

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 NEMA Premium Efficiency Three-Phase Product code : 12161817

Frame	: 143/5T	Cooling method	: IC411 - TEFC
Insulation class	: F	Mounting	: F-1
Duty cycle	: Cont.(S1)	Rotation ¹	: Both (CW and CCW)
Ambient temperature	: -20°C to +40°C	Starting method	: Direct On Line
Altitude	: 1000 m.a.s.l.	Approx. weight ³	: 22.4 kg
Protection degree	: IP55	Moment of inertia (J)	: 0.0026 kgm ²
Design	: B		

Output [HP]	2	1.5	1.5	1.5	2	2	2
Poles	2	2	2	2	2	2	2
Frequency [Hz]	60	50	50	50	50	50	50
Rated voltage [V]	230/460	380	400	415	380	400	415
Rated current [A]	5.38/2.69	2.47	2.42	2.43	3.18	3.03	2.99
L. R. Amperes [A]	47.9/23.9	21.2	22.5	22.6	21.0	21.8	23.3
LRC [A]	8.9x(Code L)	8.6x(Code L)	9.3x(Code M)	9.3x(Code M)	6.6x(Code H)	7.2x(Code J)	7.8x(Code K)
No load current [A]	2.40/1.20	1.20	1.30	1.40	1.20	1.30	1.50
Rated speed [RPM]	3500	2915	2920	2930	2855	2880	2890
Slip [%]	2.78	2.83	2.67	2.33	4.83	4.00	3.67
Rated torque [kgfm]	0.415	0.373	0.373	0.372	0.508	0.504	0.502
Locked rotor torque [%]	270	280	310	340	200	229	250
Breakdown torque [%]	380	370	420	440	250	300	300
Service factor	1.25	1.25	1.25	1.25	1.25	1.25	1.25
Temperature rise	80 K	80 K	80 K	80 K	80 K	80 K	80 K
Locked rotor time	21s (cold) 12s (hot)	25s (cold) 14s (hot)	25s (cold) 14s (hot)	23s (cold) 13s (hot)	19s (cold) 11s (hot)	21s (cold) 12s (hot)	18s (cold) 10s (hot)
Noise level ²	68.0 dB(A)	62.0 dB(A)	62.0 dB(A)	62.0 dB(A)	62.0 dB(A)	62.0 dB(A)	62.0 dB(A)
Efficiency (%)	25%						
	50%	82.5	81.4	80.3	80.1	82.5	82.5
	75%	85.5	83.3	83.1	83.1	84.0	84.0
	100%	85.5	83.5	84.0	84.0	82.5	84.0
Power Factor	25%						
	50%	0.64	0.61	0.60	0.52	0.71	0.65
	75%	0.76	0.73	0.69	0.65	0.82	0.79
	100%	0.82	0.81	0.78	0.75	0.87	0.83

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

Losses (%)	P1 (0,9;1,0)	15.7	18.3	17.6	17.6	19.6	17.6	17.6
	P2 (0,5;1,0)	12.3	14.3	13.8	13.8	15.4	13.8	13.8
	P3 (0,25;1,0)	11.6	13.5	13.0	13.0	14.5	13.0	13.0
	P4 (0,9;0,5)	8.8	10.3	9.9	9.9	11.0	9.9	9.9
	P5 (0,5;0,5)	5.4	6.3	6.1	6.1	6.8	6.1	6.1
	P6 (0,5;0,25)	3.9	4.6	4.4	4.4	4.9	4.4	4.4
	P7 (0,25;0,25)	2.7	3.1	3.0	3.0	3.4	3.0	3.0

Bearing type	: Drive end 6205 ZZ Non drive end 6204 ZZ	Foundation loads	
Sealing	: V'Ring V'Ring	Max. traction	: 31 kgf
Lubrication interval	: - -	Max. compression	: 54 kgf
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.

These are average values based on tests with sinusoidal power supply, subject to the tolerances stipulated in NEMA MG-1.

Rev.	Changes Summary	Performed	Checked	Date
Performed by				
Checked by				
Date	20/10/2024		Page 1 / 9	Revision

DATA SHEET

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Customer : _____

Notes
USABLE @208V 5.60A SF 1.15 SFA 6.43A

Rev.	Changes Summary		Performed	Checked	Date
Performed by			Page 2 / 9		Revision
Checked by					
Date	20/10/2024				

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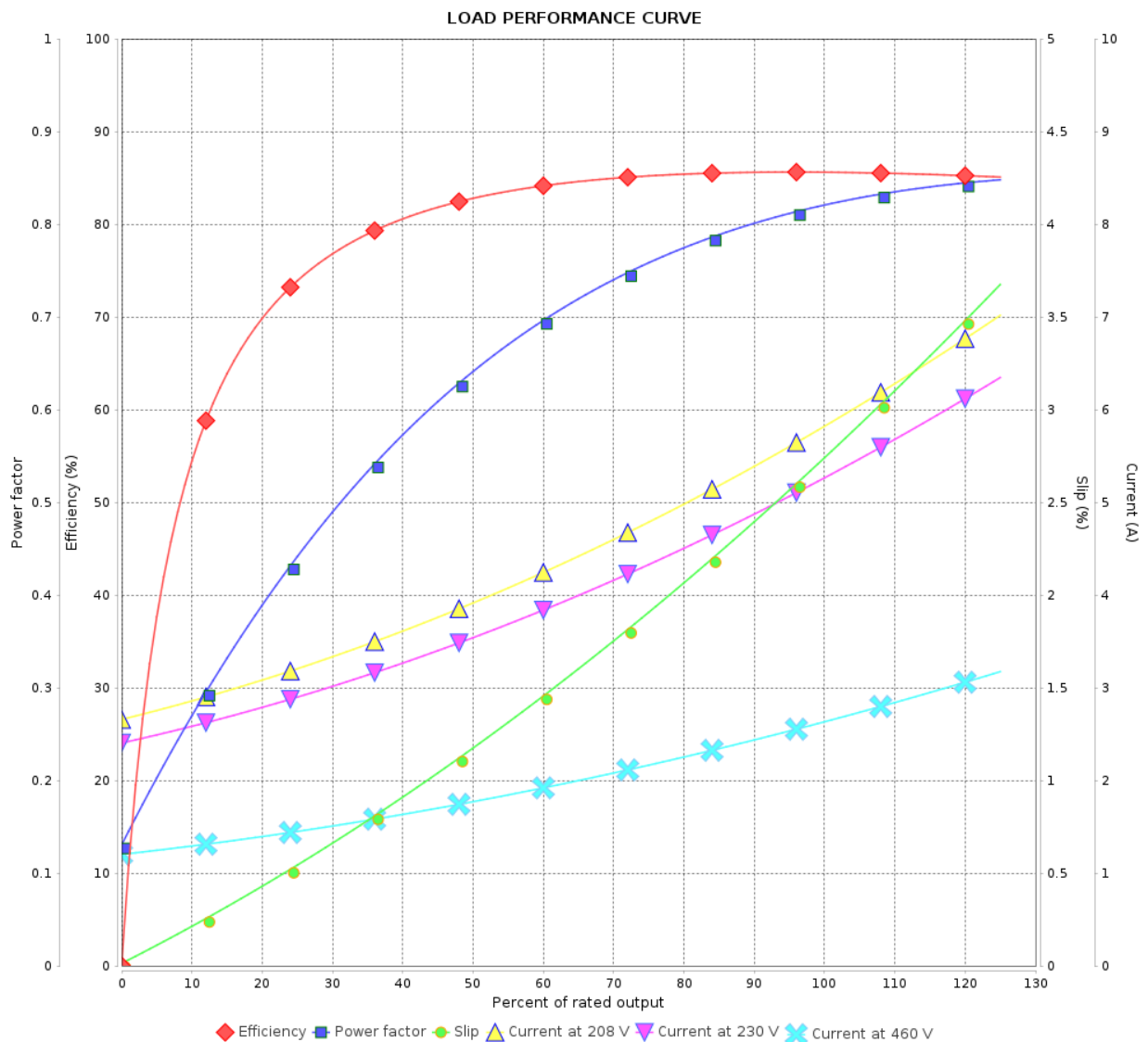
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 NEMA Premium Efficiency
Three-Phase

Product code : 12161817



Performance : 230/460 V 60 Hz 2P

Rated current : 5.38/2.69 A
LRC : 8.9
Rated torque : 0.415 kgfm
Locked rotor torque : 270 %
Breakdown torque : 380 %
Rated speed : 3500 rpm

Moment of inertia (J) : 0.0026 kgm²
Duty cycle : Cont.(S1)
Insulation class : F
Service factor : 1.25
Temperature rise : 80 K
Design : B

Rev.	Changes Summary		Performed	Checked	Date
Performed by			Page		Revision
Checked by					
Date					
	20/10/2024		3 / 9		

LOAD PERFORMANCE CURVE

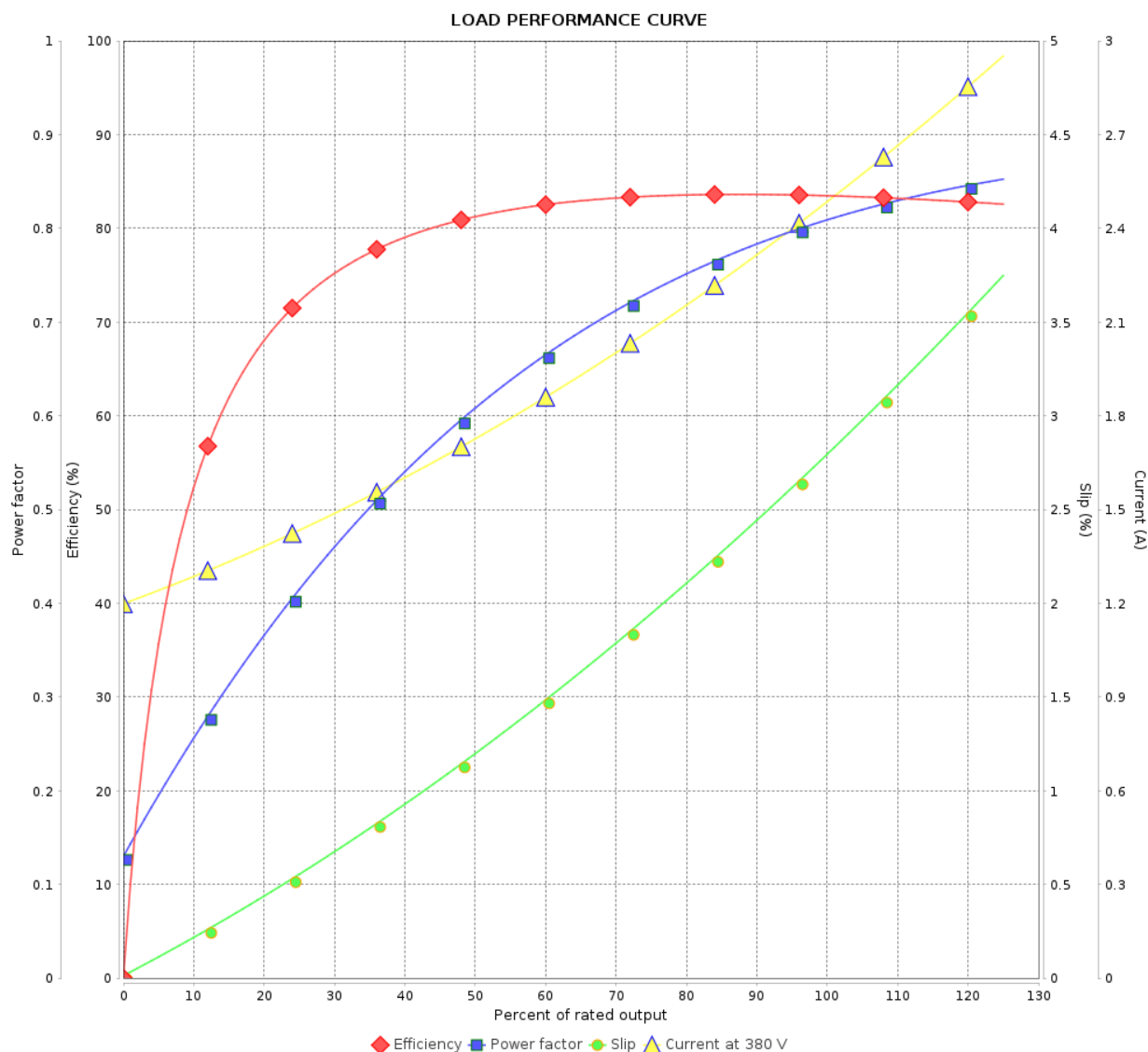
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 NEMA Premium Efficiency
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Performance : 380 V 50 Hz 2P IE3

Rated current : 2.47 A
LRC : 8.6
Rated torque : 0.373 kgfm
Locked rotor torque : 280 %
Breakdown torque : 370 %
Rated speed : 2915 rpm

Moment of inertia (J) : 0.0026 kgm²
Duty cycle : Cont.(S1)
Insulation class : F
Service factor : 1.25
Temperature rise : 80 K
Design : B

Rev.	Changes Summary		Performed	Checked	Date
Performed by				Page	Revision
Checked by				4 / 9	
Date					

LOAD PERFORMANCE CURVE

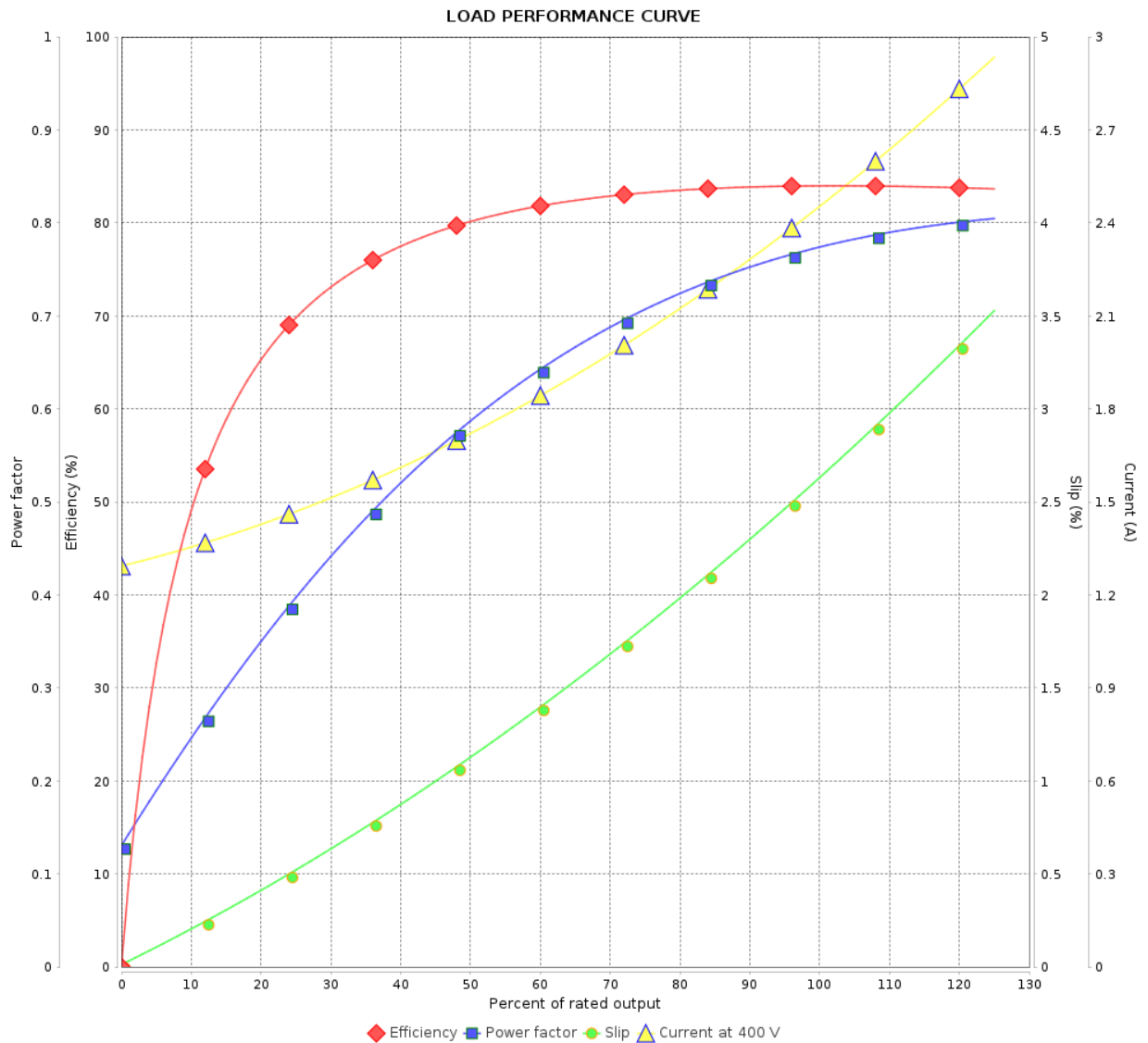
Three Phase Induction Motor - Squirrel Cage



Customer :

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Performance : 400 V 50 Hz 2P IE3

Rated current : 2.42 A
LRC : 9.3
Rated torque : 0.373 kgfm
Locked rotor torque : 310 %
Breakdown torque : 420 %
Rated speed : 2920 rpm

Moment of inertia (J) : 0.0026 kgm²
Duty cycle : Cont.(S1)
Insulation class : F
Service factor : 1.25
Temperature rise : 80 K
Design : B

Rev.	Changes Summary		Performed	Checked	Date
Performed by				Page 5 / 9	Revision
Checked by					
Date	20/10/2024				

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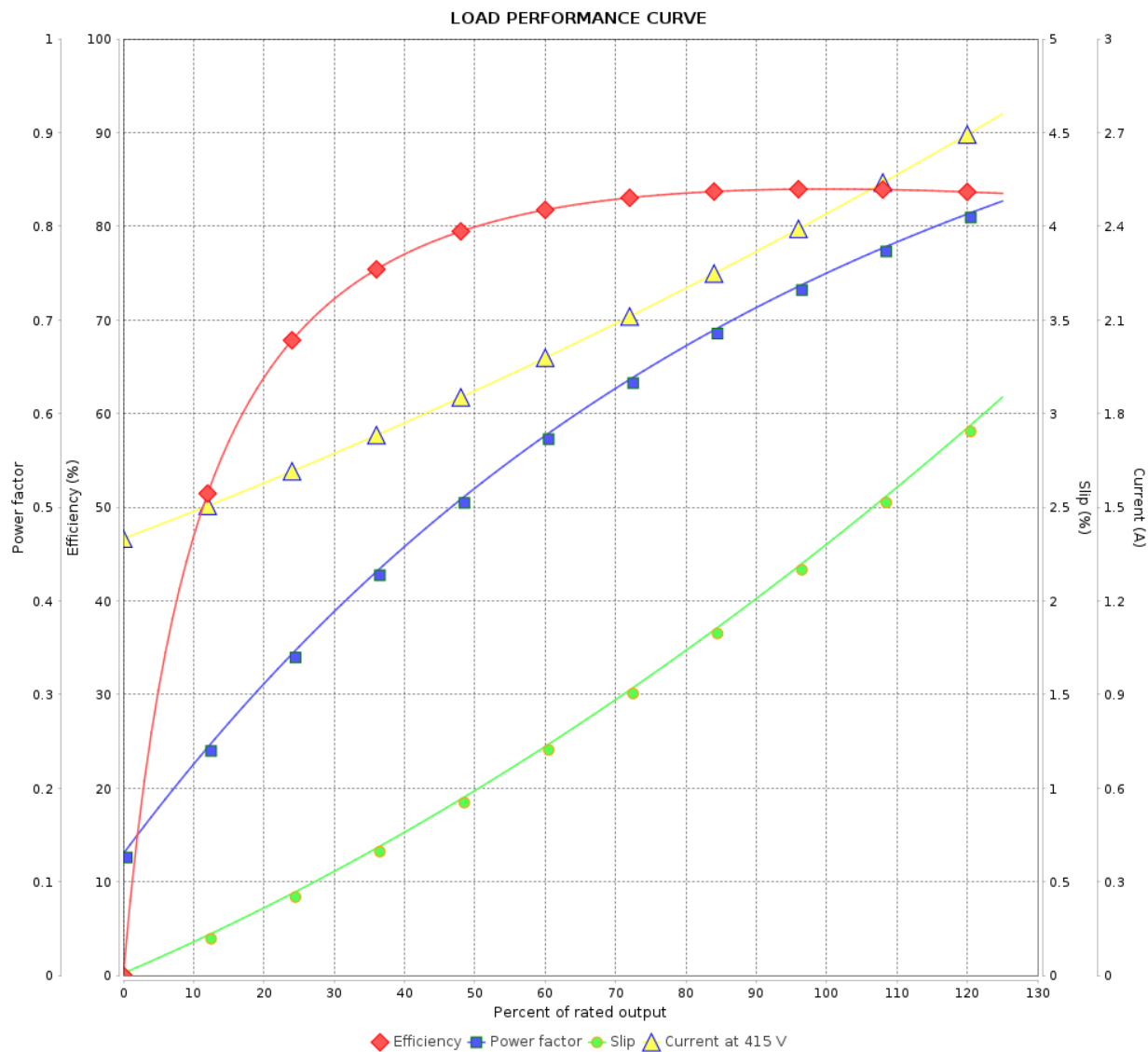
Three Phase Induction Motor - Squirrel Cage



Customer :

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Performance : 415 V 50 Hz 2P IE3

Rated current : 2.43 A
LRC : 9.3
Rated torque : 0.372 kgfm
Locked rotor torque : 340 %
Breakdown torque : 440 %
Rated speed : 2930 rpm

Moment of inertia (J) : 0.0026 kgm²
Duty cycle : Cont.(S1)
Insulation class : F
Service factor : 1.25
Temperature rise : 80 K
Design : B

Rev.	Changes Summary		Performed	Checked	Date
Performed by				Page	Revision
Checked by				6 / 9	
Date					

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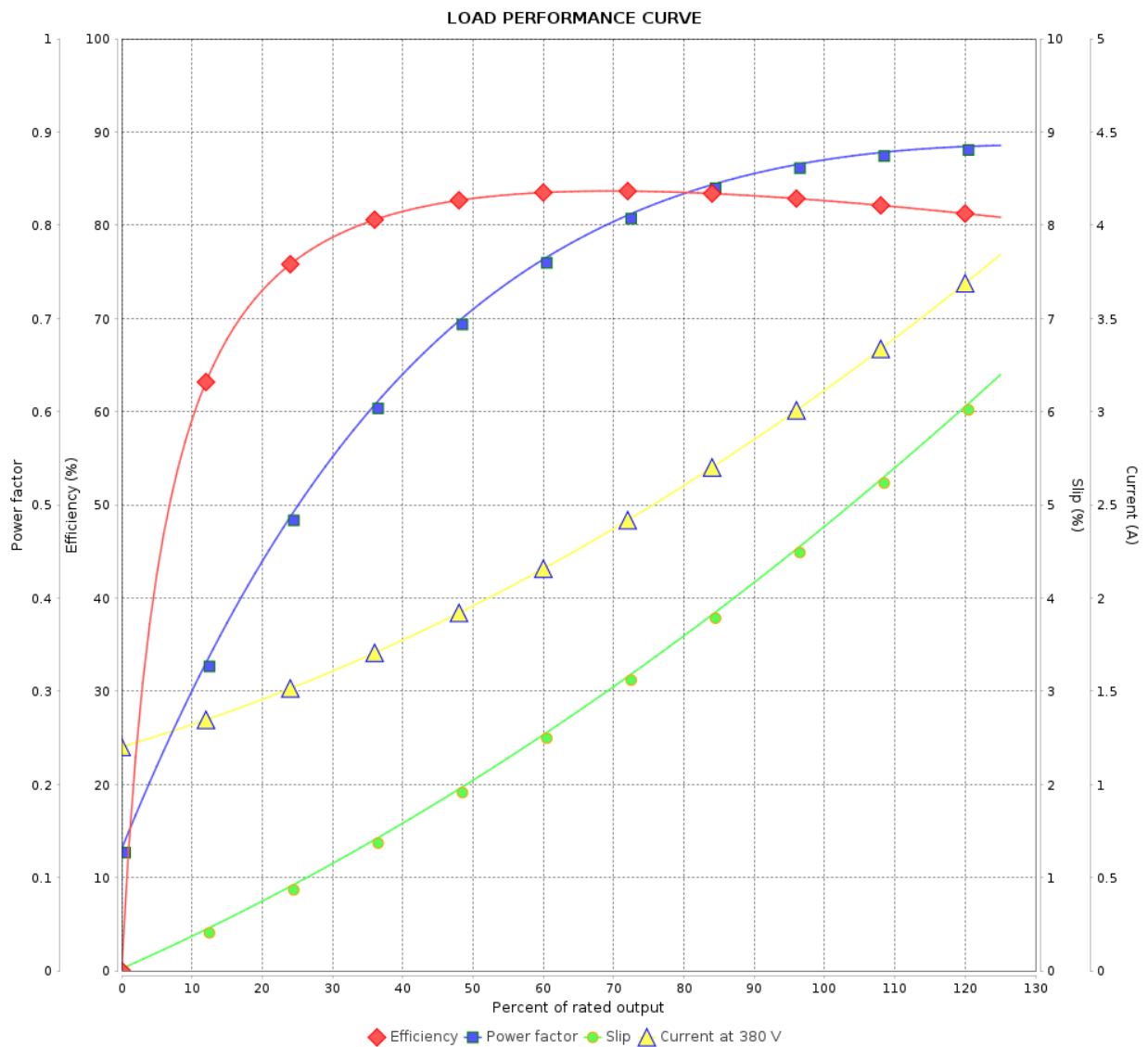
Three Phase Induction Motor - Squirrel Cage



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Performance : 380 V 50 Hz 2P IE2

Rated current	: 3.18 A	Moment of inertia (J)	: 0.0026 kgm ²
LRC	: 6.6	Duty cycle	: Cont.(S1)
Rated torque	: 0.508 kgfm	Insulation class	: F
Locked rotor torque	: 200 %	Service factor	: 1.25
Breakdown torque	: 250 %	Temperature rise	: 80 K
Rated speed	: 2855 rpm	Design	: B

Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page 7 / 9Revision		
Checked by				
Date	20/10/2024			

LOAD PERFORMANCE CURVE

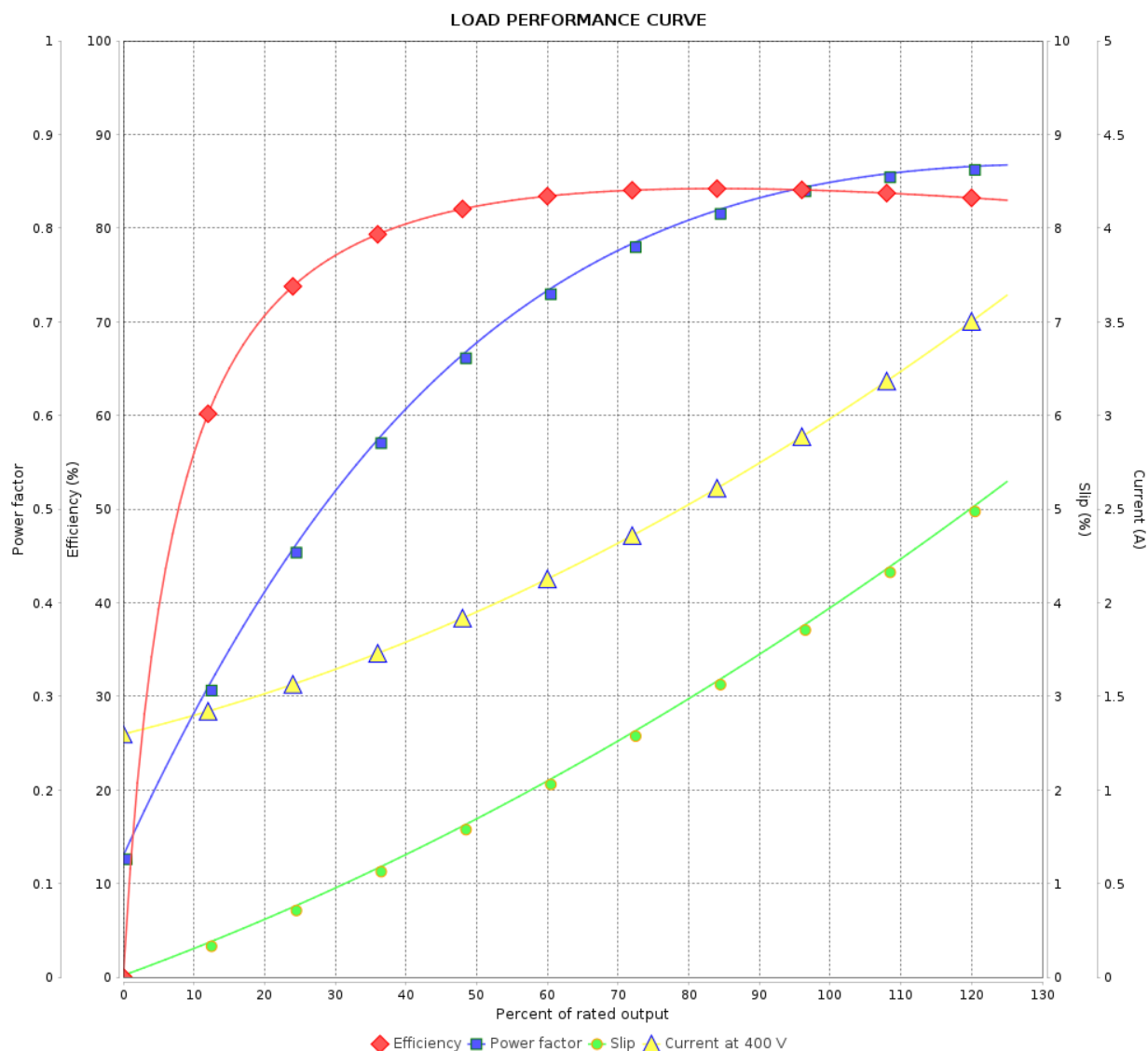
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Performance : 400 V 50 Hz 2P IE2

Rated current : 3.03 A
LRC : 7.2
Rated torque : 0.504 kgfm
Locked rotor torque : 229 %
Breakdown torque : 300 %
Rated speed : 2880 rpm

Moment of inertia (J) : 0.0026 kgm²
Duty cycle : Cont.(S1)
Insulation class : F
Service factor : 1.25
Temperature rise : 80 K
Design : B

Rev.	Changes Summary		Performed	Checked	Date
Performed by				Page	Revision
Checked by				8 / 9	
Date					

LOAD PERFORMANCE CURVE

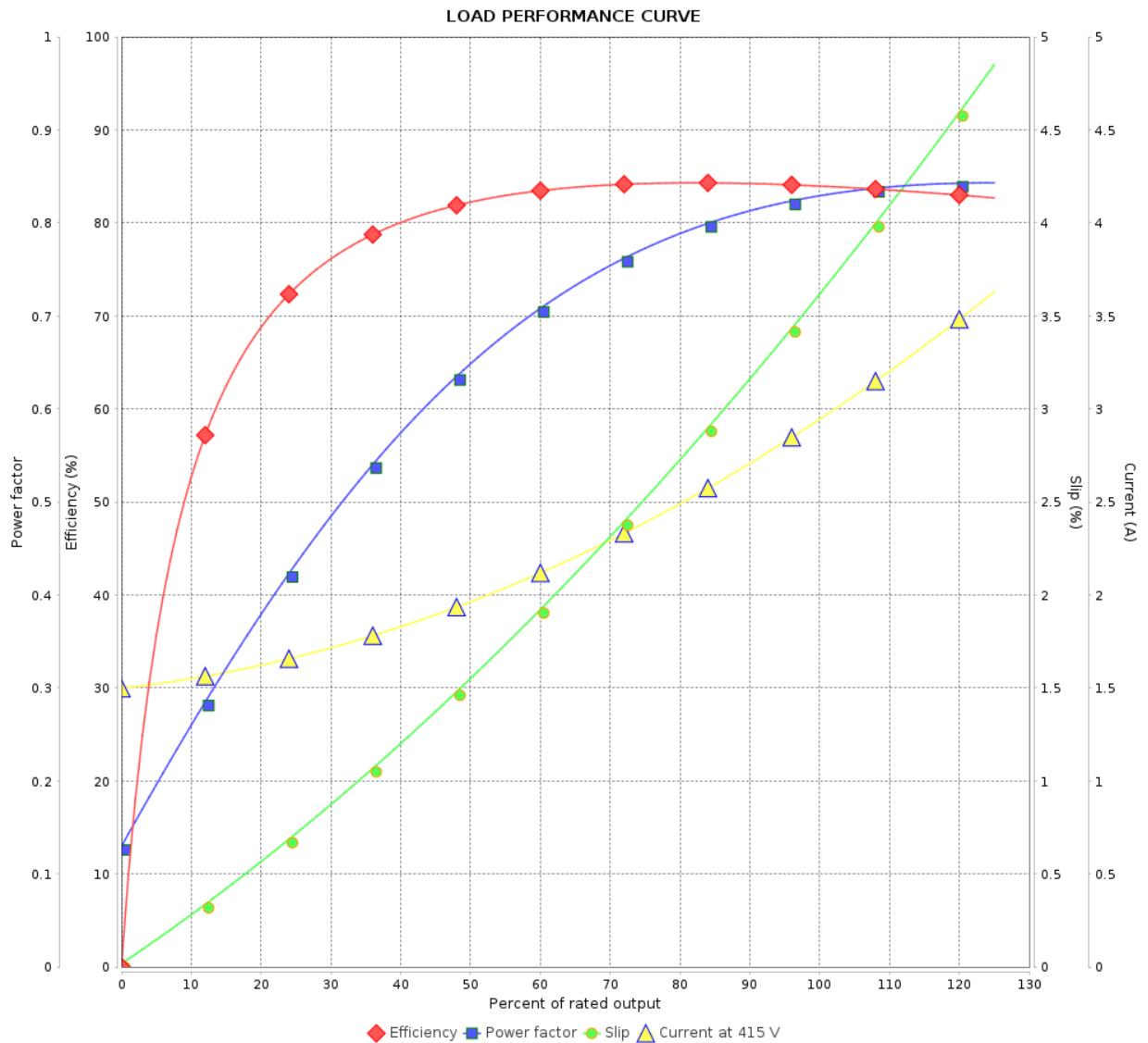
Three Phase Induction Motor - Squirrel Cage



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Performance : 415 V 50 Hz 2P IE2

Rated current	: 2.99 A	Moment of inertia (J)	: 0.0026 kgm ²
LRC	: 7.8	Duty cycle	: Cont.(S1)
Rated torque	: 0.502 kgfm	Insulation class	: F
Locked rotor torque	: 250 %	Service factor	: 1.25
Breakdown torque	: 300 %	Temperature rise	: 80 K
Rated speed	: 2890 rpm	Design	: B

Rev.	Changes Summary	Performed	Checked	Date
Performed by				
Checked by				
Date	20/10/2024		Page 9 / 9	Revision

