

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



| | | | | | |
|--|----------------------------|---|--|----------------------|----------------------|
| Customer : | | | | | |
| Product line | | : W21 Explosion Proof NEMA Premium Efficiency Three-Phase | | Product code : | 11450472 |
| Frame | : 444/5T | Cooling method | : IC411 - TEFC | | |
| Insulation class | : F | Mounting | : F-1 | | |
| Duty cycle | : Cont.(S1) | Rotation ¹ | : Both (CW and CCW) | | |
| Ambient temperature | : -20°C to +40°C | Starting method | : Direct On Line | | |
| Altitude | : 1000 m.a.s.l. | Approx. weight ³ | : 898 kg | | |
| Protection degree | : IP55 | Moment of inertia (J) | : 2.41 kgm ² | | |
| Design | : B | | | | |
| Output [HP] | 125 | 100 | 100 | 100 | 100 |
| Poles | 4 | 4 | 4 | 4 | 4 |
| Frequency [Hz] | 60 | 50 | 50 | 50 | 50 |
| Rated voltage [V] | 230/460 | 380 | 400 | 415 | 415 |
| Rated current [A] | 278/139 | 142 | 136 | 132 | 132 |
| L. R. Amperes [A] | 1890/945 | 852 | 952 | 977 | 977 |
| LRC [A] | 6.8x(Code G) | 6.0x(Code G) | 7.0x(Code H) | 7.4x(Code H) | 7.4x(Code H) |
| No load current [A] | 90.0/45.0 | 44.5 | 47.2 | 49.3 | 49.3 |
| Rated speed [RPM] | 1785 | 1485 | 1487 | 1488 | 1488 |
| Slip [%] | 0.83 | 1.00 | 0.87 | 0.80 | 0.80 |
| Rated torque [kgfm] | 50.8 | 48.9 | 48.8 | 48.8 | 48.8 |
| Locked rotor torque [%] | 200 | 190 | 210 | 229 | 229 |
| Breakdown torque [%] | 220 | 210 | 240 | 260 | 260 |
| Service factor | 1.15 | 1.00 | 1.00 | 1.00 | 1.00 |
| Temperature rise | 80 K | 80 K | 80 K | 80 K | 80 K |
| Locked rotor time | 75s (cold) 42s (hot) | 84s (cold) 47s (hot) | 77s (cold) 43s (hot) | 73s (cold) 41s (hot) | 73s (cold) 41s (hot) |
| Noise level ² | 76.0 dB(A) | 72.0 dB(A) | 72.0 dB(A) | 72.0 dB(A) | 72.0 dB(A) |
| Efficiency (%) | 25% | 94.0 | 94.4 | 94.8 | 94.4 |
| | 50% | 94.3 | 94.5 | 94.5 | 94.5 |
| | 75% | 95.2 | 94.5 | 95.0 | 95.0 |
| | 100% | 95.4 | 94.5 | 94.5 | 95.0 |
| Power Factor | 25% | 0.51 | 0.51 | 0.47 | 0.45 |
| | 50% | 0.75 | 0.75 | 0.73 | 0.71 |
| | 75% | 0.82 | 0.83 | 0.81 | 0.80 |
| | 100% | 0.85 | 0.85 | 0.84 | 0.83 |
| Bearing type | : <u>Drive end</u> 6219 C3 | <u>Non drive end</u> 6316 C3 | Foundation loads | | |
| Sealing | : Viton | Lip Seal | Max. traction | : 660 kgf | |
| | Oil Seal | | Max. compression | : 1558 kgf | |
| Lubrication interval | : 8033 h | 8569 h | | | |
| Lubricant amount | : 28 g | 34 g | | | |
| Lubricant type | : Mobil Polyrex EM | | | | |
| Notes USABLE @208V 314A SF 1.00 SFA 314A | | | | | |
| 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 | | | | | |
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Customer : _____

Thermal protection

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

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LOAD PERFORMANCE CURVE

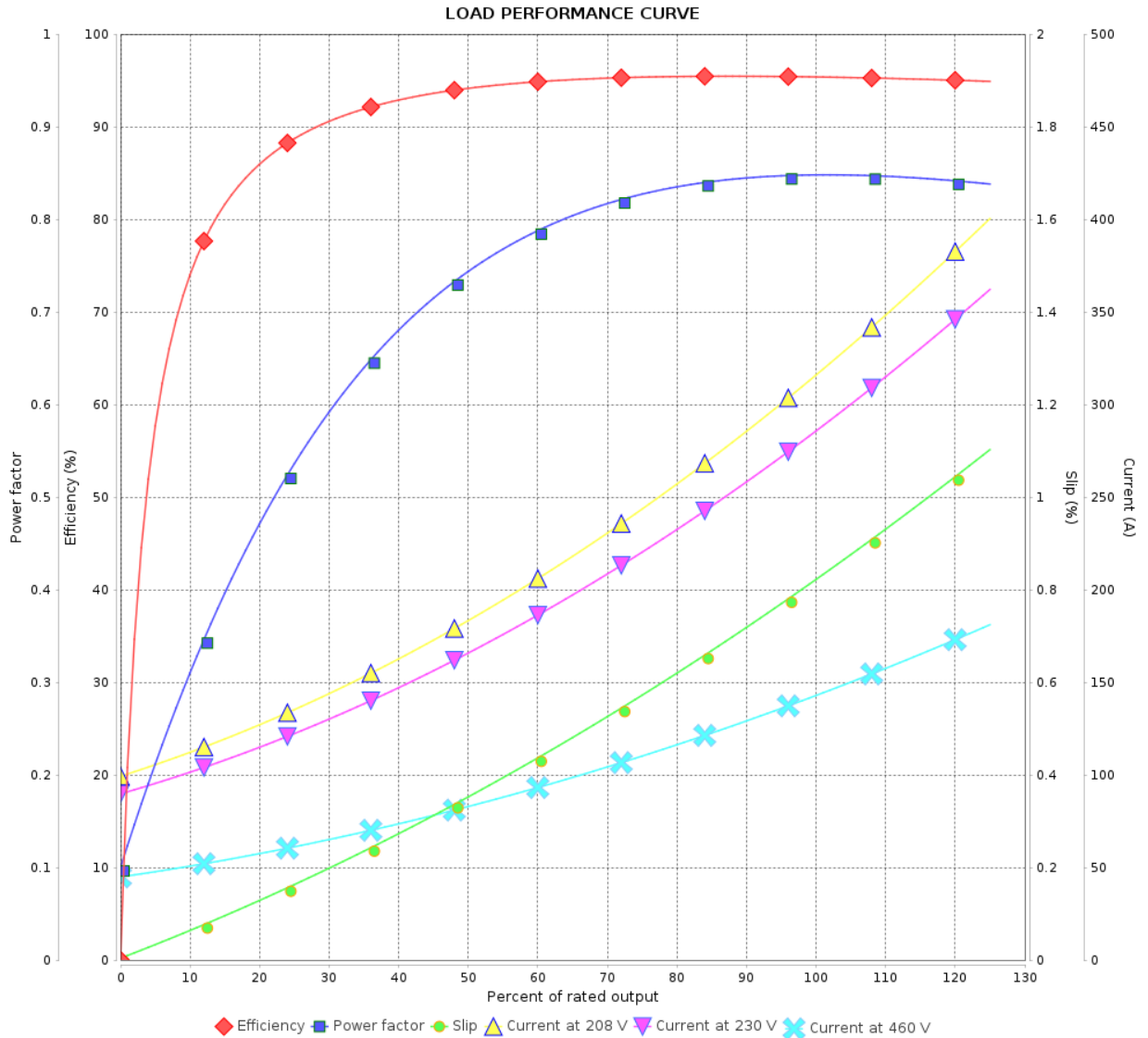
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W21 Explosion Proof NEMA Premium
Efficiency Three-Phase

Product code : 11450472



Performance : 230/460 V 60 Hz 4P

Rated current : 278/139 A
LRC : 6.8
Rated torque : 50.8 kgfm
Locked rotor torque : 200 %
Breakdown torque : 220 %
Rated speed : 1785 rpm

Moment of inertia (J) : 2.41 kgm²
Duty cycle : Cont.(S1)
Insulation class : F
Service factor : 1.15
Temperature rise : 80 K
Design : B

| Rev. | Changes Summary | Performed | Checked | Date |
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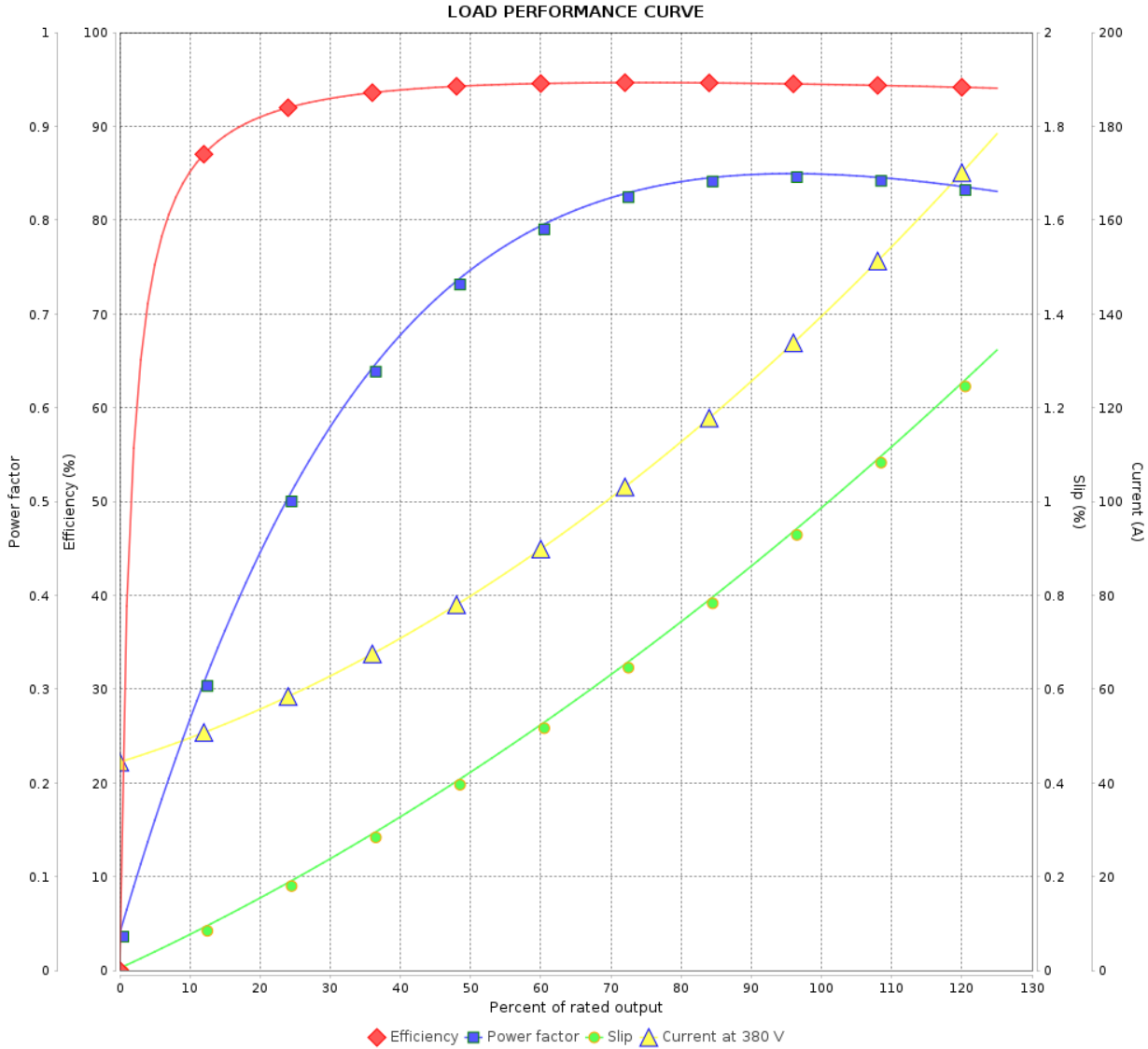
Three Phase Induction Motor - Squirrel Cage



Customer : _____

Product line : W21 Explosion Proof NEMA Premium
Efficiency Three-Phase

Product code : 11450472



Performance : 380 V 50 Hz 4P IE2

| | | | |
|---------------------|-------------|-----------------------|-------------------------|
| Rated current | : 142 A | Moment of inertia (J) | : 2.41 kgm ² |
| LRC | : 6.0 | Duty cycle | : Cont.(S1) |
| Rated torque | : 48.9 kgfm | Insulation class | : F |
| Locked rotor torque | : 190 % | Service factor | : 1.00 |
| Breakdown torque | : 210 % | Temperature rise | : 80 K |
| Rated speed | : 1485 rpm | Design | : B |

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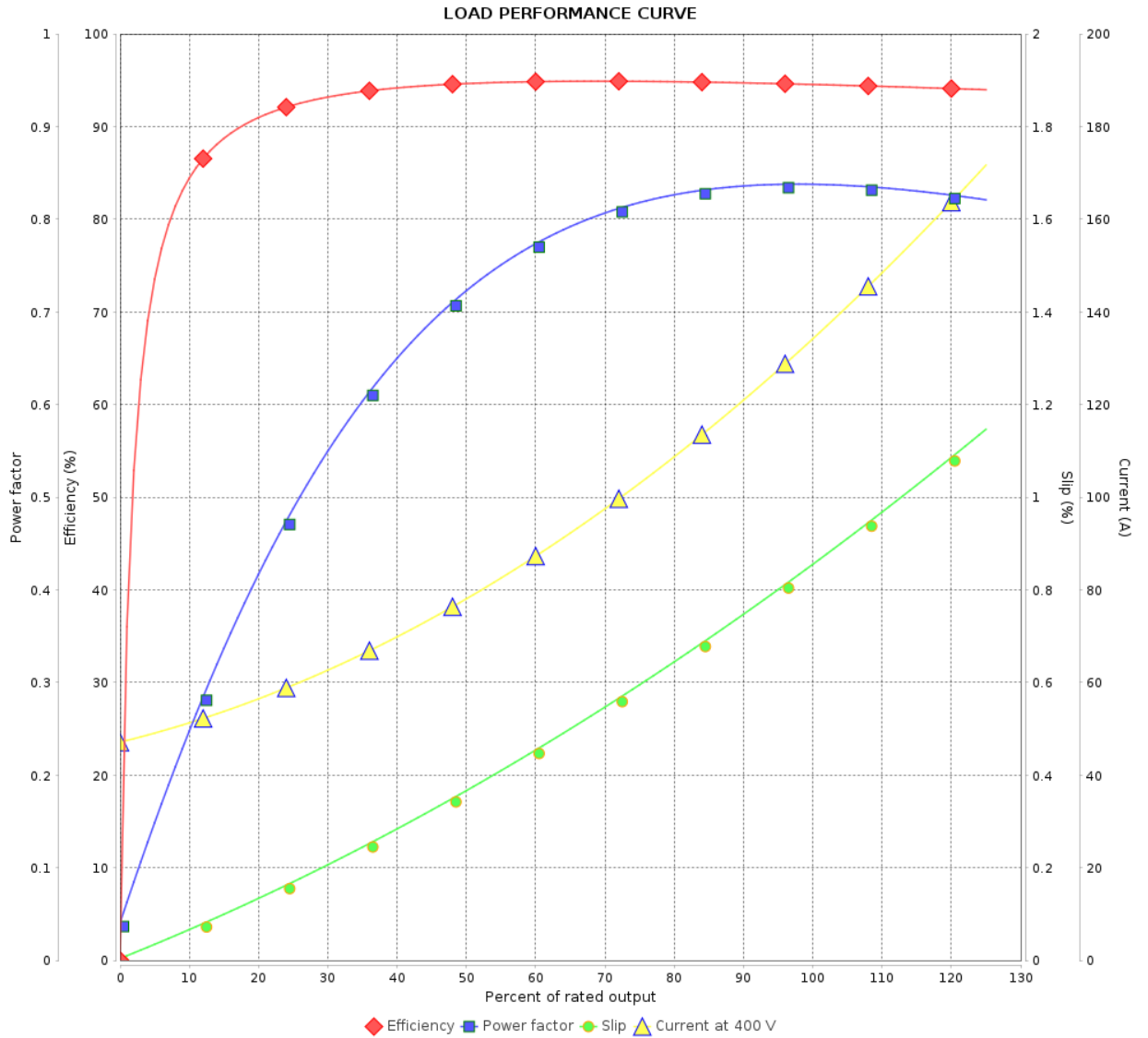
Three Phase Induction Motor - Squirrel Cage



Customer : _____

Product line : W21 Explosion Proof NEMA Premium
Efficiency Three-Phase

Product code : 11450472



Performance : 400 V 50 Hz 4P IE2

Rated current : 136 A
LRC : 7.0
Rated torque : 48.8 kgfm
Locked rotor torque : 210 %
Breakdown torque : 240 %
Rated speed : 1487 rpm

Moment of inertia (J) : 2.41 kgm²
Duty cycle : Cont.(S1)
Insulation class : F
Service factor : 1.00
Temperature rise : 80 K
Design : B

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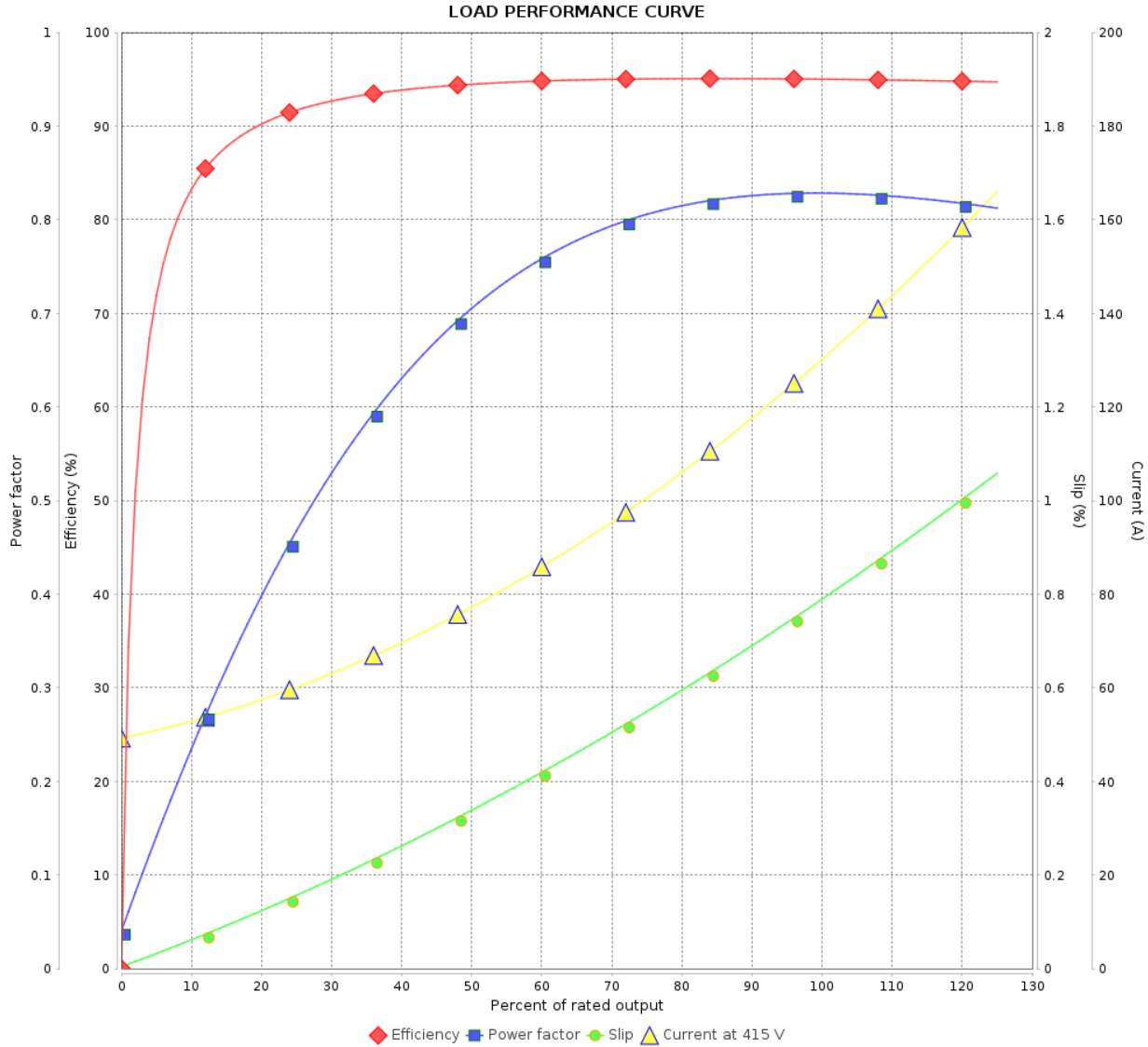
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W21 Explosion Proof NEMA Premium
Efficiency Three-Phase

Product code : 11450472



Performance : 415 V 50 Hz 4P IE3

| | | | |
|---------------------|-------------|-----------------------|-------------------------|
| Rated current | : 132 A | Moment of inertia (J) | : 2.41 kgm ² |
| LRC | : 7.4 | Duty cycle | : Cont.(S1) |
| Rated torque | : 48.8 kgfm | Insulation class | : F |
| Locked rotor torque | : 229 % | Service factor | : 1.00 |
| Breakdown torque | : 260 % | Temperature rise | : 80 K |
| Rated speed | : 1488 rpm | Design | : B |

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