

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



Customer :

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

Product code : 14412517

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	: 34.2 kg
Protection degree	: IP55	Moment of inertia (J)	: 0.0067 kgm ²
Design	: B		

Output [HP]	1	1	1	1
Poles	6	6	6	6
Frequency [Hz]	60	50	50	50
Rated voltage [V]	230/460	380	400	415
Rated current [A]	3.26/1.63	1.91	1.86	1.85
L. R. Amperes [A]	20.2/10.1	9.17	9.67	10.2
LRC [A]	6.2x(Code K)	4.8x(Code G)	5.2x(Code H)	5.5x(Code J)
No load current [A]	2.00/1.00	0.950	1.05	1.15
Rated speed [RPM]	1150	930	940	950
Slip [%]	4.17	7.00	6.00	5.00
Rated torque [kgfm]	0.631	0.780	0.772	0.764
Locked rotor torque [%]	260	180	210	240
Breakdown torque [%]	280	200	229	250
Service factor	1.15	1.00	1.00	1.00
Temperature rise	80 K	80 K	80 K	80 K
Locked rotor time	50s (cold) 28s (hot)	36s (cold) 20s (hot)	36s (cold) 20s (hot)	36s (cold) 20s (hot)
Noise level ²	50.0 dB(A)	45.0 dB(A)	45.0 dB(A)	45.0 dB(A)
Efficiency (%)	25%	76.0	76.1	74.6
	50%	77.0	77.0	75.5
	75%	82.0	78.0	78.0
	100%	82.5	78.5	78.5
Power Factor	25%	0.29	0.35	0.32
	50%	0.51	0.58	0.54
	75%	0.63	0.70	0.67
	100%	0.70	0.76	0.74

	<u>Drive end</u>	<u>Non drive end</u>	Foundation loads	
Bearing type	: 6205 2RS	6204 2RS	Max. traction	: 37 kgf
Sealing	: Oil Seal	Lip Seal	Max. compression	: 71 kgf
Lubrication interval	: -	-		
Lubricant amount	: -	-		
Lubricant type	: Mobil Polyrex EM			

Notes

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.

Rev.	Changes Summary	Performed	Checked	Date
Performed by				
Checked by				
Date	15/01/2024			
			Page	Revision
			1 / 6	

DATA SHEET

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

Rev.	Changes Summary		Performed	Checked	Date
Performed by				Page 2 / 6Revision	
Checked by					
Date	15/01/2024				

LOAD PERFORMANCE CURVE

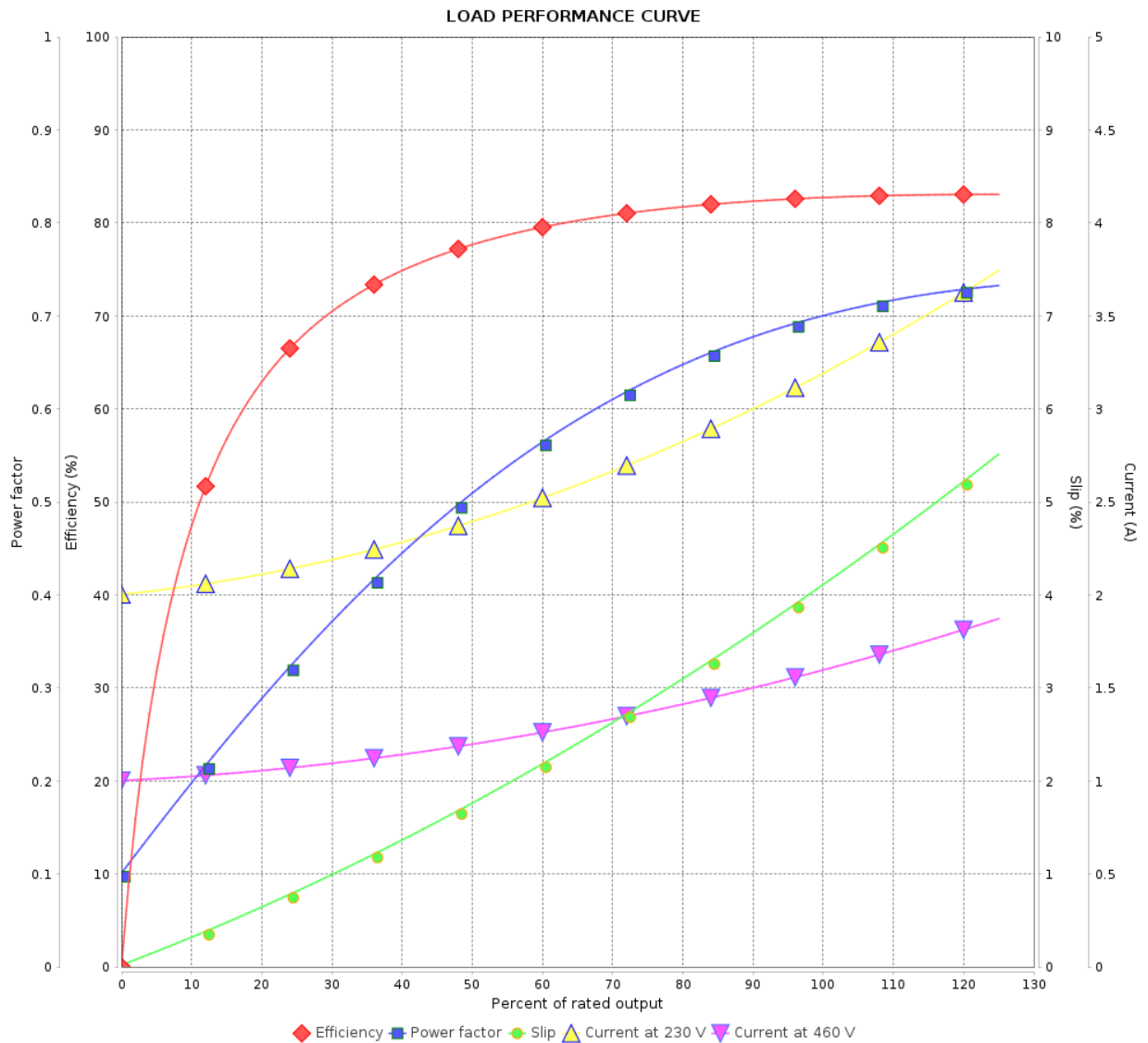
Three Phase Induction Motor - Squirrel Cage



Customer :

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

Product code : 14412517



Performance : 230/460 V 60 Hz 6P

Rated current : 3.26/1.63 A
LRC : 6.2
Rated torque : 0.631 kgfm
Locked rotor torque : 260 %
Breakdown torque : 280 %
Rated speed : 1150 rpm

Moment of inertia (J) : 0.0067 kgm²
Duty cycle : Cont.(S1)
Insulation class : F
Service factor : 1.15
Temperature rise : 80 K
Design : B

Rev.	Changes Summary	Performed	Checked	Date
Performed by				
Checked by				
Date	15/01/2024		Page 3 / 6	Revision

LOAD PERFORMANCE CURVE

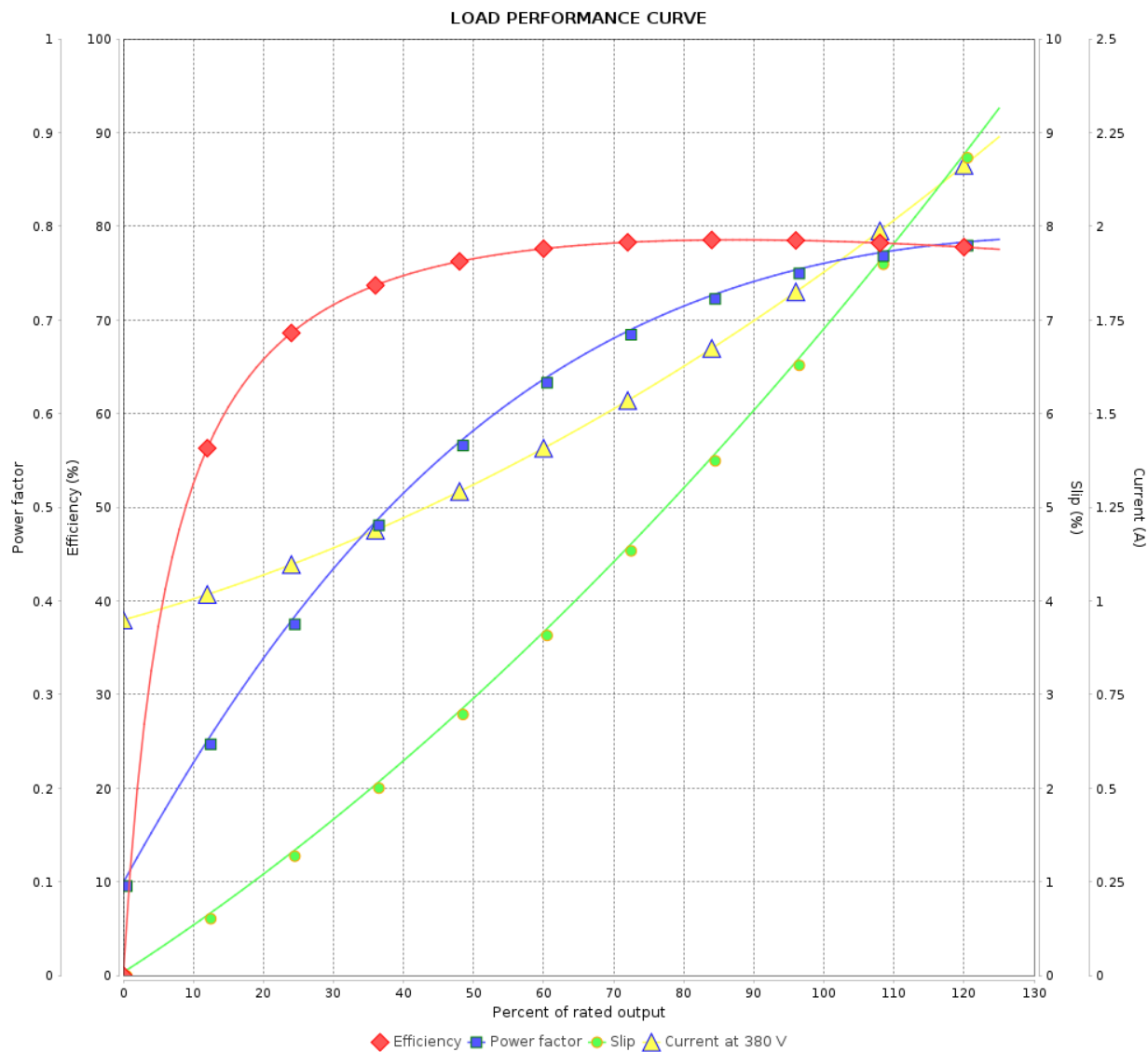
Three Phase Induction Motor - Squirrel Cage



Customer :

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

Product code : 14412517



Performance : 380 V 50 Hz 6P IE2

Rated current : 1.91 A
LRC : 4.8
Rated torque : 0.780 kgfm
Locked rotor torque : 180 %
Breakdown torque : 200 %
Rated speed : 930 rpm

Moment of inertia (J) : 0.0067 kgm²
Duty cycle : Cont.(S1)
Insulation class : F
Service factor : 1.00
Temperature rise : 80 K
Design : B

Rev.	Changes Summary		Performed	Checked	Date
Performed by				Page	Revision
Checked by				4 / 6	
Date					

LOAD PERFORMANCE CURVE

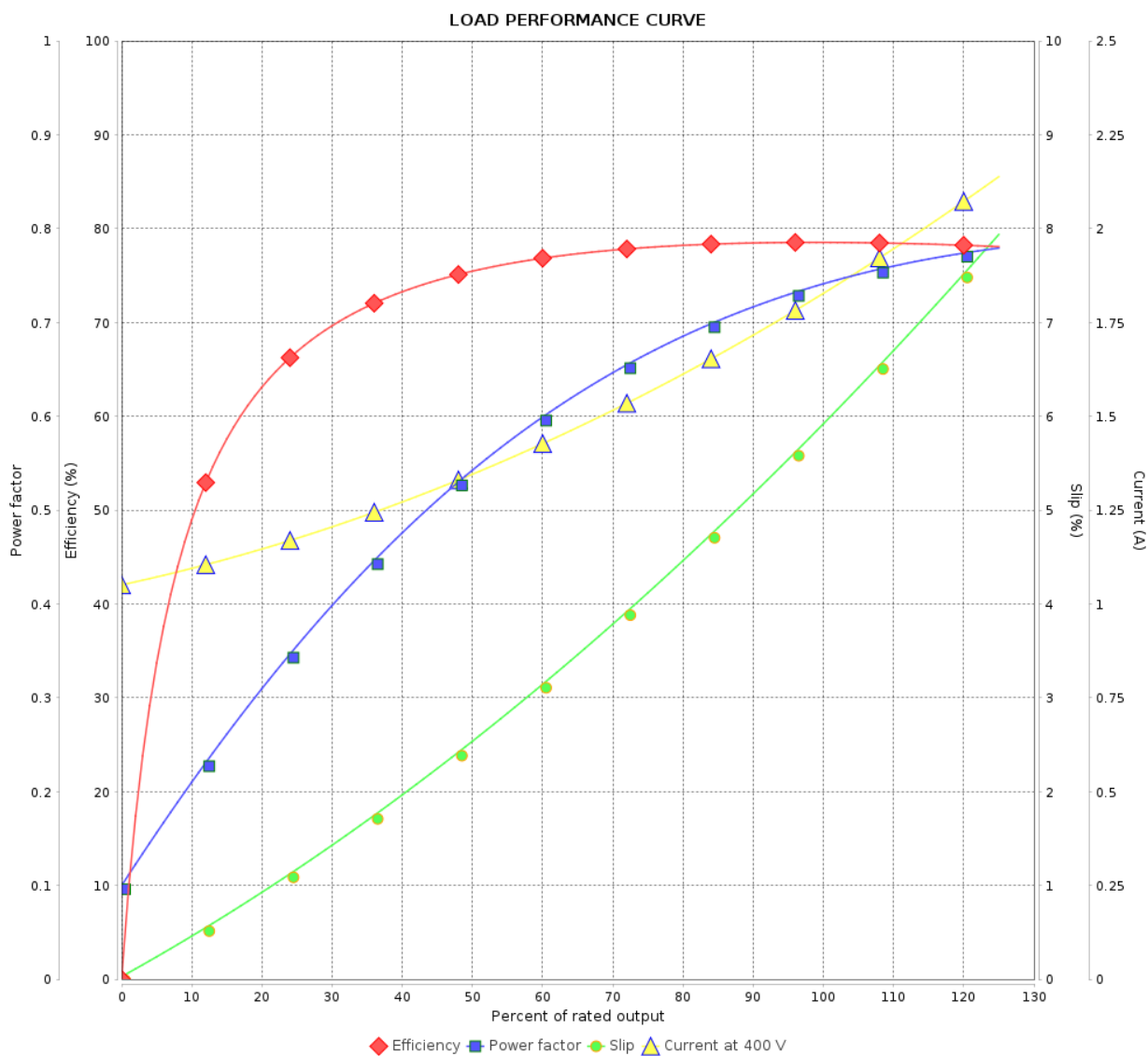
Three Phase Induction Motor - Squirrel Cage



Customer :

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

Product code : 14412517



Performance : 400 V 50 Hz 6P IE2

Rated current : 1.86 A
LRC : 5.2
Rated torque : 0.772 kgfm
Locked rotor torque : 210 %
Breakdown torque : 229 %
Rated speed : 940 rpm

Moment of inertia (J) : 0.0067 kgm²
Duty cycle : Cont.(S1)
Insulation class : F
Service factor : 1.00
Temperature rise : 80 K
Design : B

Rev.	Changes Summary		Performed	Checked	Date
Performed by				Page 5 / 6	Revision
Checked by					
Date	15/01/2024				

LOAD PERFORMANCE CURVE

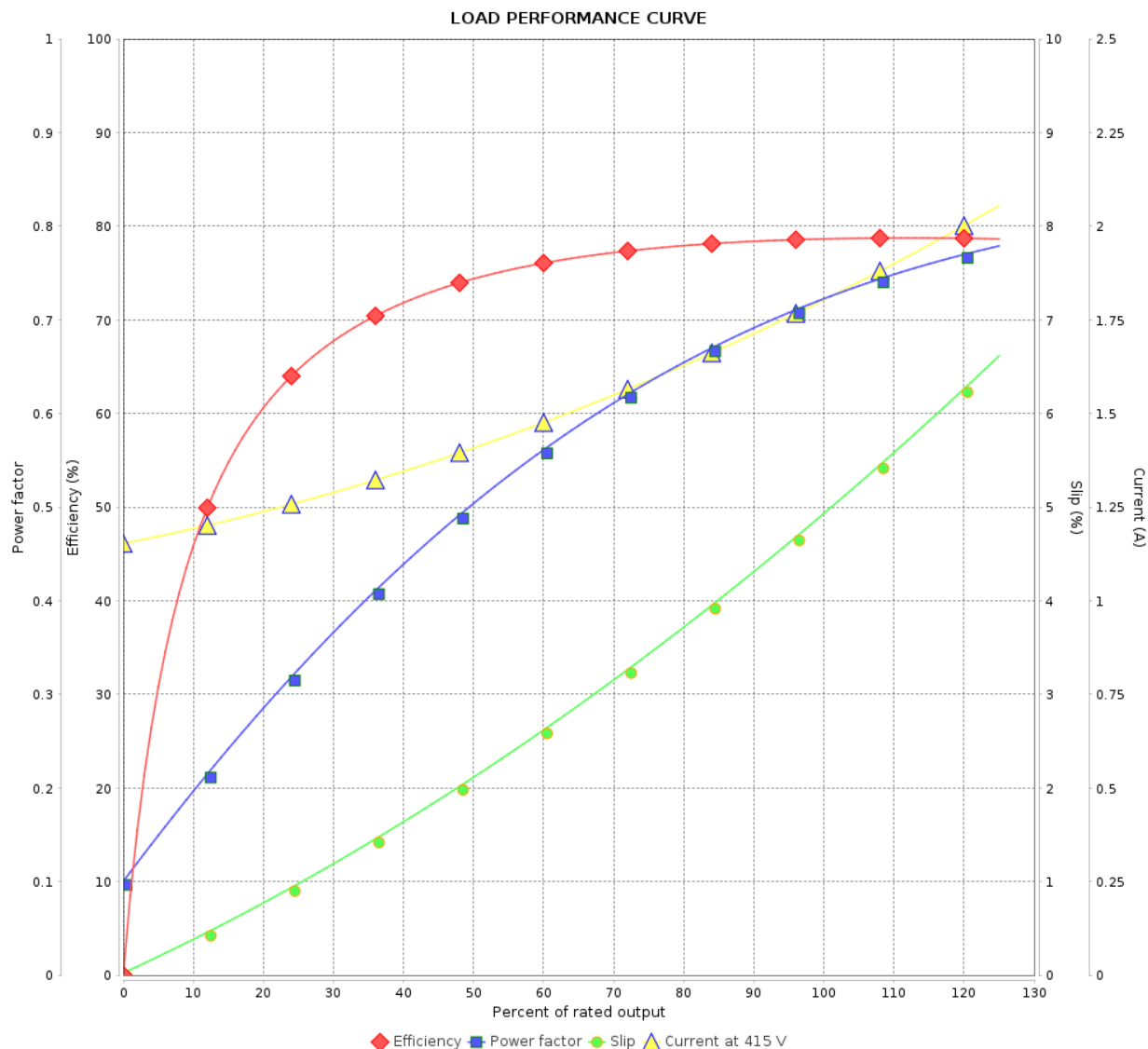
Three Phase Induction Motor - Squirrel Cage



Customer :

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

Product code : 14412517



Performance : 415 V 50 Hz 6P IE2

Rated current : 1.85 A
LRC : 5.5
Rated torque : 0.764 kgfm
Locked rotor torque : 240 %
Breakdown torque : 250 %
Rated speed : 950 rpm

Moment of inertia (J) : 0.0067 kgm²
Duty cycle : Cont.(S1)
Insulation class : F
Service factor : 1.00
Temperature rise : 80 K
Design : B

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