

# DATA SHEET



## Three Phase Induction Motor - Squirrel Cage

Customer :						
Product line : IE3 Three-Phase	Product code : 12863073					
Frame : 250S/M Output : 55 kW (75 HP) Poles : 4 Frequency : 50 Hz Rated voltage : 400/690 V Rated current : 98.7/57.2 A L. R. Amperes : 760/441 A LRC : 7.7 No load current : 39.0/22.6 A Rated speed : 1482 rpm Slip : 1.20 % Rated torque : 36.1 kgfm Locked rotor torque : 270 % Breakdown torque : 300 % Insulation class : F Service factor : 1.00 Moment of inertia (J) : 1.05 kgm <sup>2</sup> Design : N	Locked rotor time : 28s (cold) 16s (hot) Temperature rise : 80 K Duty cycle : S1 Ambient temperature : -20°C to +40°C Altitude : 1000 m.a.s.l. Protection degree : IP55 Cooling method : IC411 - TEFC Mounting : B3T Rotation <sup>1</sup> : Both (CW and CCW) Noise level <sup>2</sup> : 64.0 dB(A) Starting method : Direct On Line Approx. weight <sup>3</sup> : 456 kg					
Output            50%        75%        100% Efficiency (%)    94.3        94.6        94.6 Power Factor    0.69        0.80        0.85	Foundation loads Max. traction        : 777 kgf Max. compression   : 1233 kgf					
Losses at normative operating points (speed;torque), in percentage of rated output power						
P1 (0,9;1,0)	P2 (0,5;1,0)	P3 (0,25;1,0)	P4 (0,9;0,5)	P5 (0,5;0,5)	P6 (0,5;0,25)	P7 (0,25;0,25)
5.5	4.6	4.6	2.5	1.7	1.1	0.7
		<u>Drive end</u>		<u>Non drive end</u>		
Bearing type :		6314 C3		6314 C3		
Sealing :		WSeal		WSeal		
Lubrication interval :		14000 h		14000 h		
Lubricant amount :		27 g		27 g		
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 IEC 60034-1.			
Rev.	Changes Summary			Performed	Checked	Date
Performed by						
Checked by					Page	Revision
Date	24/10/2022				1 / 6	

# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage



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

### Thermal protection

ID	Application	Type	Quantity	Sensing Temperature
1	Winding	Thermistor - 2 wires	1 x Phase	155 °C

Rev.	Changes Summary	Performed	Checked	Date
Performed by				
Checked by			Page	Revision
Date	24/10/2022		2 / 6	

# TORQUE AND CURRENT VS SPEED CURVE

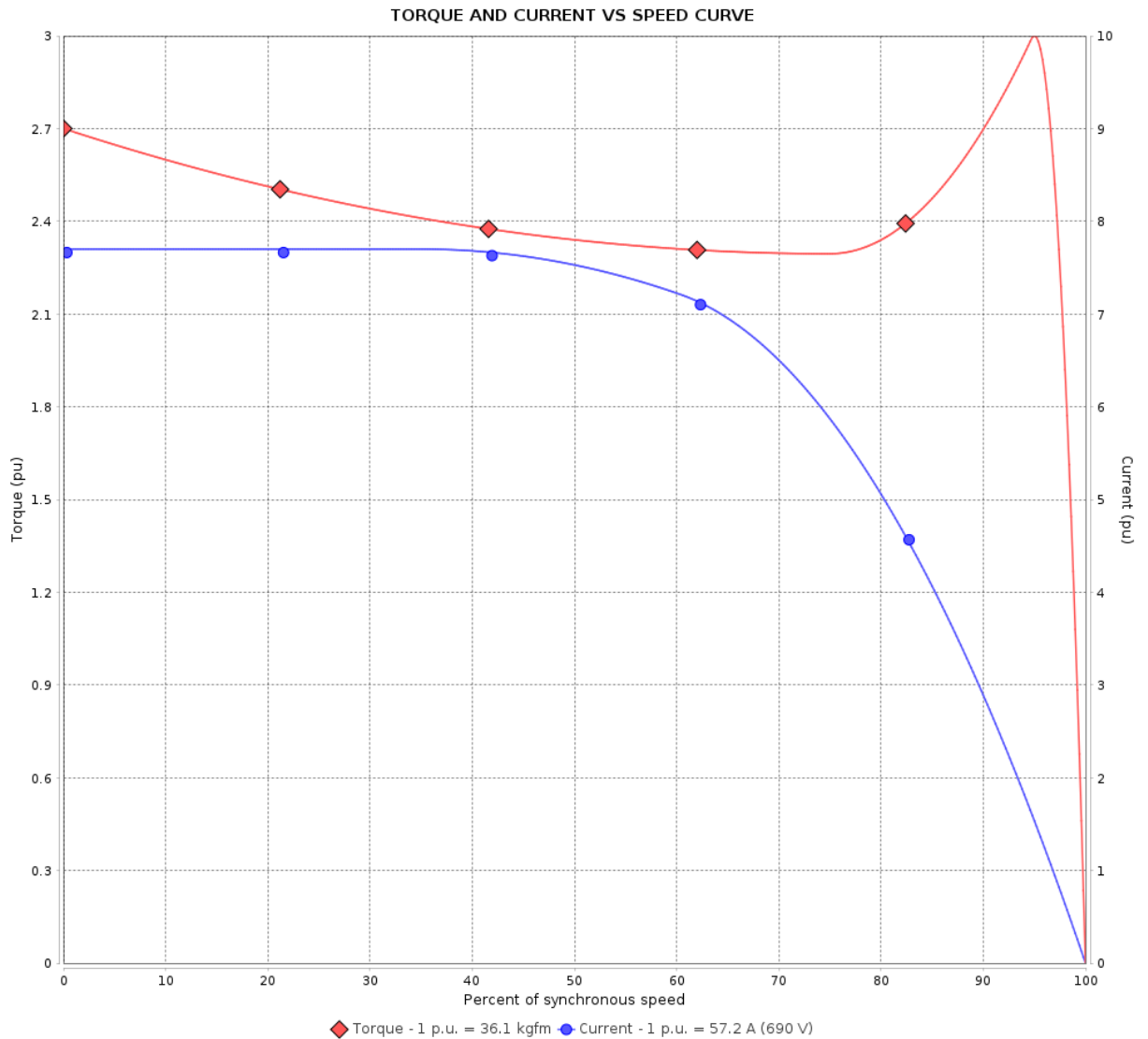


## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : IE3 Three-Phase

Product code : 12863073



Performance : 400/690 V 50 Hz 4P

Rated current	: 98.7/57.2 A	Moment of inertia (J)	: 1.05 kgm <sup>2</sup>
LRC	: 7.7	Duty cycle	: S1
Rated torque	: 36.1 kgfm	Insulation class	: F
Locked rotor torque	: 270 %	Service factor	: 1.00
Breakdown torque	: 300 %	Temperature rise	: 80 K
Rated speed	: 1482 rpm	Design	: N

Locked rotor time : 28s (cold) 16s (hot)

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page	Revision
Checked by				
Date	24/10/2022			
			3 / 6	

# LOAD PERFORMANCE CURVE

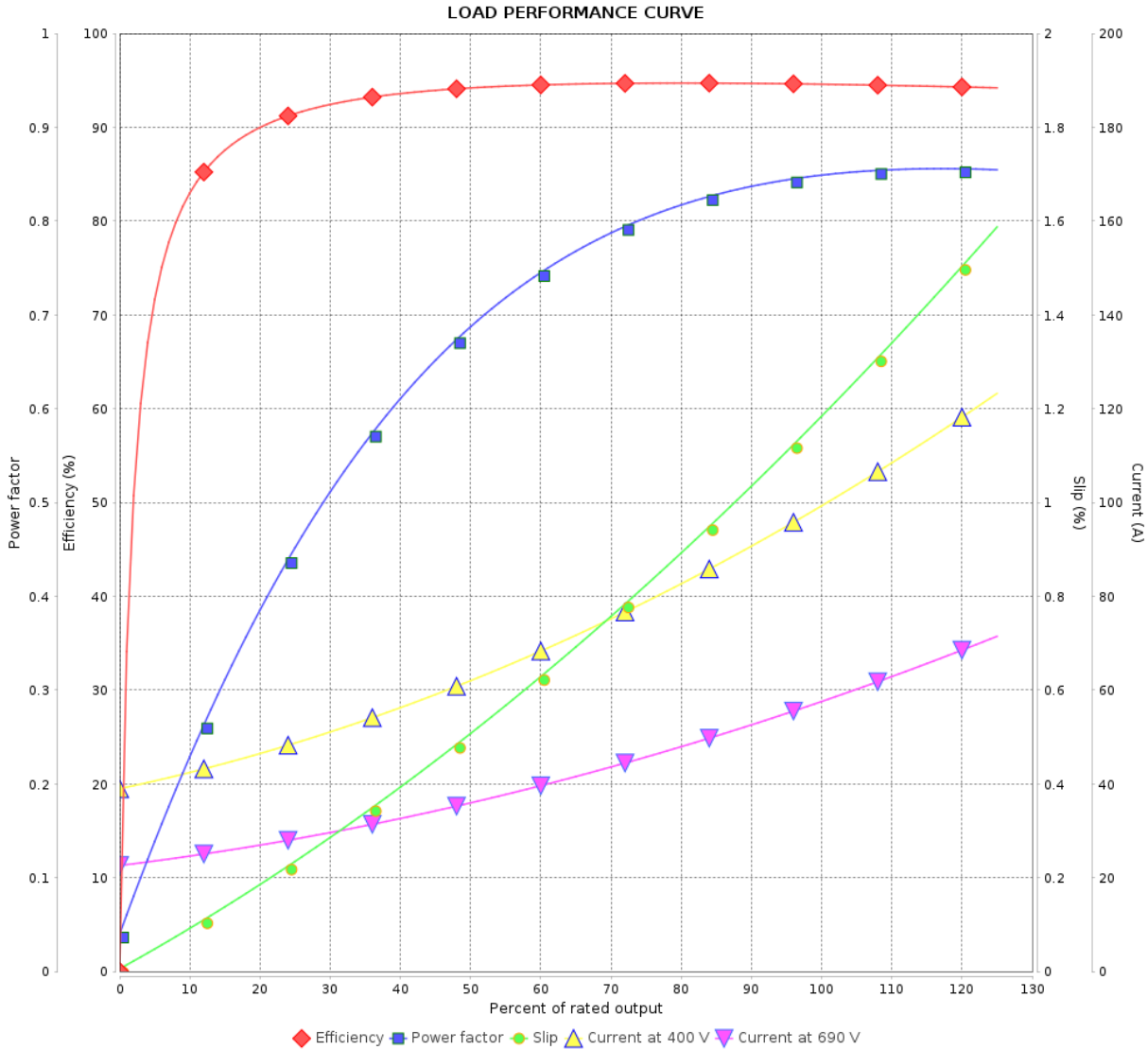
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : IE3 Three-Phase

Product code : 12863073



Performance : 400/690 V 50 Hz 4P

Rated current : 98.7/57.2 A  
 LRC : 7.7  
 Rated torque : 36.1 kgfm  
 Locked rotor torque : 270 %  
 Breakdown torque : 300 %  
 Rated speed : 1482 rpm

Moment of inertia (J) : 1.05 kgm<sup>2</sup>  
 Duty cycle : S1  
 Insulation class : F  
 Service factor : 1.00  
 Temperature rise : 80 K  
 Design : N

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

# THERMAL LIMIT CURVE

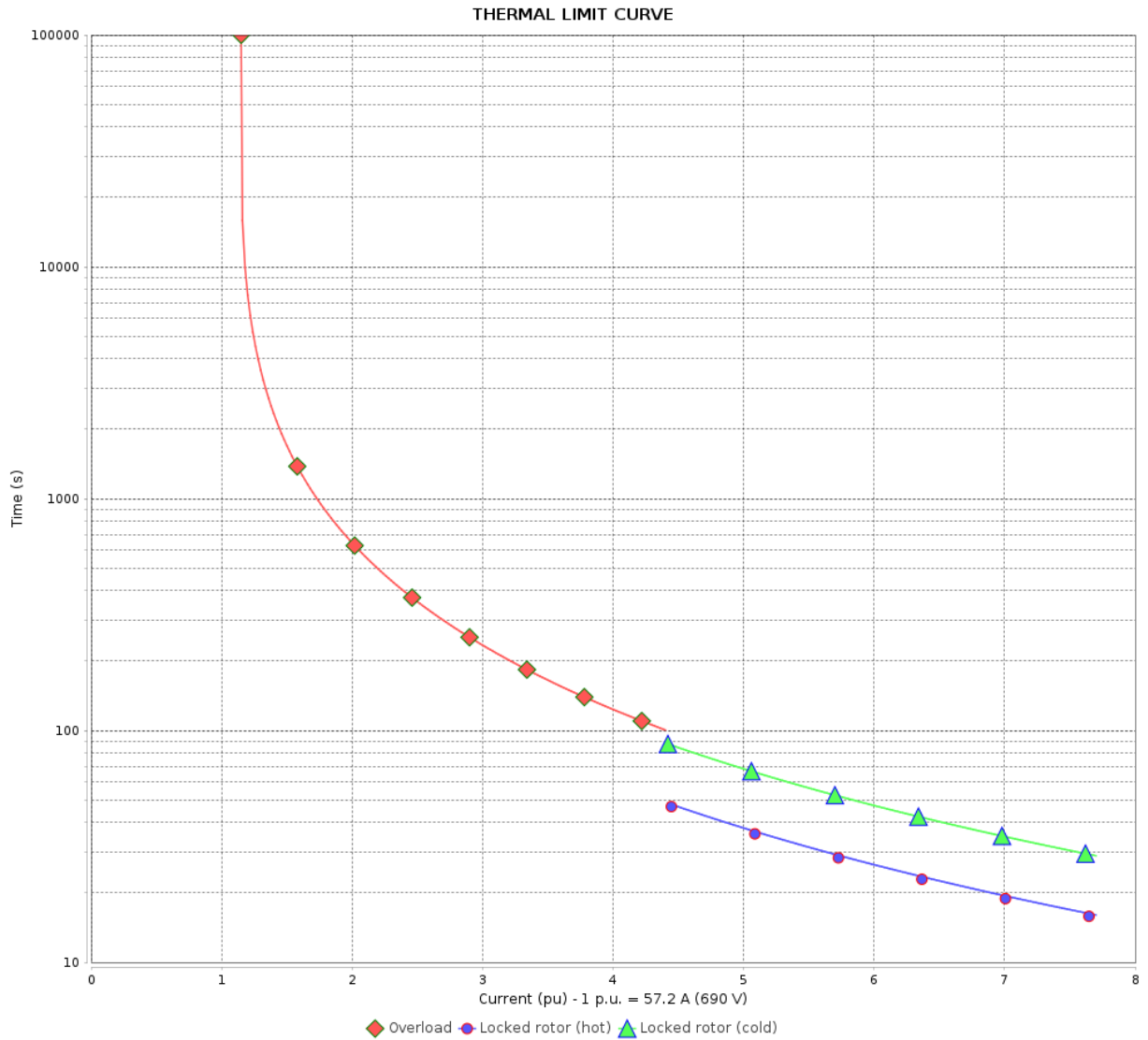
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : IE3 Three-Phase

Product code : 12863073



Performance : 400/690 V 50 Hz 4P

Rated current : 98.7/57.2 A  
 LRC : 7.7  
 Rated torque : 36.1 kgfm  
 Locked rotor torque : 270 %  
 Breakdown torque : 300 %  
 Rated speed : 1482 rpm

Moment of inertia (J) : 1.05 kgm<sup>2</sup>  
 Duty cycle : S1  
 Insulation class : F  
 Service factor : 1.00  
 Temperature rise : 80 K  
 Design : N

Heating constant

Cooling constant

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 5 / 6	Revision
Checked by				
Date	24/10/2022			

# VFD OPERATION CURVE

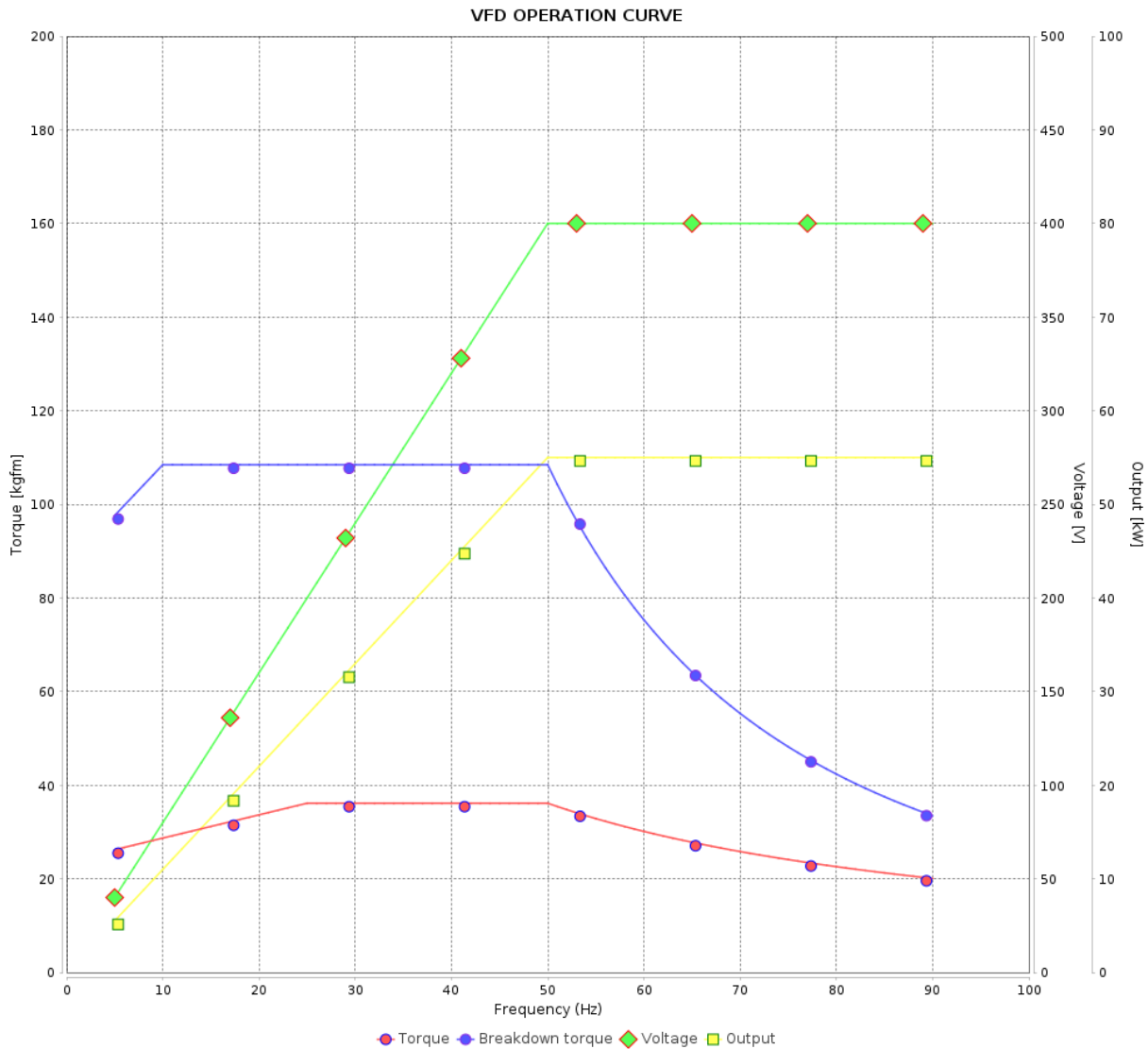
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : IE3 Three-Phase

Product code : 12863073



Performance : 400/690 V 50 Hz 4P

Rated current : 98.7/57.2 A  
 LRC : 7.7  
 Rated torque : 36.1 kgfm  
 Locked rotor torque : 270 %  
 Breakdown torque : 300 %  
 Rated speed : 1482 rpm

Moment of inertia (J) : 1.05 kgm<sup>2</sup>  
 Duty cycle : S1  
 Insulation class : F  
 Service factor : 1.00  
 Temperature rise : 80 K  
 Design : N

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 6 / 6	Revision
Checked by				
Date	24/10/2022			