

# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W21 Explosion Proof NEMA Premium Efficiency Three-Phase Product code : 14337969

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> : 56.1 kg
Protection degree : IP55	Moment of inertia (J) : 0.0117 kgm <sup>2</sup>
Design : B	

Output [HP]	3	3	3	3
Poles	4	4	4	4
Frequency [Hz]	60	50	50	50
Rated voltage [V]	230/460	380	400	415
Rated current [A]	8.02/4.01	4.72	4.59	4.49
L. R. Amperes [A]	64.2/32.1	30.7	32.1	34.1
LRC [A]	8.0x(Code K)	6.5x(Code H)	7.0x(Code J)	7.6x(Code K)
No load current [A]	4.20/2.10	2.20	2.50	2.70
Rated speed [RPM]	1760	1450	1455	1460
Slip [%]	2.22	3.33	3.00	2.67
Rated torque [kgfm]	1.24	1.50	1.50	1.49
Locked rotor torque [%]	250	215	229	260
Breakdown torque [%]	320	250	260	290
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)	45s (cold) 25s (hot)	45s (cold) 25s (hot)	45s (cold) 25s (hot)
Noise level <sup>2</sup>	56.0 dB(A)	56.0 dB(A)	56.0 dB(A)	56.0 dB(A)
Efficiency (%)	25%	86.2	89.2	88.1
	50%	87.3	88.5	87.5
	75%	88.5	88.5	88.5
	100%	89.5	87.5	87.5
Power Factor	25%	0.35	0.38	0.34
	50%	0.59	0.63	0.59
	75%	0.71	0.75	0.71
	100%	0.77	0.81	0.79

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

Losses (%)	P1 (0,9;1,0)	11.0	13.4	13.4	12.2
	P2 (0,5;1,0)	8.7	10.6	10.6	9.6
	P3 (0,25;1,0)	8.3	10.1	10.1	9.2
	P4 (0,9;0,5)	6.4	7.8	7.8	7.1
	P5 (0,5;0,5)	4.2	5.1	5.1	4.7
	P6 (0,5;0,25)	3.2	3.9	3.9	3.6
	P7 (0,25;0,25)	2.3	2.8	2.8	2.6

	<u>Drive end</u>	<u>Non drive end</u>	Foundation loads
Bearing type :	6307 2RS	6206 2RS	Max. traction : 62 kgf
Sealing :	Oil Seal	Lip Seal	Max. compression : 118 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.

Rev.	Changes Summary	Performed	Checked	Date
Performed by				
Checked by				
Date	28/10/2024		Page 1 / 7	Revision

# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage



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

Notes  
USABLE @208V 8.65A SF 1.15 SFA 9.94A

Rev.	Changes Summary		Performed	Checked	Date
Performed by			Page 2 / 7		Revision
Checked by					
Date	28/10/2024				

# 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 3 / 7	Revision
Checked by					
Date	28/10/2024				

# LOAD PERFORMANCE CURVE

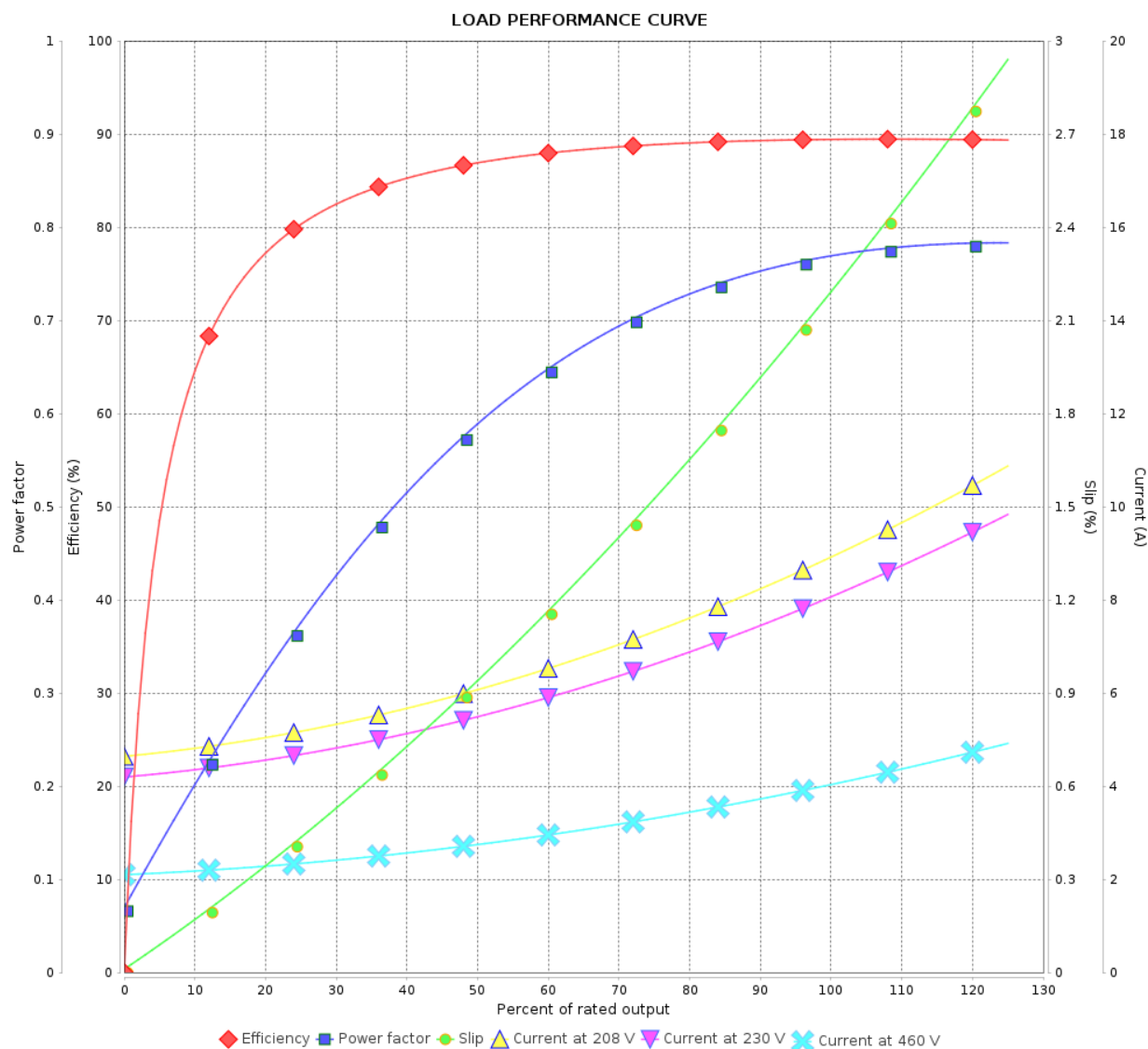
## Three Phase Induction Motor - Squirrel Cage



Customer :

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

Product code : 14337969



Performance : 230/460 V 60 Hz 4P

Rated current : 8.02/4.01 A  
LRC : 8.0  
Rated torque : 1.24 kgfm  
Locked rotor torque : 250 %  
Breakdown torque : 320 %  
Rated speed : 1760 rpm

Moment of inertia (J) : 0.0117 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 4 / 7	Revision
Checked by					
Date	28/10/2024				

# LOAD PERFORMANCE CURVE

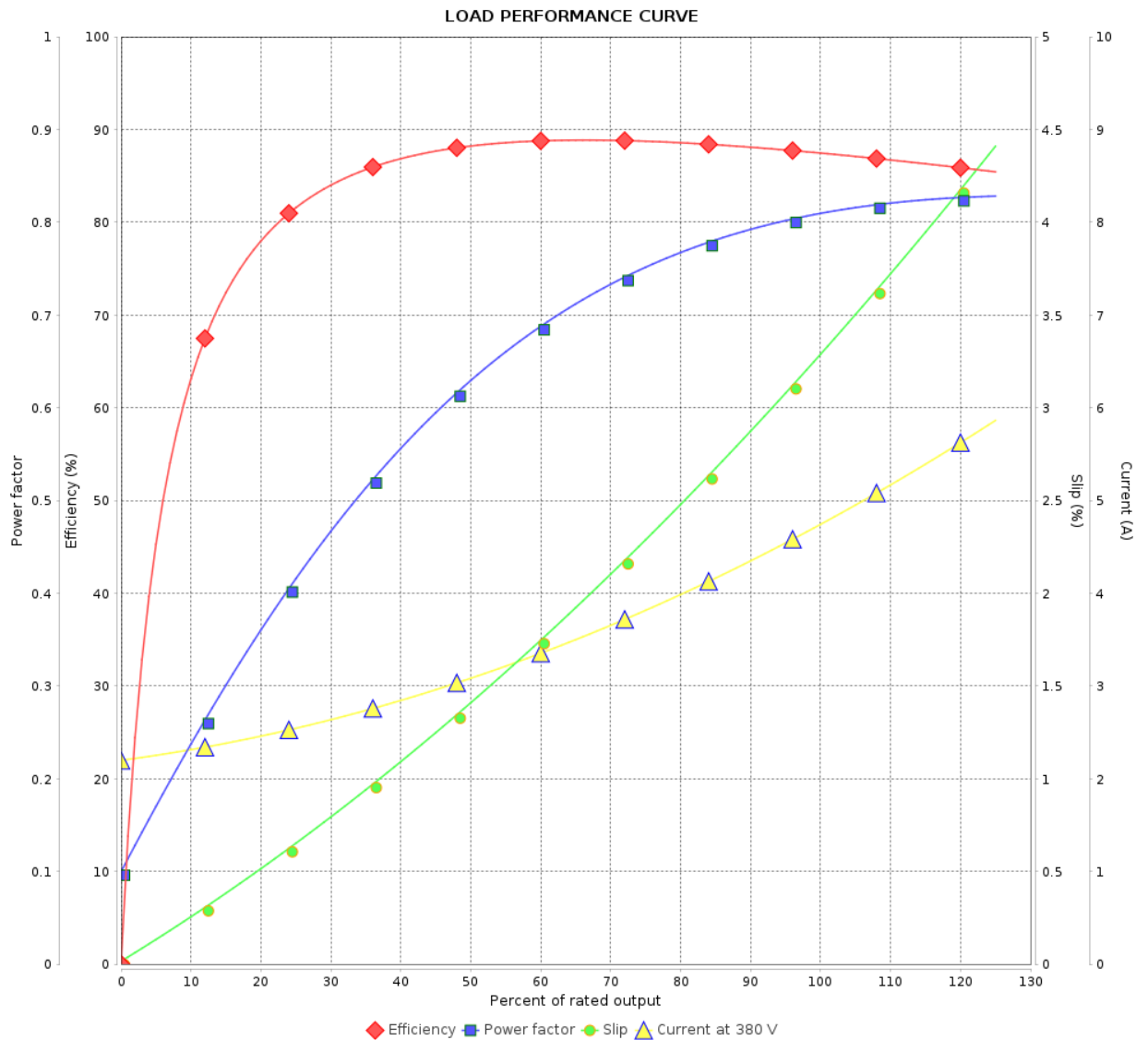
## Three Phase Induction Motor - Squirrel Cage



Customer :

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

Product code : 14337969



Performance : 380 V 50 Hz 4P IE3

Rated current : 4.72 A  
LRC : 6.5  
Rated torque : 1.50 kgfm  
Locked rotor torque : 215 %  
Breakdown torque : 250 %  
Rated speed : 1450 rpm

Moment of inertia (J) : 0.0117 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 5 / 7	Revision
Checked by					
Date	28/10/2024				

# LOAD PERFORMANCE CURVE

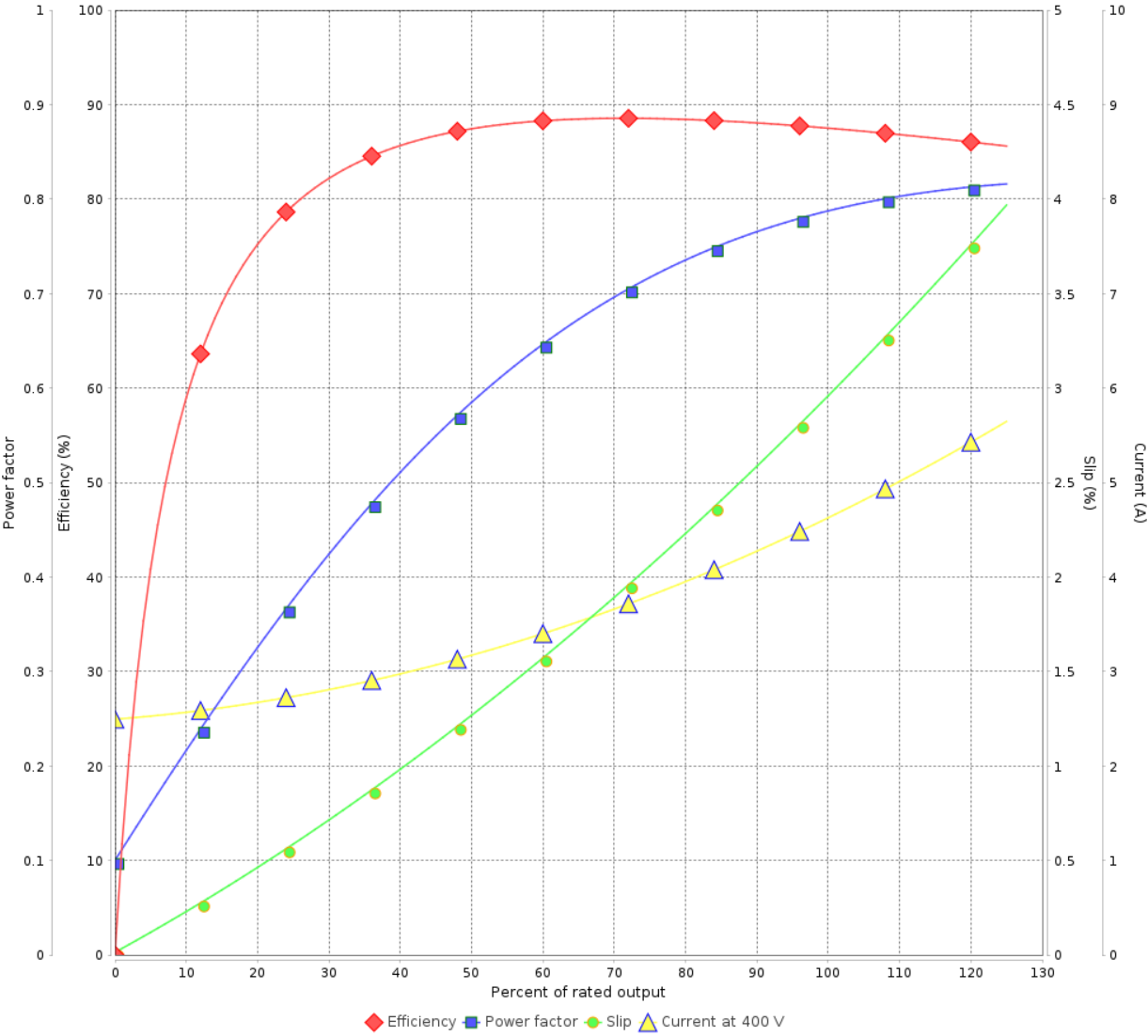
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W21 Explosion Proof NEMA Premium Efficiency Three-Phase      Product code : 14337969

LOAD PERFORMANCE CURVE



Performance : 400 V 50 Hz 4P IE3			
Rated current	: 4.59 A	Moment of inertia (J)	: 0.0117 kgm <sup>2</sup>
LRC	: 7.0	Duty cycle	: Cont.(S1)
Rated torque	: 1.50 kgfm	Insulation class	: F
Locked rotor torque	: 229 %	Service factor	: 1.00
Breakdown torque	: 260 %	Temperature rise	: 80 K
Rated speed	: 1455 rpm	Design	: B

Rev.	Changes Summary		Performed	Checked	Date
Performed by				Page 6 / 7	Revision
Checked by					
Date	28/10/2024				

# LOAD PERFORMANCE CURVE

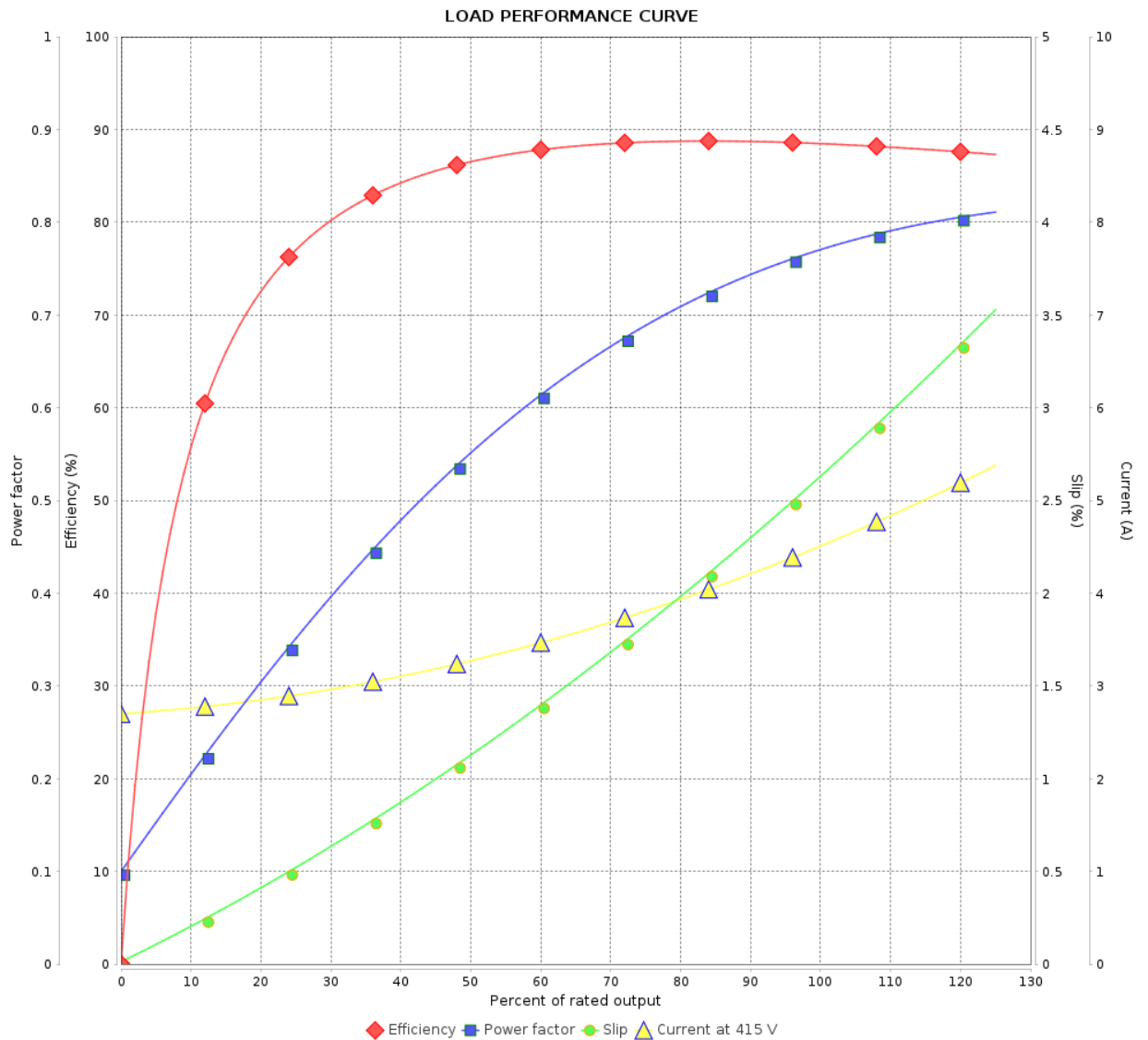
## Three Phase Induction Motor - Squirrel Cage



Customer :

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

Product code : 14337969



Performance : 415 V 50 Hz 4P IE3

Rated current	: 4.49 A	Moment of inertia (J)	: 0.0117 kgm <sup>2</sup>
LRC	: 7.6	Duty cycle	: Cont.(S1)
Rated torque	: 1.49 kgfm	Insulation class	: F
Locked rotor torque	: 260 %	Service factor	: 1.00
Breakdown torque	: 290 %	Temperature rise	: 80 K
Rated speed	: 1460 rpm	Design	: B

Rev.	Changes Summary	Performed	Checked	Date
Performed by		Page 7 / 7Revision		
Checked by				
Date	28/10/2024			