

# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 IEEE 841 NEMA Premium Efficiency Three-Phase Product code : 11603074

|                       |                 |                             |                         |
|-----------------------|-----------------|-----------------------------|-------------------------|
| Frame                 | : 213TC         | Locked rotor time           | : 104s (cold) 58s (hot) |
| Output                | : 3 HP (2.2 kW) | Temperature rise            | : 80 K                  |
| Poles                 | : 6             | Duty cycle                  | : Cont.(S1)             |
| Frequency             | : 60 Hz         | Ambient temperature         | : -20°C to +40°C        |
| Rated voltage         | : 460 V         | Altitude                    | : 1000 m.a.s.l.         |
| Rated current         | : 4.41 A        | Protection degree           | : IP55                  |
| L. R. Amperes         | : 30.9 A        | Cooling method              | : IC411 - TEFC          |
| LRC                   | : 7.0x(Code K)  | Mounting                    | : F-1                   |
| No load current       | : 2.75 A        | Rotation <sup>1</sup>       | : Both (CW and CCW)     |
| Rated speed           | : 1175 rpm      | Noise level <sup>2</sup>    | : 55.0 dB(A)            |
| Slip                  | : 2.08 %        | Starting method             | : Direct On Line        |
| Rated torque          | : 13.4 ft.lb    | Approx. weight <sup>3</sup> | : 160 lb                |
| Locked rotor torque   | : 200 %         |                             |                         |
| Breakdown torque      | : 280 %         |                             |                         |
| Insulation class      | : F             |                             |                         |
| Service factor        | : 1.25          |                             |                         |
| Moment of inertia (J) | : 1.20 sq.ft.lb |                             |                         |
| Design                | : B             |                             |                         |

| Output         | 25%  | 50%  | 75%  | 100% | Foundation loads |      |      |                  |          |
|----------------|------|------|------|------|------------------|------|------|------------------|----------|
| Efficiency (%) | 85.4 | 88.0 | 86.5 | 87.5 | 88.5             | 89.5 | 87.5 | Max. traction    | : 167 lb |
|                | 86.1 | 86.1 | 86.5 | 86.5 | 88.5             | 88.5 | 88.5 |                  |          |
| Power Factor   | 0.28 | 0.33 | 0.50 | 0.57 | 0.63             | 0.70 | 0.70 | Max. compression | : 327 lb |
|                | 0.30 | 0.28 | 0.53 | 0.50 | 0.66             | 0.64 | 0.73 |                  |          |

Losses at normative operating points (speed;torque), in percentage of rated output power

|            |                |      |      |      |      |
|------------|----------------|------|------|------|------|
| Losses (%) | P1 (0,9;1,0)   | 11.0 | 11.0 | 11.0 | 11.0 |
|            | P2 (0,5;1,0)   | 8.5  | 8.5  | 8.5  | 8.5  |
|            | P3 (0,25;1,0)  | 7.7  | 7.7  | 7.7  | 7.7  |
|            | P4 (0,9;0,5)   | 6.7  | 6.7  | 6.7  | 6.7  |
|            | P5 (0,5;0,5)   | 4.4  | 4.4  | 4.4  | 4.4  |
|            | P6 (0,5;0,25)  | 3.4  | 3.4  | 3.4  | 3.4  |
|            | P7 (0,25;0,25) | 2.5  | 2.5  | 2.5  | 2.5  |

|                      |   |                  |                      |
|----------------------|---|------------------|----------------------|
|                      |   | <u>Drive end</u> | <u>Non drive end</u> |
| Bearing type         | : | 6308 2RS C3      | 6207 2RS C3          |
| Sealing              | : | Inpro/Seal       | Inpro/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 |
|--------------|-----------------|---------------------------|---------|------|
|              |                 |                           |         |      |
| Performed by |                 | Page<br>1 / 1<br>Revision |         |      |
| Checked by   |                 |                           |         |      |
| Date         | 25/03/2024      |                           |         |      |