

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



| | | |
|--|---|------|
| Customer : | | |
| Product line | : NEMA Premium Efficiency Three-Phase | |
| Product code : | 12677335 | |
| Catalog # : | 00518ET3ER184TC-S | |
| Frame | : 182/4TC | |
| Insulation class | : F | |
| Duty cycle | : Cont.(S1) | |
| Ambient temperature | : -20°C to +40°C | |
| Altitude | : 1000 m.a.s.l. | |
| Protection degree | : IP55 | |
| Design | : B | |
| Cooling method | : IC411 - TEFC | |
| Mounting | : W-6 | |
| Rotation ¹ | : Both (CW and CCW) | |
| Starting method | : Direct On Line | |
| Approx. weight ² | : 84.4 lb | |
| Moment of inertia (J) | : 0.3080 sq.ft.lb | |
| Output [HP] | 5 | |
| Poles | 4 | |
| Frequency [Hz] | 60 | |
| Rated voltage [V] | 230/460 | |
| Rated current [A] | 13.0/6.49 | |
| L. R. Amperes [A] | 90.9/45.4 | |
| LRC [A] | 7.0x(Code J) | |
| No load current [A] | 6.89/3.44 | |
| Rated speed [RPM] | 1750 | |
| Slip [%] | 2.78 | |
| Rated torque [ft.lb] | 15.0 | |
| Locked rotor torque [%] | 220 | |
| Breakdown torque [%] | 300 | |
| Service factor | 1.15 | |
| Temperature rise | 80 K | |
| Locked rotor time | 28s (cold) 16s (hot) | |
| Noise level ² | 56.0 dB(A) | |
| Efficiency (%) | 25% | 88.2 |
| | 50% | 88.5 |
| | 75% | 89.5 |
| | 100% | 89.5 |
| Power Factor | 25% | 0.35 |
| | 50% | 0.60 |
| | 75% | 0.73 |
| | 100% | 0.80 |
| Bearing type | : <u>Drive end</u> 6206 ZZ <u>Non drive end</u> 6205 ZZ | |
| Sealing | : V'Ring Without Bearing Seal | |
| Lubrication interval | : - - | |
| Lubricant amount | : - - | |
| Lubricant type | : Mobil Polyrex EM | |
| Foundation loads | Max. traction : 262 lb | |
| | Max. compression : 346 lb | |
| Notes USABLE @208V 14.4A SF 1.00 SFA 14.4A | | |
| 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 by | Performed | |
| Checked by | Checked | |
| Date | Date | |
| 13/04/2022 | | |
| Page | Revision | |
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TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



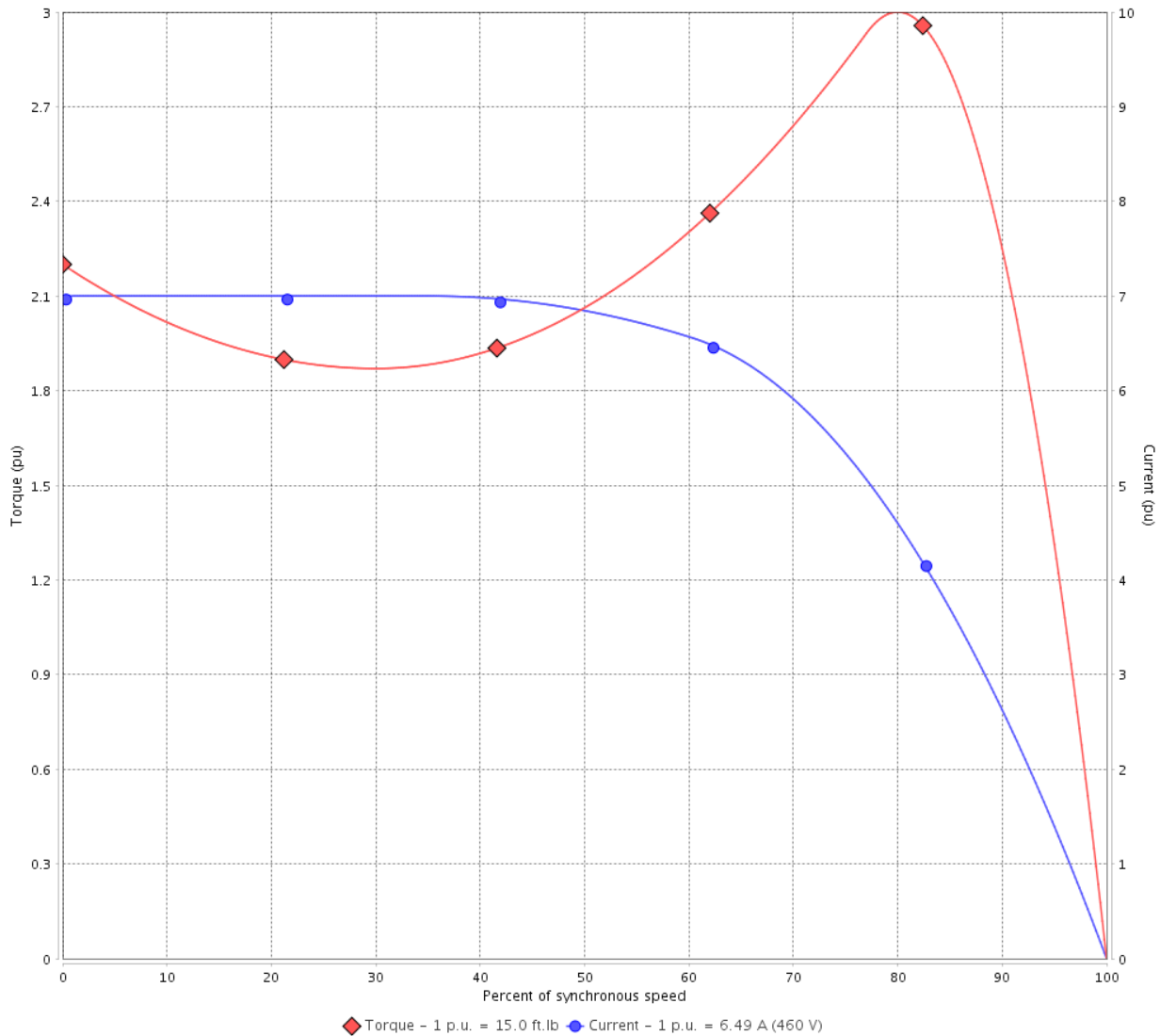
Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12677335

Catalog # : 00518ET3ER184TC-S

TORQUE AND CURRENT VS SPEED CURVE



Performance : 230/460 V 60 Hz 4P

Rated current : 13.0/6.49 A
 LRC : 7.0
 Rated torque : 15.0 ft.lb
 Locked rotor torque : 220 %
 Breakdown torque : 300 %
 Rated speed : 1750 rpm

Moment of inertia (J) : 0.3080 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.15
 Temperature rise : 80 K
 Design : B

Locked rotor time : 28s (cold) 16s (hot)

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TORQUE AND CURRENT VS SPEED CURVE

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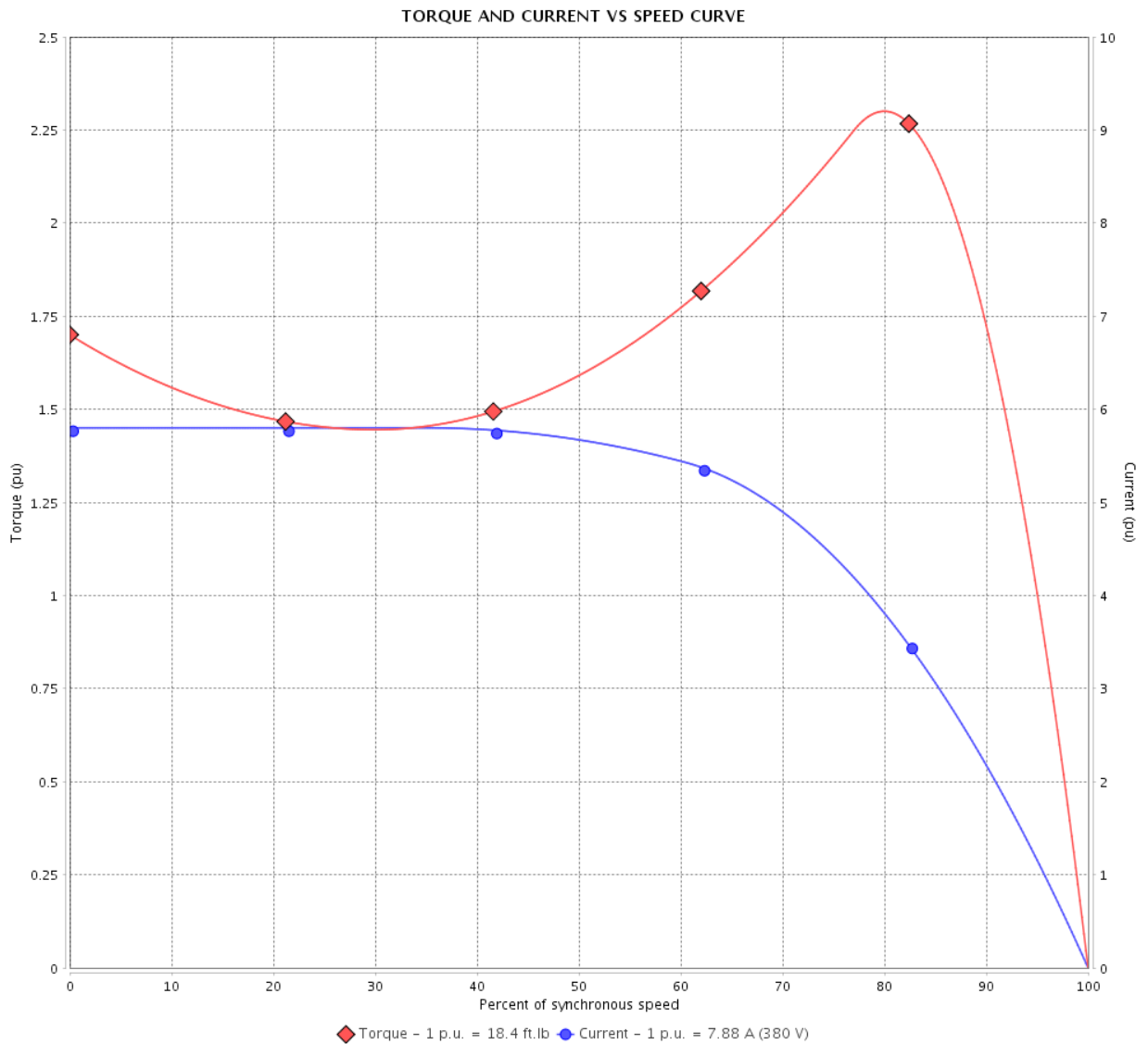


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12677335

Catalog # : 00518ET3ER184TC-S



Performance : 190/380 V 50 Hz 4P

| | | | |
|---------------------|---------------|-----------------------|-------------------|
| Rated current | : 15.8/7.88 A | Moment of inertia (J) | : 0.3080 sq.ft.lb |
| LRC | : 5.8 | Duty cycle | : Cont.(S1) |
| Rated torque | : 18.4 ft.lb | Insulation class | : F |
| Locked rotor torque | : 170 % | Service factor | : 1.00 |
| Breakdown torque | : 229 % | Temperature rise | : 105 K |
| Rated speed | : 1425 rpm | Design | : B |

Locked rotor time : 0s (cold) 0s (hot)

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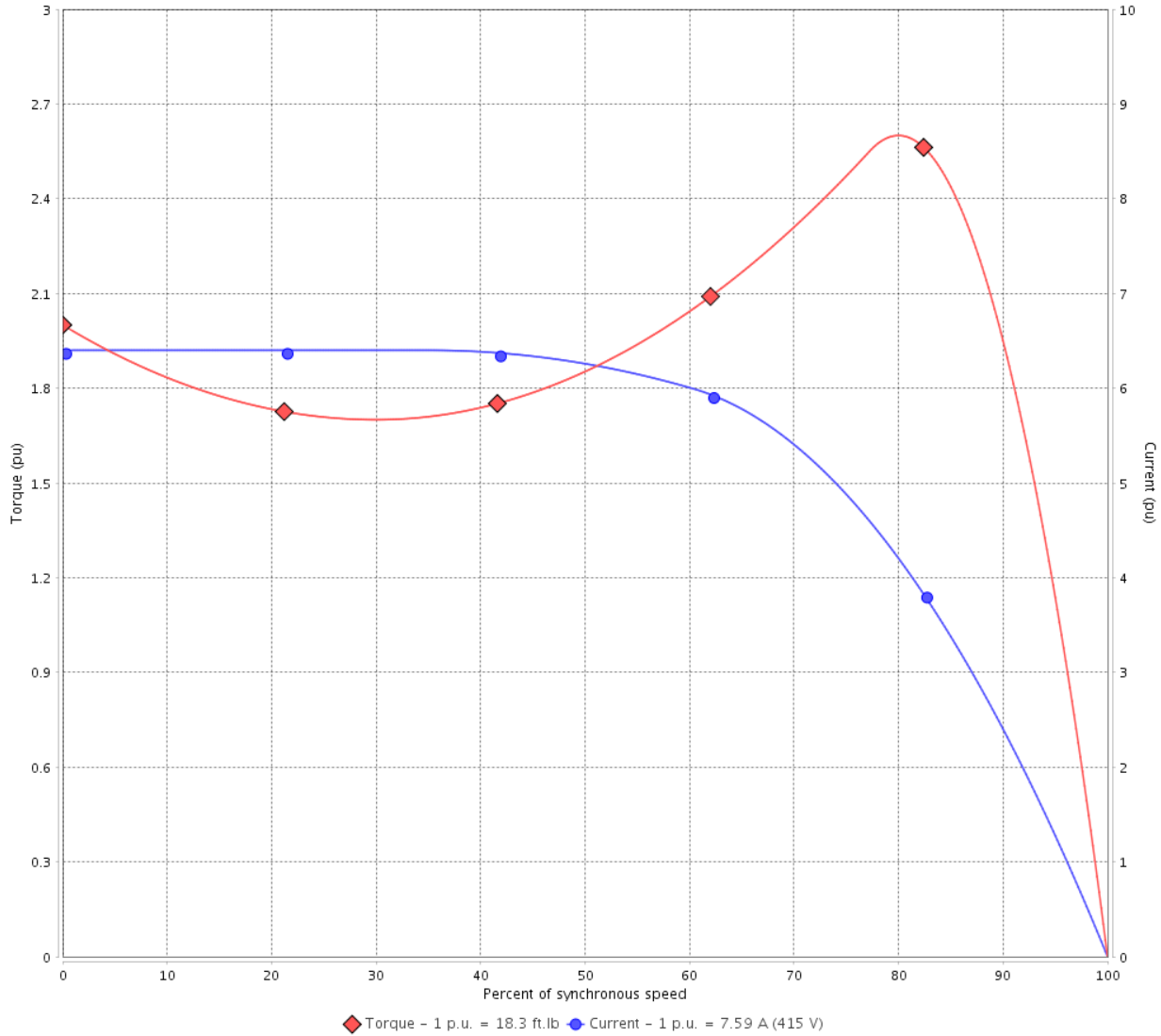
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Product code : 12677335

Catalog # : 00518ET3ER184TC-S

TORQUE AND CURRENT VS SPEED CURVE



Performance : 220/415 V 50 Hz 4P

| | | | |
|---------------------|---------------|-----------------------|-------------------|
| Rated current | : 14.3/7.59 A | Moment of inertia (J) | : 0.3080 sq.ft.lb |
| LRC | : 6.4 | Duty cycle | : Cont.(S1) |
| Rated torque | : 18.3 ft.lb | Insulation class | : F |
| Locked rotor torque | : 200 % | Service factor | : 1.00 |
| Breakdown torque | : 260 % | Temperature rise | : 105 K |
| Rated speed | : 1435 rpm | Design | : B |

Locked rotor time : 0s (cold) 0s (hot)

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LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage

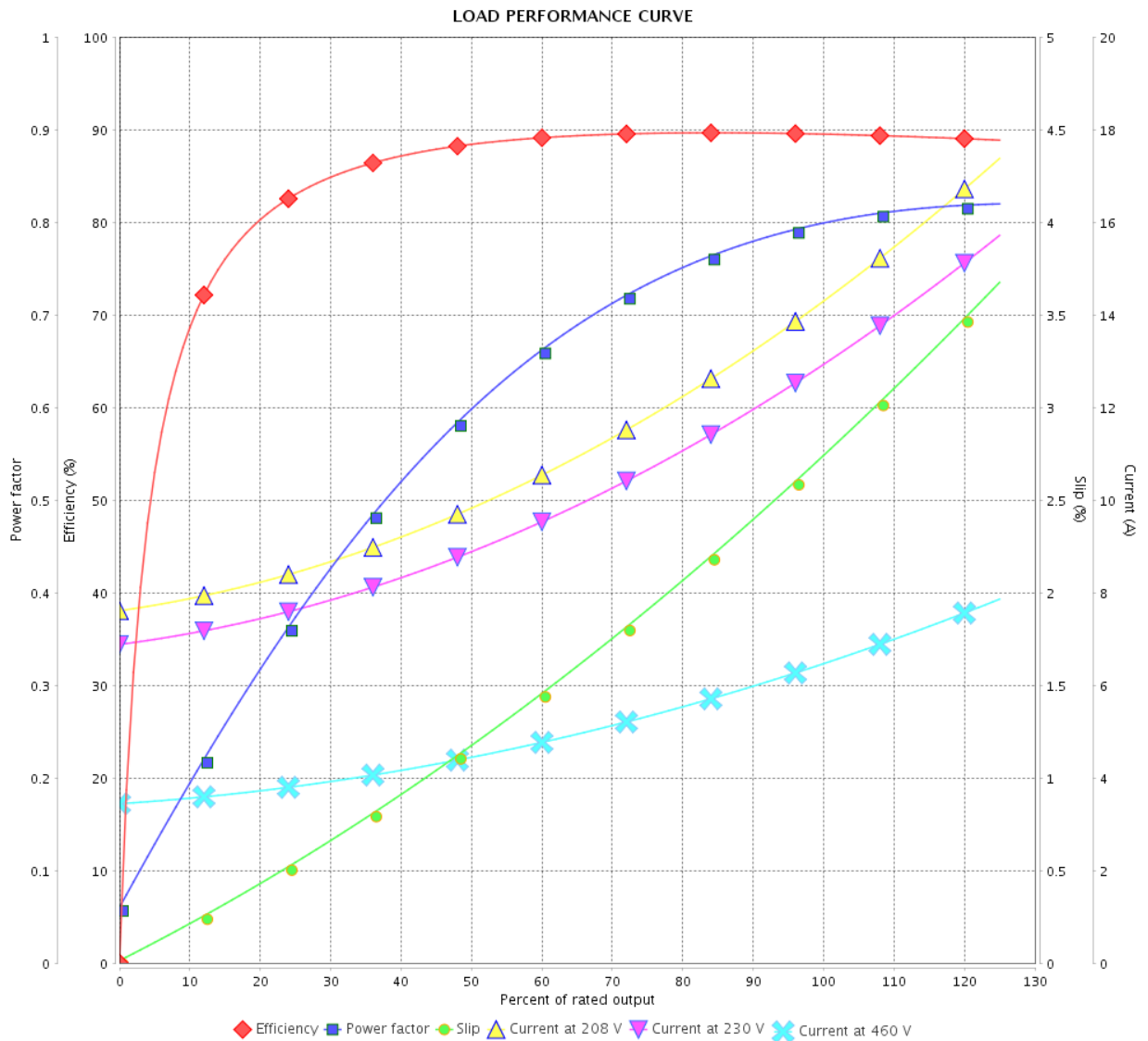


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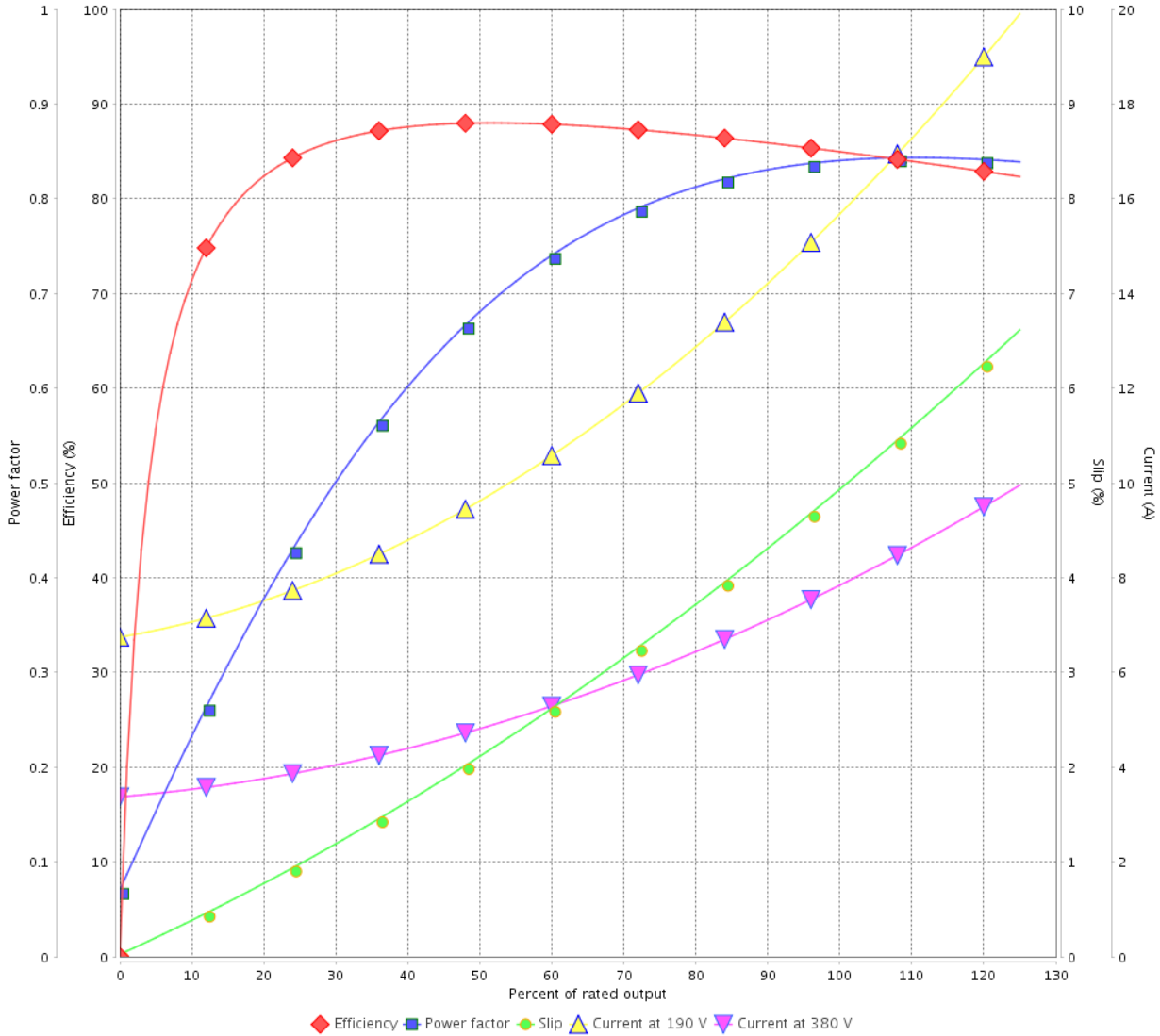
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LOAD PERFORMANCE CURVE



Performance : 190/380 V 50 Hz 4P

Rated current : 15.8/7.88 A
 LRC : 5.8
 Rated torque : 18.4 ft.lb
 Locked rotor torque : 170 %
 Breakdown torque : 229 %
 Rated speed : 1425 rpm

Moment of inertia (J) : 0.3080 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 105 K
 Design : B

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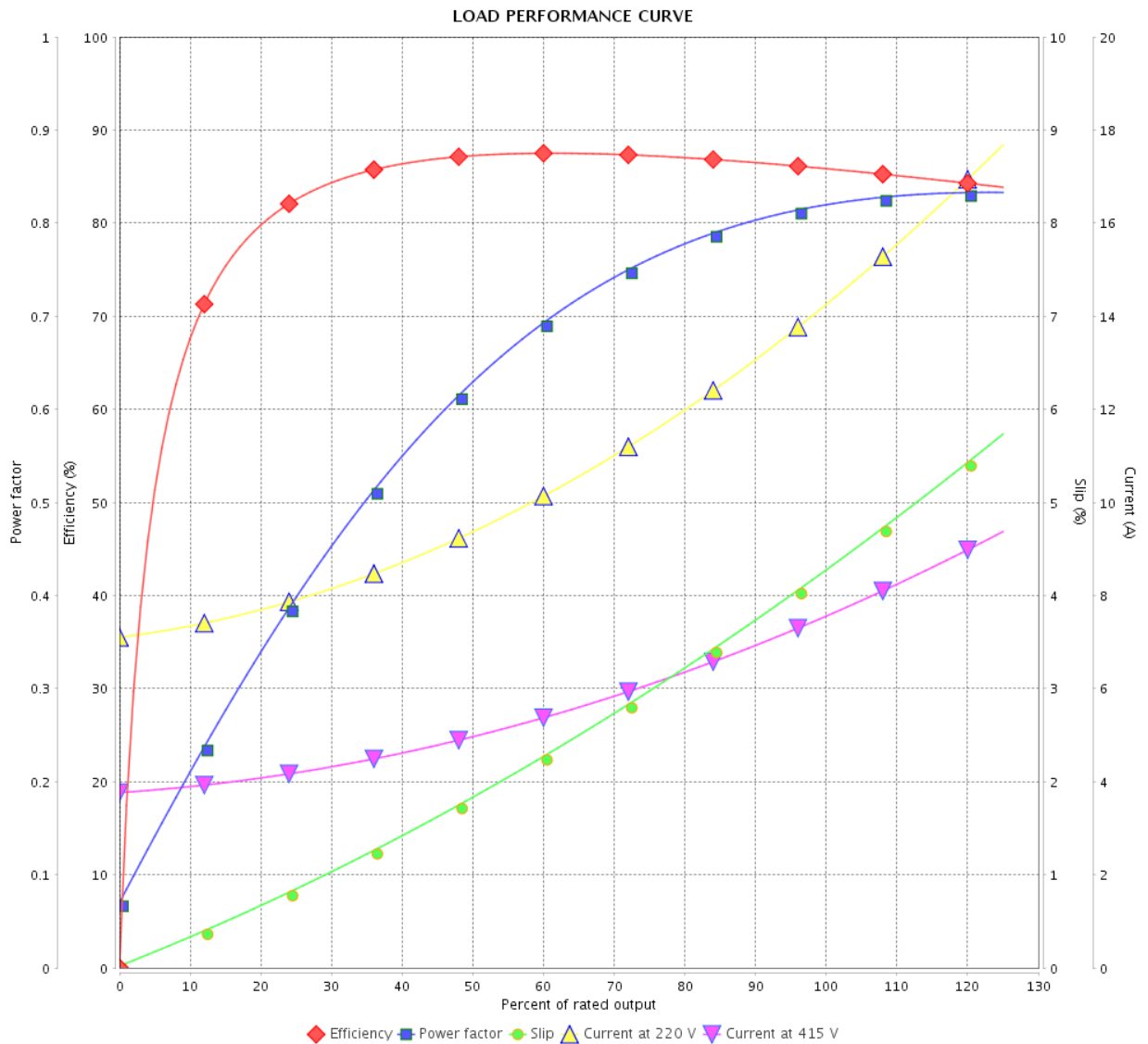


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Performance : 220/415 V 50 Hz 4P

Rated current : 14.3/7.59 A
 LRC : 6.4
 Rated torque : 18.3 ft.lb
 Locked rotor torque : 200 %
 Breakdown torque : 260 %
 Rated speed : 1435 rpm

Moment of inertia (J) : 0.3080 sq.ft.lb
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THERMAL LIMIT CURVE

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Customer :

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Product code : 12677335
Catalog # : 00518ET3ER184TC-S

Performance : 230/460 V 60 Hz 4P

| | |
|-----------------------------|---|
| Rated current : 13.0/6.49 A | Moment of inertia (J) : 0.3080 sq.ft.lb |
| LRC : 7.0 | Duty cycle : Cont.(S1) |
| Rated torque : 15.0 ft.lb | Insulation class : F |
| Locked rotor torque : 220 % | Service factor : 1.15 |
| Breakdown torque : 300 % | Temperature rise : 80 K |
| Rated speed : 1750 rpm | Design : B |

Heating constant

Cooling constant

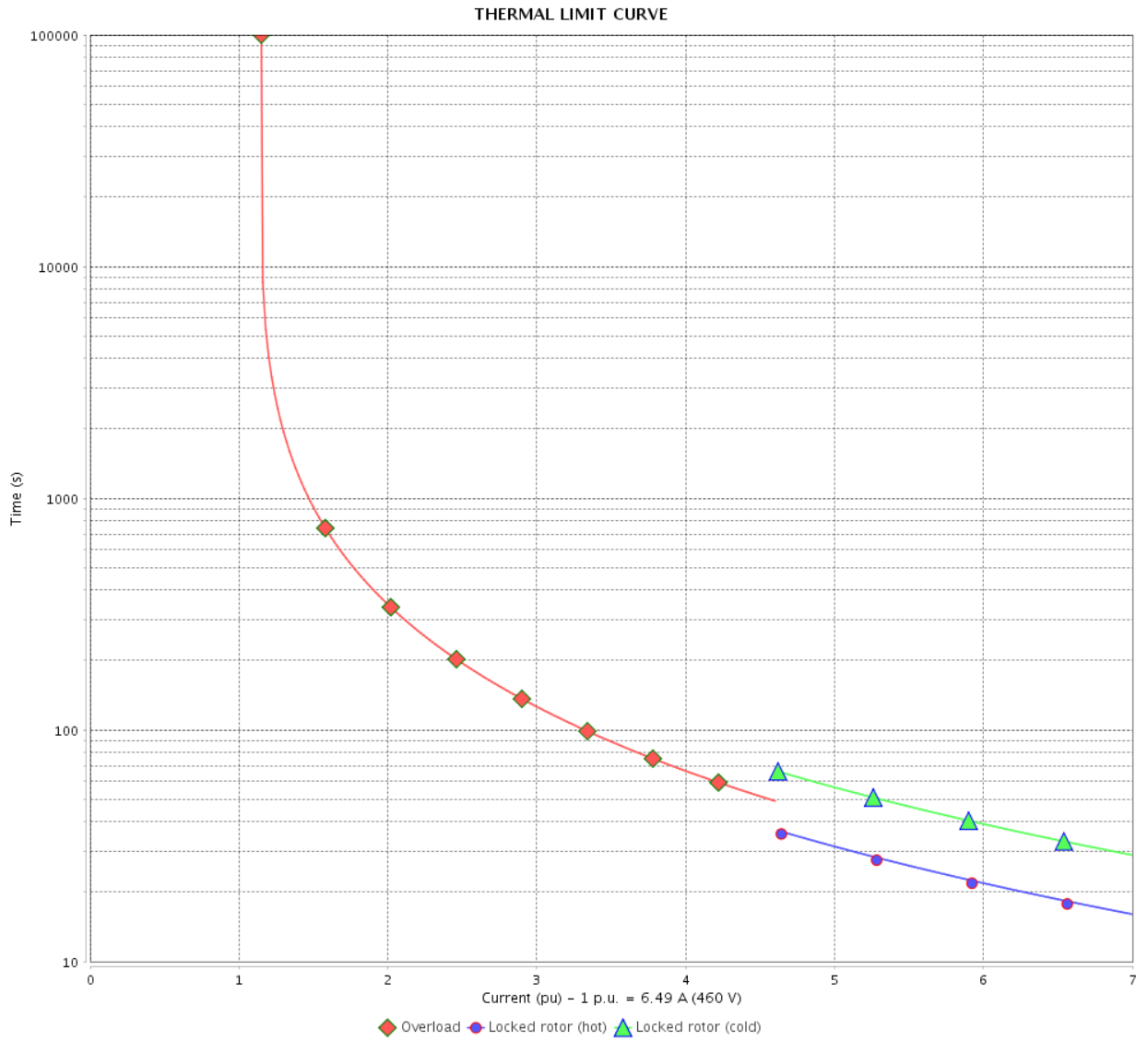
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THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



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| Rated torque | : 18.4 ft.lb | Insulation class | : F |
| Locked rotor torque | : 170 % | Service factor | : 1.00 |
| Breakdown torque | : 229 % | Temperature rise | : 105 K |
| Rated speed | : 1425 rpm | Design | : B |

Heating constant

Cooling constant

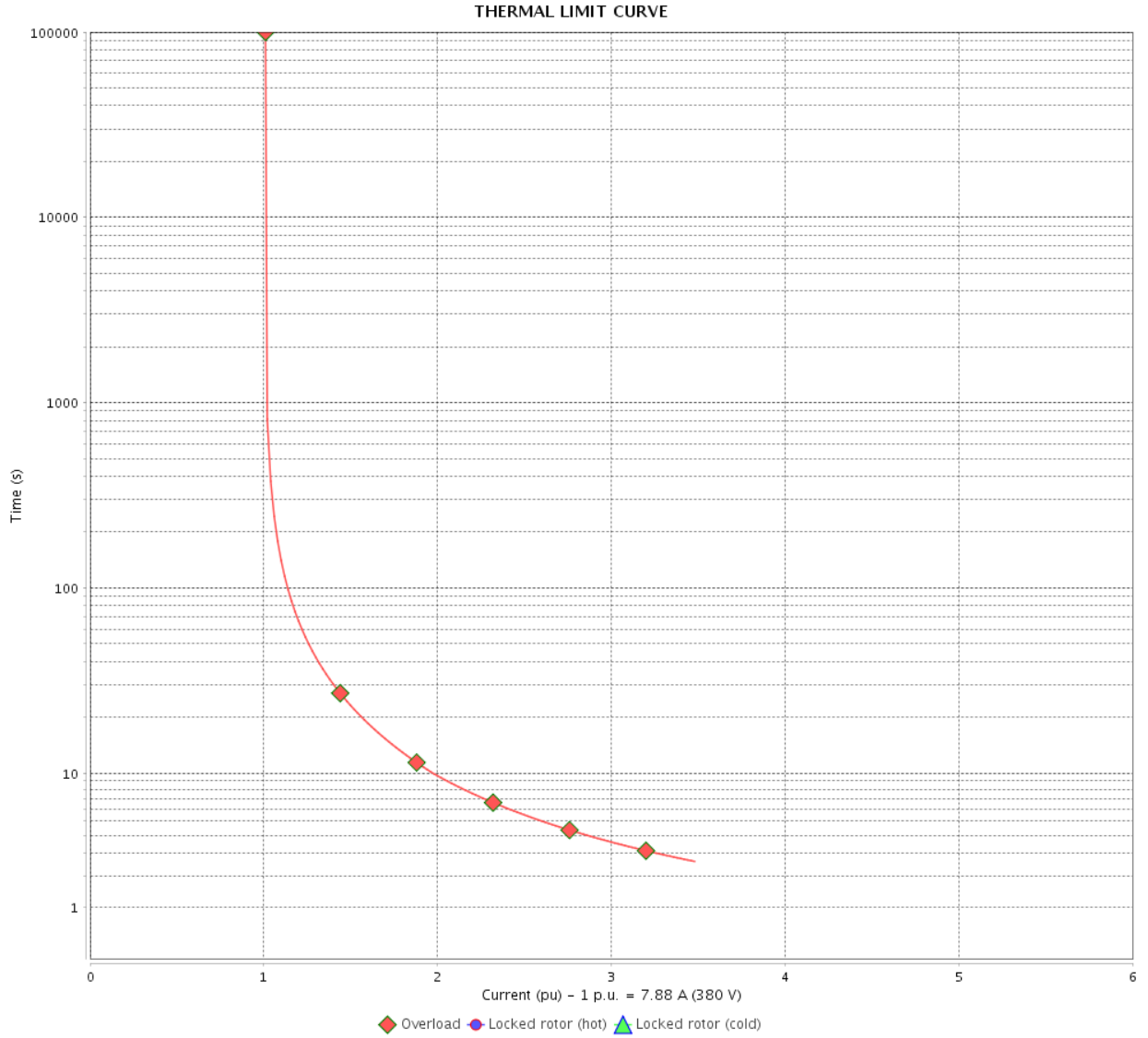
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| LRC | : 6.4 | Duty cycle | : Cont.(S1) |
| Rated torque | : 18.3 ft.lb | Insulation class | : F |
| Locked rotor torque | : 200 % | Service factor | : 1.00 |
| Breakdown torque | : 260 % | Temperature rise | : 105 K |
| Rated speed | : 1435 rpm | Design | : B |

Heating constant

Cooling constant

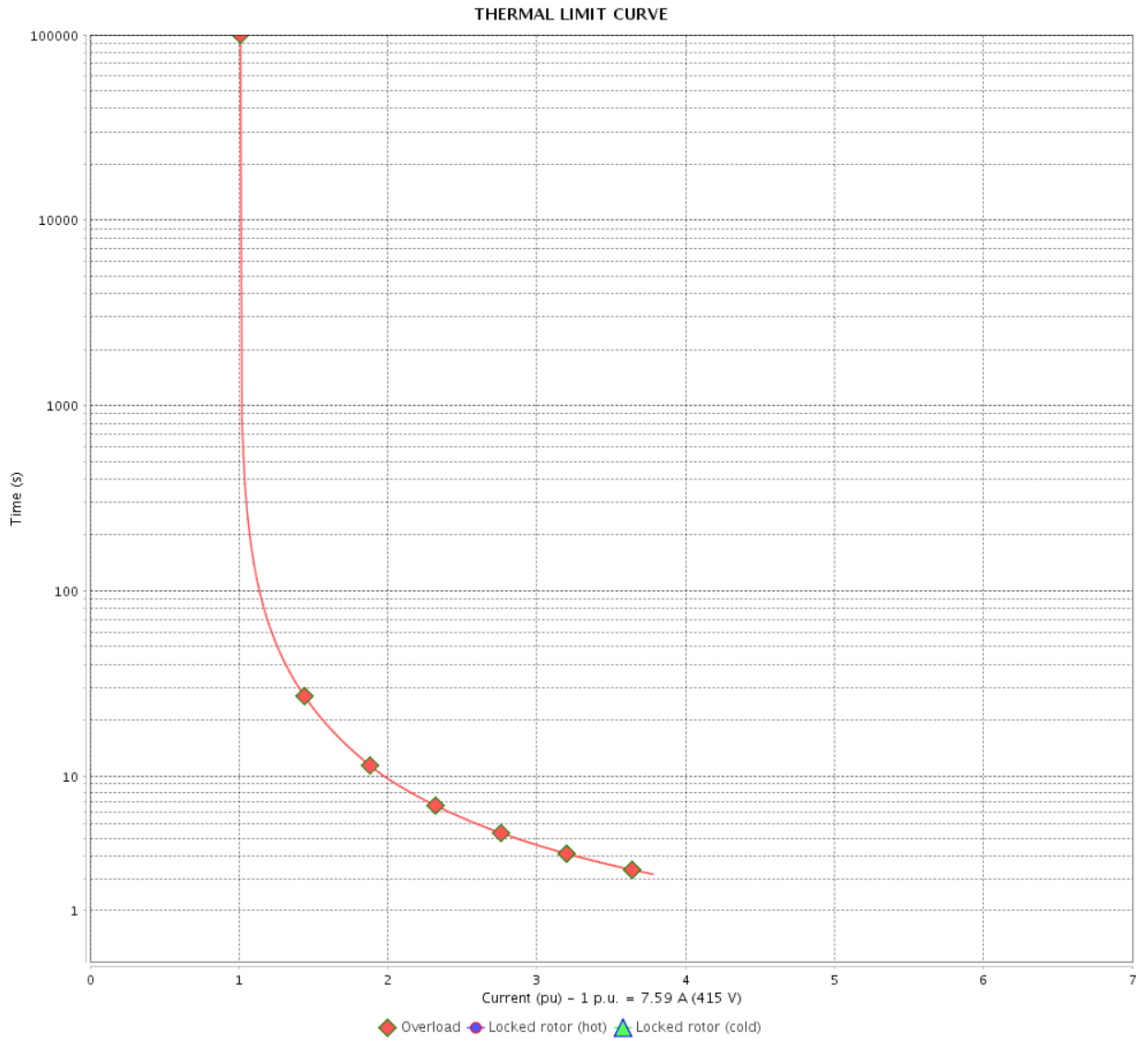
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THERMAL LIMIT CURVE

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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

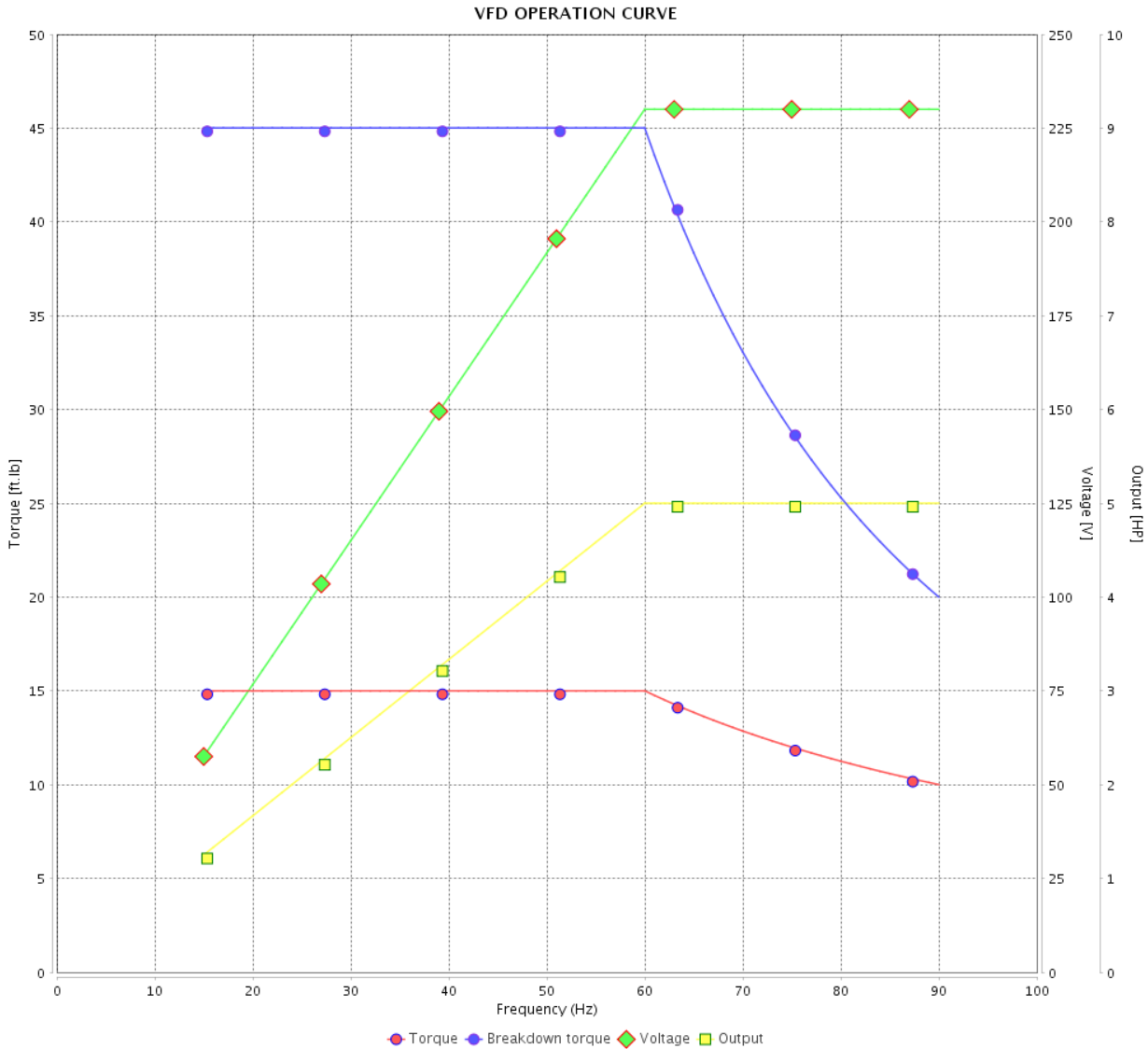


Customer :

Product line : NEMA Premium Efficiency Three-Phase

Product code : 12677335

Catalog # : 00518ET3ER184TC-S



Performance : 230/460 V 60 Hz 4P

Rated current : 13.0/6.49 A
 LRC : 7.0
 Rated torque : 15.0 ft.lb
 Locked rotor torque : 220 %
 Breakdown torque : 300 %
 Rated speed : 1750 rpm

Moment of inertia (J) : 0.3080 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.15
 Temperature rise : 80 K
 Design : B

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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

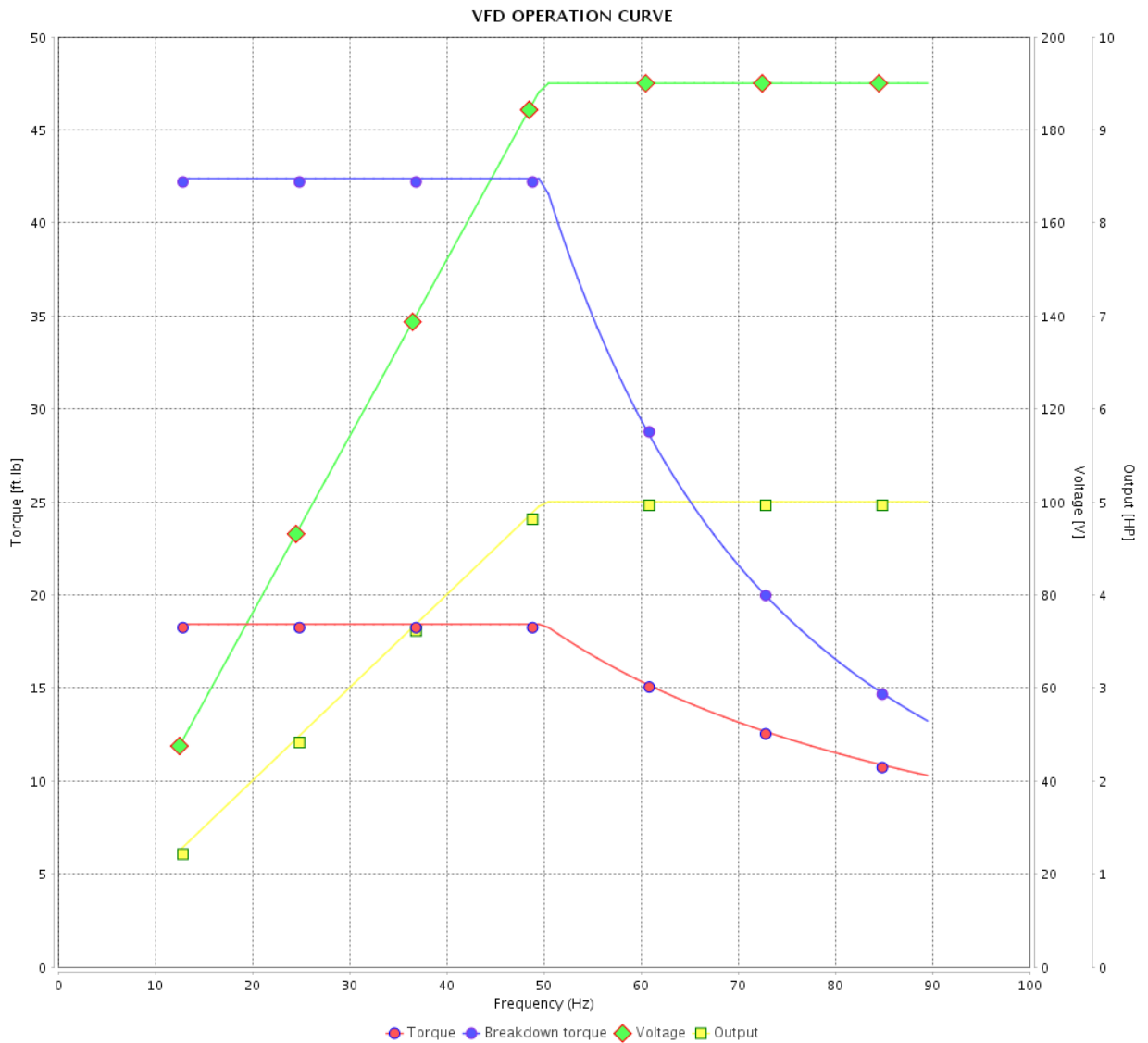


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Rated current : 15.8/7.88 A
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 Rated torque : 18.4 ft.lb
 Locked rotor torque : 170 %
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 Insulation class : F
 Service factor : 1.00
 Temperature rise : 105 K
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VFD OPERATION CURVE

Three Phase Induction Motor - Squirrel Cage

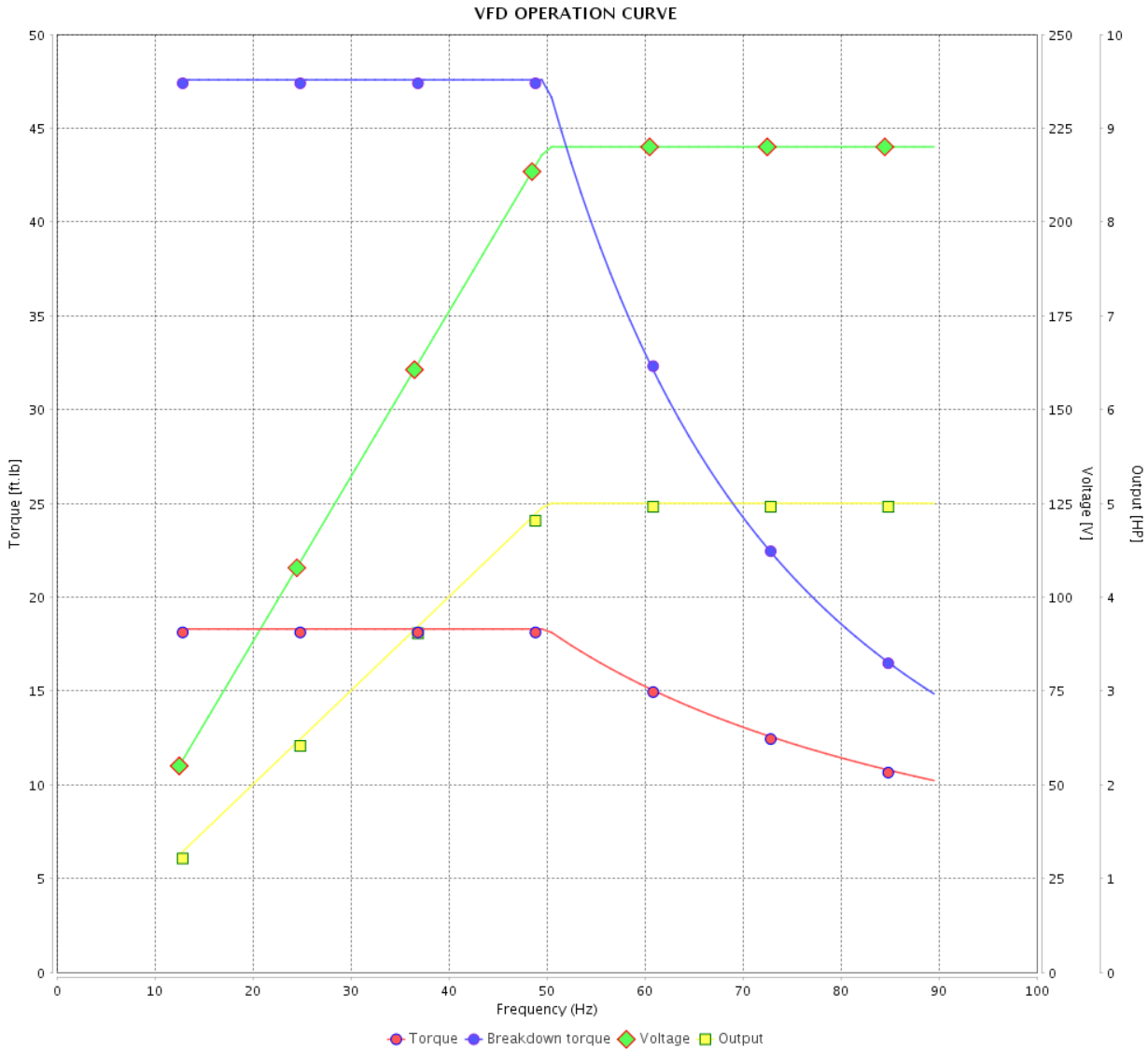


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Performance : 220/415 V 50 Hz 4P

Rated current : 14.3/7.59 A
 LRC : 6.4
 Rated torque : 18.3 ft.lb
 Locked rotor torque : 200 %
 Breakdown torque : 260 %
 Rated speed : 1435 rpm

Moment of inertia (J) : 0.3080 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.00
 Temperature rise : 105 K
 Design : B

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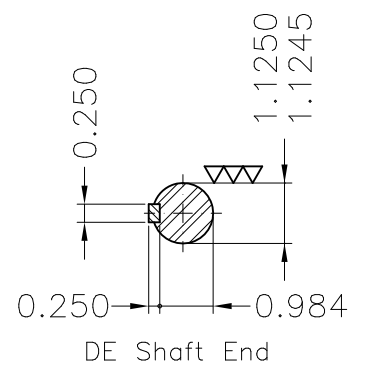
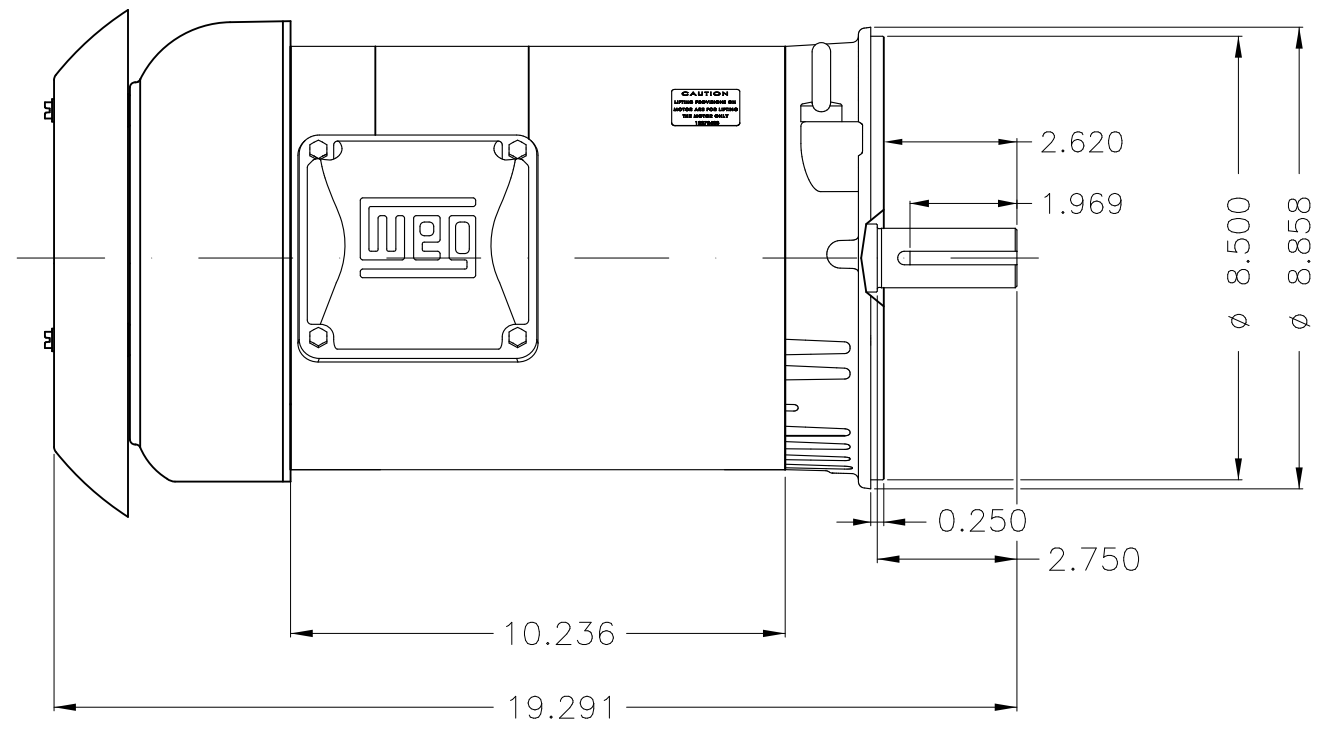
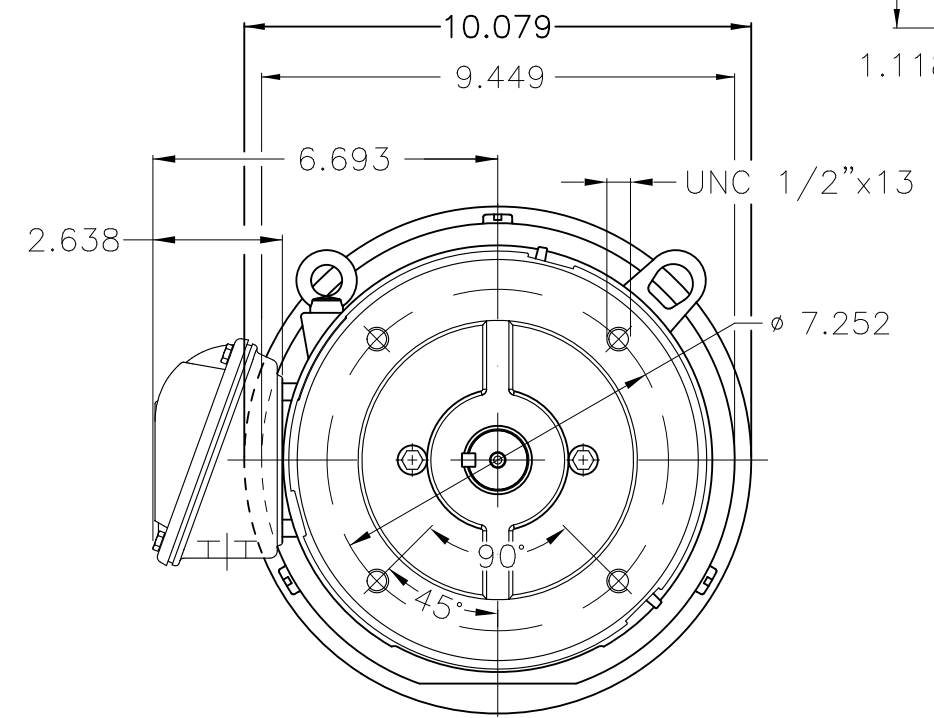
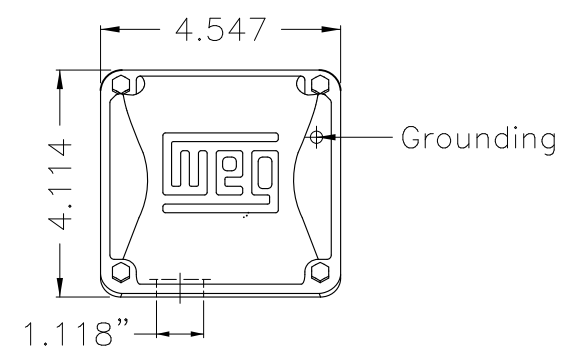
A

B


C

D

E



Dimensions in inches

| | | | | | | | | | | |
|-------------------------------|-----------|---|----------------|---------------------|-------|---|-----------------------|----------|------|-----|
| Color Munsell N 1 matte black | | | | | | | | | | |
| Painting plan 207N | | | | | | | | | | |
| Mounting W-6/V18R(D) | | | | | | | | | | |
| | | | | | | | | | | |
| | | | | | | | | | | |
| ECM | LOC | SUMMARY OF MODIFICATIONS | | | | EXECUTED | CHECKED | RELEASED | DATE | VER |
| EXECUTED | PIRWBUSER | THREE PH. MOTOR ROLLED STEEL PREM. EFF. | | | |  | PREVIEW WDD | | | |
| CHECKED | | FRAME 182/4TC IP55 TEFC | | | | | | | | |
| RELEASED | | | | | | | | | | |
| REL DT. | | WMO | Jaragua do Sul | Product Engineering | SHEET | 1 / 1 | | | | |

5 HP 04 Poles 60 Hz

A



NEMA
Premium



MADE IN MEXICO

MAT: 12677335 CC029A

W01.TE0IC0X0N

MODEL 00518ET3ER184TC-S

04APR2022 S/N:

**For 60Hz: Class I, Zone 2, IIC
Class I, Div.2, Gr. A,B,C,D - T3**

**Div 2 Inverter Duty (SF1.00)
CT 2:1/VT 1000:1**

| | | |
|----------------------------|---------------|--------------------------------|
| PH 3 | Hz 60 | HP 5.0 |
| FR 182/4TC | | KW 3.7 |
| DUTY CONT. | | V 230/460 |
| ALT 1000 m.a.s.l. | | A 13.0/6.49 |
| INS CL F AT 80K | IP55 | SFA 14.9/7.46 |
| AMB 40°C | DES B | SF 1.15 |
| ENCL TEFC | CODE J | PF 0.80 |
| USABLE @ 208V 14.4A | | RPM 1750 |
| SF1.00 | | NEMA NOM. EFF 89.5% |

| |
|--|
| ALTERNATE RATING: 5.0HP 50Hz 190-220/380-415V SF1.00 |
| 15.8-14.17.88-7.47A 1425RPM EFF 84.9% (IE1) IEC 60034-1 |

For safe area-inverter duty motor For 60Hz use on VPWM 1000:1 VT, 4:1 CT

| | | |
|-------------------|--------------------|-------------------------|
| DE 6206-ZZ | ODE 6205-ZZ | MOBIL POLYREX EM |
|-------------------|--------------------|-------------------------|



T1-BLU T2-WHT
T3-ORG T4-YEL
T5-BLK T6-GRY
T7-PNK T8-RED
T9-BRK RED

INTERCHANGE ANY TWO LINE WIRES TO REVERSE THE ROTATION

WARNING: Motor must be grounded in accordance with local and national electrical codes to prevent serious electrical shocks. Disconnect power source before servicing unit.

AVERTISSEMENT: Le moteur doit être mis à la terre conformément aux codes électriques locaux et nationaux afin d'éviter tout choc électrique grave. Déconnectez l'alimentation avant l'entretien de la machine.

