

# DATA SHEET

## Three Phase Induction Motor - Squirrel Cage



Customer :

Product line : W22 NEMA Premium Efficiency Three-Phase Product code : 12448181  
Catalog # : HT040402NPW22

|                       |                 |                             |                        |
|-----------------------|-----------------|-----------------------------|------------------------|
| Frame                 | : 324/6TS       | Locked rotor time           | : 39s (cold) 22s (hot) |
| Output                | : 40 HP (30 kW) | Temperature rise            | : 80 K                 |
| Frequency             | : 60 Hz         | Duty cycle                  | : Cont.(S1)            |
| Rated voltage         | : 230/460 V     | Ambient temperature         | : -20°C to +40°C       |
| Poles                 | : 2             | Altitude                    | : 1000 m.a.s.l.        |
| Rated current         | : 95.9/47.9 A   | Protection degree           | : IP55                 |
|                       | : 6.3x(Code G)  | Cooling method              | : IC411 - TEFC         |
| Rated speed           | : 3560 rpm      | Mounting                    | : F-1                  |
| Rated torque          | : 59.0 ft.lb    | Rotation <sup>1</sup>       | : Both (CW and CCW)    |
| Insulation class      | : F             | Noise level <sup>2</sup>    | : 76.0 dB(A)           |
| Service factor        | : 1.25          | Starting method             | : Direct On Line       |
| Moment of inertia (J) | : 4.90 sq.ft.lb | Approx. weight <sup>3</sup> | : 547 lb               |
| Design                | : B             |                             |                        |

|                |       |      |      |      |                  |          |
|----------------|-------|------|------|------|------------------|----------|
| Output         | 25%   | 50%  | 75%  | 100% | Foundation loads |          |
| Efficiency (%) | 0.000 | 91.7 | 92.4 | 92.4 | Max. traction    | : 418 lb |
| Power Factor   | 0.00  | 0.74 | 0.82 | 0.85 | Max. compression | : 890 lb |

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) |
|--------------|--------------|---------------|--------------|--------------|---------------|----------------|
| 7.9          | 5.3          | 4.4           | 5.3          | 2.9          | 2.3           | 1.4            |

|                      | Drive end        | Non drive end |
|----------------------|------------------|---------------|
| Bearing type         | : 6312 C3        | 6212 C3       |
| Sealing              | : V'Ring         | V'Ring        |
| Lubrication interval | : 12000 h        | 15000 h       |
| Lubricant amount     | : 21 g           | 13 g          |
| Lubricant type       | Mobil Polyrex EM |               |

### Notes

USABLE @208V 101A SF 1.10 SFA 111A

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 |                 |           |         |      |
| Checked by   |                 |           |         |      |
| Date         | 29/06/2026      |           |         |      |

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Revision

# TORQUE AND CURRENT VS SPEED CURVE

## Three Phase Induction Motor - Squirrel Cage

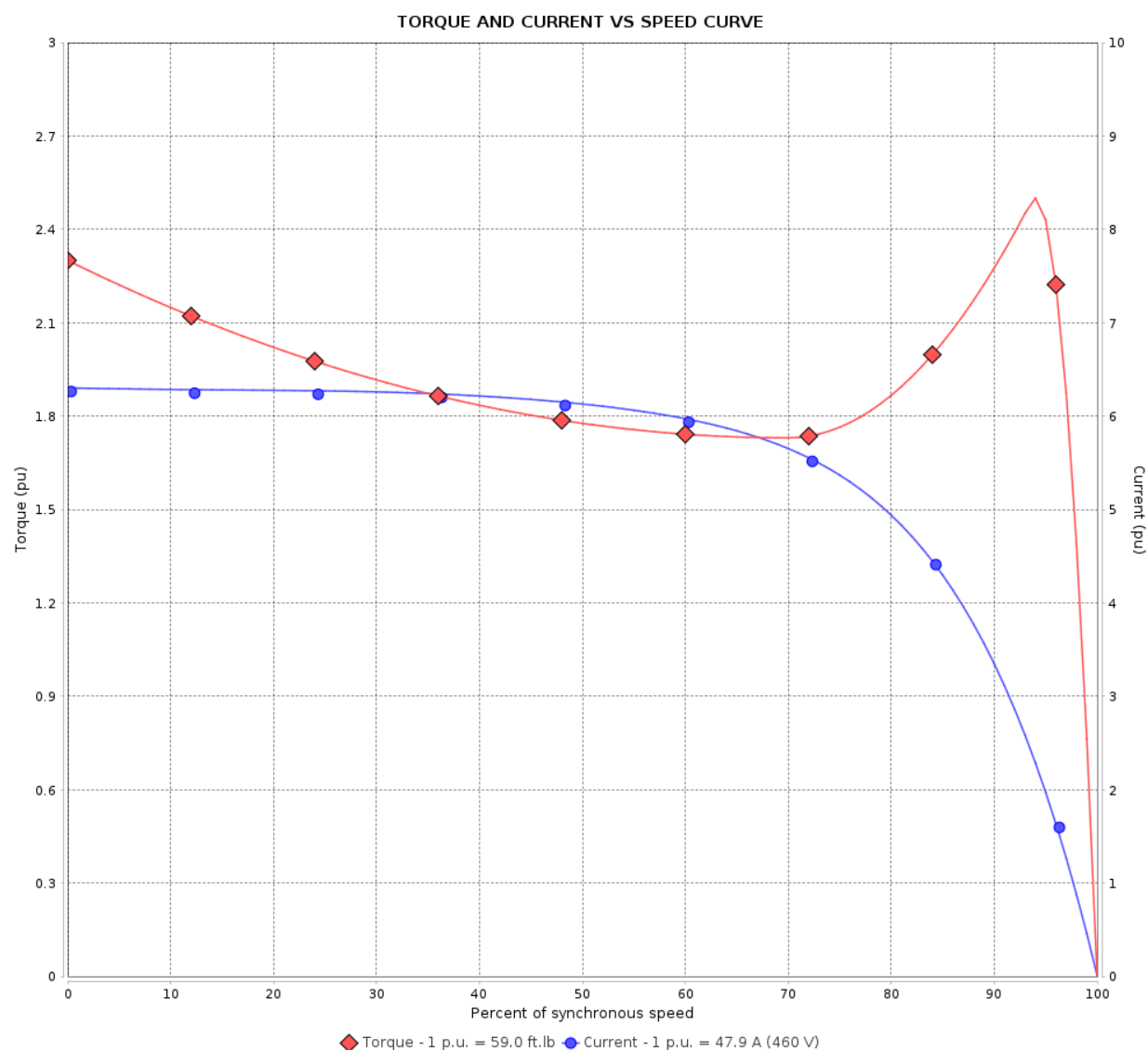


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Three-Phase

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Performance : 230/460 V 60 Hz 2P

Rated current : 95.9/47.9 A  
LRC : 6.3  
Rated torque : 59.0 ft.lb  
Locked rotor torque : 229 %  
Breakdown torque : 250 %  
Rated speed : 3560 rpm

Moment of inertia (J) : 4.90 sq.ft.lb  
Duty cycle : Cont.(S1)  
Insulation class : F  
Service factor : 1.25  
Duty cycle : Cont.(S1)

Locked rotor time : 39s (cold) 22s (hot)

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# LOAD PERFORMANCE CURVE

## Three Phase Induction Motor - Squirrel Cage

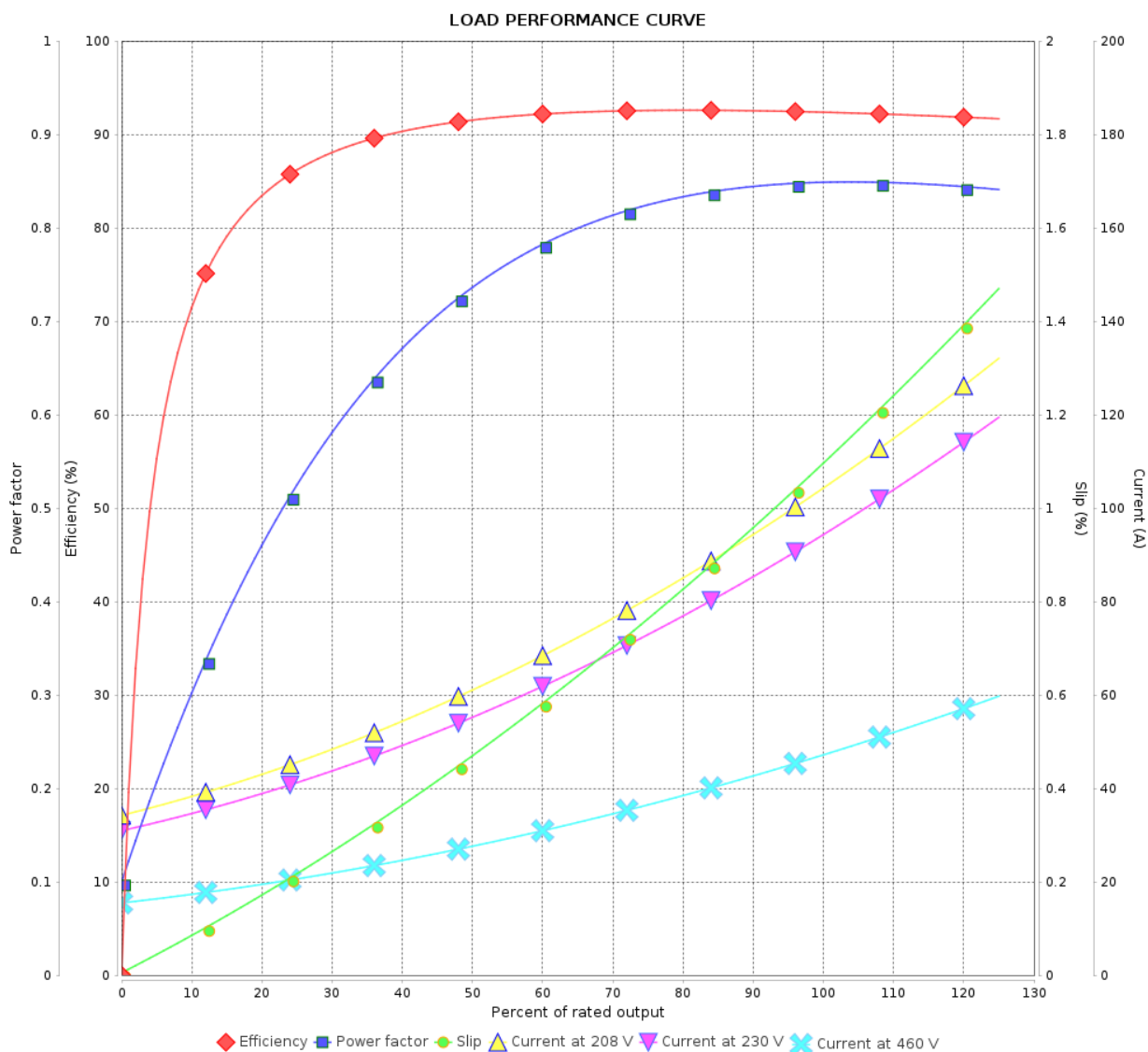


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# THERMAL LIMIT CURVE

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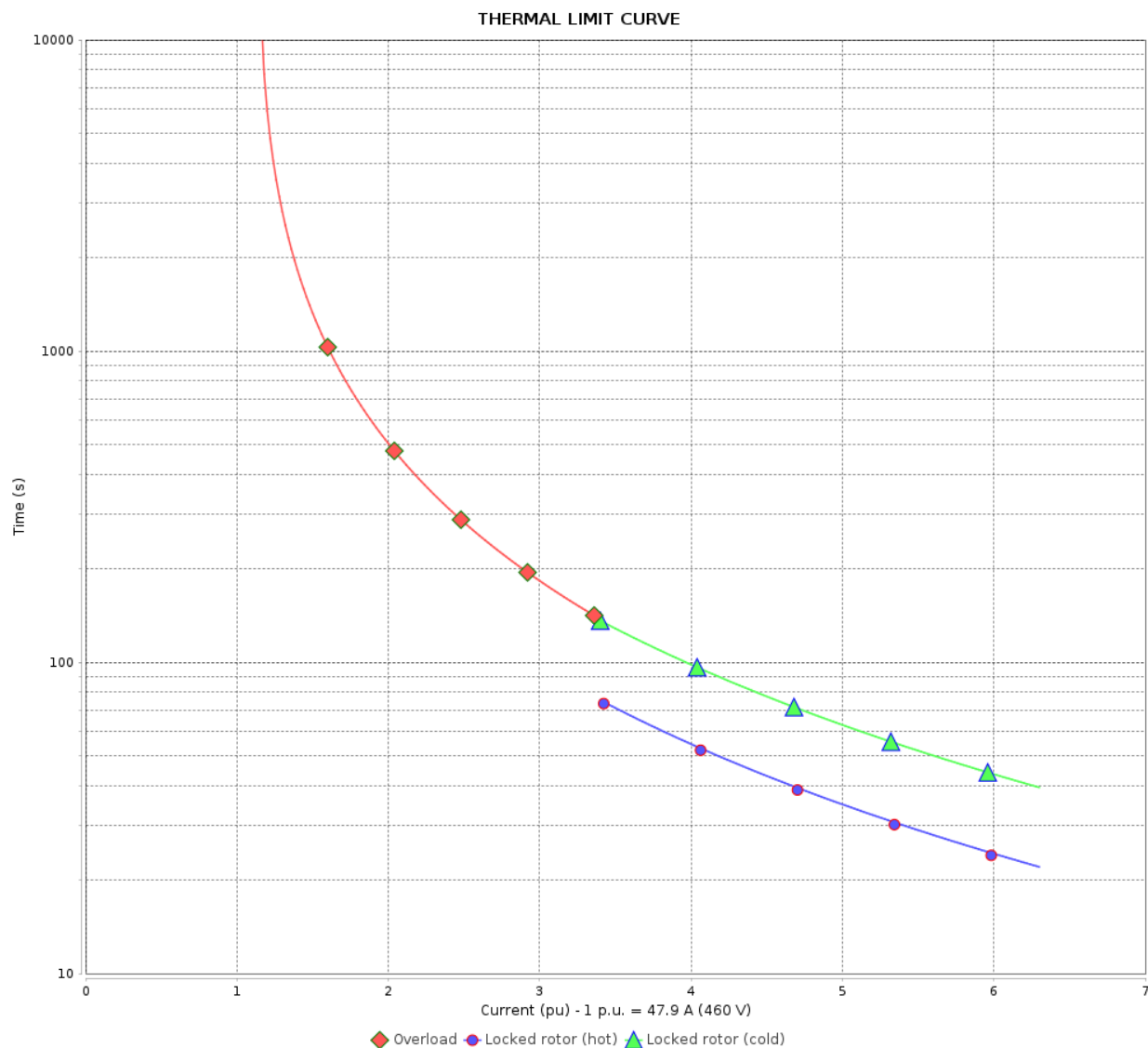


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Heating constant

Cooling constant

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# VFD OPERATION CURVE

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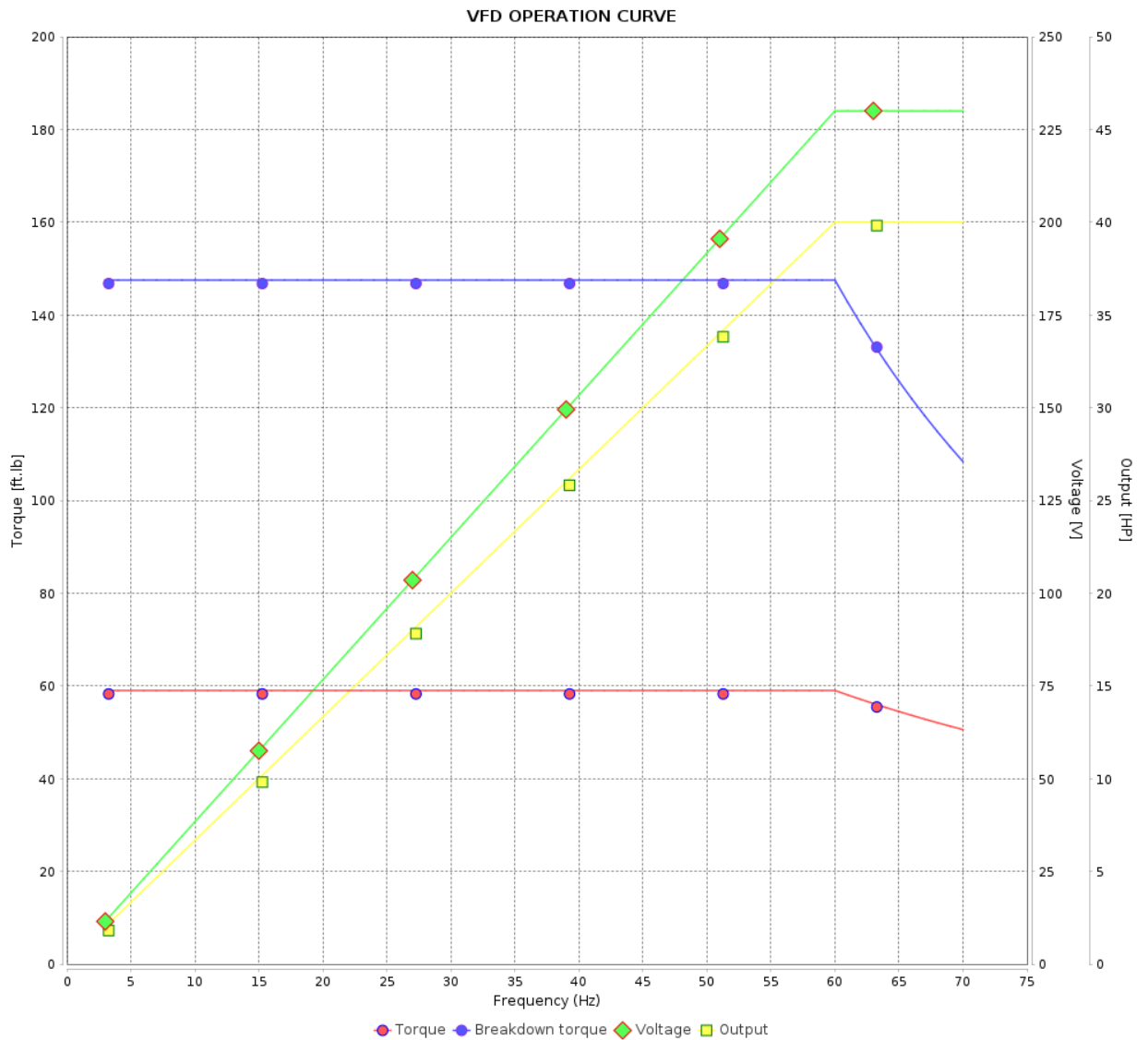


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