

# DATA SHEET



## Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : W20 Three-Phase Product code : 17700186

Frame	: 90S/L	Locked rotor time	: 18s (cold) 10s (hot)
Output	: 2.2 kW (3 HP)	Temperature rise	: 80 K
Poles	: 2	Duty cycle	: S1
Frequency	: 50 Hz	Ambient temperature	: -20°C to +40°C
Rated voltage	: 230/400 V	Altitude	: 1000 m.a.s.l.
Rated current	: 7.57/4.35 A	Protection degree	: IP55
L. R. Amperes	: 53.0/30.5 A	Cooling method	: IC411 - TEFC
LRC	: 7.0	Mounting	: B3T
No load current	: 3.69/2.12 A	Rotation <sup>1</sup>	: Both (CW and CCW)
Rated speed	: 2855 rpm	Noise level <sup>2</sup>	: 62.0 dB(A)
Slip	: 4.83 %	Starting method	: Direct On Line
Rated torque	: 7.36 Nm	Approx. weight <sup>3</sup>	: 19.2 kg
Locked rotor torque	: 340 %		
Breakdown torque	: 340 %		
Insulation class	: F		
Service factor	: 1.00		
Moment of inertia (J)	: 0.0025 kgm <sup>2</sup>		
Design	: N		

Output	50%	75%	100%	Foundation loads	
Efficiency (%)	84.2	85.1	85.9	Max. traction	: 621 N
Power Factor	0.67	0.79	0.85	Max. compression	: 809 N

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)
15.6	13.5	13.3	7.4	5.1	3.4	2.4

	Drive end	Non drive end
Bearing type	: 6205 ZZ	: 6204 ZZ
Sealing	: V'Ring	: V'Ring
Lubrication interval	: -	: -
Lubricant amount	: -	: -
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	25/11/2025		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	25/11/2025		2 / 6	

# TORQUE AND CURRENT VS SPEED CURVE

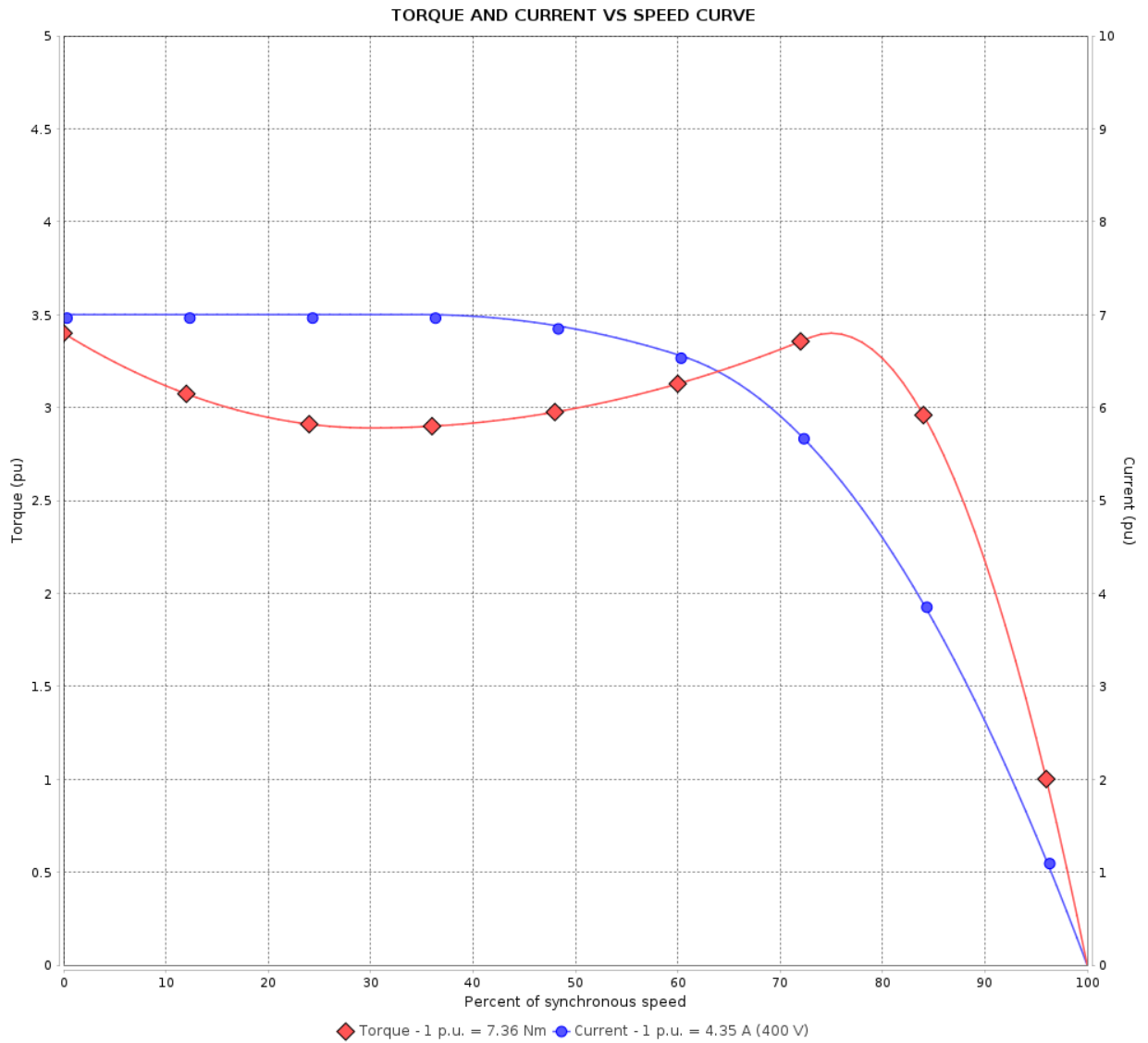
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W20 Three-Phase

Product code : 17700186



Performance : 230/400 V 50 Hz 2P

Rated current	: 7.57/4.35 A	Moment of inertia (J)	: 0.0025 kgm <sup>2</sup>
LRC	: 7.0	Duty cycle	: S1
Rated torque	: 7.36 Nm	Insulation class	: F
Locked rotor torque	: 340 %	Service factor	: 1.00
Breakdown torque	: 340 %	Temperature rise	: 80 K
Rated speed	: 2855 rpm	Design	: N

Locked rotor time : 18s (cold) 10s (hot)

Rev.	Changes Summary	Performed	Checked	Date
Performed by			Page 3 / 6	Revision
Checked by				
Date	25/11/2025			

# LOAD PERFORMANCE CURVE

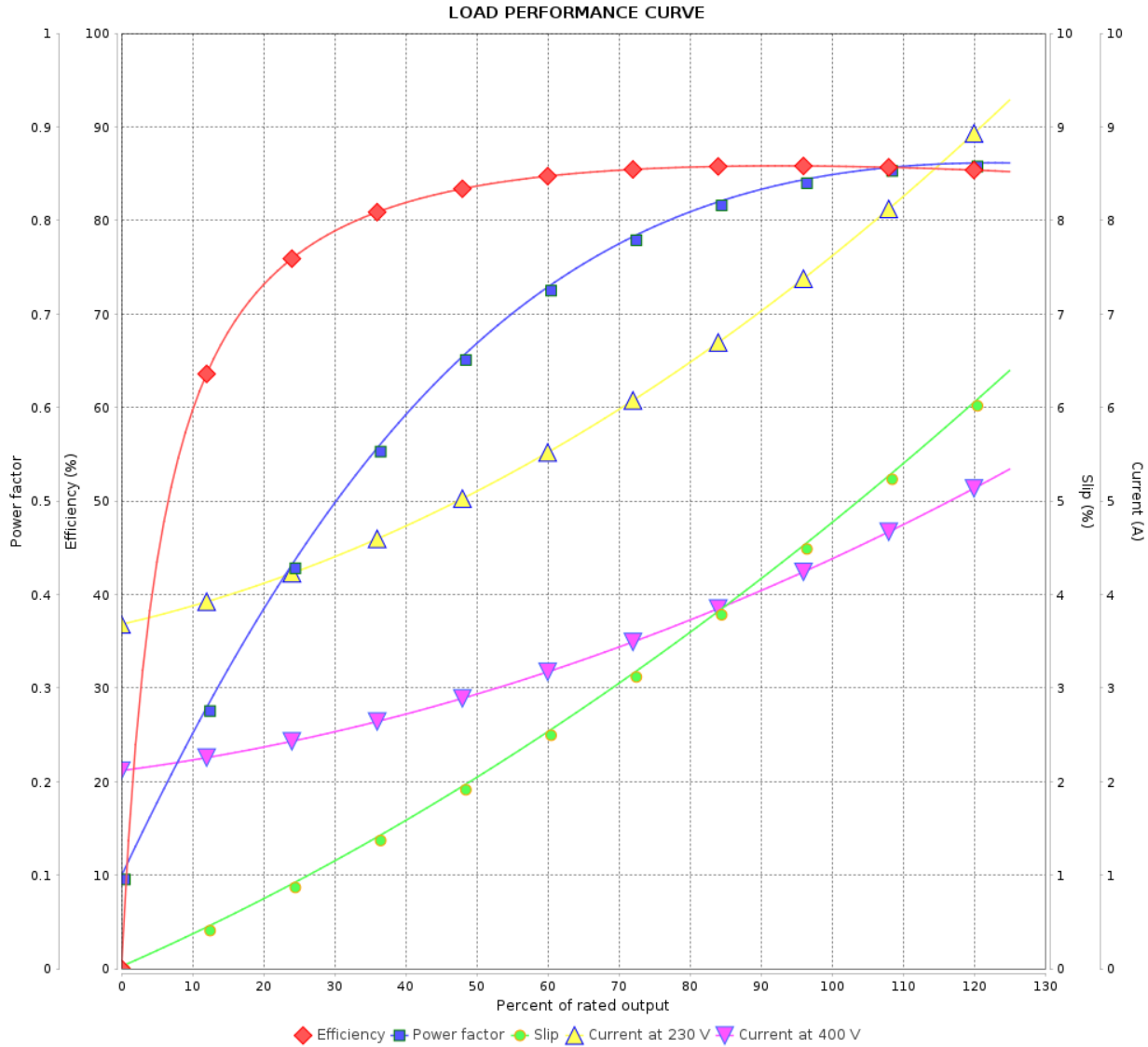
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W20 Three-Phase

Product code : 17700186



Performance : 230/400 V 50 Hz 2P

Rated current : 7.57/4.35 A  
 LRC : 7.0  
 Rated torque : 7.36 Nm  
 Locked rotor torque : 340 %  
 Breakdown torque : 340 %  
 Rated speed : 2855 rpm

Moment of inertia (J) : 0.0025 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

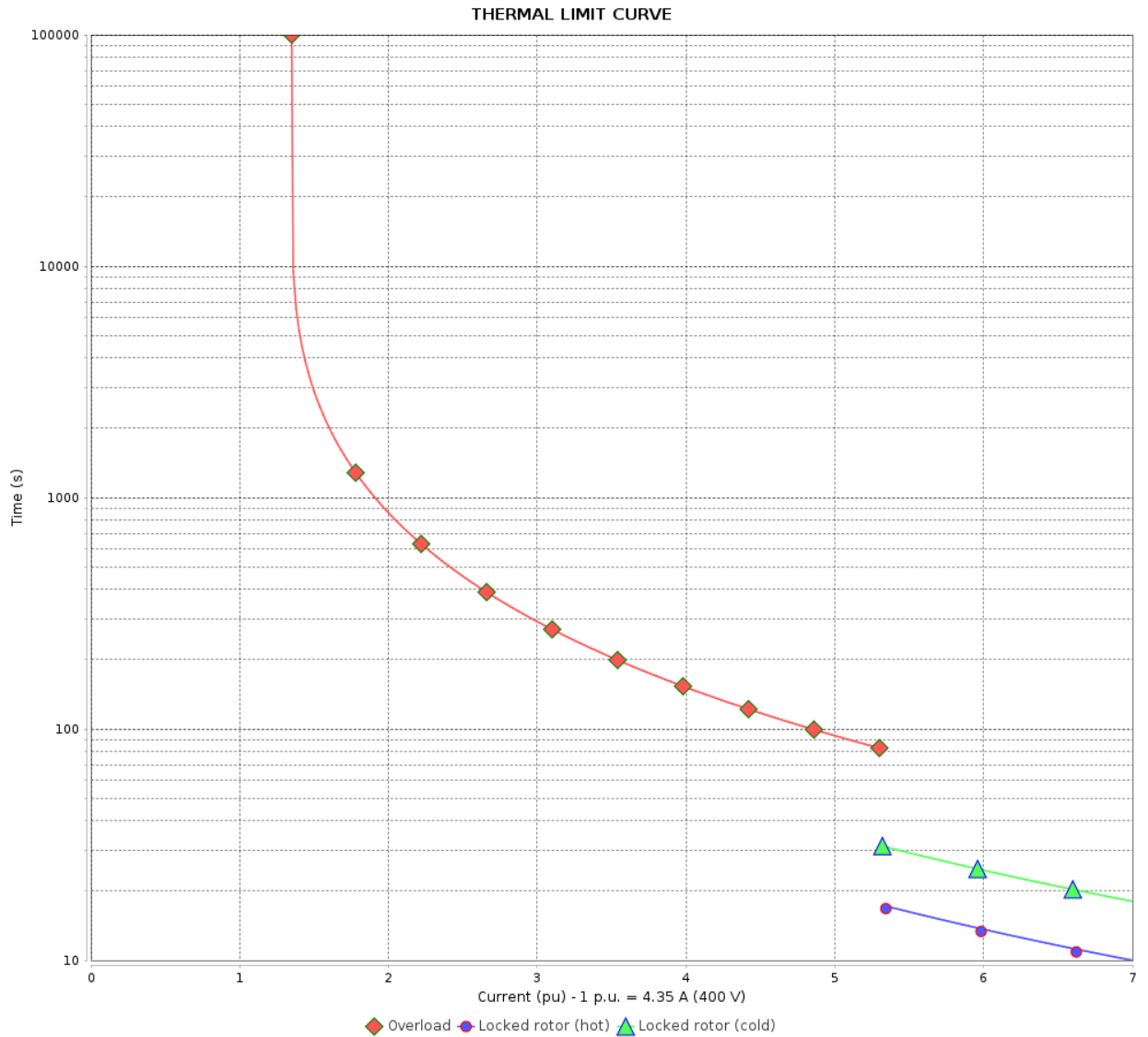
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W20 Three-Phase

Product code : 17700186



Performance : 230/400 V 50 Hz 2P

Rated current : 7.57/4.35 A  
 LRC : 7.0  
 Rated torque : 7.36 Nm  
 Locked rotor torque : 340 %  
 Breakdown torque : 340 %  
 Rated speed : 2855 rpm

Moment of inertia (J) : 0.0025 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				
Checked by				
Date				
		Page	Revision	
		5 / 6		

# VFD OPERATION CURVE

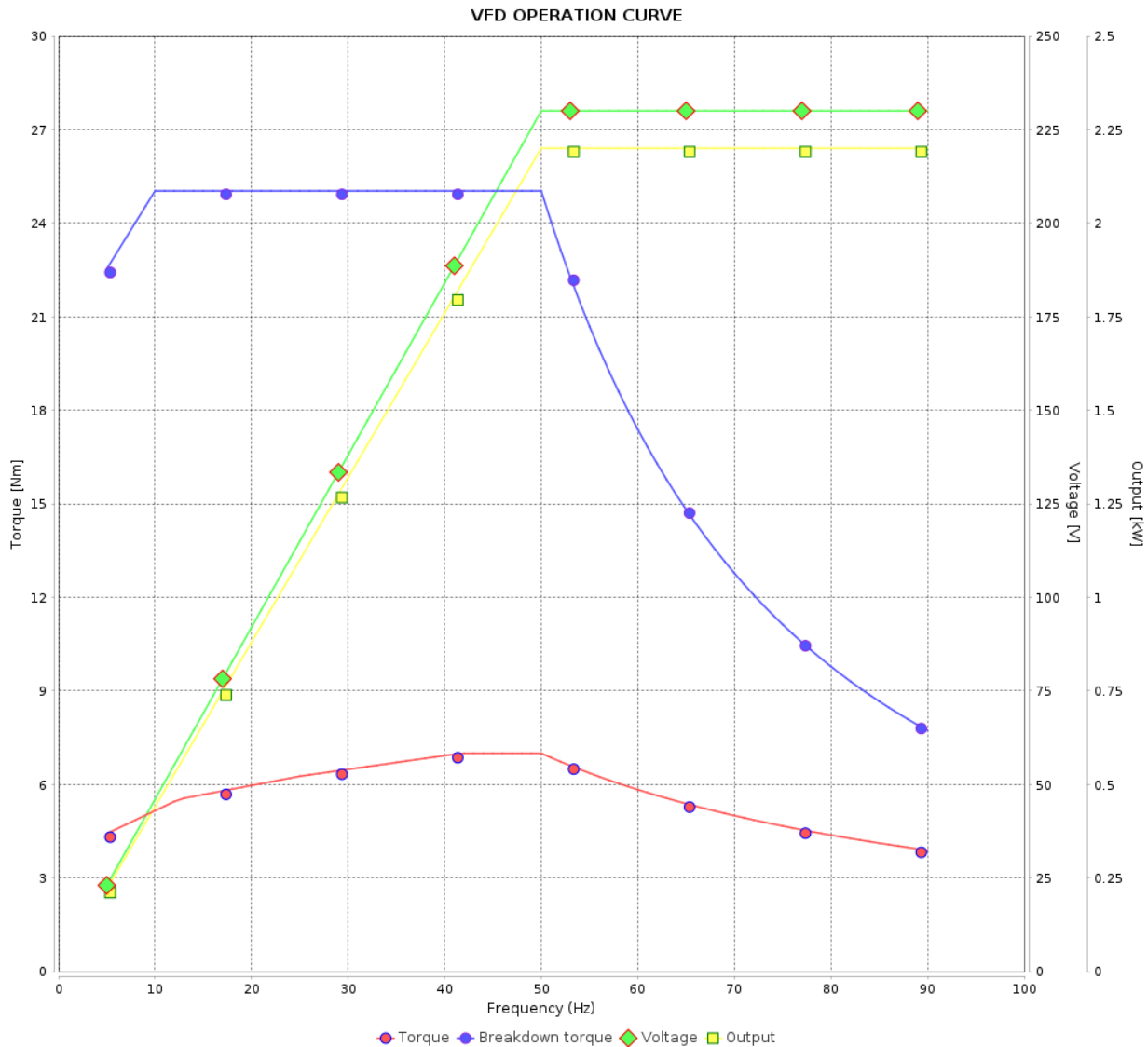
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W20 Three-Phase

Product code : 17700186



Performance : 230/400 V 50 Hz 2P

Rated current : 7.57/4.35 A  
 LRC : 7.0  
 Rated torque : 7.36 Nm  
 Locked rotor torque : 340 %  
 Breakdown torque : 340 %  
 Rated speed : 2855 rpm

Moment of inertia (J) : 0.0025 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				

