

# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 Tru-Metric IE3 Three-Phase

Product code :

16993587

Catalog # :

01112ET3E160LF3-W22

Frame : 160L  
Output : 15 HP (11 kW)  
Poles : 6  
Frequency : 50 Hz  
Rated voltage : 380 V  
Rated current : 22.6 A  
L. R. Amperes : 147 A  
LRC : 6.5  
No load current : 9.50 A  
Rated speed : 970 rpm  
Slip : 3.00 %  
Rated torque : 81.2 ft.lb  
Locked rotor torque : 220 %  
Breakdown torque : 260 %  
Insulation class : F  
Service factor : 1.25  
Moment of inertia (J) : 3.75 sq.ft.lb  
Design : N

Locked rotor time : 34s (cold) 19s (hot)  
Temperature rise : 80 K  
Duty cycle : S1  
Ambient temperature : -20°C to +40°C  
Altitude : 1000 m.a.s.l.  
Protection degree : IP55  
Cooling method : IC411 - TEFC  
Mounting : B3T  
Rotation<sup>1</sup> : Both (CW and CCW)  
Noise level<sup>2</sup> : 57.0 dB(A)  
Starting method : Direct On Line  
Approx. weight<sup>3</sup> : 315 lb

| Output         | 25%  |      | 50%  |      | 75%  |      | 100% |      |
|----------------|------|------|------|------|------|------|------|------|
| Efficiency (%) | 84.9 | 85.7 | 85.5 | 86.5 | 90.3 | 90.0 | 90.3 | 90.5 |
|                | 87.0 |      | 88.5 |      | 90.2 |      | 91.7 |      |
| Power Factor   | 0.42 | 0.34 | 0.66 | 0.58 | 0.77 | 0.70 | 0.82 | 0.78 |
|                | 0.36 |      | 0.60 |      | 0.71 |      | 0.77 |      |

Foundation loads  
Max. traction : 1079 lb  
Max. compression : 1394 lb

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

|            |                |      |      |     |
|------------|----------------|------|------|-----|
| Losses (%) | P1 (0,9;1,0)   | 10.4 | 10.1 | 8.7 |
|            | P2 (0,5;1,0)   | 8.4  | 8.2  | 7.1 |
|            | P3 (0,25;1,0)  | 8.0  | 7.8  | 6.7 |
|            | P4 (0,9;0,5)   | 5.9  | 5.8  | 5.0 |
|            | P5 (0,5;0,5)   | 4.0  | 3.9  | 3.4 |
|            | P6 (0,5;0,25)  | 3.1  | 3.0  | 2.6 |
|            | P7 (0,25;0,25) | 2.1  | 2.1  | 1.8 |

|                      |   |                  |                      |
|----------------------|---|------------------|----------------------|
|                      |   | <u>Drive end</u> | <u>Non drive end</u> |
| Bearing type         | : | 6309 C3          | 6209 C3              |
| Sealing              | : | V'Ring           | V'Ring               |
| Lubrication interval | : | 20000 h          | 20000 h              |
| Lubricant amount     | : | 13 g             | 9 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         | 26/03/2024      |           |         |          |
|              |                 |           | Page    | Revision |
|              |                 |           | 1 / 1   |          |