

# 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>	: 30.9 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%	77.3	81.2	80.7
	50%	80.0	81.5	81.0
	75%	82.5	82.5	82.5
	100%	85.5	82.5	82.5
Power Factor	25%	0.32	0.36	0.33
	50%	0.57	0.62	0.58
	75%	0.68	0.74	0.70
	100%	0.75	0.80	0.78
Bearing type	: <u>Drive end</u> 6205 2RS <u>Non drive end</u> 6204 2RS	Foundation loads		
Sealing	: Oil Seal Lip Seal	Max. traction	: 28 kgf	
Lubrication interval	: - -	Max. compression	: 59 kgf	
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.		
Rev.	Changes Summary		Performed	Checked
Performed by			Page	Revision
Checked by				
Date	15/01/2024			
			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				
Checked by			Page	Revision
Date	15/01/2024		2 / 6	

# LOAD PERFORMANCE CURVE

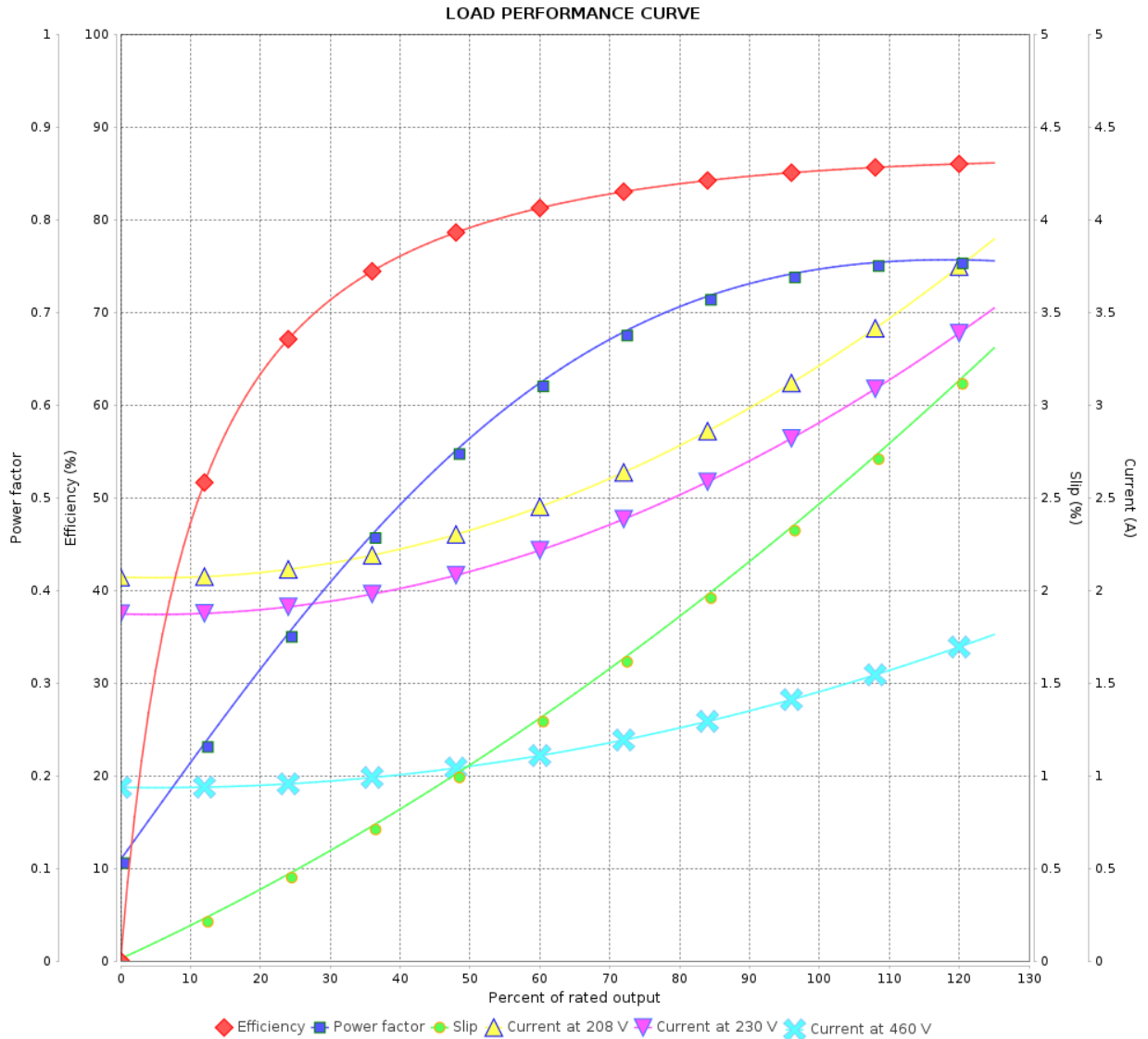
## Three Phase Induction Motor - Squirrel Cage



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

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

# LOAD PERFORMANCE CURVE

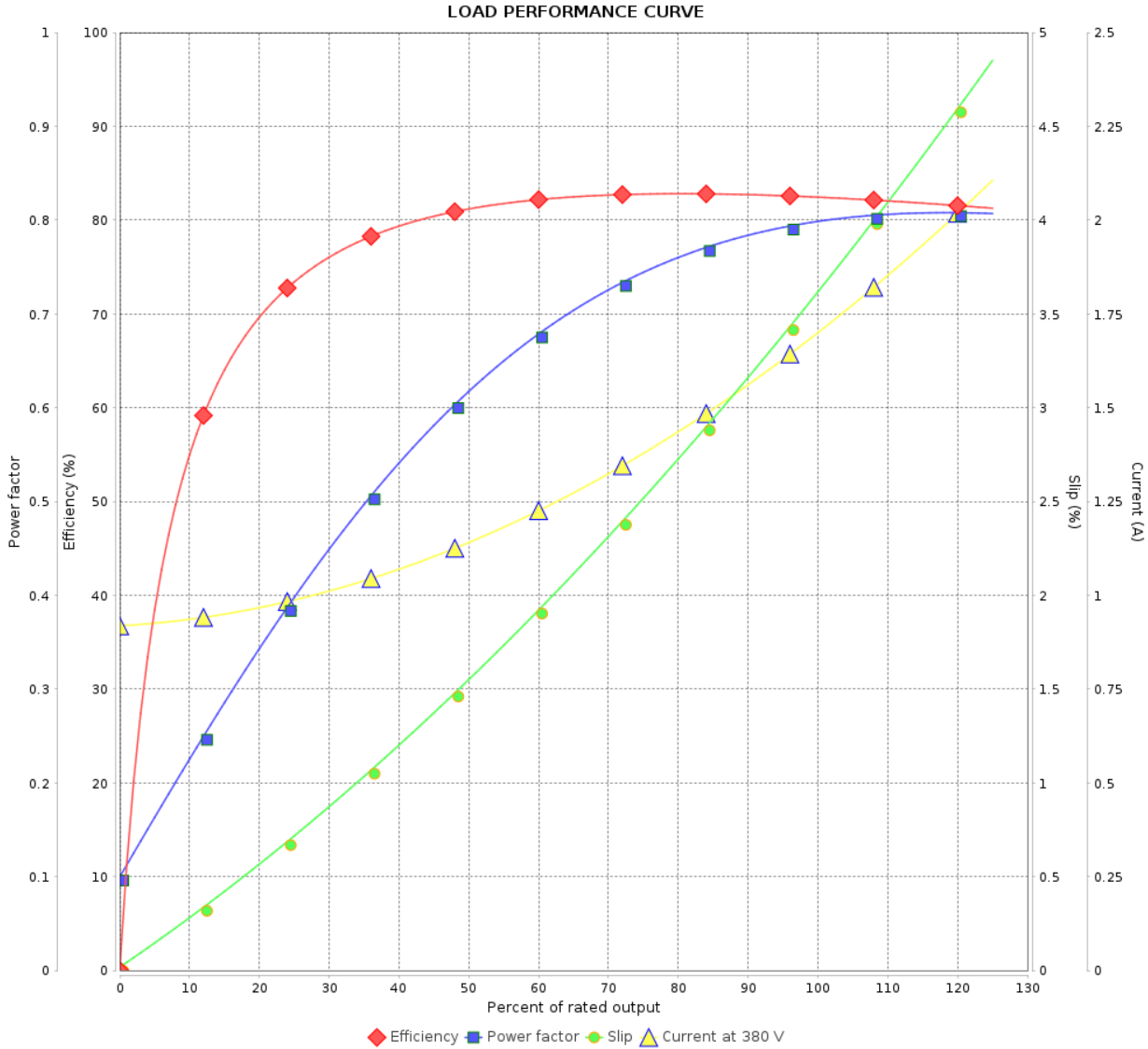
Three Phase Induction Motor - Squirrel Cage



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

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 4 / 6	Revision
Checked by				
Date	15/01/2024			

# LOAD PERFORMANCE CURVE

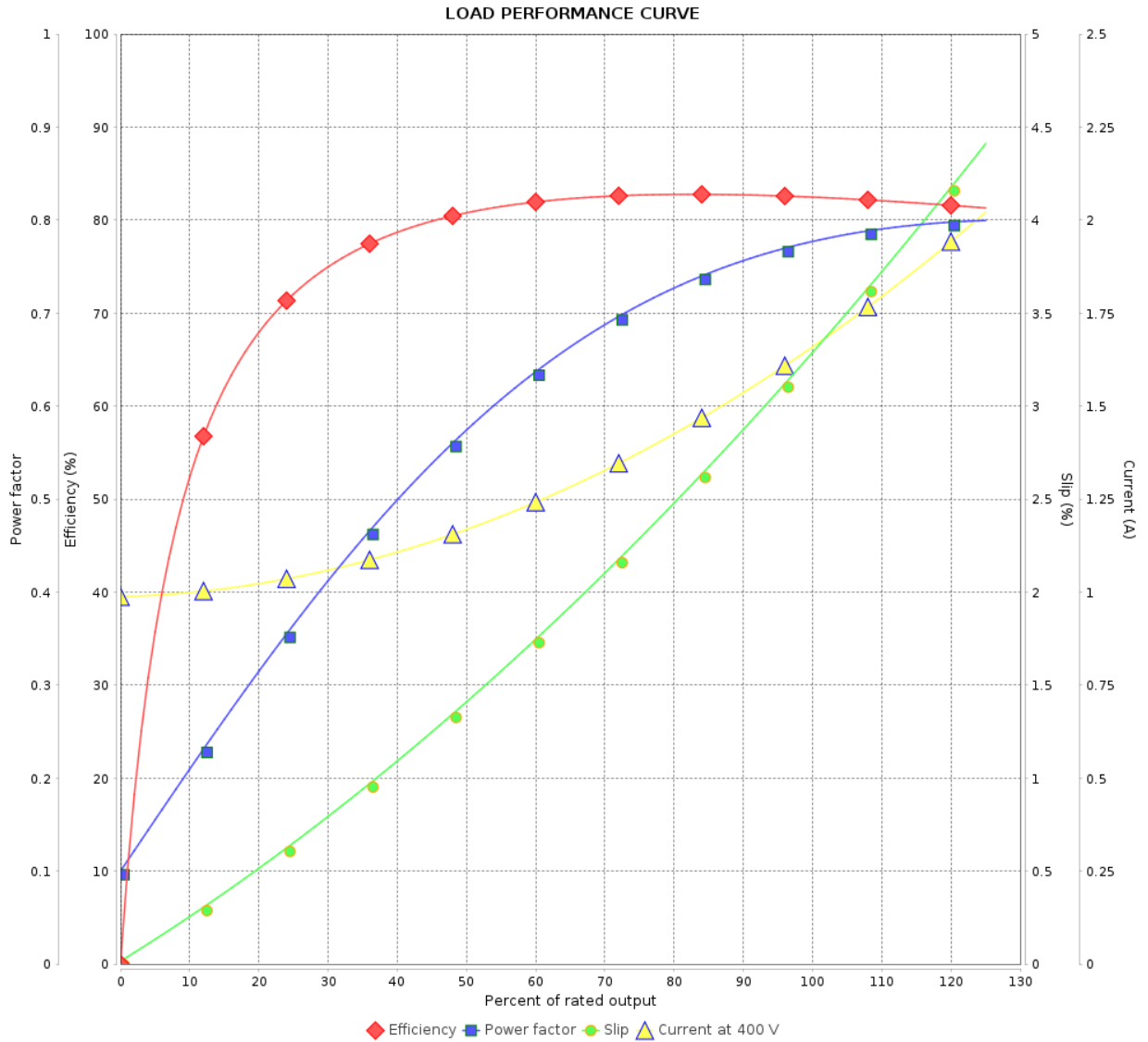
## Three Phase Induction Motor - Squirrel Cage



Customer : \_\_\_\_\_

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

Product code : 14255321



Performance : 400 V 50 Hz 4P IE3

Rated current : 1.68 A  
 LRC : 7.4  
 Rated torque : 0.501 kgfm  
 Locked rotor torque : 240 %  
 Breakdown torque : 280 %  
 Rated speed : 1450 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

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

# LOAD PERFORMANCE CURVE

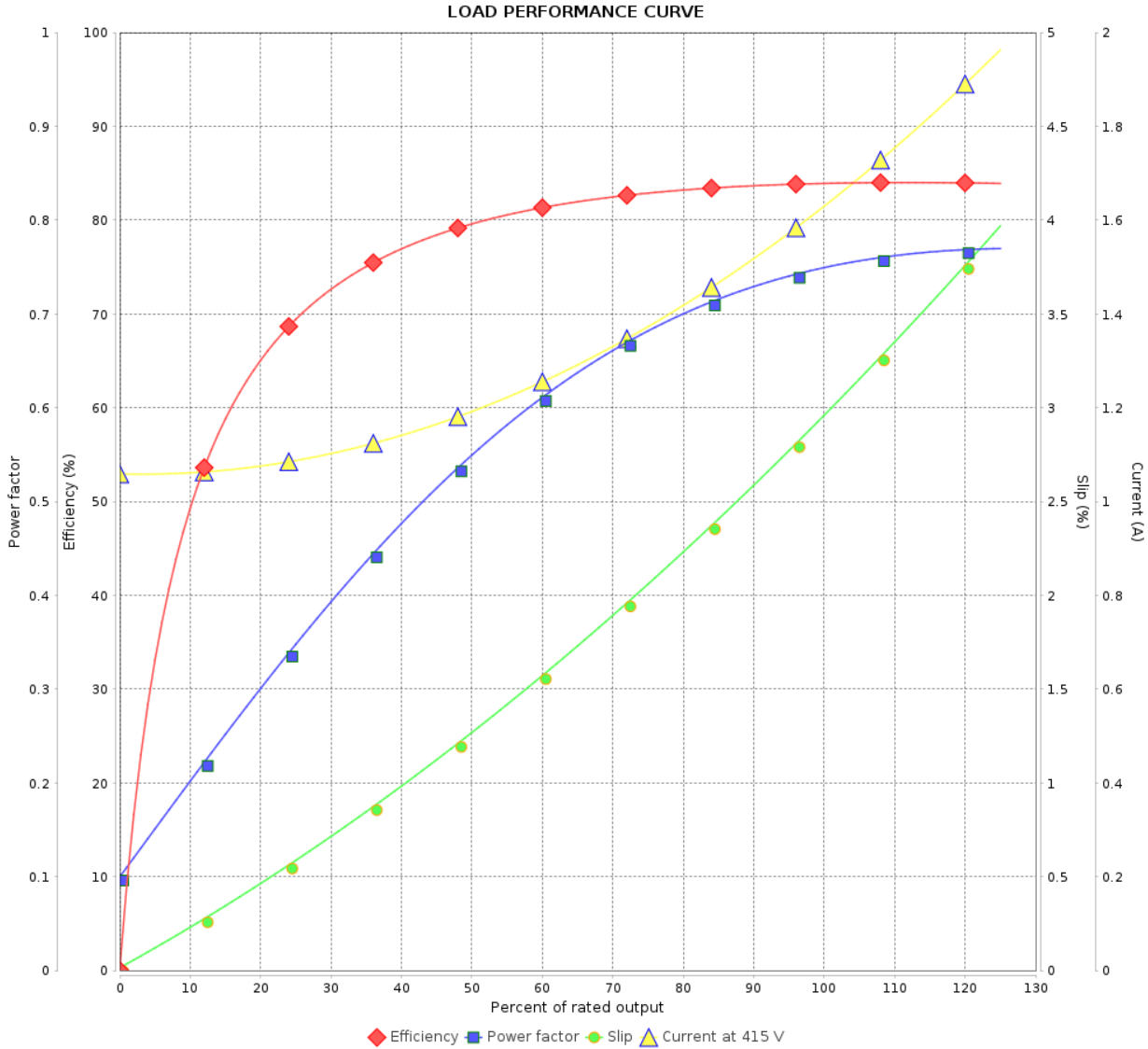
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W21 Explosion Proof NEMA 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

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