### **DATA SHEET**

#### Three Phase Induction Motor - Squirrel Cage



Customer Product line : W40 NEMA Premium Efficiency Product code: 14272886 Three-Phase Catalog #: 12518OT3H405TC-W40 Frame : 404/5TC Locked rotor time : 18s (cold) 10s (hot) Output : 125 HP Temperature rise : 80 K Poles Duty cycle : Cont.(S1) : -20°C to +40°C Frequency : 60 Hz Ambient temperature Rated voltage : 575 V : 1000 m.a.s.l. Altitude Rated current : 110 A Protection degree : IP23 L. R. Amperes : 762 A Cooling method : IC01 - ODP : 6.9x(Code G) LRC Mounting : F-1 No load current : 37.6 A Rotation<sup>1</sup> : Both (CW and CCW) Rated speed : 1780 rpm Noise level<sup>2</sup> : 69.0 dB(A) Starting method Slip : 1.11 % : Direct On Line Rated torque : 369 ft.lb Approx. weight<sup>3</sup> : 1049 lb Locked rotor torque : 270 % Breakdown torque : 260 % Insulation class : F Service factor : 1.25 Moment of inertia (J) : 25.5 sq.ft.lb Design : B 25% 50% 75% 100% Output Foundation loads 95.4 Efficiency (%) 94.9 95.0 95.4 Max. traction : 2351 lb Power Factor 0.50 0.86 0.75 0.83 Max. compression : 3400 lb Non drive end Drive end Bearing type 6316 C3 6212 Z C3 Sealing Without Bearing Seal Without Bearing Seal Lubrication interval 20000 h 20000 h Lubricant amount 34 g 13 g 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 NEMA MG-1.

| Rev.         |            | Changes Summary | Performed | Checked | Date     |
|--------------|------------|-----------------|-----------|---------|----------|
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| Date         | 13/04/2022 |                 |           | 1/6     |          |

### TORQUE AND CURRENT VS SPEED CURVE

### Three Phase Induction Motor - Squirrel Cage



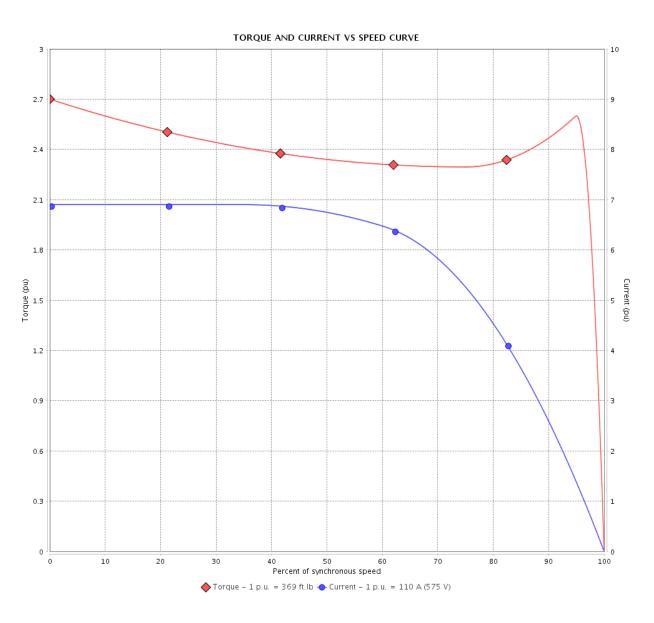
Customer :

Product line : W40 NEMA Premium Efficiency

Three-Phase

Product code: 14272886

Catalog #: 12518OT3H405TC-W40



| : 110 A     | Moment of inertia (J)                      | : 25.5 sq.ft.lb   |
|-------------|--|---|
| : 6.9       | Duty cycle                                 | : Cont.(S1)   |
| : 369 ft.lb | Insulation class                           | : F   |
| : 270 %     | Service factor                             | : 1.25  |
| : 260 %     | Temperature rise                           | : 80 K  |
| : 1780 rpm  | Design                                     | : B   |
|             | : 6.9<br>: 369 ft.lb<br>: 270 %<br>: 260 % | : 6.9 Duty cycle : 369 ft.lb Insulation class : 270 % Service factor : 260 % Temperature rise |

Locked rotor time : 18s (cold) 10s (hot)

| Rev.         |            | Changes Summary | Performed | Checked | Date     |
|--------------|------------|-----------------|-----------|---------|----------|
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# LOAD PERFORMANCE CURVE

#### Three Phase Induction Motor - Squirrel Cage



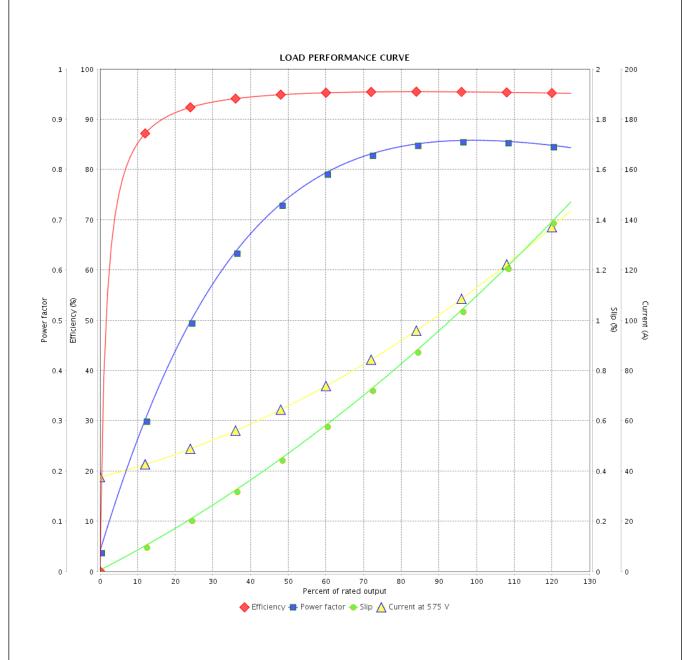
Customer

Product line : W40 NEMA Premium Efficiency Product code :

Three-Phase

Catalog #: 12518OT3H405TC-W40

14272886



| Performance  |                          | 75 V 60 Hz 4P                                     |  |           |  |          |
|--|--------------------------|---|--|-----------|--|----------|
| Rated current<br>LRC<br>Rated torque<br>Locked rotor torque<br>Breakdown torque<br>Rated speed | : 6<br>: 3<br>: 3<br>: 2 | 10 A<br>.9<br>69 ft.lb<br>70 %<br>60 %<br>780 rpm | Moment of inertia (J) Duty cycle Insulation class Service factor Temperature rise Design |           | : 25.5 sq.ft.lb<br>: Cont.(S1)<br>: F<br>: 1.25<br>: 80 K<br>: B |          |
| Rev.   |                          | Changes Summary                                   |  | Performed | Checked  | Date     |
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# THERMAL LIMIT CURVE

### Three Phase Induction Motor - Squirrel Cage



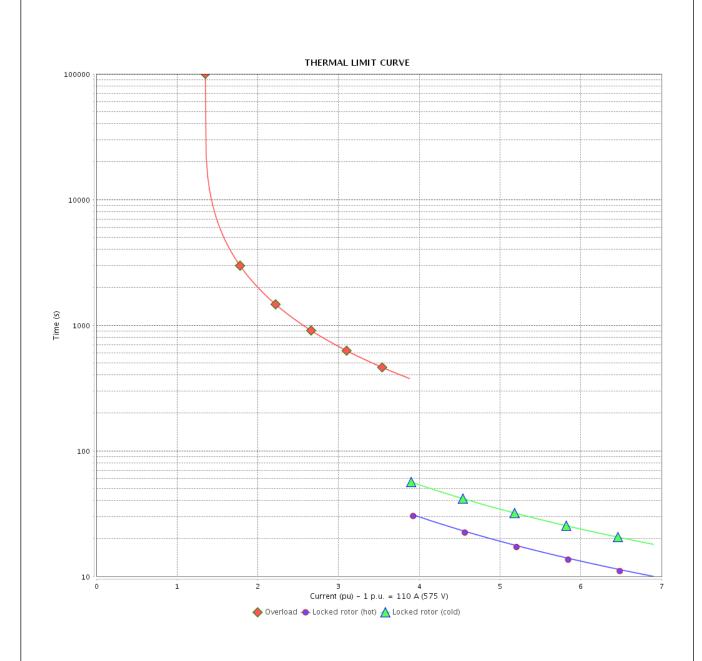
| Customer  | :                                      |  |   |                |  |          |
|---|--|--|---|----------------|--|----------|
| Product line  |  | W40 NEMA Premium Effici<br>nree-Phase                            |   | Product code : | 14272886<br>12518OT3H4   | 05TC-W40 |
|   |  |  |   |                |  |          |
| Performance Rated current LRC Rated torque Locked rotor torque Breakdown torque Rated speed | : 11<br>: 6.<br>: 36<br>: 27<br>e : 26 | 75 V 60 Hz 4P<br>0 A<br>9<br>69 ft.lb<br>70 %<br>60 %<br>780 rpm | Moment of<br>Duty cycle<br>Insulation<br>Service fac<br>Temperatu<br>Design | class          | : 25.5 sq.ft.lb<br>: Cont.(S1)<br>: F<br>: 1.25<br>: 80 K<br>: B |          |
| Heating constant<br>Cooling constant<br>Rev.  |  | Changes Summary  |   | Performed      | Checked  | Date     |
| Performed by Checked by   | 40/04/2000                             |  |   |                | Page   | Revision |

# THERMAL LIMIT CURVE

### Three Phase Induction Motor - Squirrel Cage



Customer



| Rev.         | Changes Summary |  | Performed | Checked | Date     |
|--------------|-----------------|--|-----------|---------|----------|
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| Date         | 13/04/2022      |  |           | 5/6     |          |

## VFD OPERATION CURVE

#### Three Phase Induction Motor - Squirrel Cage



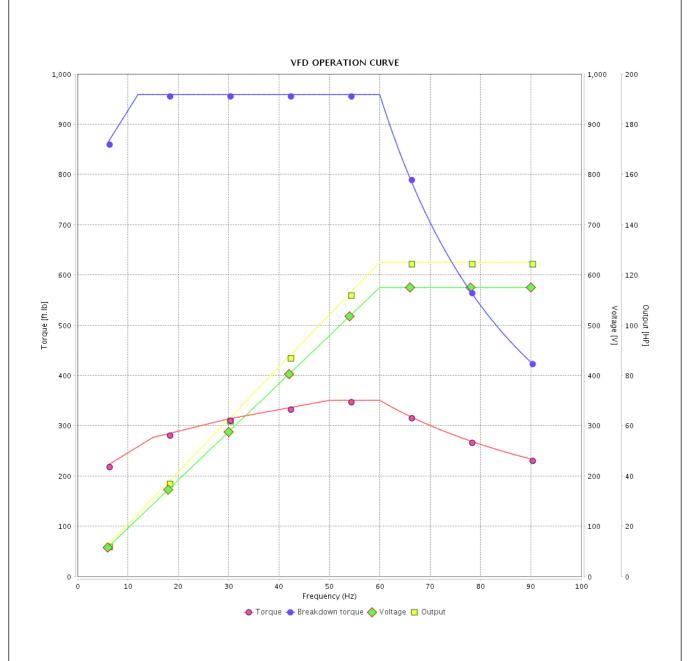
Customer :

Product line : W40 NEMA Premium Efficiency

Three-Phase

Product code: 14272886

Catalog #: 12518OT3H405TC-W40



|                          |            |                 |                       |           | <del> </del>    |          |
|--------------------------|------------|-----------------|-----------------------|-----------|-----------------|----------|
| Performance              | : 5        | 75 V 60 Hz 4P   |                       |           |                 |          |
| Rated current : 110 A    |            | 10 A            | Moment of inertia (J) |           | : 25.5 sq.ft.lb |          |
| LRC                      | RC : 6.9   |                 | Duty cycle            |           | : Cont.(S1)     |          |
| Rated torque             | : 30       | 69 ft.lb        | Insulation class      |           | : F             |          |
| Locked rotor torque : 27 |            | 70 %            | Service factor        |           | : 1.25          |          |
| Breakdown torque ::      |            | 60 %            | Temperature rise      |           | : 80 K          |          |
| Rated speed              |            | 780 rpm         | Design                |           | : B             |          |
| Rev.                     |            | Changes Summary |                       | Performed | Checked         | Date     |
|                          |            |                 |                       |           |                 |          |
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| Date                     | 13/04/2022 | 1               |                       |           | 6/6             |          |

