

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 NEMA Premium Efficiency Three-Phase

Product code : 12821974

Catalog # : 00312ET3ER213TC-W22

Frame : 213TC
Output : 3 HP (2.2 kW)
Poles : 6
Frequency : 60 Hz
Rated voltage : 230/460 V
Rated current : 8.83/4.41 A
L. R. Amperes : 61.8/30.9 A
LRC : 7.0x(Code K)
No load current : 5.50/2.75 A
Rated speed : 1175 rpm
Slip : 2.08 %
Rated torque : 13.4 ft.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

Locked rotor time : 104s (cold) 58s (hot)
Temperature rise : 80 K
Duty cycle : Cont.(S1)
Ambient temperature : -20°C to +40°C
Altitude : 1000 m.a.s.l.
Protection degree : IP55
Cooling method : IC411 - TEFC
Mounting : W-6
Rotation¹ : Both (CW and CCW)
Noise level² : 55.0 dB(A)
Starting method : Direct On Line
Approx. weight³ : 152 lb

| Output | 25% | | 50% | | 75% | | 100% | |
|----------------|------|------|------|------|------|------|------|------|
| Efficiency (%) | 85.4 | 88.0 | 86.5 | 87.5 | 88.5 | 88.5 | 89.5 | 87.5 |
| | 86.1 | 86.1 | 86.5 | 86.5 | 88.5 | 88.5 | 88.5 | 88.5 |
| Power Factor | 0.28 | 0.33 | 0.50 | 0.57 | 0.63 | 0.70 | 0.70 | 0.75 |
| | 0.30 | 0.28 | 0.53 | 0.50 | 0.66 | 0.64 | 0.73 | 0.71 |

Foundation loads
Max. traction : 171 lb
Max. compression : 323 lb

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 ZZ | 6207 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 NEMA MG-1.

| Rev. | Changes Summary | Performed | Checked | Date |
|--------------|-----------------|---------------|---------|------|
| | | | | |
| Performed by | | Page 1 / 1 | | |
| Checked by | | | | |
| Date | 28/03/2024 | | | |
| | | Revision | | |