

# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 IE2 Three-Phase

Product code :

14414845

Catalog # :

E01818EP3Y160LF3-W22

|                       |                   |                             |                        |
|-----------------------|-------------------|-----------------------------|------------------------|
| Frame                 | : 160L            | Locked rotor time           | : 21s (cold) 12s (hot) |
| Output                | : 18.5 kW (25 HP) | Temperature rise            | : 80 K                 |
| Poles                 | : 4               | Duty cycle                  | : S1                   |
| Frequency             | : 50 Hz           | Ambient temperature         | : -20°C to +40°C       |
| Rated voltage         | : 380/660 V       | Altitude                    | : 1000 m.a.s.l.        |
| Rated current         | : 36.3/20.9 A     | Protection degree           | : IP55                 |
| L. R. Amperes         | : 276/159 A       | Cooling method              | : IC411 - TEFC         |
| LRC                   | : 7.6             | Mounting                    | : B3T                  |
| No load current       | : 14.6/8.41 A     | Rotation <sup>1</sup>       | : Both (CW and CCW)    |
| Rated speed           | : 1470 rpm        | Noise level <sup>2</sup>    | : 61.0 dB(A)           |
| Slip                  | : 2.00 %          | Starting method             | : Direct On Line       |
| Rated torque          | : 88.7 ft.lb      | Approx. weight <sup>3</sup> | : 359 lb               |
| Locked rotor torque   | : 260 %           |                             |                        |
| Breakdown torque      | : 280 %           |                             |                        |
| Insulation class      | : F               |                             |                        |
| Service factor        | : 1.00            |                             |                        |
| Moment of inertia (J) | : 3.81 sq.ft.lb   |                             |                        |
| Design                | : N               |                             |                        |

| Output         | 25%  |      | 50%  |      | 75%  |      | 100% |      | Foundation loads |           |
|----------------|------|------|------|------|------|------|------|------|------------------|-----------|
| Efficiency (%) | 90.1 | 90.2 | 90.5 | 90.5 | 91.0 | 91.0 | 91.2 | 91.2 | Max. traction    | : 1120 lb |
|                | 88.5 | 89.4 | 89.0 | 90.2 | 91.0 | 91.7 | 91.2 | 92.4 |                  |           |
| Power Factor   | 0.45 | 0.40 | 0.71 | 0.66 | 0.81 | 0.77 | 0.85 | 0.83 | Max. compression | : 1480 lb |
|                | 0.36 | 0.39 | 0.62 | 0.64 | 0.74 | 0.76 | 0.81 | 0.82 |                  |           |

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

|            |                |     |     |     |     |
|------------|----------------|-----|-----|-----|-----|
| Losses (%) | P1 (0,9;1,0)   | 9.3 | 9.3 | 9.3 | 7.9 |
|            | P2 (0,5;1,0)   | 7.6 | 7.6 | 7.6 | 6.5 |
|            | P3 (0,25;1,0)  | 6.8 | 6.8 | 6.8 | 5.8 |
|            | P4 (0,9;0,5)   | 4.7 | 4.7 | 4.7 | 4.0 |
|            | P5 (0,5;0,5)   | 3.2 | 3.2 | 3.2 | 2.7 |
|            | P6 (0,5;0,25)  | 2.2 | 2.2 | 2.2 | 1.8 |
|            | P7 (0,25;0,25) | 1.4 | 1.4 | 1.4 | 1.2 |

|                      |   |                  |                      |
|----------------------|---|------------------|----------------------|
|                      |   | <u>Drive end</u> | <u>Non drive end</u> |
| Bearing type         | : | 6309 ZZ C3       | 6209 ZZ C3           |
| 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 IEC 60034-1.

| Rev.         | Changes Summary | Performed                 | Checked | Date |
|--------------|-----------------|---------------------------|---------|------|
|              |                 |                           |         |      |
| Performed by |                 | Page<br>1 / 2<br>Revision |         |      |
| Checked by   |                 |                           |         |      |
| Date         | 26/03/2024      |                           |         |      |

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## Three Phase Induction Motor - Squirrel Cage



Customer :

Thermal protection

| ID | Application | Type                 | Quantity  | Sensing Temperature |
|----|-------------|----------------------|-----------|---------------------|
| 1  | Winding     | Thermistor - 2 wires | 1 x Phase | 155 °C              |

|              |                 |  |           |         |          |
|--------------|-----------------|--|-----------|---------|----------|
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|              |                 |  |           |         |          |
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