

# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W21 Explosion Proof NEMA Premium Efficiency Three-Phase Product code : 14323484

|                       |                           |                             |                        |
|-----------------------|---------------------------|-----------------------------|------------------------|
| Frame                 | : 182/4TC                 | Locked rotor time           | : 50s (cold) 28s (hot) |
| Output                | : 3 HP (2.2 kW)           | Temperature rise            | : 80 K                 |
| Poles                 | : 4                       | Duty cycle                  | : Cont.(S1)            |
| Frequency             | : 60 Hz                   | Ambient temperature         | : -20°C to +40°C       |
| Rated voltage         | : 575 V                   | Altitude                    | : 1000 m.a.s.l.        |
| Rated current         | : 3.17 A                  | Protection degree           | : IP55                 |
| L. R. Amperes         | : 25.3 A                  | Cooling method              | : IC411 - TEFC         |
| LRC                   | : 8.0x(Code K)            | Mounting                    | : F-1                  |
| No load current       | : 1.68 A                  | Rotation <sup>1</sup>       | : Both (CW and CCW)    |
| Rated speed           | : 1760 rpm                | Noise level <sup>2</sup>    | : 56.0 dB(A)           |
| Slip                  | : 2.22 %                  | Starting method             | : Direct On Line       |
| Rated torque          | : 1.24 kgfm               | Approx. weight <sup>3</sup> | : 55.2 kg              |
| Locked rotor torque   | : 250 %                   |                             |                        |
| Breakdown torque      | : 320 %                   |                             |                        |
| Insulation class      | : F                       |                             |                        |
| Service factor        | : 1.15                    |                             |                        |
| Moment of inertia (J) | : 0.0117 kgm <sup>2</sup> |                             |                        |
| Design                | : B                       |                             |                        |

|                |      |      |      |                  |           |
|----------------|------|------|------|------------------|-----------|
| Output         | 50%  | 75%  | 100% | Foundation loads |           |
| Efficiency (%) | 87.5 | 88.5 | 89.5 | Max. traction    | : 54 kgf  |
| Power Factor   | 0.59 | 0.71 | 0.78 | Max. compression | : 111 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) |
|--------------|--------------|---------------|--------------|--------------|---------------|----------------|
| 11.0         | 8.6          | 8.3           | 6.3          | 4.1          | 3.0           | 2.2            |

|                      |   |                  |                      |
|----------------------|---|------------------|----------------------|
|                      |   | <u>Drive end</u> | <u>Non drive end</u> |
| Bearing type         | : | 6307 2RS         | 6206 2RS             |
| Sealing              | : | Oil Seal         | Lip Seal             |
| 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 NEMA MG-1.

| Rev.         | Changes Summary | Performed              | Checked | Date |
|--------------|-----------------|------------------------|---------|------|
|              |                 |                        |         |      |
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| Checked by   |                 |                        |         |      |
| Date         | 28/10/2024      |                        |         |      |

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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     |
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| Checked by   |                 |  |           |               |          |
| Date         | 28/10/2024      |  |           |               |          |

# LOAD PERFORMANCE CURVE

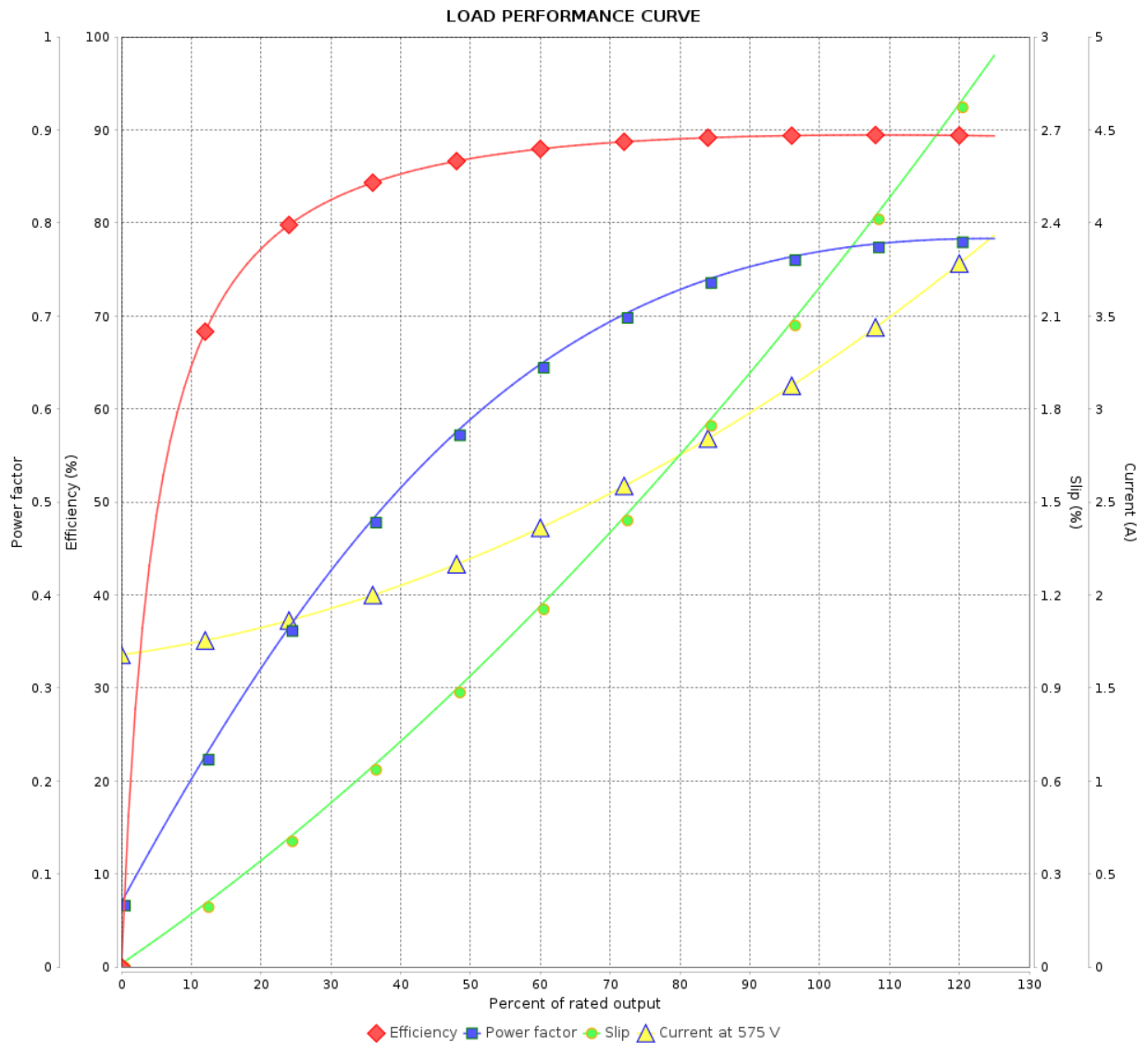
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Customer :

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

Product code : 14323484



Performance : 575 V 60 Hz 4P

Rated current : 3.17 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     |
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