

# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W21 Explosion Proof NEMA Premium Efficiency Three-Phase Product code : 16202761

Frame	: 182/4TC	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>	: 58.5 kg
Protection degree	: IP55	Moment of inertia (J)	: 0.0178 kgm <sup>2</sup>
Design	: B		

Output [HP]	1.5	1.5	1.5	1.5
Poles	6	6	6	6
Frequency [Hz]	60	50	50	50
Rated voltage [V]	230/460	380	400	415
Rated current [A]	4.64/2.32	2.68	2.62	2.64
L. R. Amperes [A]	30.6/15.3	14.5	16.0	16.9
LRC [A]	6.6x(Code K)	5.4x(Code H)	6.1x(Code J)	6.4x(Code K)
No load current [A]	2.80/1.40	1.40	1.50	1.60
Rated speed [RPM]	1165	960	960	965
Slip [%]	2.92	4.00	4.00	3.50
Rated torque [kgfm]	0.934	1.13	1.13	1.13
Locked rotor torque [%]	260	190	220	250
Breakdown torque [%]	330	250	250	290
Service factor	1.15	1.00	1.00	1.00
Temperature rise	80 K	80 K	80 K	80 K
Locked rotor time	63s (cold) 35s (hot)	25s (cold) 14s (hot)	25s (cold) 14s (hot)	25s (cold) 14s (hot)
Noise level <sup>2</sup>	52.0 dB(A)	49.0 dB(A)	49.0 dB(A)	49.0 dB(A)
Efficiency (%)	25%			
	50%	84.5	85.5	84.5
	75%	86.5	86.5	85.5
	100%	87.5	85.5	86.5
Power Factor	25%			
	50%	0.47	0.52	0.48
	75%	0.59	0.63	0.60
	100%	0.68	0.73	0.70

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

Losses (%)	P1 (0,9;1,0)	13.4	15.9	14.7	14.7
	P2 (0,5;1,0)	10.7	12.7	11.7	11.7
	P3 (0,25;1,0)	10.0	11.9	11.0	11.0
	P4 (0,9;0,5)	8.2	9.7	9.0	9.0
	P5 (0,5;0,5)	5.5	6.6	6.0	6.0
	P6 (0,5;0,25)	4.4	5.2	4.8	4.8
	P7 (0,25;0,25)	3.2	3.8	3.5	3.5

	<u>Drive end</u>	<u>Non drive end</u>	Foundation loads	
Bearing type	: 6307 2RS	6206 2RS	Max. traction	: 40 kgf
Sealing	: Oil Seal	Lip Seal	Max. compression	: 97 kgf
Lubrication interval	: -	-		
Lubricant amount	: -	-		
Lubricant type	: Mobil Polyrex EM			

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.

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 :

Notes

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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

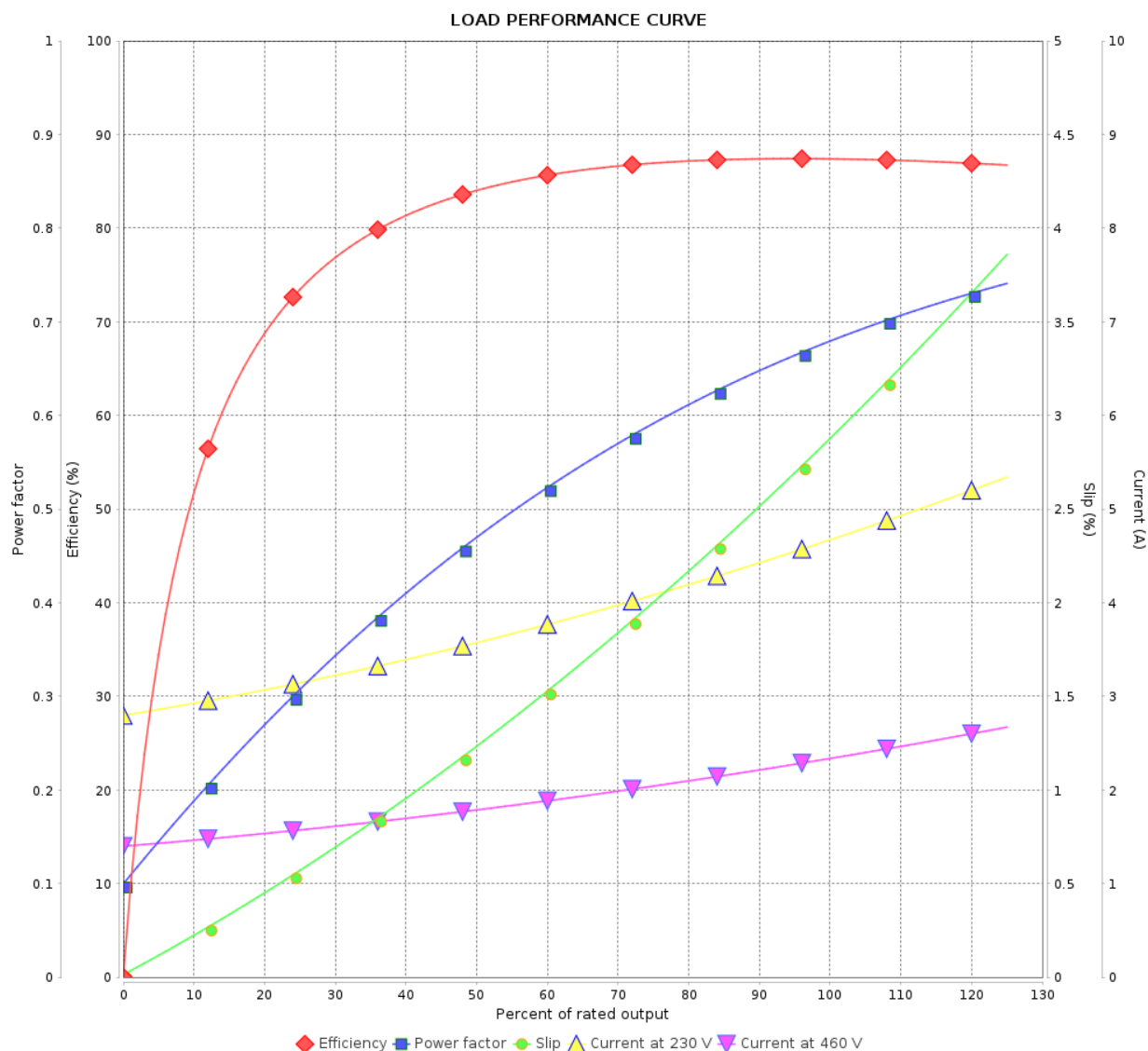
## Three Phase Induction Motor - Squirrel Cage



Customer :

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

Product code : 16202761



Performance : 230/460 V 60 Hz 6P

Rated current : 4.64/2.32 A  
LRC : 6.6  
Rated torque : 0.934 kgfm  
Locked rotor torque : 260 %  
Breakdown torque : 330 %  
Rated speed : 1165 rpm

Moment of inertia (J) : 0.0178 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

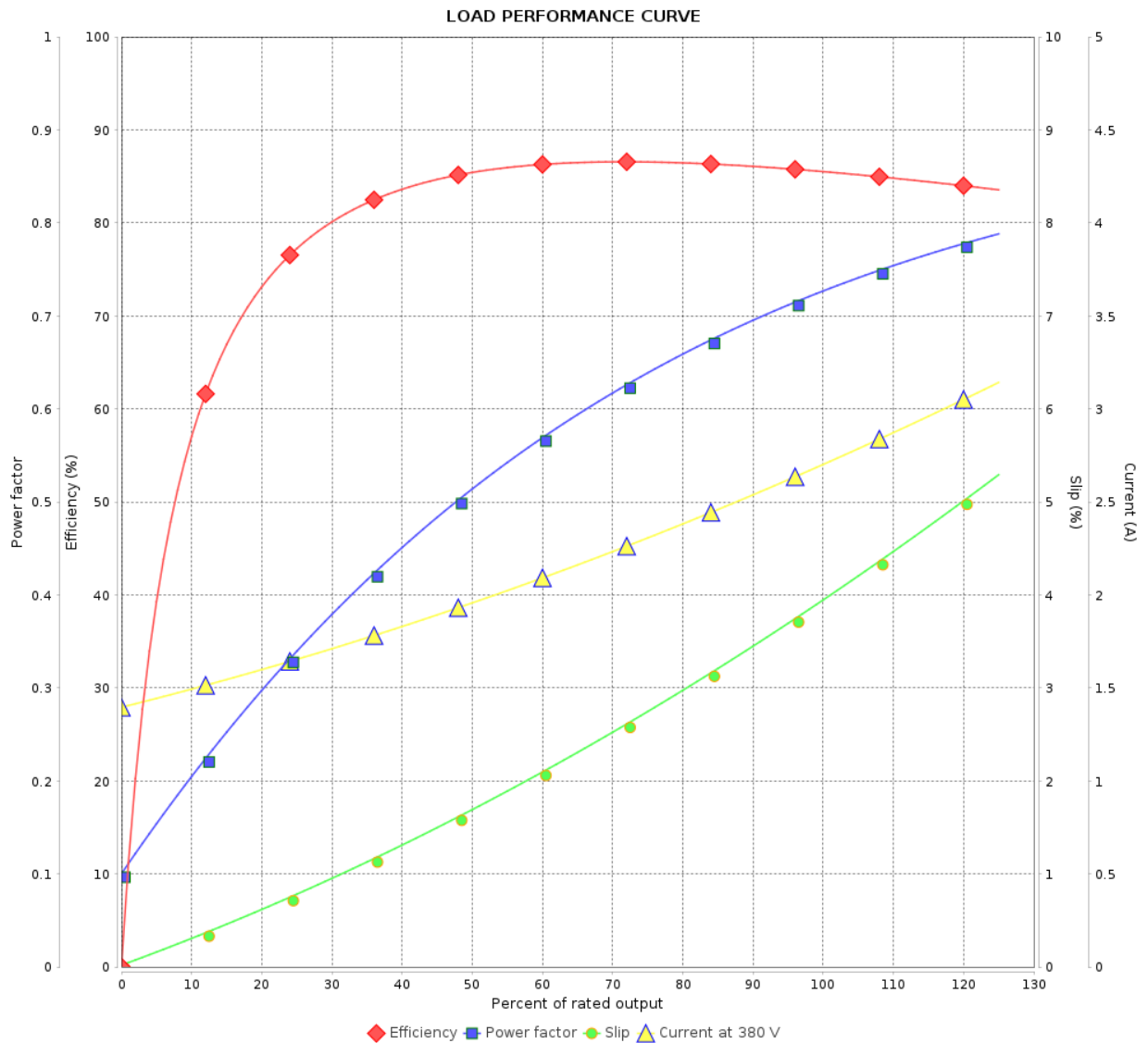
## Three Phase Induction Motor - Squirrel Cage



Customer :

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

Product code : 16202761



Performance : 380 V 50 Hz 6P IE4

Rated current	: 2.68 A	Moment of inertia (J)	: 0.0178 kgm <sup>2</sup>
LRC	: 5.4	Duty cycle	: Cont.(S1)
Rated torque	: 1.13 kgfm	Insulation class	: F
Locked rotor torque	: 190 %	Service factor	: 1.00
Breakdown torque	: 250 %	Temperature rise	: 80 K
Rated speed	: 960 rpm	Design	: B

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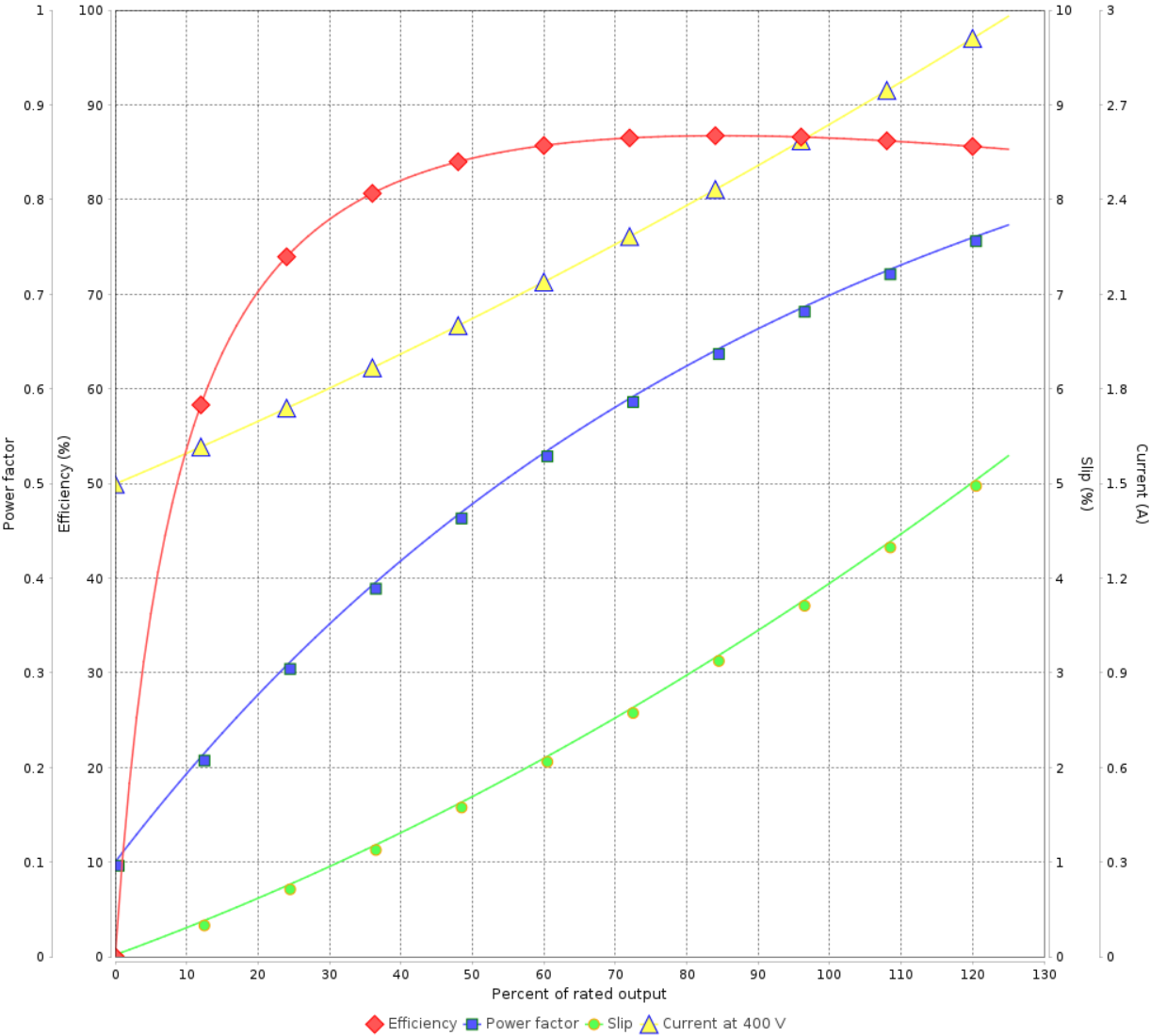
Three Phase Induction Motor - Squirrel Cage



Customer :

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LOAD PERFORMANCE CURVE



Performance : 400 V 50 Hz 6P IE4

Rated current	: 2.62 A	Moment of inertia (J)	: 0.0178 kgm <sup>2</sup>
LRC	: 6.1	Duty cycle	: Cont.(S1)
Rated torque	: 1.13 kgfm	Insulation class	: F
Locked rotor torque	: 220 %	Service factor	: 1.00
Breakdown torque	: 250 %	Temperature rise	: 80 K
Rated speed	: 960 rpm	Design	: B

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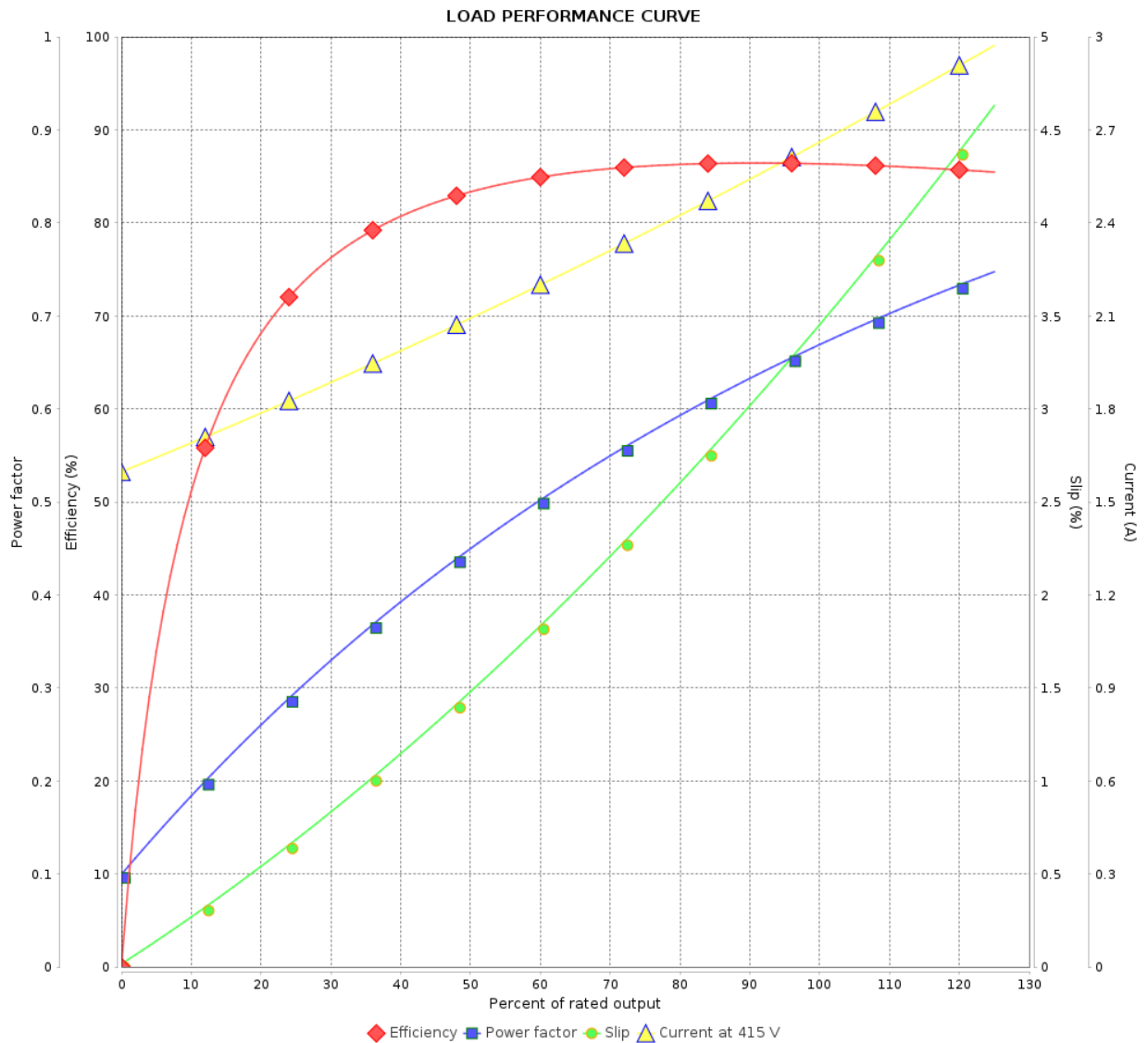
## Three Phase Induction Motor - Squirrel Cage



Customer :

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

Product code : 16202761



Performance : 415 V 50 Hz 6P IE4

Rated current	: 2.64 A	Moment of inertia (J)	: 0.0178 kgm <sup>2</sup>
LRC	: 6.4	Duty cycle	: Cont.(S1)
Rated torque	: 1.13 kgfm	Insulation class	: F
Locked rotor torque	: 250 %	Service factor	: 1.00
Breakdown torque	: 290 %	Temperature rise	: 80 K
Rated speed	: 965 rpm	Design	: B

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