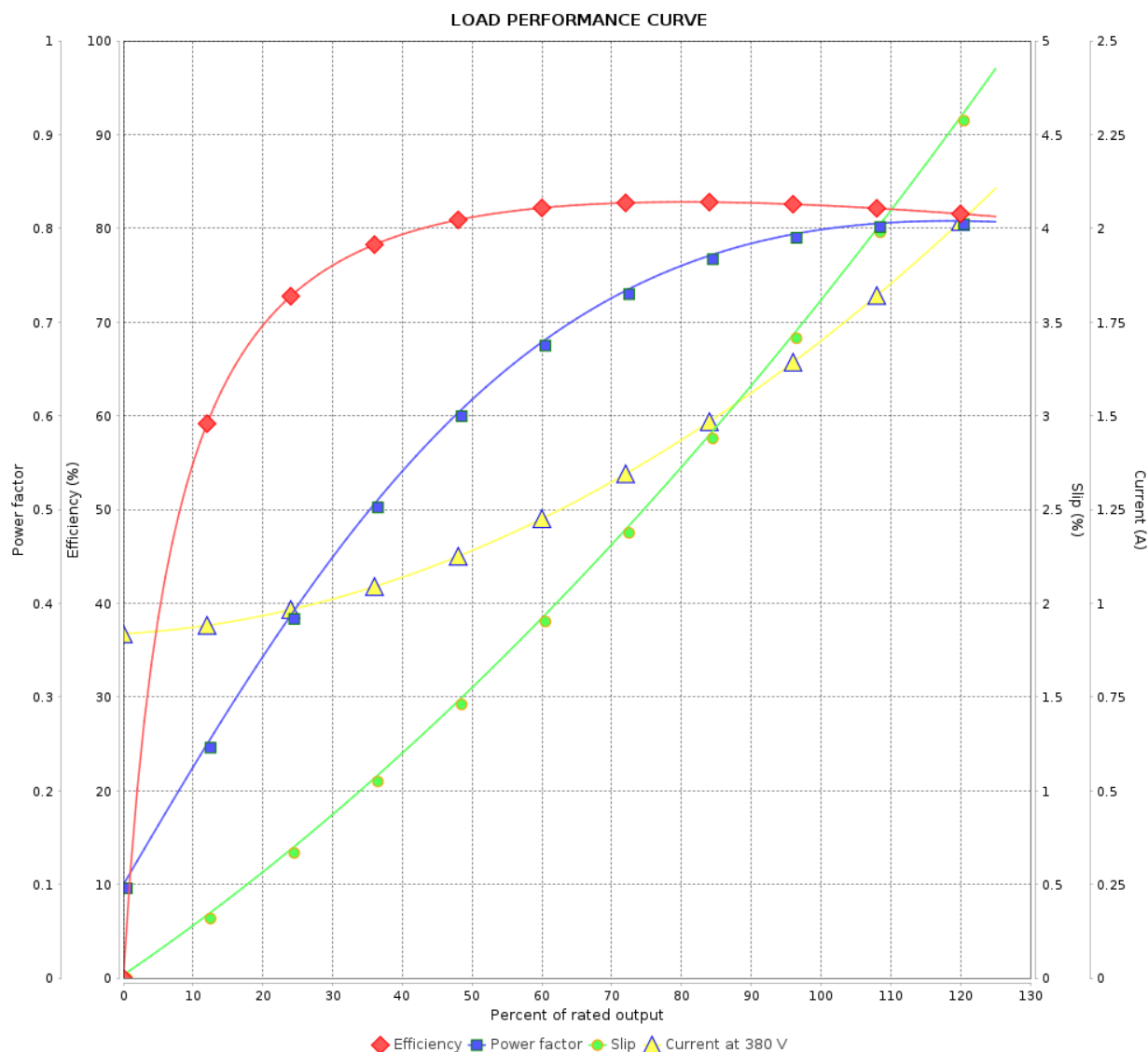
## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W21 Explosion Proof NEMA  
Premium Efficiency Three-Phase

Product code : 14255321



Performance : 380 V 50 Hz 4P IE3

Rated current : 1.73 A  
LRC : 6.7  
Rated torque : 0.502 kgfm  
Locked rotor torque : 210 %  
Breakdown torque : 250 %  
Rated speed : 1445 rpm

Moment of inertia (J) : 0.0041 kgm<sup>2</sup>  
Duty cycle : Cont.(S1)  
Insulation class : F  
Service factor : 1.00  
Temperature rise : 80 K  
Design : B

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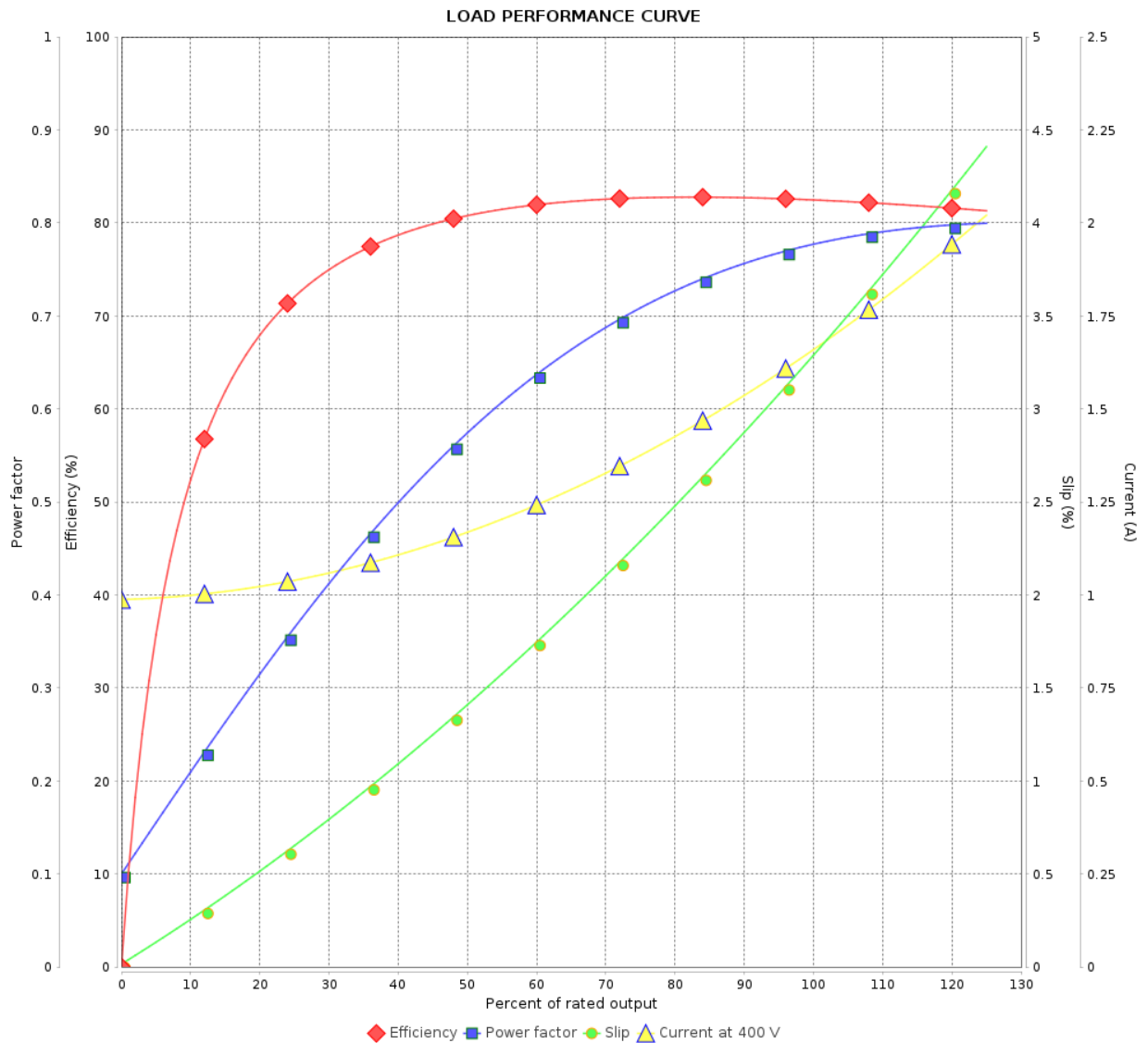
## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W21 Explosion Proof NEMA  
Premium Efficiency Three-Phase

Product code : 14255321



Performance : 400 V 50 Hz 4P IE3

Rated current	: 1.68 A	Moment of inertia (J)	: 0.0041 kgm <sup>2</sup>
LRC	: 7.4	Duty cycle	: Cont.(S1)
Rated torque	: 0.501 kgfm	Insulation class	: F
Locked rotor torque	: 240 %	Service factor	: 1.00
Breakdown torque	: 280 %	Temperature rise	: 80 K
Rated speed	: 1450 rpm	Design	: B

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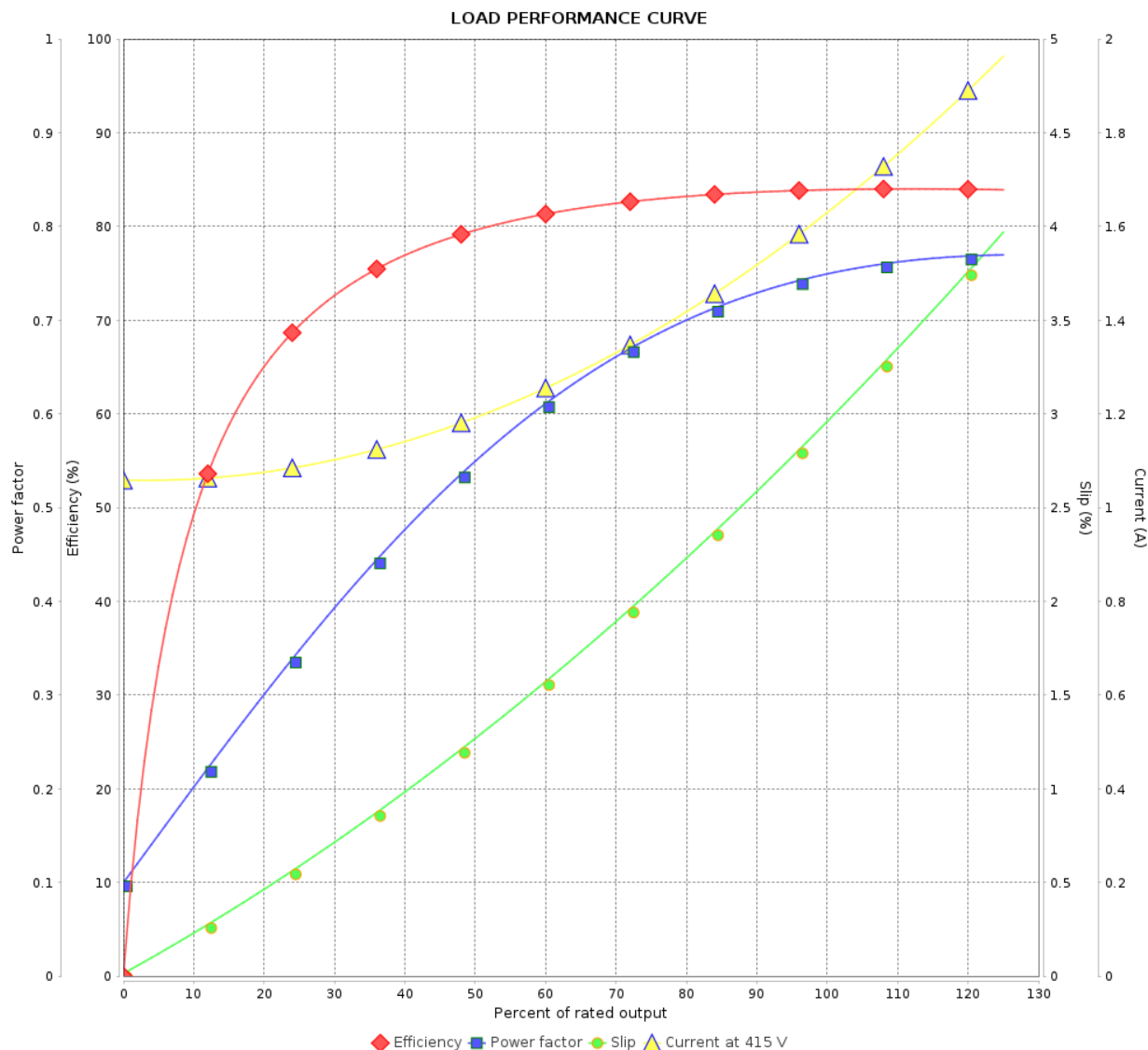
## Three Phase Induction Motor - Squirrel Cage



Customer :

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Premium Efficiency Three-Phase

Product code : 14255321



Performance : 415 V 50 Hz 4P IE3

Rated current : 1.66 A  
LRC : 7.9  
Rated torque : 0.499 kgfm  
Locked rotor torque : 260 %  
Breakdown torque : 310 %  
Rated speed : 1455 rpm

Moment of inertia (J) : 0.0041 kgm<sup>2</sup>  
Duty cycle : Cont.(S1)  
Insulation class : F  
Service factor : 1.00  
Temperature rise : 80 K  
Design : B

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