

# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 IE3 Three-Phase Product code : 12862535

|                       |                           |                             |                       |
|-----------------------|---------------------------|-----------------------------|-----------------------|
| Frame                 | : 180M                    | Locked rotor time           | : 12s (cold) 7s (hot) |
| Output                | : 18.5 kW (25 HP)         | Temperature rise            | : 80 K                |
| Frequency             | : 50 Hz                   | Duty cycle                  | : S1                  |
| Rated voltage         | : 400/690 V               | Ambient temperature         | : -20°C to +40°C      |
| Poles                 | : 4                       | Altitude                    | : 1000 m.a.s.l.       |
| Rated current         | : 35.6/20.6 A             | Protection degree           | : IP55                |
| LRC                   | : 7.9                     | Cooling method              | : IC411 - TEFC        |
| Rated speed           | : 1480 rpm                | Mounting                    | : B5T                 |
| Rated torque          | : 119 Nm                  | Rotation <sup>1</sup>       | : Both (CW and CCW)   |
| Insulation class      | : F                       | Noise level <sup>2</sup>    | : 61.0 dB(A)          |
| Service factor        | : 1.00                    | Starting method             | : Direct On Line      |
| Moment of inertia (J) | : 0.1740 kgm <sup>2</sup> | Approx. weight <sup>3</sup> | : 190 kg              |
| Design                | : N                       |                             |                       |

|                |      |      |      |                  |          |
|----------------|------|------|------|------------------|----------|
| Output         | 50%  | 75%  | 100% | Foundation loads |          |
| Efficiency (%) | 91.3 | 92.3 | 92.6 | Max. traction    | : 4466 N |
| Power Factor   | 0.63 | 0.75 | 0.81 | Max. compression | : 6329 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) |
|--------------|--------------|---------------|--------------|--------------|---------------|----------------|
| 7.8          | 6.8          | 6.4           | 3.9          | 2.8          | 2.0           | 1.4            |

|                      |   |            |               |
|----------------------|---|------------|---------------|
|                      |   | Drive end  | Non drive end |
| Bearing type         | : | 6311 ZZ C3 | 6211 ZZ C3    |
| Sealing              | : | Oil Seal   | Lip Seal      |
| Lubrication interval | : | -          | -             |
| Lubricant amount     | : | -          | -             |
| Lubricant type       | : | 00088      |               |

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 |                 |           |               |          |
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| Date         | 02/02/2026      |           | Page<br>1 / 5 | Revision |

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Customer :

Thermal protection

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

|              |                 |  |           |         |          |
|--------------|-----------------|--|-----------|---------|----------|
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# TORQUE AND CURRENT VS SPEED CURVE

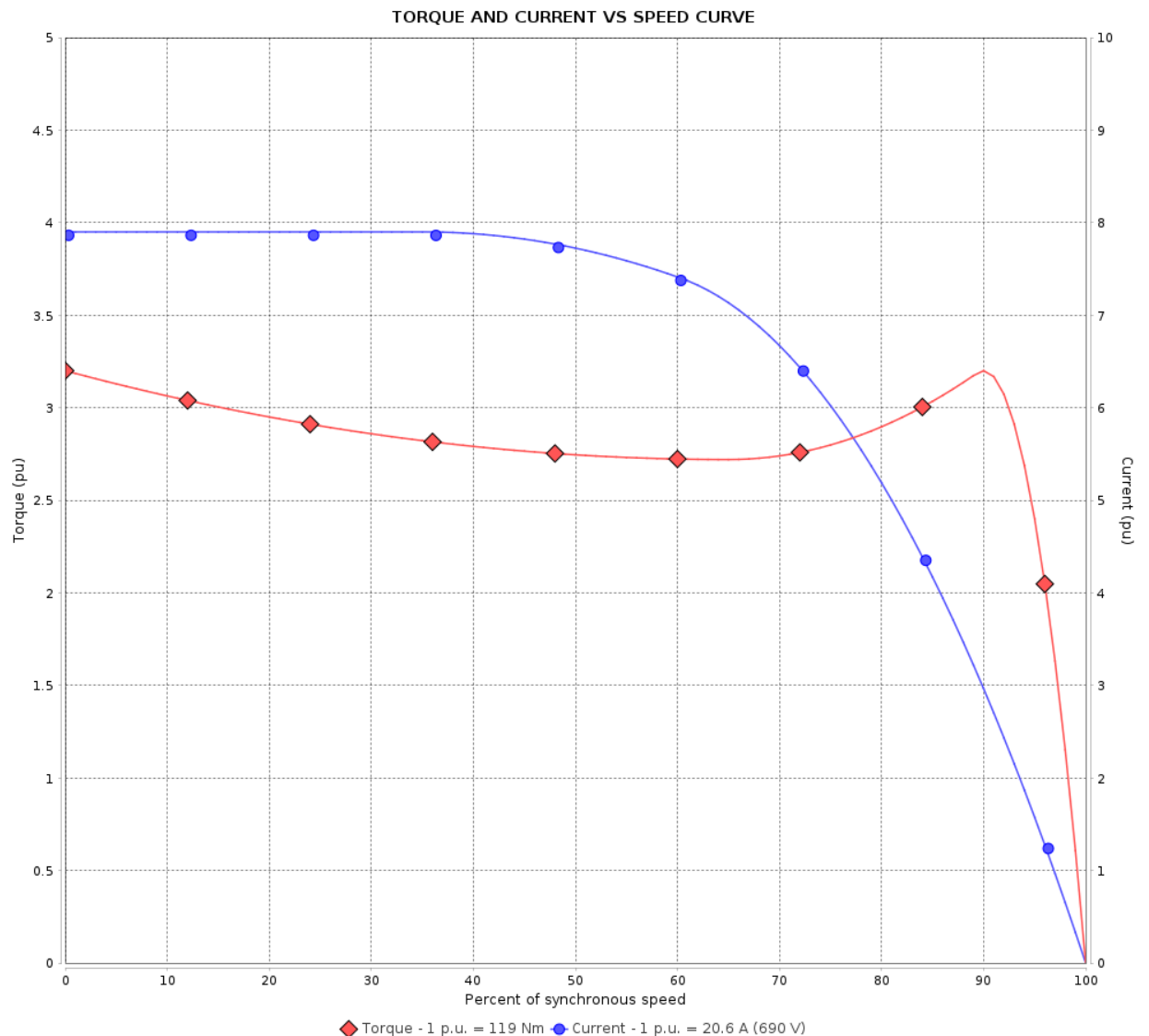
## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 IE3 Three-Phase

Product code : 12862535



Performance : 400/690 V 50 Hz 4P

Rated current : 35.6/20.6 A  
LRC : 7.9  
Rated torque : 119 Nm  
Locked rotor torque : 320 %  
Breakdown torque : 320 %  
Rated speed : 1480 rpm

Moment of inertia (J) : 0.1740 kgm<sup>2</sup>  
Duty cycle : S1  
Insulation class : F  
Service factor : 1.00  
Duty cycle : S1

Locked rotor time : 12s (cold) 7s (hot)

| Rev.         | Changes Summary | Performed             | Checked | Date |
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# LOAD PERFORMANCE CURVE

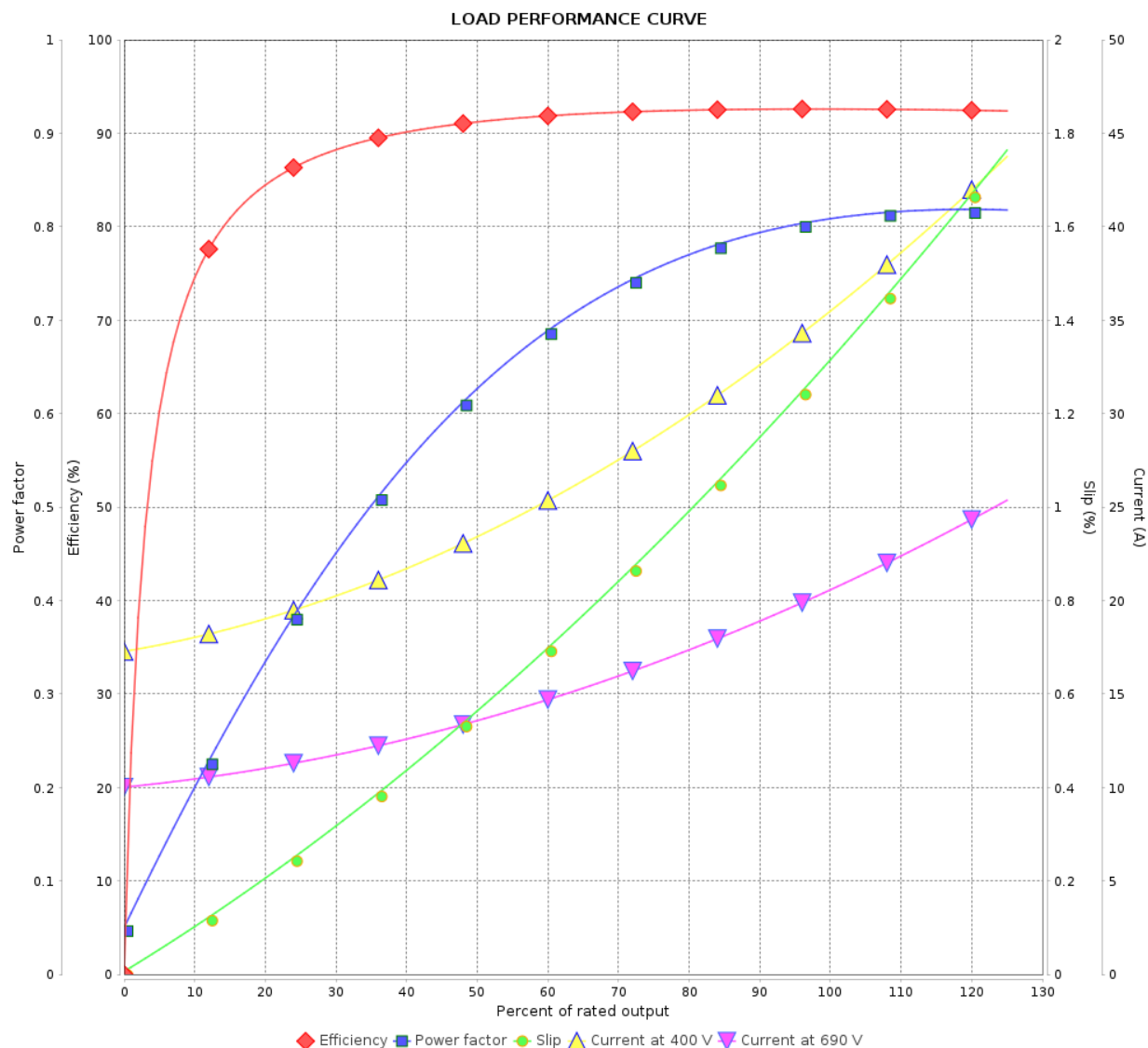
Three Phase Induction Motor - Squirrel Cage



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| Rev.         | Changes Summary |  | Performed | Checked | Date     |
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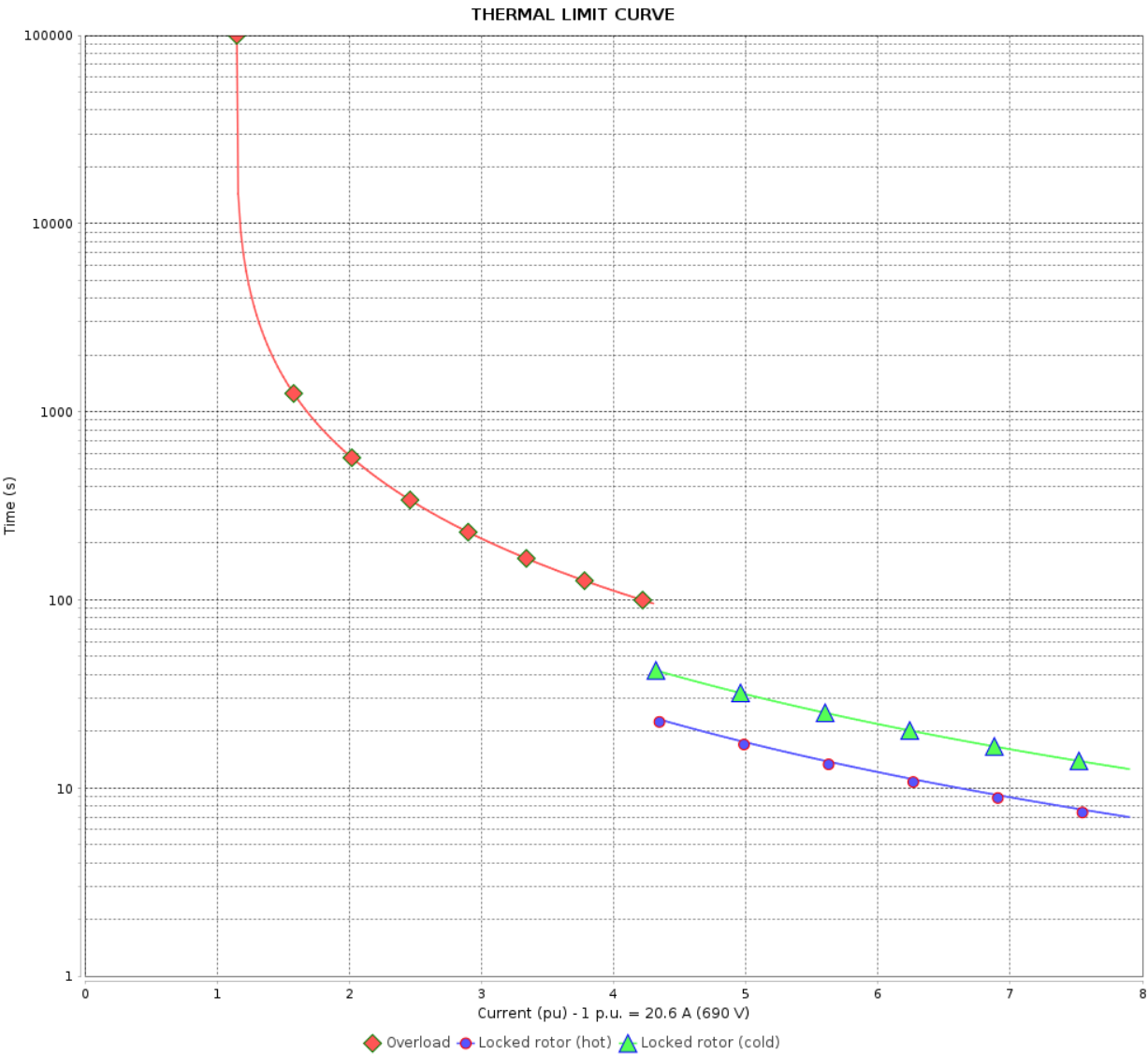
# THERMAL LIMIT CURVE

## Three Phase Induction Motor - Squirrel Cage



Customer :

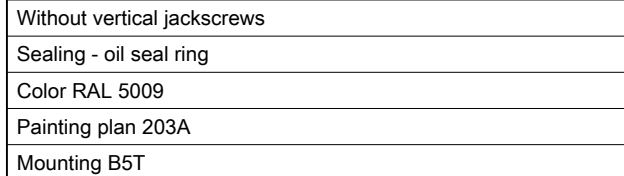
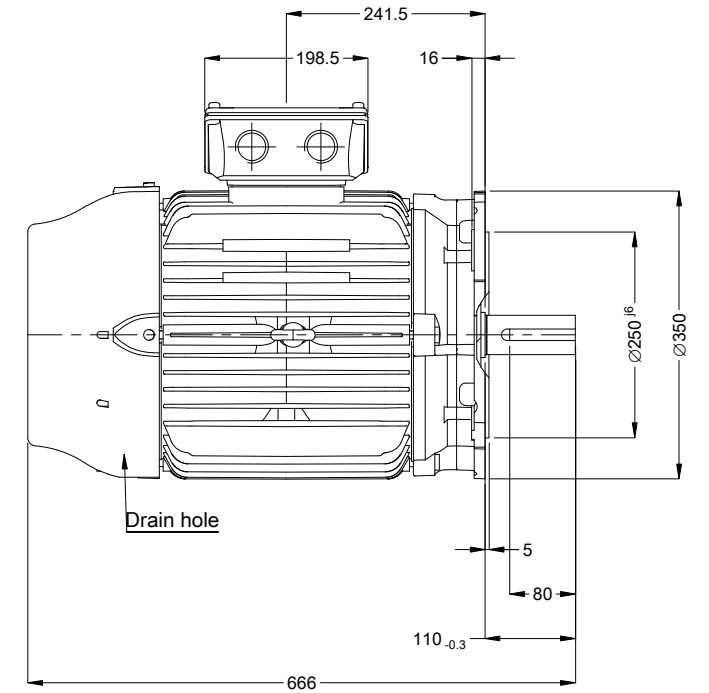
Product line : W22 IE3 Three-Phase      Product code : 12862535

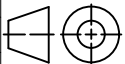



Heating constant

Cooling constant

| Rev.         | Changes Summary | Performed                | Checked | Date |
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|                              |  |            |  |   |  |   |  |   |  |          |
|------------------------------|--|------------|--|---|--|---|--|---|--|----------|
| 18.5 kW    04 Poles    50 Hz |  |            |  |   |  |   |  |   |  | A        |
|                              |  |            |  |   |  |   |  |   |  |          |
|                              |  |            |  |   |  | Scale                    1 : 9            |  |   |  |          |
|                              |  |            |  |   |  |   |  |   |  |          |
|                              |  |            |  | HYBRISUSER  |  |   |  |   |  | 00       |
| ECM                          |  | LOC        |  | SUMMARY OF MODIFICATIONS  |  | EXECUTED                                  |  | CHECKED   |  | RELEASED |
| EXECUTED                     |  | HYBRISUSER |  |  THREE PH. MOTOR W22 IE3<br>FRAME 180M IP55 TEFC |  | <div>PREVIEW</div> <div>WDD      00</div> |  |  |  |          |
| CHECKED                      |  |            |  |   |  |   |  |   |  |          |
| RELEASED                     |  |            |  |   |  |   |  |   |  |          |
| REL. DATE                    |  |            |  |   |  |   |  |   |  |          |
|                              |  |            |  |   |  | SHEET                                     |  | 1 / 1   |  |          |