

# DATA SHEET



## Three Phase Induction Motor - Squirrel Cage

Customer :					
Product line		: W21 Explosion Proof NEMA Premium Efficiency Three-Phase		Product code : 14443177	
Frame	: 284TS	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>	: 210 kg		
Protection degree	: IP55	Moment of inertia (J)	: 0.1086 kgm <sup>2</sup>		
Design	: B				
Output [HP]	25	25	25	25	
Poles	2	2	2	2	
Frequency [Hz]	60	50	50	50	
Rated voltage [V]	230/460	380	400	415	
Rated current [A]	57.1/28.6	34.7	33.1	31.7	
L. R. Amperes [A]	383/191	184	195	275	
LRC [A]	6.7x(Code G)	5.3x(Code E)	5.9x(Code F)	8.7x(Code J)	
No load current [A]	12.6/6.30	6.00	6.50	7.00	
Rated speed [RPM]	3545	2920	2930	2940	
Slip [%]	1.53	2.67	2.33	2.00	
Rated torque [kgfm]	5.12	6.21	6.19	6.17	
Locked rotor torque [%]	240	180	210	229	
Breakdown torque [%]	240	180	200	220	
Service factor	1.15	1.00	1.00	1.00	
Temperature rise	80 K	80 K	80 K	80 K	
Locked rotor time	59s (cold) 33s (hot)	45s (cold) 25s (hot)	45s (cold) 25s (hot)	25s (cold) 14s (hot)	
Noise level <sup>2</sup>	75.0 dB(A)	70.0 dB(A)	70.0 dB(A)	70.0 dB(A)	
Efficiency (%)	25%	91.5	92.1	91.5	90.9
	50%	91.7	91.7	91.7	91.7
	75%	92.4	91.7	91.7	91.7
	100%	92.4	91.0	91.7	92.4
Power Factor	25%	0.58	0.64	0.61	0.57
	50%	0.78	0.82	0.80	0.77
	75%	0.85	0.87	0.86	0.85
	100%	0.88	0.89	0.88	0.88
Losses at normative operating points (speed;torque), in percentage of rated output power					
Losses (%)	P1 (0,9;1,0)	7.8	9.3	8.6	7.8
	P2 (0,5;1,0)	5.9	7.1	6.5	5.9
	P3 (0,25;1,0)	5.0	6.0	5.5	5.0
	P4 (0,9;0,5)	3.7	4.5	4.1	3.7
	P5 (0,5;0,5)	2.1	2.5	2.3	2.1
	P6 (0,5;0,25)	1.2	1.5	1.4	1.2
	P7 (0,25;0,25)	0.7	0.8	0.8	0.7
Bearing type	: Drive end 6311 C3	Non drive end 6211 C3	Foundation loads		
Sealing	: Oil Seal	Lip Seal	Max. traction	: 89 kgf	
Lubrication interval	: 11517 h	14226 h	Max. compression	: 299 kgf	
Lubricant amount	: 18 g	11 g			
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				Page	Revision
Date	15/01/2024			1 / 7	

# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage



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

Notes  
USABLE @208V 62.8A SF 1.10 SFA 69.0A

Rev.	Changes Summary	Performed	Checked	Date
Performed by				
Checked by			Page	Revision
Date	15/01/2024		2 / 7	

# 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
Checked by				
Date	15/01/2024			
				Revision

# LOAD PERFORMANCE CURVE

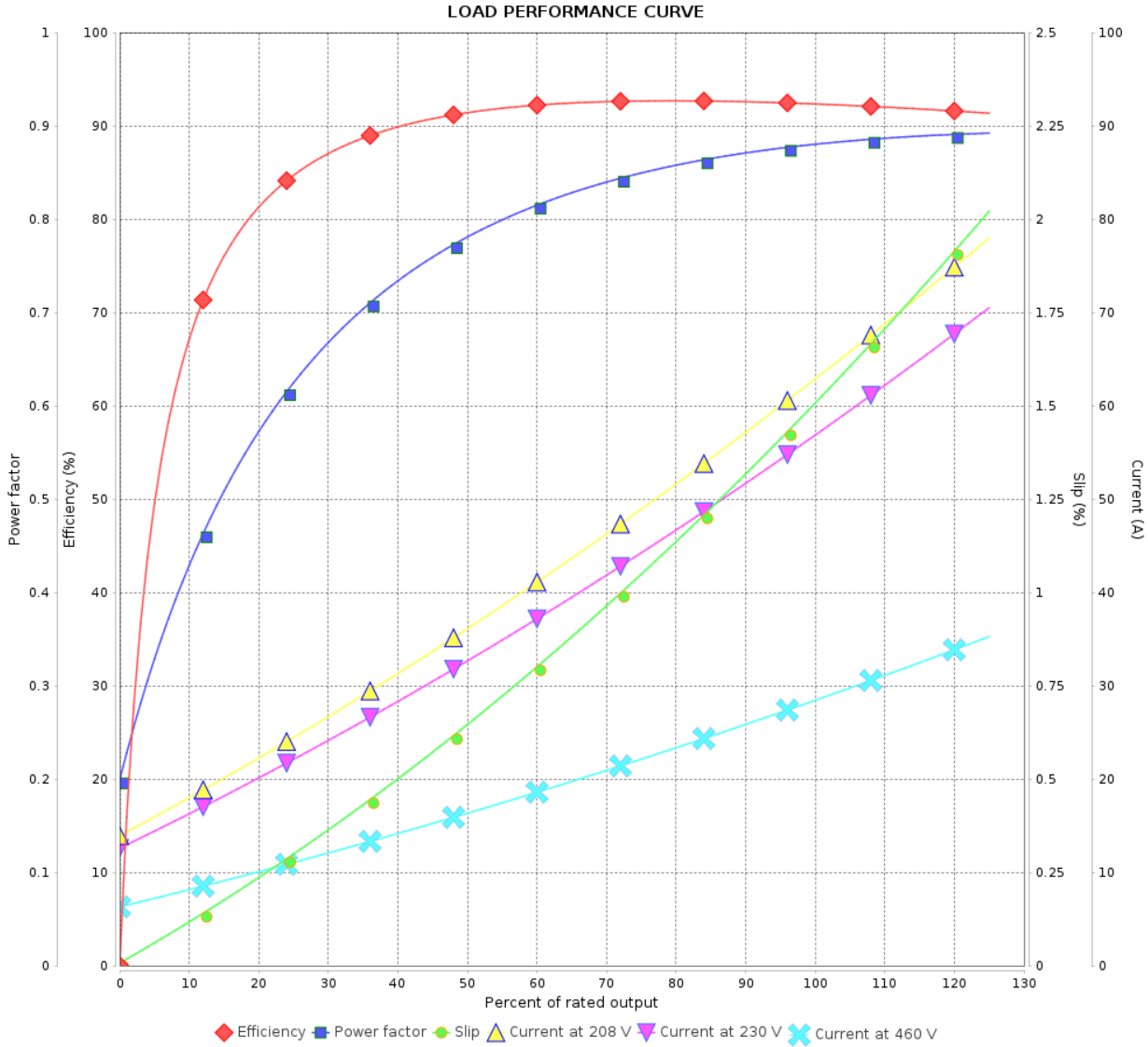
Three Phase Induction Motor - Squirrel Cage



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

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

Product code : 14443177



Performance : 230/460 V 60 Hz 2P

Rated current : 57.1/28.6 A  
 LRC : 6.7  
 Rated torque : 5.12 kgfm  
 Locked rotor torque : 240 %  
 Breakdown torque : 240 %  
 Rated speed : 3545 rpm

Moment of inertia (J) : 0.1086 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

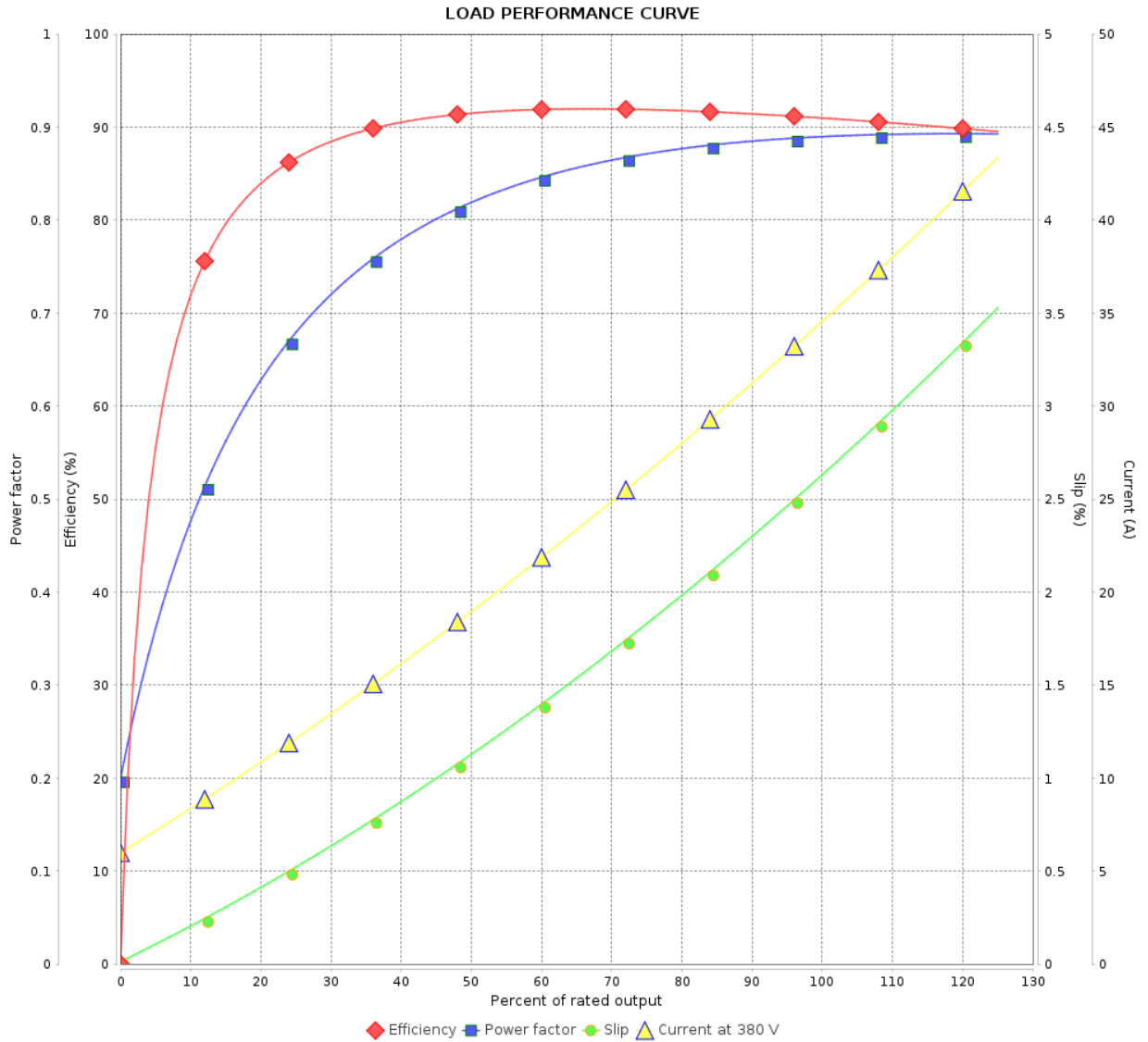
## Three Phase Induction Motor - Squirrel Cage



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

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

Product code : 14443177



Performance : 380 V 50 Hz 2P IE2

Rated current : 34.7 A  
 LRC : 5.3  
 Rated torque : 6.21 kgfm  
 Locked rotor torque : 180 %  
 Breakdown torque : 180 %  
 Rated speed : 2920 rpm

Moment of inertia (J) : 0.1086 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

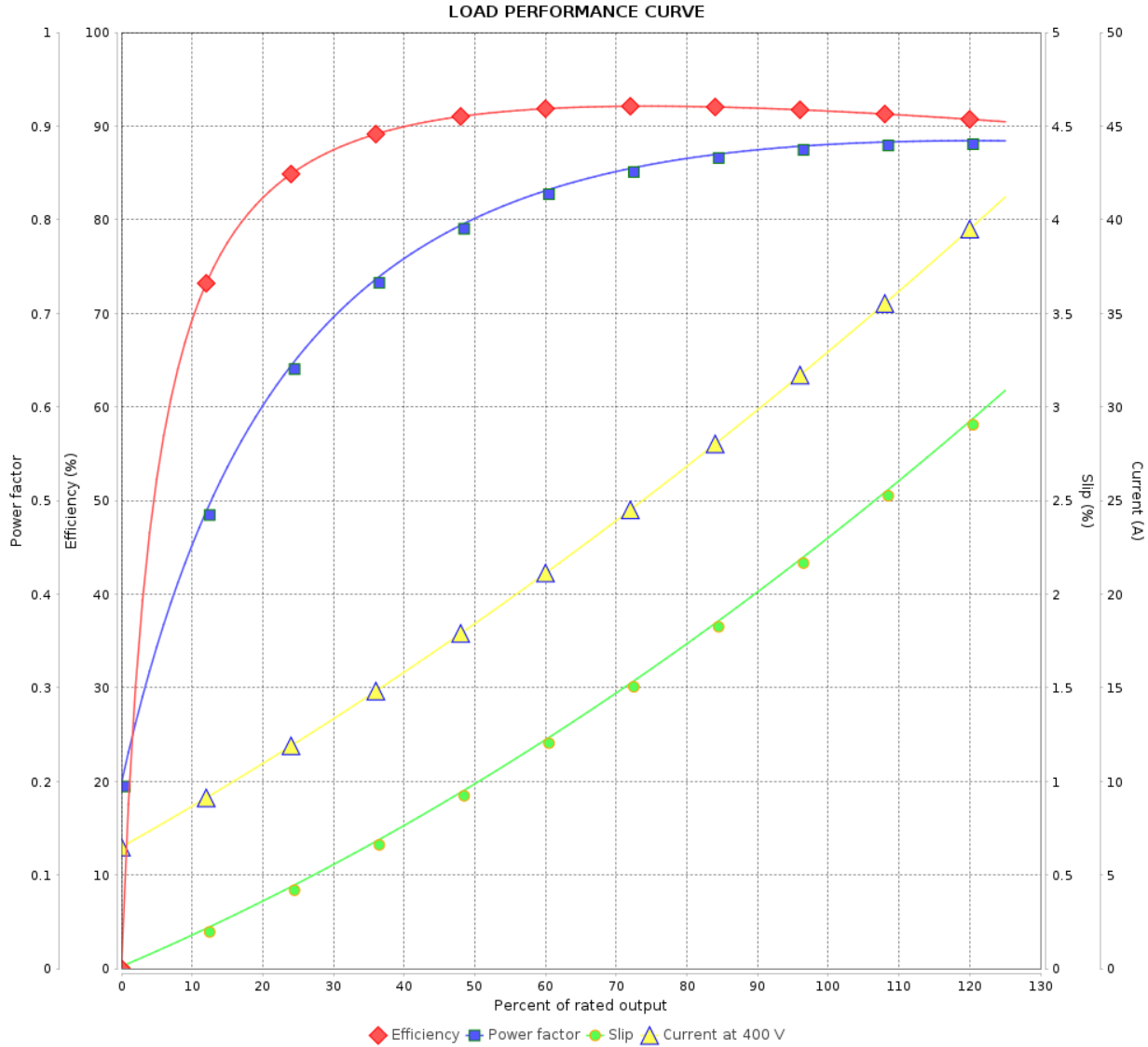
Three Phase Induction Motor - Squirrel Cage



Customer :

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

Product code : 14443177



Performance : 400 V 50 Hz 2P IE2

Rated current : 33.1 A  
LRC : 5.9  
Rated torque : 6.19 kgfm  
Locked rotor torque : 210 %  
Breakdown torque : 200 %  
Rated speed : 2930 rpm

Moment of inertia (J) : 0.1086 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

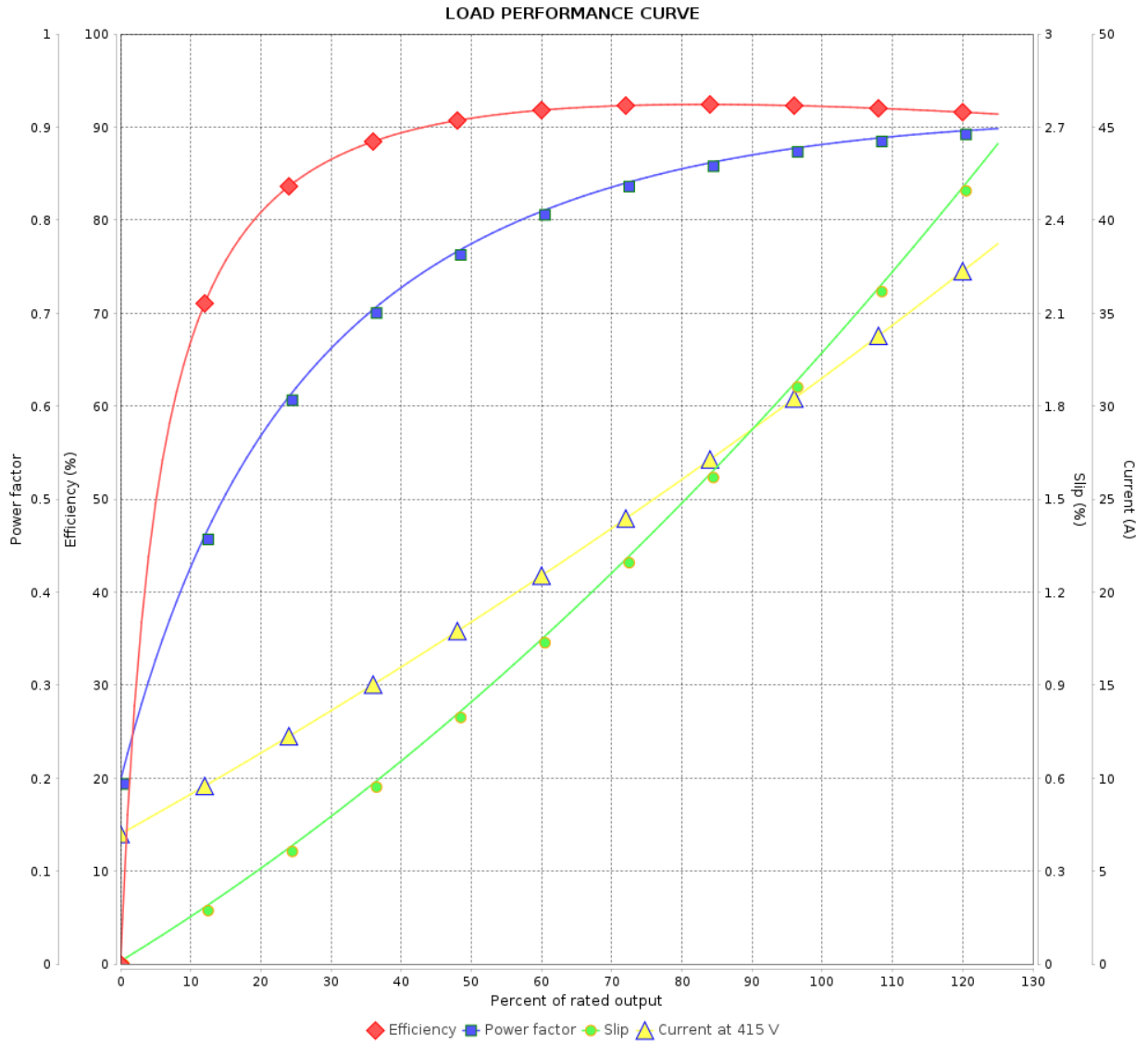
## Three Phase Induction Motor - Squirrel Cage



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

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

Product code : 14443177



Performance : 415 V 50 Hz 2P IE3

Rated current : 31.7 A  
 LRC : 8.7  
 Rated torque : 6.17 kgfm  
 Locked rotor torque : 229 %  
 Breakdown torque : 220 %  
 Rated speed : 2940 rpm

Moment of inertia (J) : 0.1086 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				
Checked by				
Date				
			Page	Revision
			7 / 7	