

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 Super Premium Efficiency Three-Phase
Product code : 12792146

| | | | |
|---------------------|------------------|-----------------------------|---------------------------|
| Frame | : 182/4T | 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 ² | : 44.9 kg |
| Protection degree | : IP55 | Moment of inertia (J) | : 0.0167 kgm ² |
| Design | : A | | |

| | | | | |
|--------------------------|----------------------|----------------------|----------------------|----------------------|
| Output [HP] | 3 | 3 | 3 | 3 |
| Poles | 4 | 4 | 4 | 4 |
| Frequency [Hz] | 60 | 50 | 50 | 50 |
| Rated voltage [V] | 230/460 | 380 | 400 | 415 |
| Rated current [A] | 7.88/3.94 | 4.61 | 4.49 | 4.41 |
| L. R. Amperes [A] | 74.9/37.4 | 36.9 | 39.1 | 41.9 |
| LRC [A] | 9.5x(Code L) | 8.0x(Code K) | 8.7x(Code L) | 9.5x(Code M) |
| No load current [A] | 4.60/2.30 | 2.20 | 2.40 | 2.50 |
| Rated speed [RPM] | 1770 | 1460 | 1465 | 1465 |
| Slip [%] | 1.67 | 2.67 | 2.33 | 2.33 |
| Rated torque [kgfm] | 1.23 | 1.49 | 1.49 | 1.49 |
| Locked rotor torque [%] | 250 | 220 | 250 | 280 |
| Breakdown torque [%] | 360 | 250 | 300 | 350 |
| Service factor | 1.25 | 1.25 | 1.15 | 1.15 |
| Temperature rise | 80 K | 80 K | 80 K | 80 K |
| Locked rotor time | 64s (cold) 36s (hot) | 54s (cold) 30s (hot) | 54s (cold) 30s (hot) | 52s (cold) 29s (hot) |
| Noise level ² | 56.0 dB(A) | 56.0 dB(A) | 56.0 dB(A) | 56.0 dB(A) |
| Efficiency (%) | 25% | | | |
| | 50% | 87.5 | 88.5 | 88.5 |
| | 75% | 88.5 | 89.5 | 89.5 |
| | 100% | 91.0 | 89.5 | 89.5 |
| Power Factor | 25% | | | |
| | 50% | 0.59 | 0.65 | 0.62 |
| | 75% | 0.70 | 0.76 | 0.73 |
| | 100% | 0.77 | 0.81 | 0.79 |

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

| | | | | | |
|------------|----------------|-----|------|------|------|
| Losses (%) | P1 (0,9;1,0) | 9.4 | 11.1 | 11.1 | 10.3 |
| | P2 (0,5;1,0) | 7.3 | 8.6 | 8.6 | 8.0 |
| | P3 (0,25;1,0) | 6.6 | 7.8 | 7.8 | 7.2 |
| | P4 (0,9;0,5) | 5.6 | 6.7 | 6.7 | 6.2 |
| | P5 (0,5;0,5) | 3.7 | 4.4 | 4.4 | 4.1 |
| | P6 (0,5;0,25) | 2.9 | 3.4 | 3.4 | 3.2 |
| | P7 (0,25;0,25) | 2.0 | 2.4 | 2.4 | 2.2 |

| | | | | |
|----------------------|--------------------|----------------------|------------------|-----------|
| | <u>Drive end</u> | <u>Non drive end</u> | Foundation loads | |
| Bearing type | : 6207 ZZ | 6206 ZZ | Max. traction | : 86 kgf |
| Sealing | : V'Ring | V'Ring | Max. compression | : 131 kgf |
| Lubrication interval | : - | - | | |
| Lubricant amount | : - | - | | |
| Lubricant type | : Mobil Polyrex EM | | | |

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.

These are average values based on tests with sinusoidal power supply, subject to the tolerances stipulated in NEMA MG-1.

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Three Phase Induction Motor - Squirrel Cage



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Notes

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LOAD PERFORMANCE CURVE

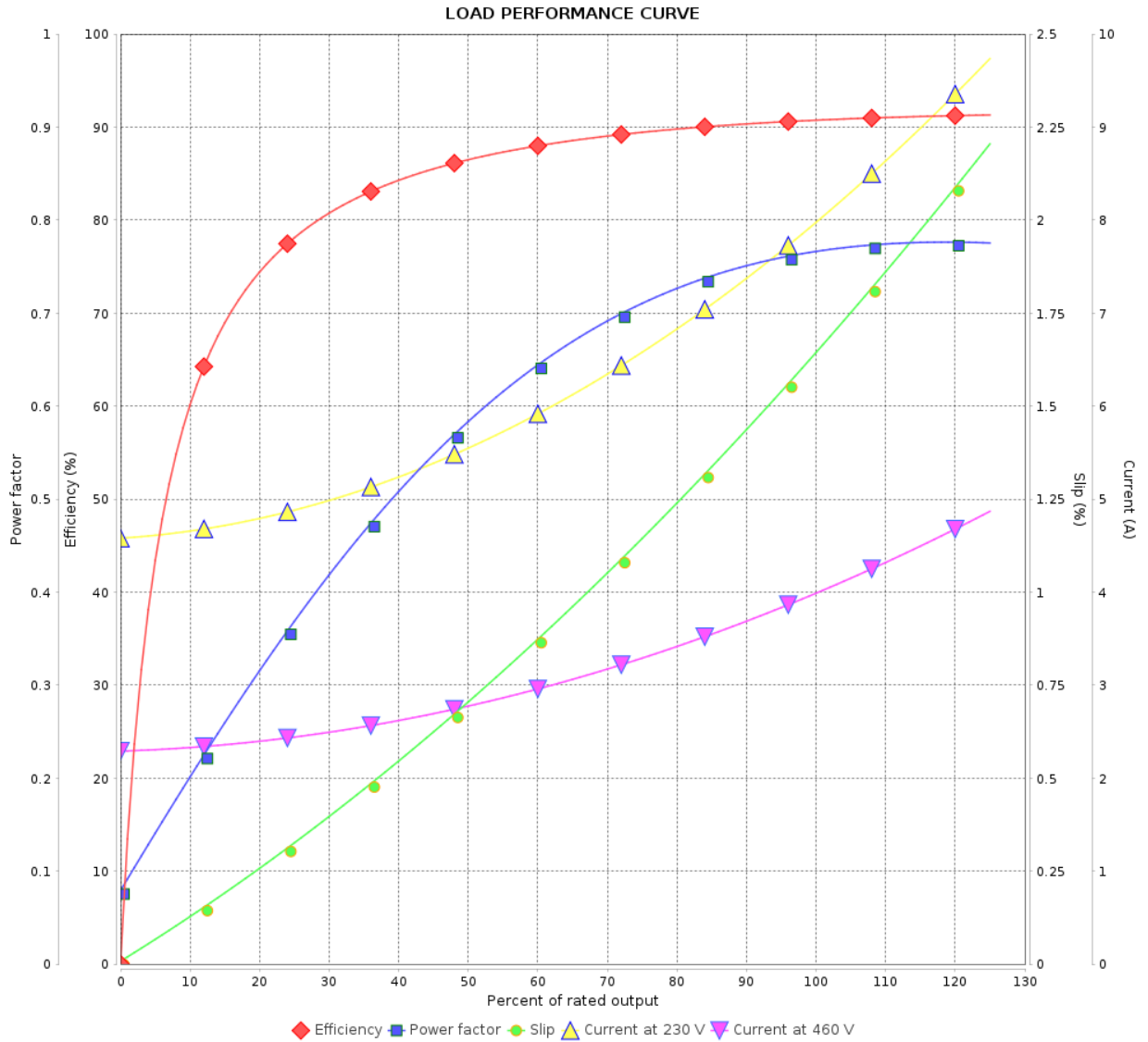
Three Phase Induction Motor - Squirrel Cage



Customer : _____

Product line : W22 Super Premium Efficiency Three-Phase

Product code : 12792146



Performance : 230/460 V 60 Hz 4P

Rated current : 7.88/3.94 A
 LRC : 9.5
 Rated torque : 1.23 kgfm
 Locked rotor torque : 250 %
 Breakdown torque : 360 %
 Rated speed : 1770 rpm

Moment of inertia (J) : 0.0167 kgm²
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.25
 Temperature rise : 80 K
 Design : A

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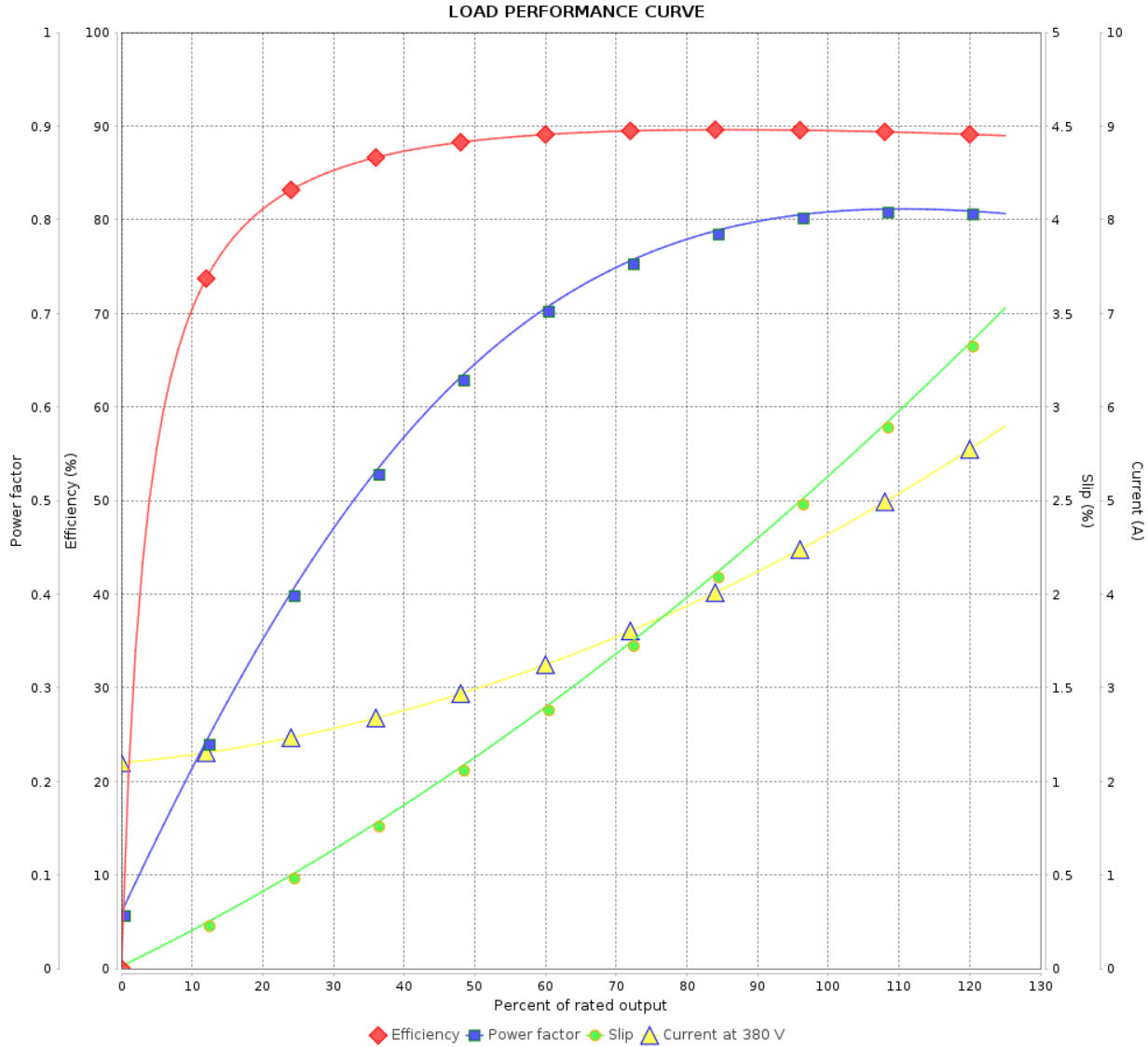
Three Phase Induction Motor - Squirrel Cage



Customer :

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Product code : 12792146



Performance : 380 V 50 Hz 4P IE4

Rated current : 4.61 A
 LRC : 8.0
 Rated torque : 1.49 kgfm
 Locked rotor torque : 220 %
 Breakdown torque : 250 %
 Rated speed : 1460 rpm

Moment of inertia (J) : 0.0167 kgm²
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.25
 Temperature rise : 80 K
 Design : A

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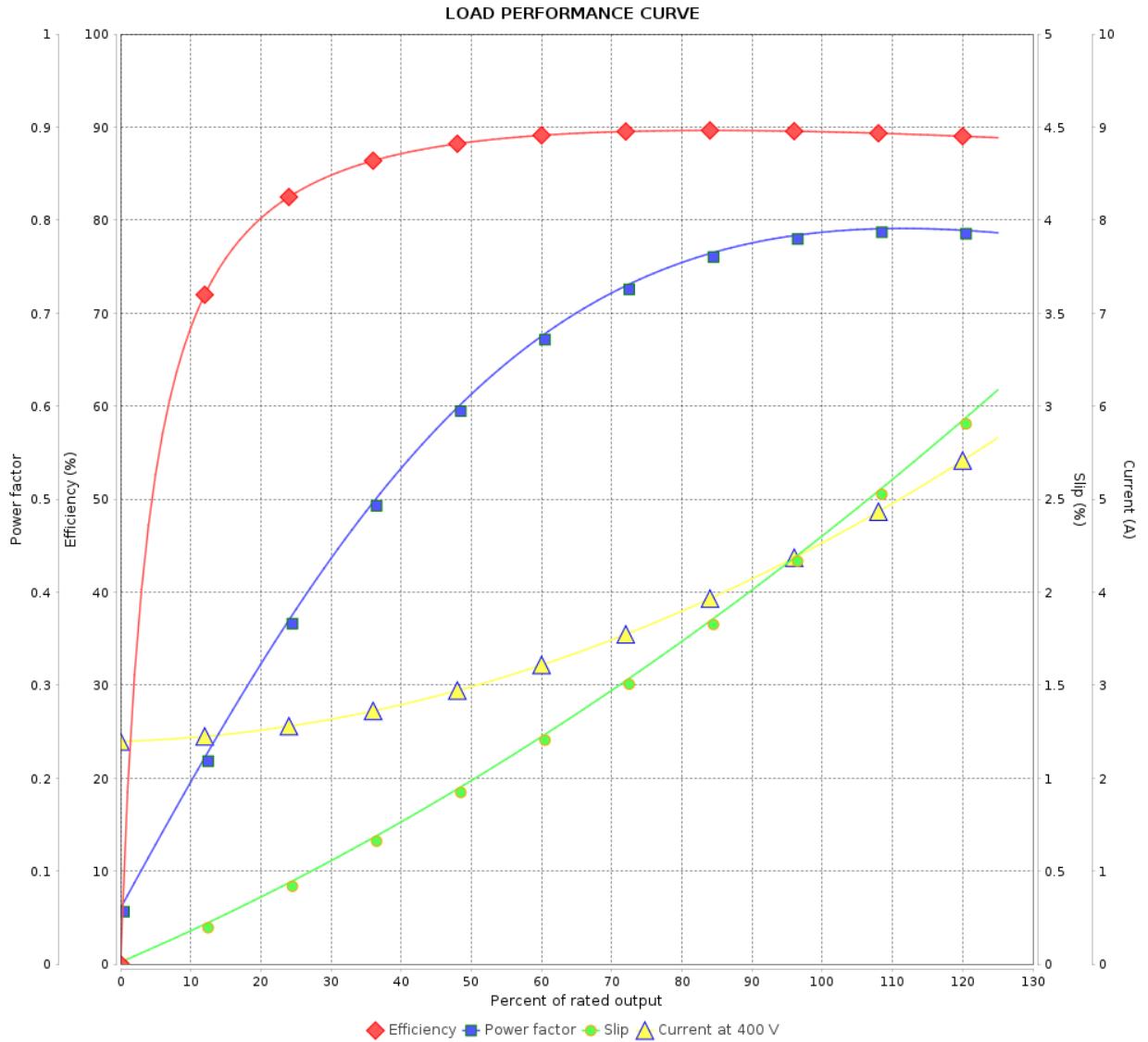
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 Super Premium Efficiency Three-Phase

Product code : 12792146



Performance : 400 V 50 Hz 4P IE4

Rated current : 4.49 A
 LRC : 8.7
 Rated torque : 1.49 kgfm
 Locked rotor torque : 250 %
 Breakdown torque : 300 %
 Rated speed : 1465 rpm

Moment of inertia (J) : 0.0167 kgm²
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.15
 Temperature rise : 80 K
 Design : A

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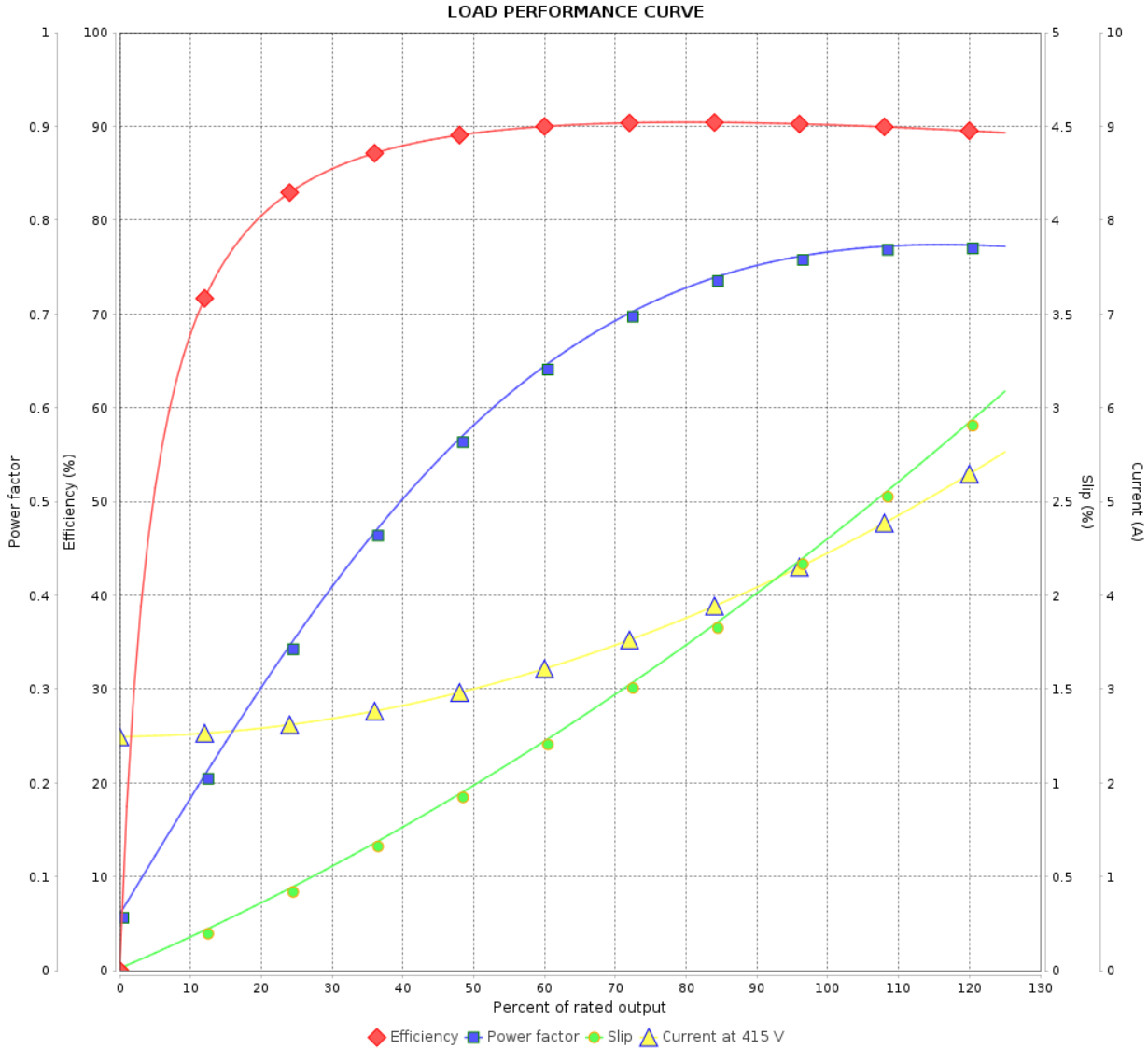
Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 Super Premium Efficiency Three-Phase

Product code : 12792146



Performance : 415 V 50 Hz 4P IE4

Rated current : 4.41 A
 LRC : 9.5
 Rated torque : 1.49 kgfm
 Locked rotor torque : 280 %
 Breakdown torque : 350 %
 Rated speed : 1465 rpm

Moment of inertia (J) : 0.0167 kgm²
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.15
 Temperature rise : 80 K
 Design : A

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