

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 IEEE 841 NEMA Premium Efficiency Three-Phase Product code : 12373691
Catalog # : 00156ST3QIE143TC-W22

| | | | |
|-----------------------|-------------------|-----------------------------|------------------------|
| Frame | : 143/5TC | Locked rotor time | : 37s (cold) 21s (hot) |
| Output | : 1.5 HP (1.1 kW) | Temperature rise | : 80 K |
| Poles | : 2 | 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 | : 1.96 A | Protection degree | : IP56 |
| L. R. Amperes | : 17.4 A | Cooling method | : IC411 - TEFC |
| LRC | : 8.9x(Code L) | Mounting | : F-1 |
| No load current | : 0.830 A | Rotation ¹ | : Both (CW and CCW) |
| Rated speed | : 3480 rpm | Noise level ² | : 68.0 dB(A) |
| Slip | : 3.33 % | Starting method | : Direct On Line |
| Rated torque | : 2.26 ft.lb | Approx. weight ³ | : 54.7 lb |
| Locked rotor torque | : 310 % | | |
| Breakdown torque | : 370 % | | |
| Insulation class | : F | | |
| Service factor | : 1.25 | | |
| Moment of inertia (J) | : 0.0470 sq.ft.lb | | |
| Design | : B | | |

| Output | 25% | | 50% | | 75% | | 100% | | Foundation loads | |
|----------------|------|------|------|------|------|------|------|------|------------------|----------|
| Efficiency (%) | 81.1 | 79.9 | 81.5 | 80.5 | 84.0 | 83.2 | 84.0 | 83.4 | Max. traction | : 46 lb |
| | 78.4 | 77.9 | 79.3 | 78.9 | 82.8 | 82.7 | 83.4 | 83.4 | | |
| | 80.6 | 81.6 | 81.0 | 82.0 | 81.5 | 82.5 | 81.5 | 82.5 | | |
| | 81.7 | 82.0 | 82.5 | 82.5 | | | | | | |
| Power Factor | 0.43 | 0.39 | 0.68 | 0.63 | 0.78 | 0.74 | 0.84 | 0.81 | Max. compression | : 101 lb |
| | 0.35 | 0.33 | 0.58 | 0.55 | 0.71 | 0.68 | 0.78 | 0.76 | | |
| | 0.51 | 0.46 | 0.75 | 0.70 | 0.84 | 0.80 | 0.87 | 0.86 | | |
| | 0.43 | 0.67 | 0.78 | 0.84 | | | | | | |

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

| | | | | | | | | |
|------------|----------------|------|------|------|------|------|------|------|
| Losses (%) | P1 (0,9;1,0) | 17.7 | 17.7 | 17.7 | 17.7 | 17.7 | 17.7 | 17.7 |
| | P2 (0,5;1,0) | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 | 13.3 |
| | P3 (0,25;1,0) | 12.1 | 12.1 | 12.1 | 12.1 | 12.1 | 12.1 | 12.1 |
| | P4 (0,9;0,5) | 9.8 | 9.8 | 9.8 | 9.8 | 9.8 | 9.8 | 9.8 |
| | P5 (0,5;0,5) | 5.6 | 5.6 | 5.6 | 5.6 | 5.6 | 5.6 | 5.6 |
| | P6 (0,5;0,25) | 3.8 | 3.8 | 3.8 | 3.8 | 3.8 | 3.8 | 3.8 |
| | P7 (0,25;0,25) | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 | 2.4 |

| | | | |
|----------------------|---|------------------|----------------------|
| | | <u>Drive end</u> | <u>Non drive end</u> |
| Bearing type | : | 6205 C3 | 6204 C3 |
| Sealing | : | Inpro/Seal | Inpro/Seal |
| Lubrication interval | : | 20000 h | 20000 h |
| Lubricant amount | : | 4 g | 4 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 NEMA MG-1.

| | | | | |
|--------------|-----------------|-----------|---------------|----------|
| Rev. | Changes Summary | Performed | Checked | Date |
| Performed by | | | | |
| Checked by | | | | |
| Date | 29/03/2024 | | Page 1 / 1 | Revision |