

DATA SHEET



Three Phase Induction Motor - Squirrel Cage

Customer :

Product line : W20 Three-Phase Product code : 17689161

| | | | |
|-----------------------|---------------------------|-----------------------------|------------------------|
| Frame | : 100L | Locked rotor time | : 32s (cold) 18s (hot) |
| Output | : 2.2 kW (3 HP) | Temperature rise | : 80 K |
| Poles | : 4 | Duty cycle | : S1 |
| Frequency | : 50 Hz | Ambient temperature | : -20°C to +40°C |
| Rated voltage | : 230/400 V | Altitude | : 1000 m.a.s.l. |
| Rated current | : 8.28/4.76 A | Protection degree | : IP55 |
| L. R. Amperes | : 60.4/34.7 A | Cooling method | : IC411 - TEFC |
| LRC | : 7.3 | Mounting | : B3T |
| No load current | : 4.92/2.83 A | Rotation ¹ | : Both (CW and CCW) |
| Rated speed | : 1445 rpm | Noise level ² | : 53.0 dB(A) |
| Slip | : 3.67 % | Starting method | : Direct On Line |
| Rated torque | : 14.5 Nm | Approx. weight ³ | : 25.3 kg |
| Locked rotor torque | : 270 % | | |
| Breakdown torque | : 310 % | | |
| Insulation class | : F | | |
| Service factor | : 1.00 | | |
| Moment of inertia (J) | : 0.0097 kgm ² | | |
| Design | : N | | |

| | | | | | |
|----------------|------|------|------|------------------|----------|
| Output | 50% | 75% | 100% | Foundation loads | |
| Efficiency (%) | 84.7 | 86.3 | 86.7 | Max. traction | : 1003 N |
| Power Factor | 0.57 | 0.70 | 0.77 | Max. compression | : 1251 N |

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

| P1 (0,9;1,0) | P2 (0,5;1,0) | P3 (0,25;1,0) | P4 (0,9;0,5) | P5 (0,5;0,5) | P6 (0,5;0,25) | P7 (0,25;0,25) |
|--------------|--------------|---------------|--------------|--------------|---------------|----------------|
| 14.7 | 12.8 | 12.2 | 7.5 | 5.4 | 3.9 | 2.8 |

| | Drive end | Non drive end |
|----------------------|--------------------|---------------|
| Bearing type | : 6206 ZZ | : 6205 ZZ |
| 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.

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Thermal protection

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

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TORQUE AND CURRENT VS SPEED CURVE

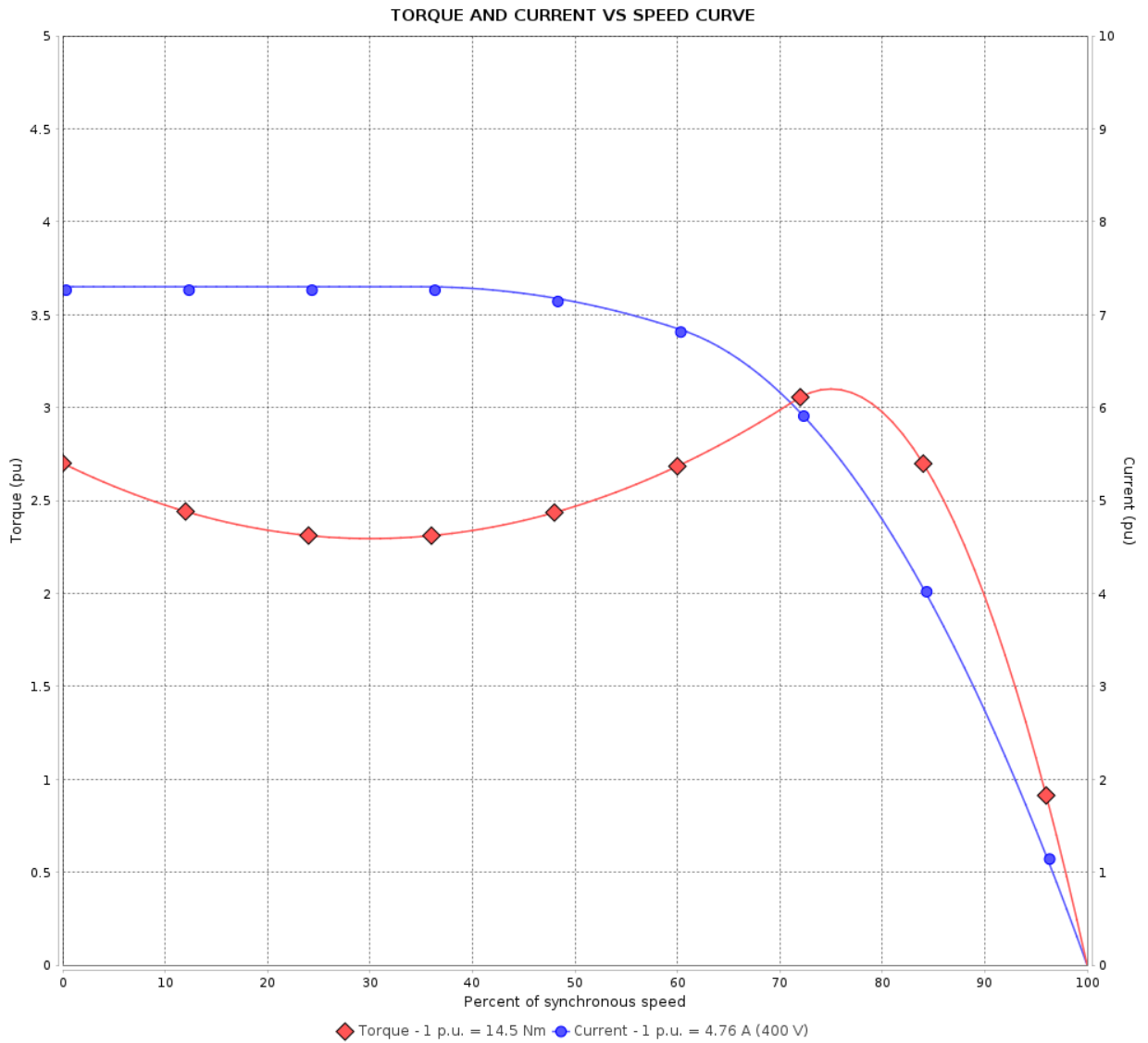
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Performance : 230/400 V 50 Hz 4P

| | | | |
|---------------------|---------------|-----------------------|---------------------------|
| Rated current | : 8.28/4.76 A | Moment of inertia (J) | : 0.0097 kgm ² |
| LRC | : 7.3 | Duty cycle | : S1 |
| Rated torque | : 14.5 Nm | Insulation class | : F |
| Locked rotor torque | : 270 % | Service factor | : 1.00 |
| Breakdown torque | : 310 % | Temperature rise | : 80 K |
| Rated speed | : 1445 rpm | Design | : N |

Locked rotor time : 32s (cold) 18s (hot)

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LOAD PERFORMANCE CURVE

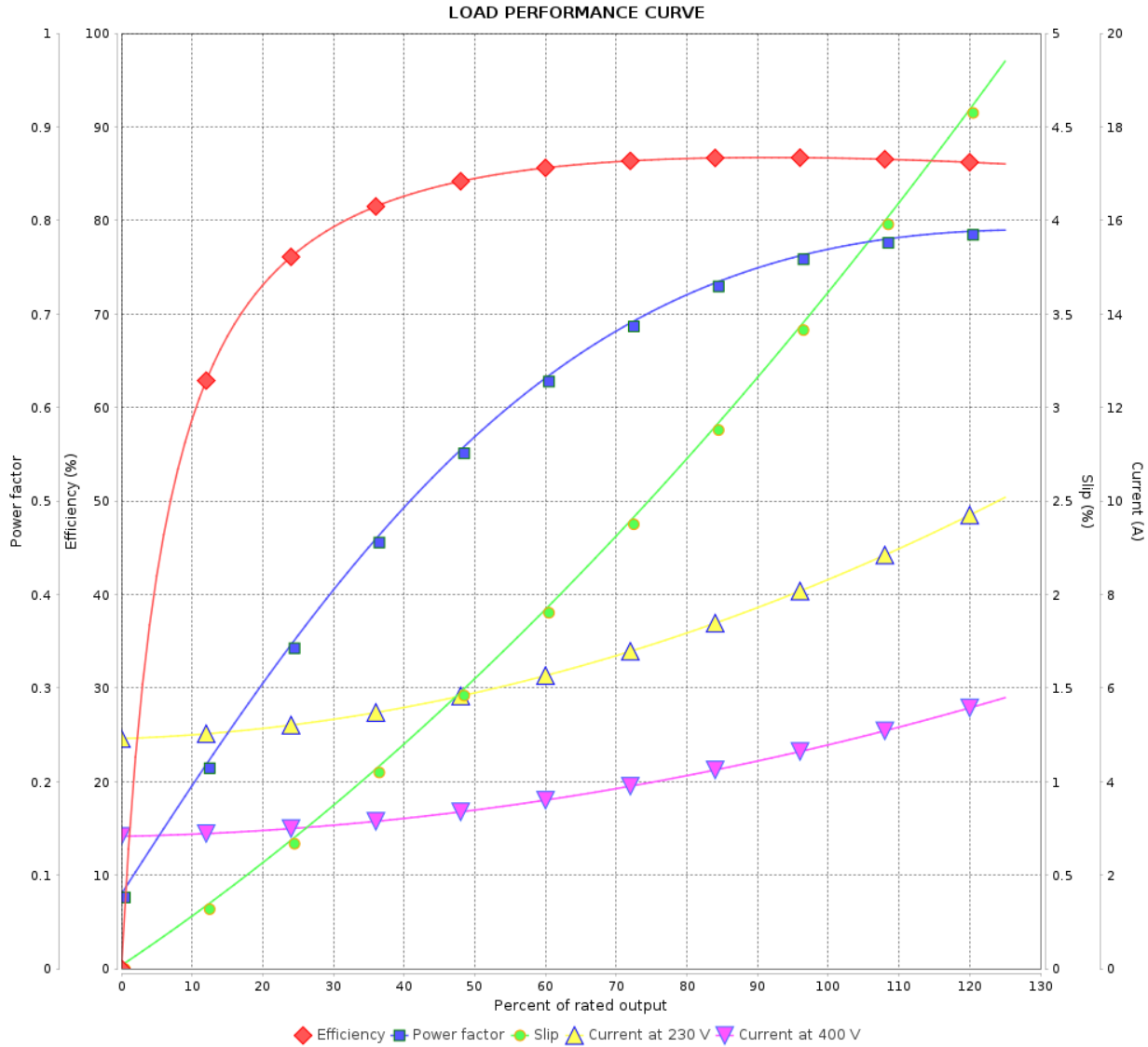
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Performance : 230/400 V 50 Hz 4P

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 Breakdown torque : 310 %
 Rated speed : 1445 rpm

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 Service factor : 1.00
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THERMAL LIMIT CURVE

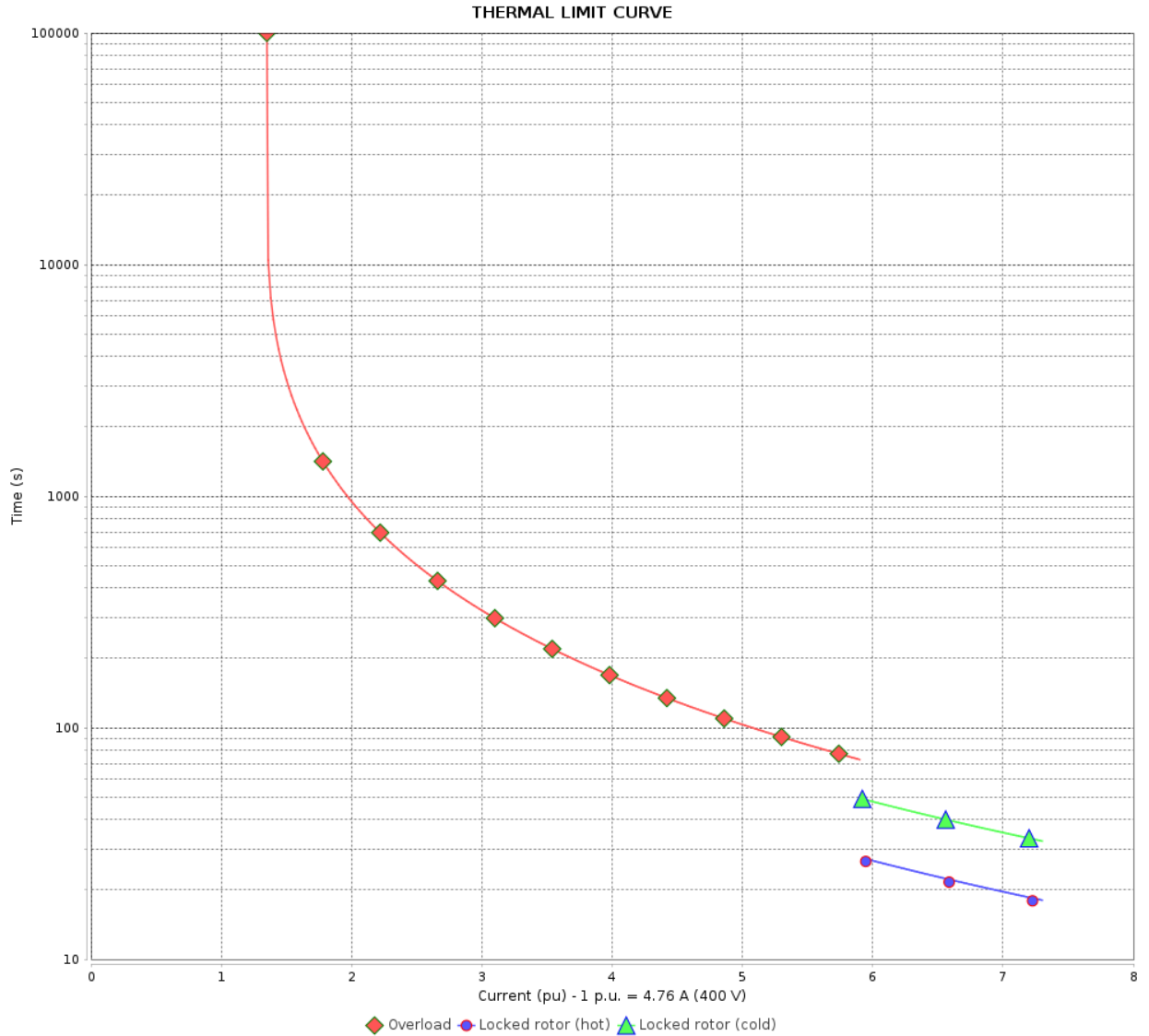
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Heating constant
 Cooling constant

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VFD OPERATION CURVE

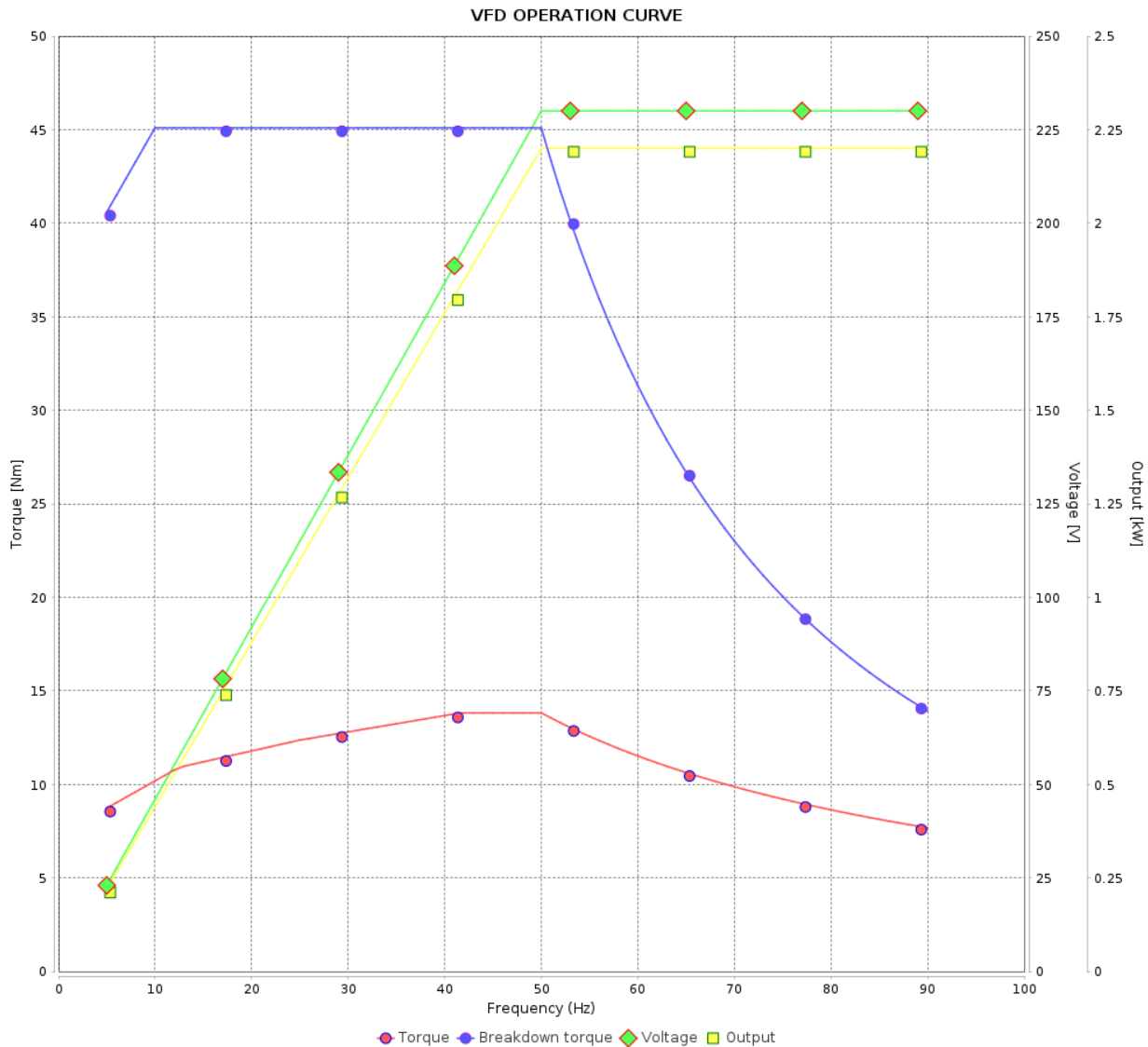
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