DATA SHEET

Three Phase Induction Motor - Squirrel Cage



11168211

Customer

Product line : Close Coupled Pump NEMA Premium Product code:

Efficiency Three-Phase

: 256JM Cooling method Frame : IC01 - ODP

Insulation class : F Mounting : F-1 Duty cycle : Cont.(S1) Rotation¹ : Both (CW and CCW)

Ambient temperature : -20°C to +40°C Starting method : Direct On Line Approx. weight³ : 127 kg Altitude : 1000 m.a.s.l. Protection degree : IP23 Moment of inertia (J) : 0.1104 kgm²

| i rotootion dog.o | • | 0 | | | | | o | |
|--------------------------|-------------|------------|--------------|--------------|--------------|--------------|------------|-------------|
| Design | | : B | | | | | | |
| Output [HP] | | 20 | 15 | 15 | 15 | 20 | 20 | 20 |
| Poles | | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| Frequency [Hz] | | 60 | 50 | 50 | 50 | 50 | 50 | 50 |
| Rated voltage [V] | | 230/460 | 380 | 400 | 415 | 380 | 400 | 415 |
| Rated current [A] | | 49.4/24.7 | 23.4 | 23.4 | 24.1 | 29.6 | 29.1 | 29.2 |
| L. R. Amperes [A] | | 311/156 | 166 | 175 | 188 | 166 | 175 | 187 |
| LRC [A] | | 6.3x(Code | 7.1x(Code J) | 7.5x(Code K) | 7.8x(Code K) | 5.6x(Code F) | 6.0x(Code | 6.4x(Code H |
| | | G) | | | | | G) | |
| No load current [A |] | 24.0/12.0 | 11.9 | 13.5 | 15.1 | 11.9 | 13.5 | 15.1 |
| Rated speed [RPN | / 1] | 1770 | 1475 | 1475 | 1475 | 1465 | 1465 | 1470 |
| Slip [%] | | 1.67 | 1.67 | 1.67 | 1.67 | 2.33 | 2.33 | 2.00 |
| Rated torque [kgfm] | | 8.20 | 7.38 | 7.38 | 7.38 | 9.91 | 9.91 | 9.87 |
| Locked rotor torque [%] | | 260 | 229 | 260 | 270 | 170 | 190 | 200 |
| Breakdown torque | [%] | 280 | 350 | 390 | 430 | 260 | 290 | 320 |
| Service factor | | 1.15 | 1.15 | 1.15 | 1.15 | 1.15 | 1.15 | 1.15 |
| Temperature rise | | 80 K | 80 K | 80 K | 80 K | 80 K | 80 K | 80 K |
| Locked rotor time | | 21s (cold) | 28s (cold) | 27s (cold) | 25s (cold) | 28s (cold) | 27s (cold) | 25s (cold) |
| | | 12s (hot) | 16s (hot) | 15s (hot) | 14s (hot) | 16s (hot) | 15s (hot) | 14s (hot) |
| Noise level ² | | 60.0 dB(A) | | | | | | |
| | 25% | | | | | | | |
| Efficiency (%) | 50% | 91.7 | 87.6 | 87.1 | 86.7 | 90.2 | 90.2 | 90.2 |
| Lincicity (70) | 75% | 93.0 | 90.4 | 90.4 | 90.4 | 91.0 | 91.0 | 91.0 |
| | 100% | 93.0 | 91.4 | 91.5 | 91.6 | 91.7 | 91.7 | 91.7 |
| | 25% | | | | | | | |
| Power Factor | 50% | 0.63 | 0.59 | 0.54 | 0.49 | 0.68 | 0.63 | 0.58 |
| 1 OWELL ACIOI | 75% | 0.72 | 0.72 | 0.67 | 0.62 | 0.80 | 0.76 | 0.72 |
| | 100% | 0.82 | 0.80 | 0.76 | 0.71 | 0.84 | 0.81 | 0.78 |

Drive end Non drive end Foundation loads Bearing type 6309 Z C3 6209 Z C3

Max. traction : 433 kgf Without Sealing Without Max. compression : 561 kgf

Bearing Seal Bearing Seal 20000 h 20000 h Lubrication interval Lubricant amount 13 g 9 g Mobil Polyrex EM Lubricant type

Notes USABLE @208V 55.3A SF 1.15 SFA 63.6A

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 |
|--------------|------------|-----------------|-----------|---------|----------|
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| Performed by | | | | | |
| Checked by | | | | Page | Revision |
| Date | 14/01/2024 | | | 1/8 | |

Three Phase Induction Motor - Squirrel Cage

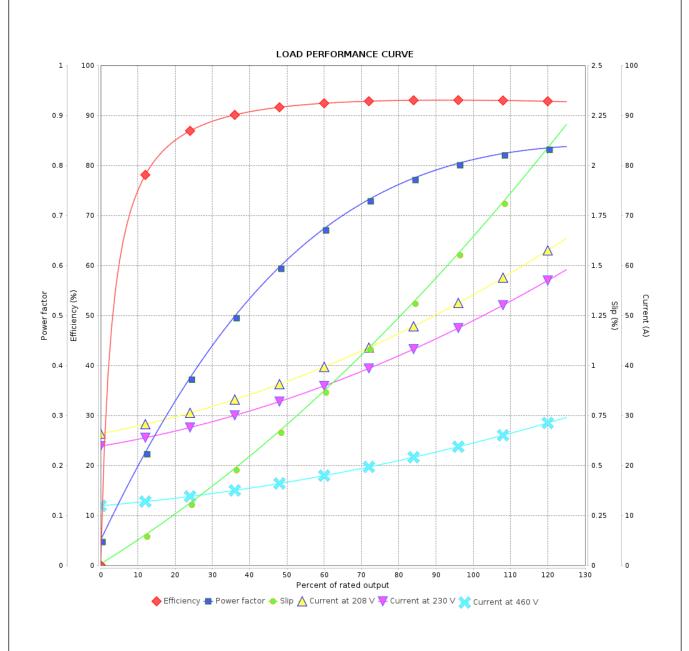


Customer :

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| : 49.4/24.7 A : 6.3 : 8.20 kgfm : 260 % : 280 % : 1770 rpm | Moment of inertia (J) Duty cycle Insulation class Service factor Temperature rise Design | : 0.1104 kgm² : Cont.(S1) : F : 1.15 : 80 K : B | |
|---|--|--|---|
| Changes Summary | Performed | Checked | Date |
| | | | Revision |
| | : 6.3 : 8.20 kgfm : 260 % : 280 % : 1770 rpm | : 6.3 : 8.20 kgfm : 260 % : 280 % : 1770 rpm Duty cycle Insulation class Service factor Temperature rise Design | : 6.3 Duty cycle : Cont.(S1) : 8.20 kgfm Insulation class : F : 260 % Service factor : 1.15 : 280 % Temperature rise : 80 K : 1770 rpm Design : B |

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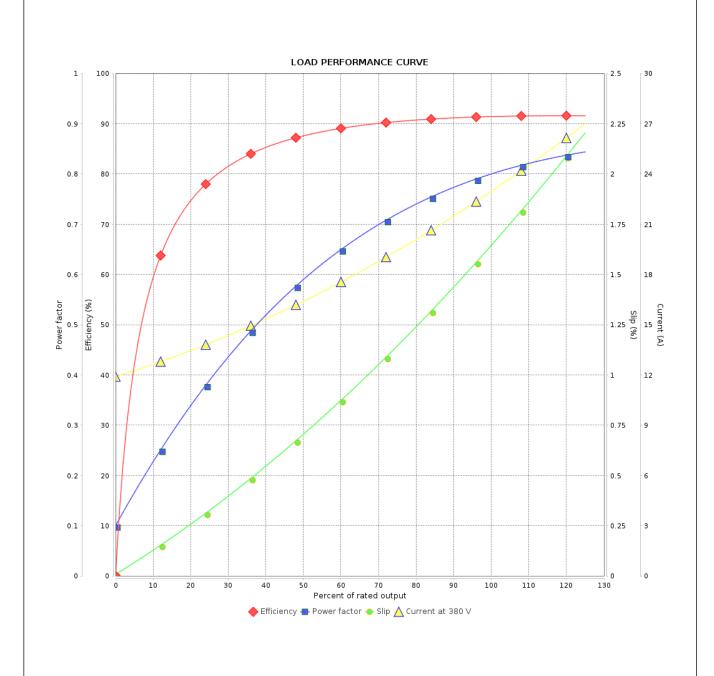


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| Performance | :: | 380 V 50 Hz 4P IE3 | | | | |
|-------------------|------------|--------------------------|----------------|-----------------------|-------------|----------|
| Rated current | | 23.4 A | Moment o | Moment of inertia (J) | | 2 |
| LRC | : | 7.1 | Duty cycle | | : Cont.(S1) | |
| Rated torque | | | : F | | | |
| Locked rotor torq | ue :: | 229 % | Service factor | | : 1.15 | |
| Breakdown torque | e :: | : 350 % Temperature rise | | : 80 K | | |
| Rated speed | : | 1475 rpm | Design | | : B | |
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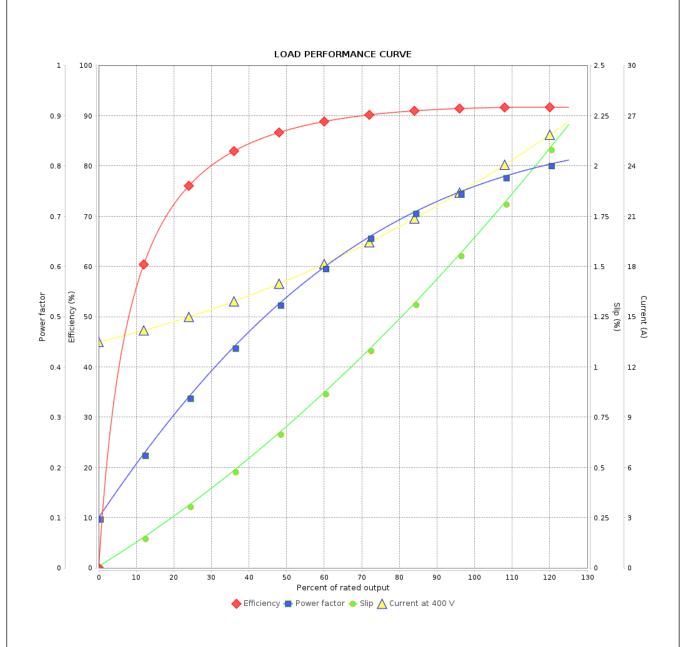


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| Performance | : 4 | 00 V 50 Hz 4P IE3 | I | | | |
|---|--|--|---|---------------|--|----------|
| Rated current LRC Rated torque Locked rotor tord Breakdown torqu Rated speed | : 7 : 7 : 7 : 1 : 2 : 3 | 3.4 A .5 .38 kgfm 60 % 90 % 475 rpm | Moment on Duty cycle Insulation Service fa Temperatu Design | class ctor | : 0.1104 kgm ² : Cont.(S1) : F : 1.15 : 80 K : B | 2 |
| Rev. | | Changes Summa | ıry | Performed | Checked | Date |
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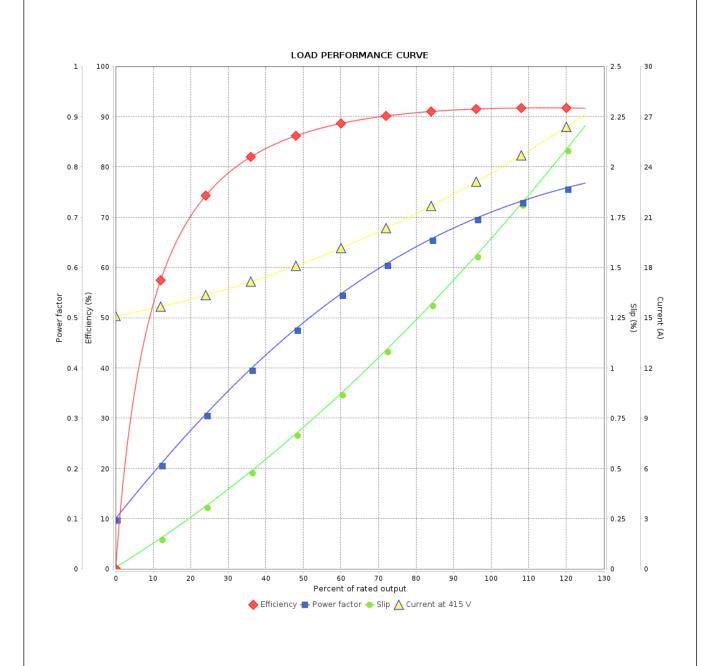


Customer :

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| Performance | : 4 | 415 V 50 Hz 4P IE3 | | | | |
|-------------------|------------|--------------------|------------------|---------------|---------------|----------|
| Rated current | :: | 24.1 A | Moment o | f inertia (J) | : 0.1104 kgm² | |
| LRC | : ' | 7.8 | Duty cycle | | : Cont.(S1) | |
| Rated torque | : | 7.38 kgfm | Insulation class | | :F | |
| Locked rotor torq | ue :: | 270 % | Service factor | | : 1.15 | |
| Breakdown torqu | ie : 4 | 430 % | Temperature rise | | : 80 K | |
| Rated speed | : | 1475 rpm | Design | | : B | |
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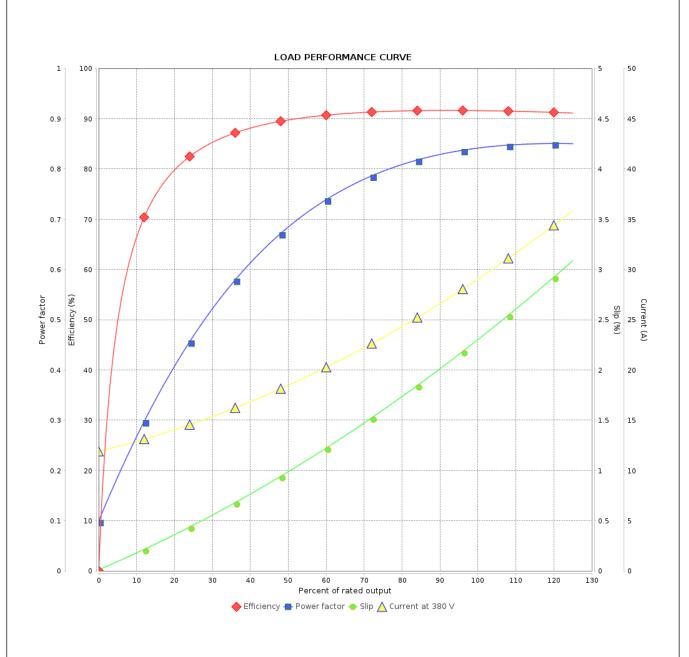


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| Performance : 380 V 50 Hz 4P IE2 Rated current : 29.6 A | : 0.1104 kgm² : Cont.(S1) : F : 1.15 |
|---|---|
| LRC : 5.6 Duty cycle Rated torque : 9.91 kgfm Insulation class Locked rotor torque : 170 % Service factor Breakdown torque : 260 % Temperature rise | : Cont.(S1) : F |
| Rated speed : 1465 rpm Design | : 80 K : B |
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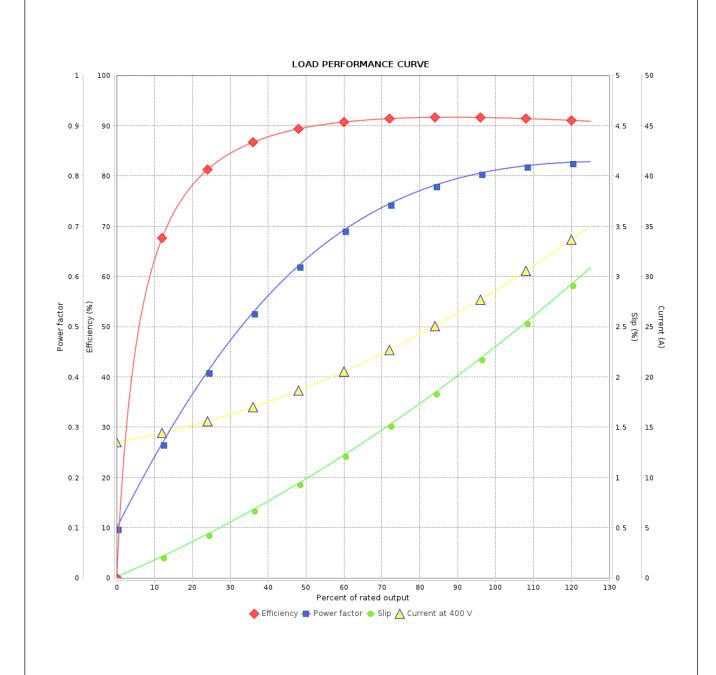


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| Performance | | : 400 V 50 Hz 4F | P IE2 | | | | |
|---|---|--|-------|---|---------------|--|------|
| Rated current LRC Rated torque Locked rotor tord Breakdown torqu Rated speed | • | : 29.1 A : 6.0 : 9.91 kgfm : 190 % : 290 % : 1465 rpm | | Moment o Duty cycle Insulation Service fa Temperatu Design | class ctor | : 0.1104 kgm ² : Cont.(S1) : F : 1.15 : 80 K : B | 2 |
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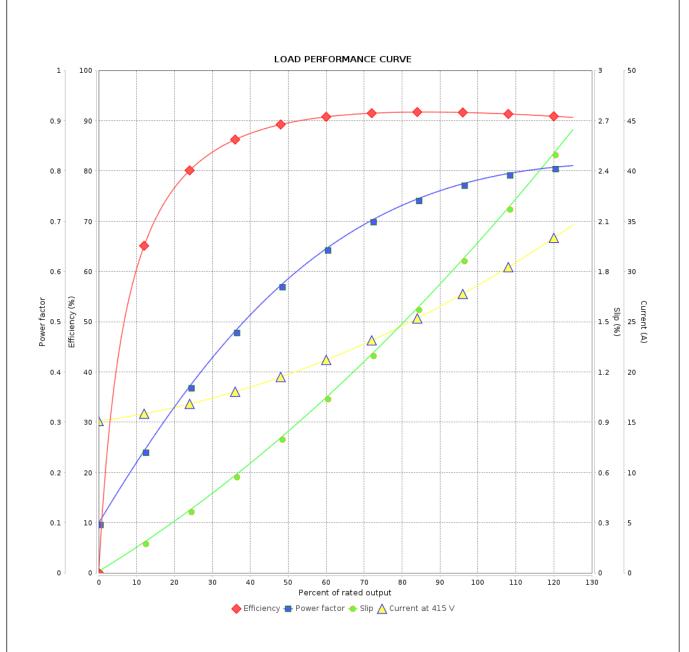


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| Performance | : 415 V 50 Hz 4P IE2 | | | |
|--|--|--|--|----------|
| Rated current LRC Rated torque Locked rotor torque Breakdown torque Rated speed | : 29.2 A : 6.4 : 9.87 kgfm : 200 % : 320 % : 1470 rpm | Moment of inertia (J) Duty cycle Insulation class Service factor Temperature rise Design | : 0.1104 kgm² : Cont.(S1) : F : 1.15 : 80 K : B | |
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