

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W21 Explosion Proof NEMA Premium Efficiency Three-Phase Product code : 14338143

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	: 32.6 kg
Protection degree	: IP55	Moment of inertia (J)	: 0.0023 kgm ²
Design	: B		

Output [HP]	2	2	2	2
Poles	2	2	2	2
Frequency [Hz]	60	50	50	50
Rated voltage [V]	230/460	380	400	415
Rated current [A]	5.38/2.69	3.25	3.09	3.05
L. R. Amperes [A]	49.5/24.7	22.8	23.2	24.4
LRC [A]	9.2x(Code L)	7.0x(Code J)	7.5x(Code K)	8.0x(Code K)
No load current [A]	2.40/1.20	1.10	1.20	1.30
Rated speed [RPM]	3495	2860	2880	2890
Slip [%]	2.92	4.67	4.00	3.67
Rated torque [kgfm]	0.416	0.508	0.506	0.503
Locked rotor torque [%]	370	270	310	340
Breakdown torque [%]	420	290	330	360
Service factor	1.15	1.00	1.00	1.00
Temperature rise	80 K	80 K	80 K	80 K
Locked rotor time	27s (cold) 15s (hot)	37s (cold) 21s (hot)	37s (cold) 21s (hot)	37s (cold) 21s (hot)
Noise level ²	68.0 dB(A)	62.0 dB(A)	62.0 dB(A)	62.0 dB(A)
Efficiency (%)	25%	78.4	81.1	82.1
	50%	80.0	81.5	82.5
	75%	84.0	82.5	84.5
	100%	85.5	82.5	84.5
Power Factor	25%	0.41	0.47	0.43
	50%	0.64	0.70	0.66
	75%	0.76	0.81	0.78
	100%	0.82	0.85	0.83

	<u>Drive end</u>	<u>Non drive end</u>	Foundation loads	
Bearing type	: 6205 2RS	6204 2RS	Max. traction	: 35 kgf
Sealing	: Oil Seal	Lip Seal	Max. compression	: 68 kgf
Lubrication interval	: -	-		
Lubricant amount	: -	-		
Lubricant type	: Mobil Polyrex EM			

Notes
USABLE @208V 5.95A SF 1.15 SFA 6.84A

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	28/10/2024			

Page 1 / 6
Revision

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 / 6	Revision
Checked by					
Date	28/10/2024				

LOAD PERFORMANCE CURVE

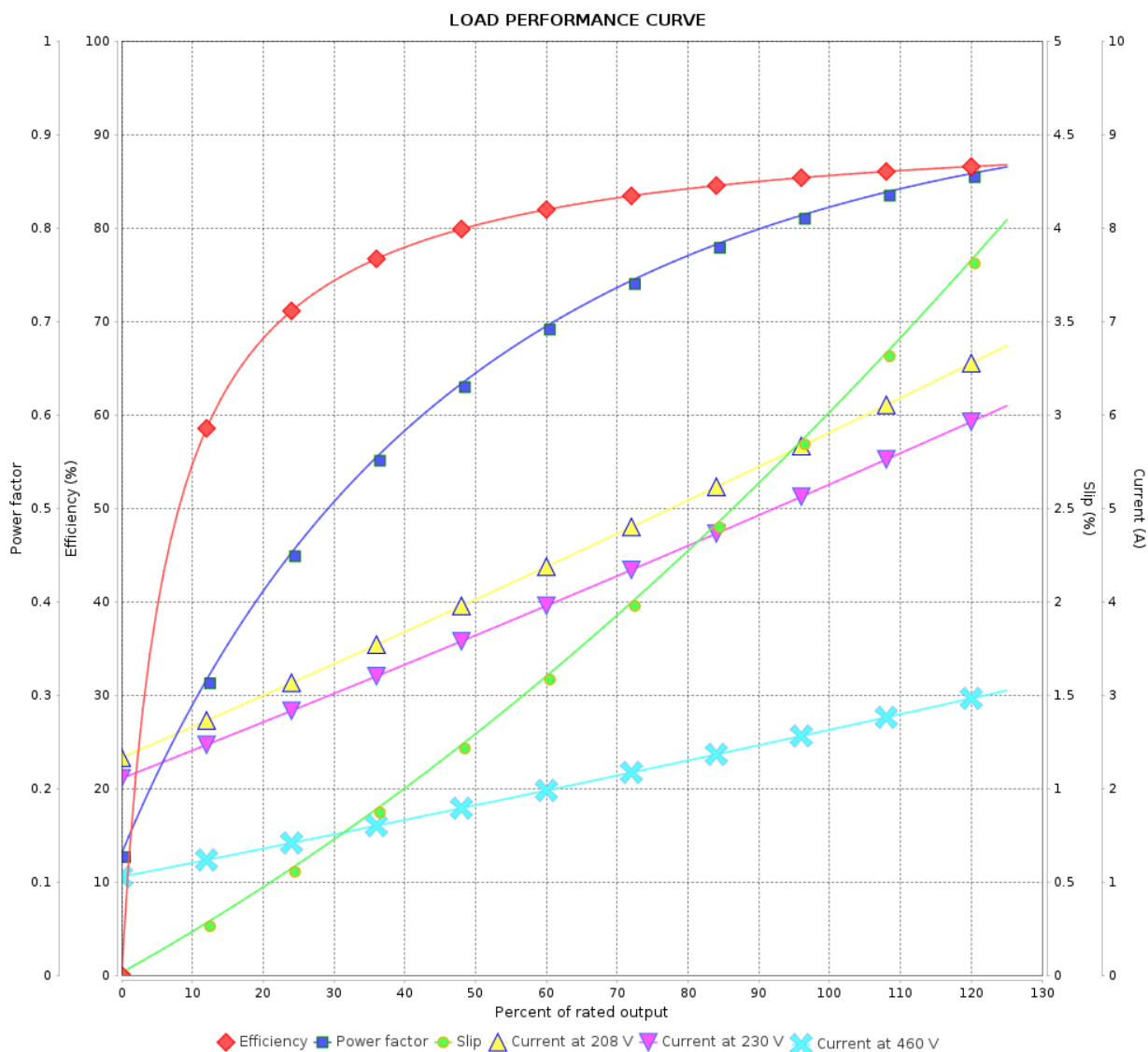
Three Phase Induction Motor - Squirrel Cage



Customer :

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

Product code : 14338143



Performance : 230/460 V 60 Hz 2P

Rated current : 5.38/2.69 A
LRC : 9.2
Rated torque : 0.416 kgfm
Locked rotor torque : 370 %
Breakdown torque : 420 %
Rated speed : 3495 rpm

Moment of inertia (J) : 0.0023 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		Page 3 / 6Revision			
Checked by					
Date	28/10/2024				

LOAD PERFORMANCE CURVE

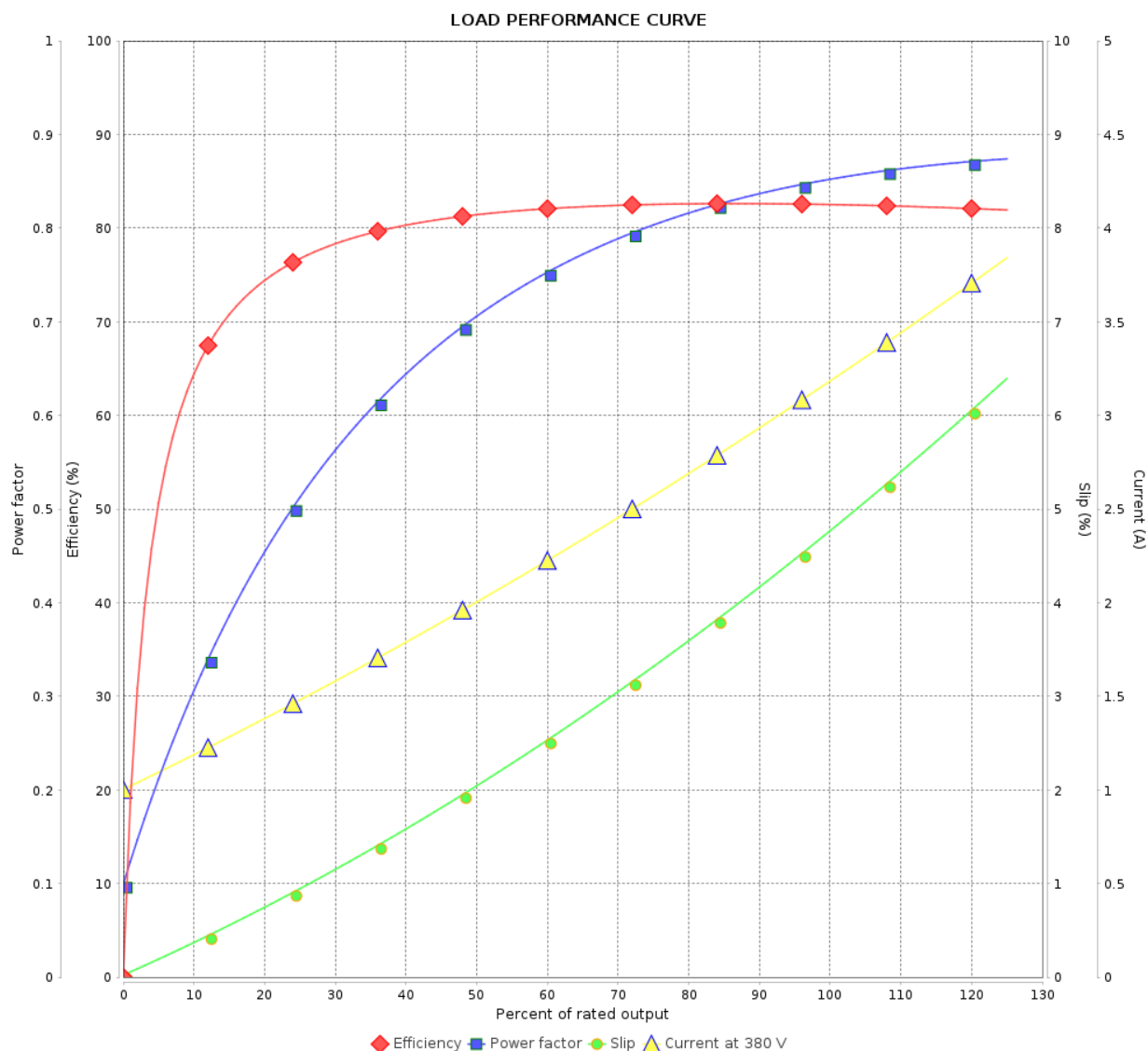
Three Phase Induction Motor - Squirrel Cage



Customer :

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

Product code : 14338143



Performance : 380 V 50 Hz 2P IE2

Rated current : 3.25 A
LRC : 7.0
Rated torque : 0.508 kgfm
Locked rotor torque : 270 %
Breakdown torque : 290 %
Rated speed : 2860 rpm

Moment of inertia (J) : 0.0023 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

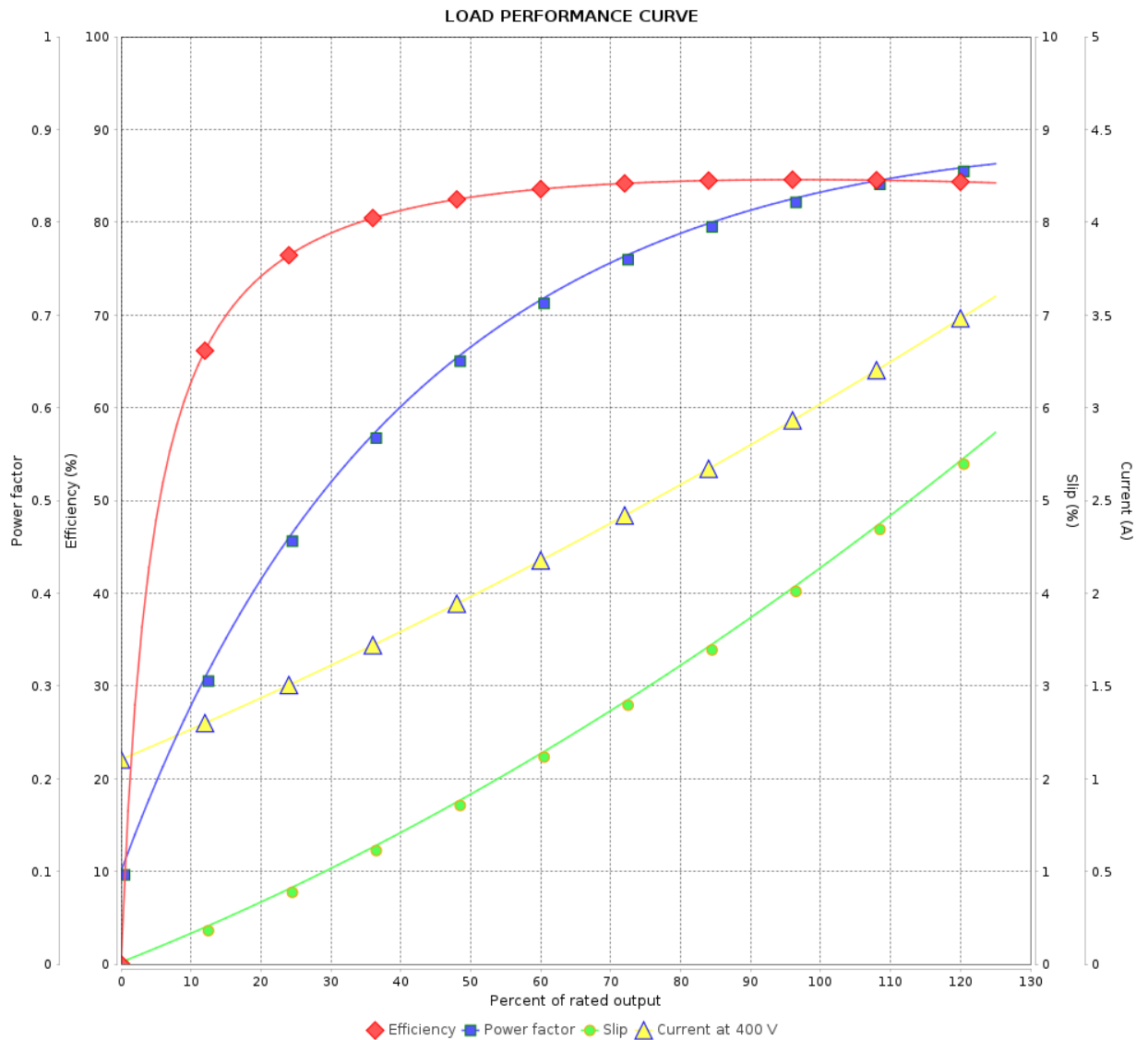
Three Phase Induction Motor - Squirrel Cage



Customer :

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

Product code : 14338143



Performance : 400 V 50 Hz 2P IE3

Rated current	: 3.09 A	Moment of inertia (J)	: 0.0023 kgm ²
LRC	: 7.5	Duty cycle	: Cont.(S1)
Rated torque	: 0.506 kgfm	Insulation class	: F
Locked rotor torque	: 310 %	Service factor	: 1.00
Breakdown torque	: 330 %	Temperature rise	: 80 K
Rated speed	: 2880 rpm	Design	: B

Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page 5 / 6Revision		
Checked by				
Date	28/10/2024			

LOAD PERFORMANCE CURVE

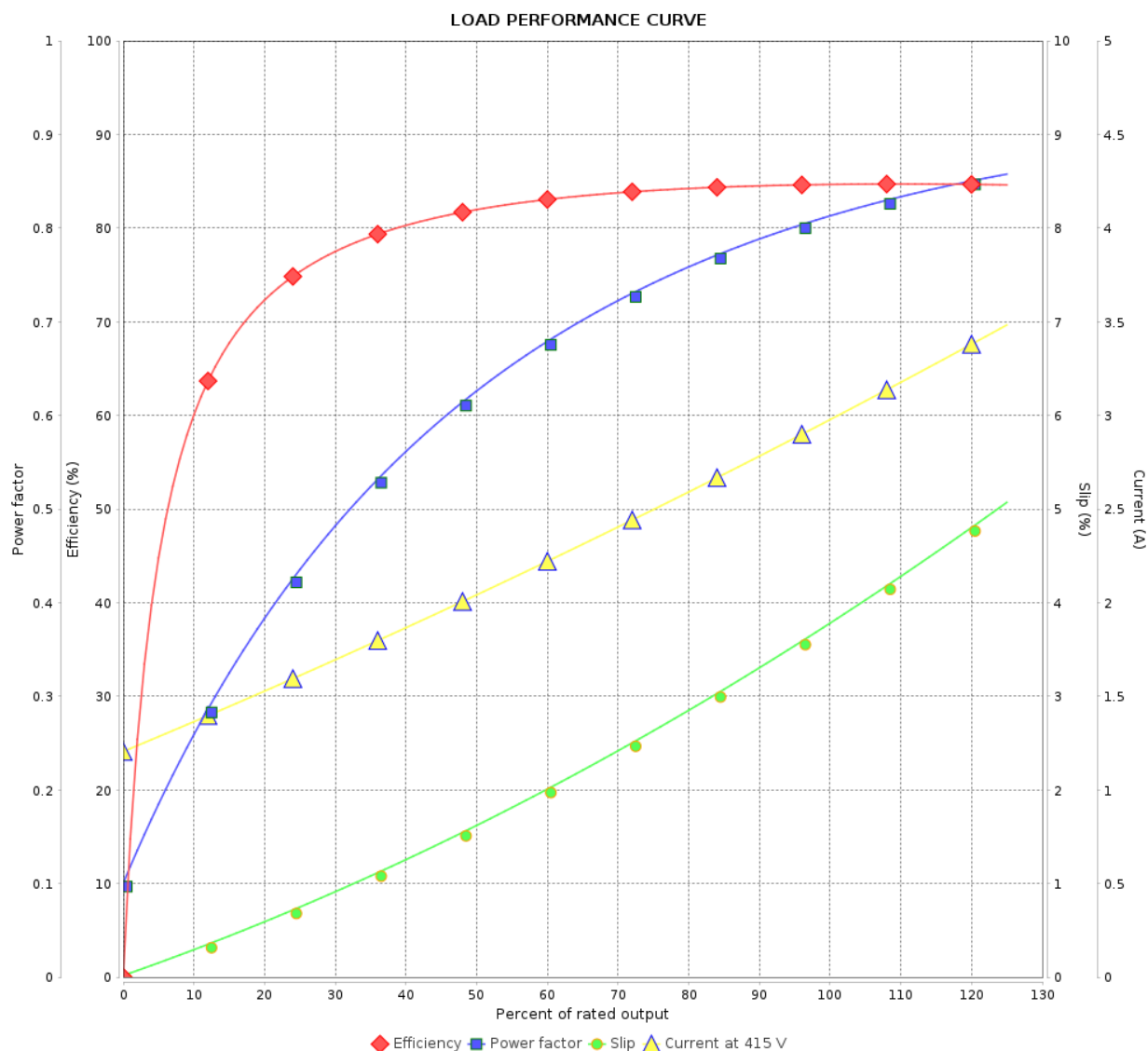
Three Phase Induction Motor - Squirrel Cage



Customer :

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

Product code : 14338143



Performance : 415 V 50 Hz 2P IE3

Rated current : 3.05 A
LRC : 8.0
Rated torque : 0.503 kgfm
Locked rotor torque : 340 %
Breakdown torque : 360 %
Rated speed : 2890 rpm

Moment of inertia (J) : 0.0023 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 6 / 6Revision		
Checked by				
Date	28/10/2024			