

DATA SHEET



Three Phase Induction Motor - Squirrel Cage

| | | | | | |
|--|-----------------------|-----------------------------|--|---------|----------|
| Customer : | | | | | |
| Product line : Standard Efficiency Three-Phase | | Product code : 14796862 | | | |
| | | Catalog # : .2518ES3E56C-S | | | |
| Frame | : 56C | 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 | : 18.9 lb | | |
| Protection degree | : IP55 | Moment of inertia (J) | : 0.0453 sq.ft.lb | | |
| Output [HP] | 0.25 | 0.25 | 0.25 | | |
| Poles | 4 | 4 | 4 | | |
| Frequency [Hz] | 60 | 50 | 50 | | |
| Rated voltage [V] | 208-230/460 | 190-220/380 | 415 | | |
| Rated current [A] | 1.15-1.04/0.521 | 1.13-0.974/0.564 | 0.585 | | |
| L. R. Amperes [A] | 7.26-6.56/3.28 | 5.98-5.16/2.99 | 3.33 | | |
| LRC [A] | 6.3x(Code M) | 5.3x(Code J) | 5.7x(Code L) | | |
| No load current [A] | 0.776-0.900/0.450 | 0.844-0.729/0.422 | 0.487 | | |
| Rated speed [RPM] | 1765 | 1455 | 1465 | | |
| Slip [%] | 1.94 | 3.00 | 2.33 | | |
| Rated torque [ft.lb] | 0.744 | 0.902 | 0.896 | | |
| Locked rotor torque [%] | 240 | 180 | 220 | | |
| Breakdown torque [%] | 300 | 280 | 340 | | |
| Service factor | | 1.15 | 1.15 | | |
| Temperature rise | 80 K | 80 K | 80 K | | |
| Locked rotor time | 68s (cold) 38s (hot) | 72s (cold) 40s (hot) | 63s (cold) 35s (hot) | | |
| Noise level ² | 52.0 dB(A) | 49.0 dB(A) | 49.0 dB(A) | | |
| Efficiency (%) | 25% | 54.4 | 56.7 | 52.5 | |
| | 50% | 57.5 | 59.3 | 55.7 | |
| | 75% | 66.0 | 66.2 | 63.7 | |
| | 100% | 70.0 | 69.3 | 67.9 | |
| Power Factor | 25% | 0.24 | 0.28 | 0.25 | |
| | 50% | 0.43 | 0.50 | 0.44 | |
| | 75% | 0.54 | 0.61 | 0.54 | |
| | 100% | 0.62 | 0.70 | 0.63 | |
| Bearing type | : Drive end : 6203 ZZ | Non drive end : 6202 ZZ | Foundation loads | | |
| Sealing | : V'Ring | Without Bearing Seal | Max. traction : 20 lb | | |
| Lubrication interval | : - | - | Max. compression : 39 lb | | |
| Lubricant amount | : - | - | | | |
| Lubricant type | : Mobil Polyrex EM | | | | |
| Notes USABLE @208V SF 1.00 | | | | | |
| 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 | | | | Page | Revision |
| Date | 09/09/2022 | | | 1 / 13 | |

TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



Customer :

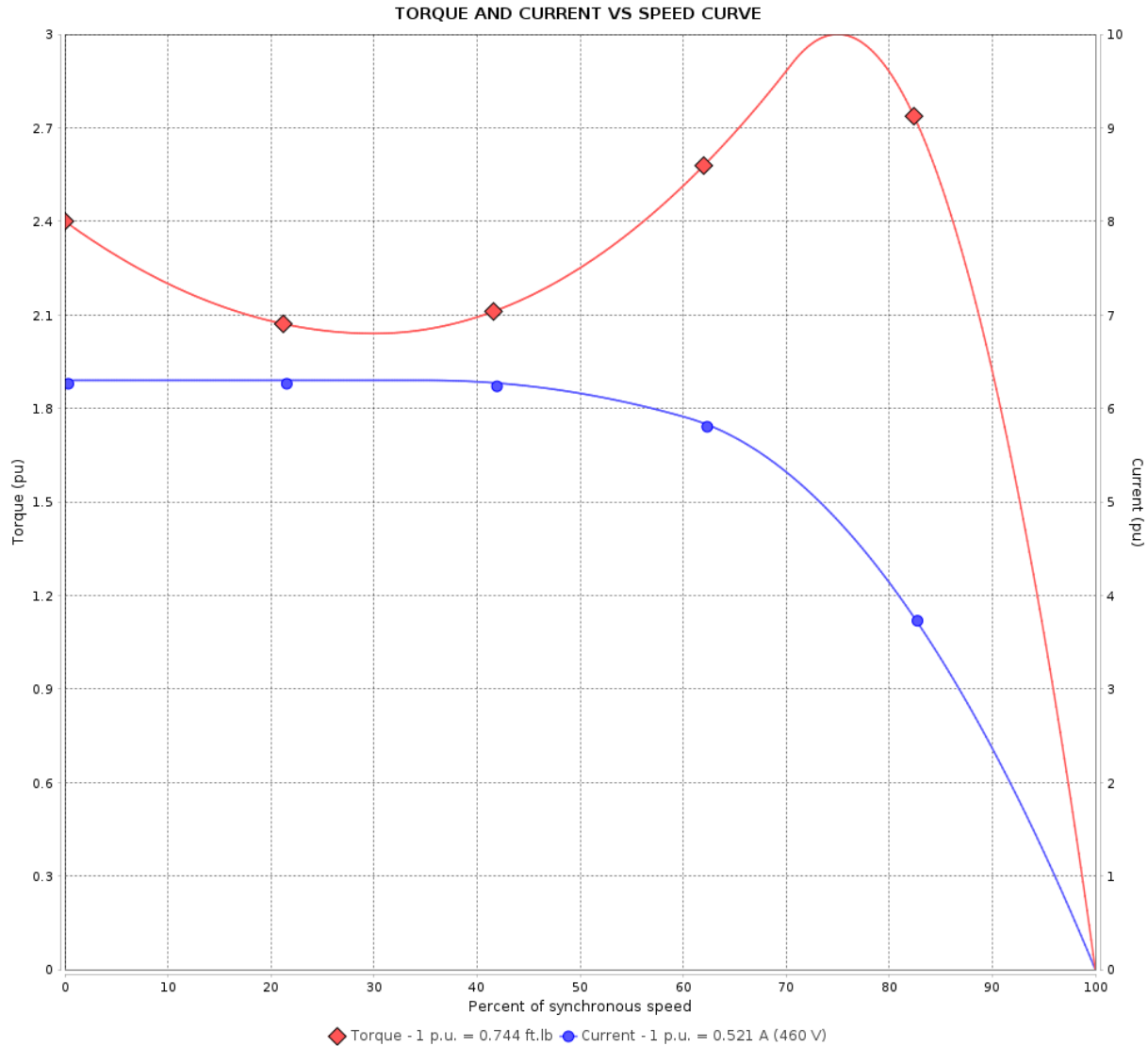
Product line : Standard Efficiency Three-Phase

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Catalog # :

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Performance : 208-230/460 V 60 Hz 4P

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|---------------------|---------------------|-----------------------|-------------------|
| Rated current | : 1.15-1.04/0.521 A | Moment of inertia (J) | : 0.0453 sq.ft.lb |
| LRC | : 6.3 | Duty cycle | : Cont.(S1) |
| Rated torque | : 0.744 ft.lb | Insulation class | : F |
| Locked rotor torque | : 240 % | Service factor | : |
| Breakdown torque | : 300 % | Temperature rise | : 80 K |
| Rated speed | : 1765 rpm | | |

Locked rotor time : 68s (cold) 38s (hot)

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|--------------|-----------------|-----------|----------------|----------|
| | | | | |
| Performed by | | | Page 2 / 13 | Revision |
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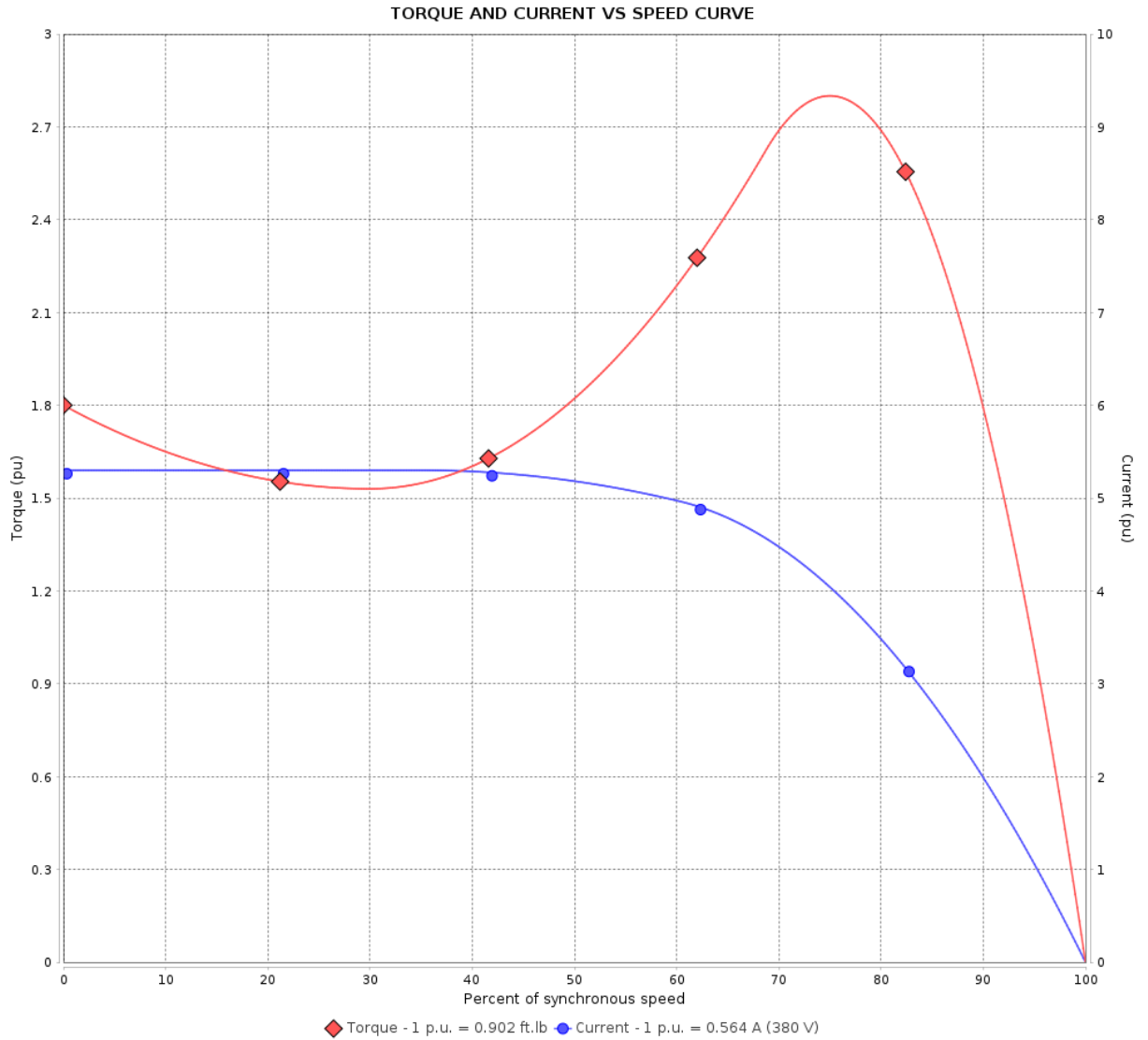
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Performance : 190-220/380 V 50 Hz 4P

Rated current : 1.13-0.974/0.564 A
 LRC : 5.3
 Rated torque : 0.902 ft.lb
 Locked rotor torque : 180 %
 Breakdown torque : 280 %
 Rated speed : 1455 rpm

Moment of inertia (J) : 0.0453 sq.ft.lb
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 Insulation class : F
 Service factor : 1.15
 Temperature rise : 80 K

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|--------------|-----------------|-----------|----------------|----------|
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| Performed by | | | Page 3 / 13 | Revision |
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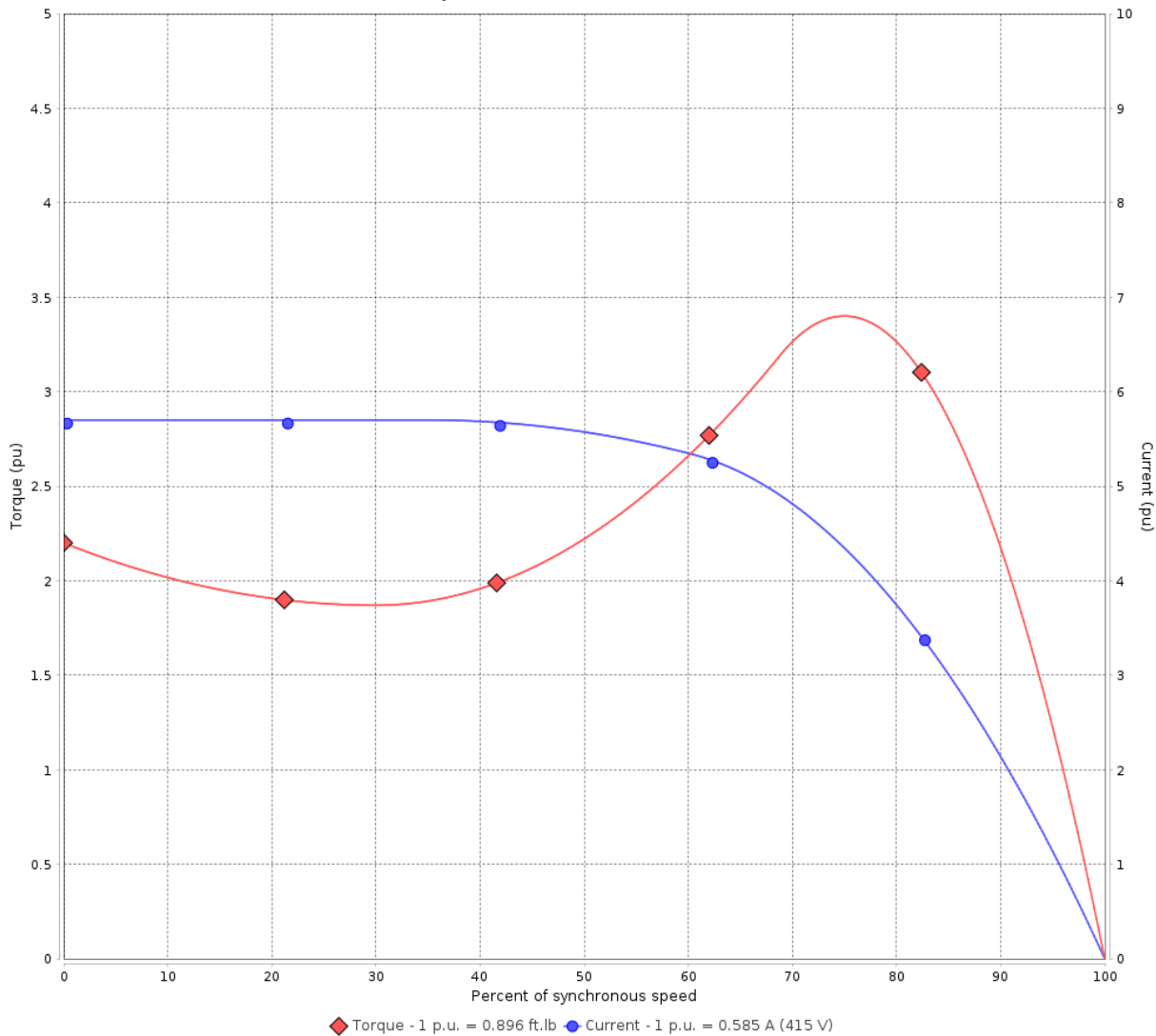
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TORQUE AND CURRENT VS SPEED CURVE



Performance : 415 V 50 Hz 4P

Rated current : 0.585 A
 LRC : 5.7
 Rated torque : 0.896 ft.lb
 Locked rotor torque : 220 %
 Breakdown torque : 340 %
 Rated speed : 1465 rpm

Moment of inertia (J) : 0.0453 sq.ft.lb
 Duty cycle : Cont.(S1)
 Insulation class : F
 Service factor : 1.15
 Temperature rise : 80 K

Locked rotor time : 63s (cold) 35s (hot)

| Rev. | Changes Summary | Performed | Checked | Date |
|--------------|-----------------|-----------|----------------|----------|
| | | | | |
| Performed by | | | Page 4 / 13 | Revision |
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LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage



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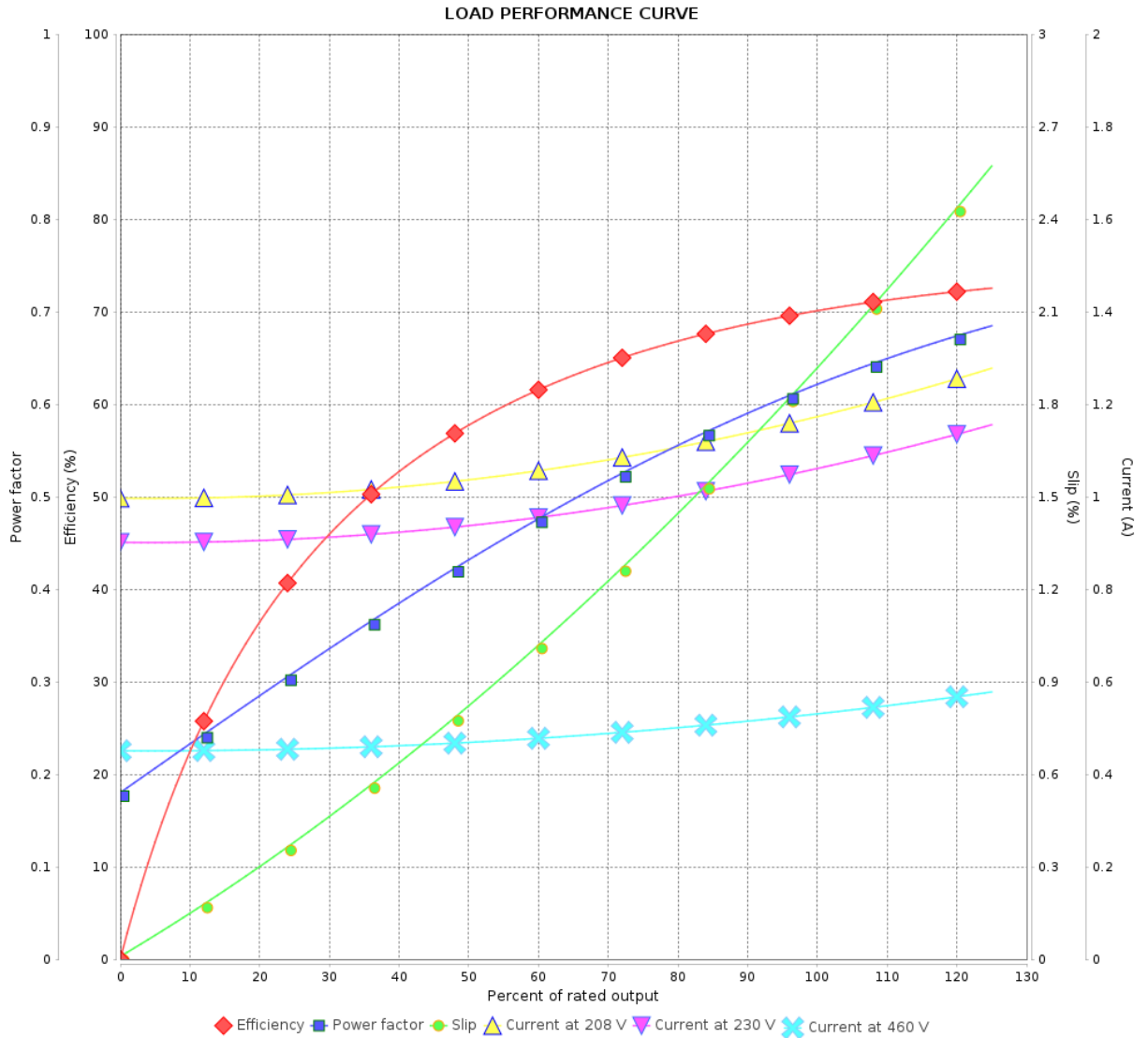
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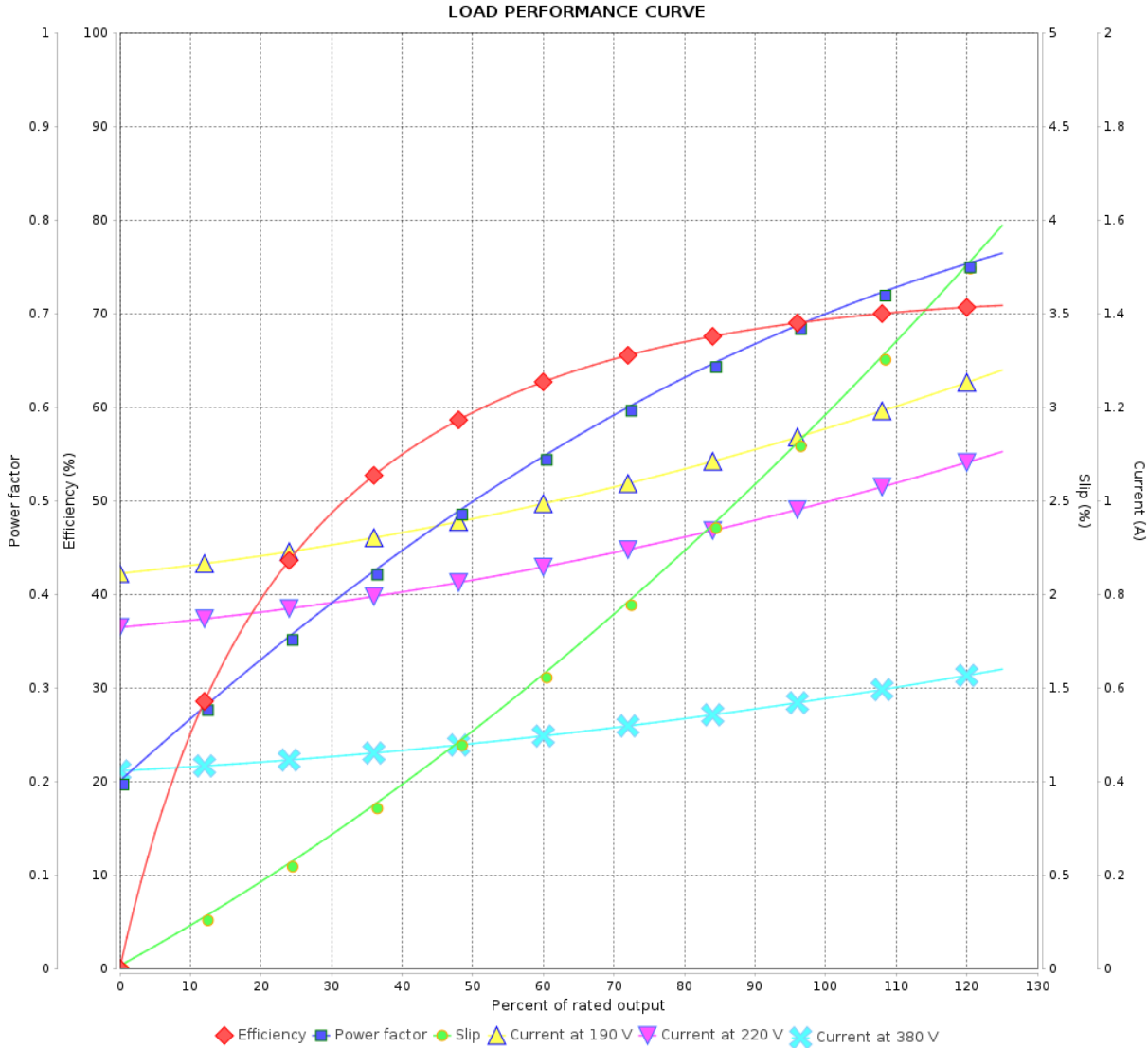
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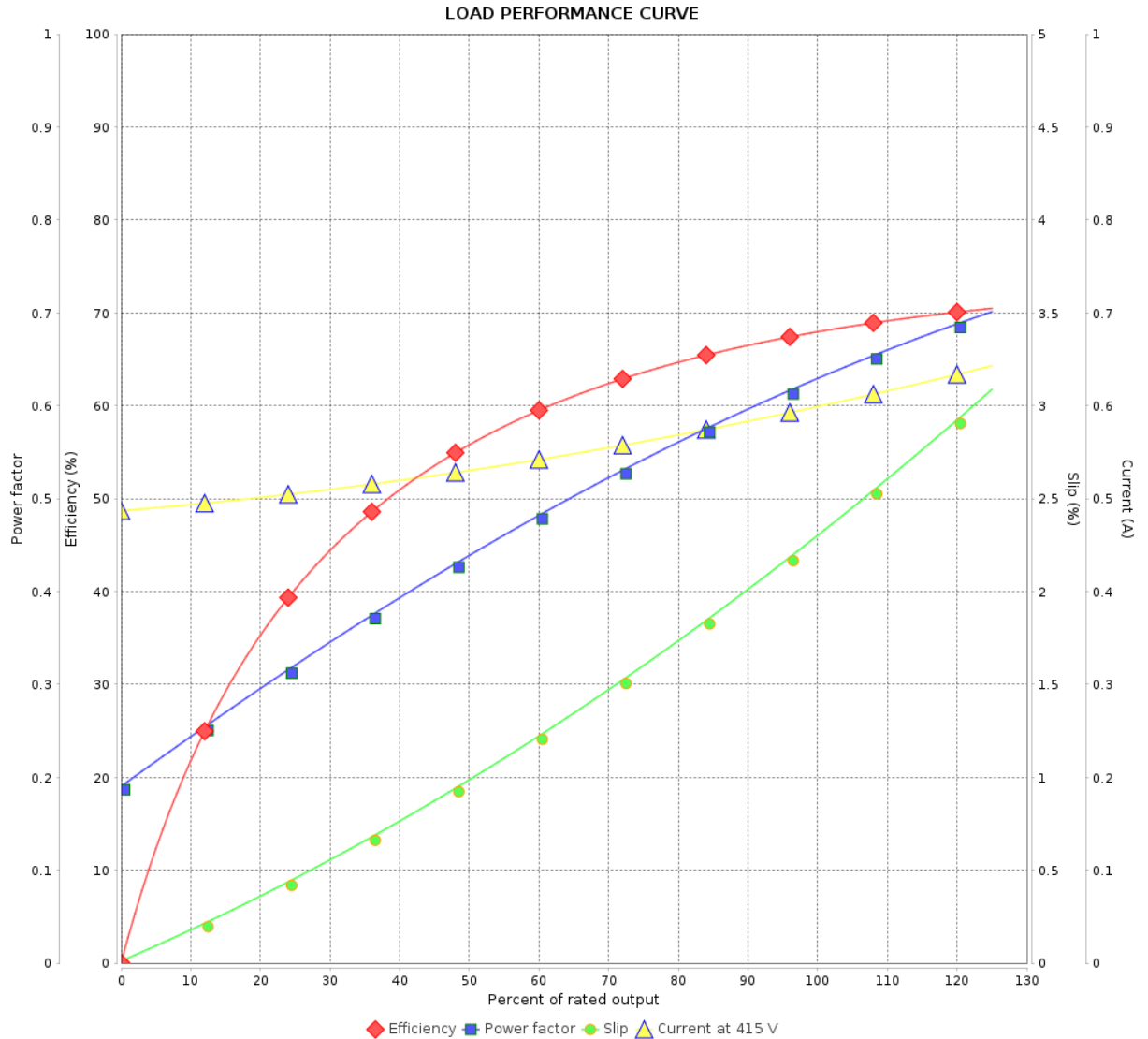
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| | | | | |
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THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



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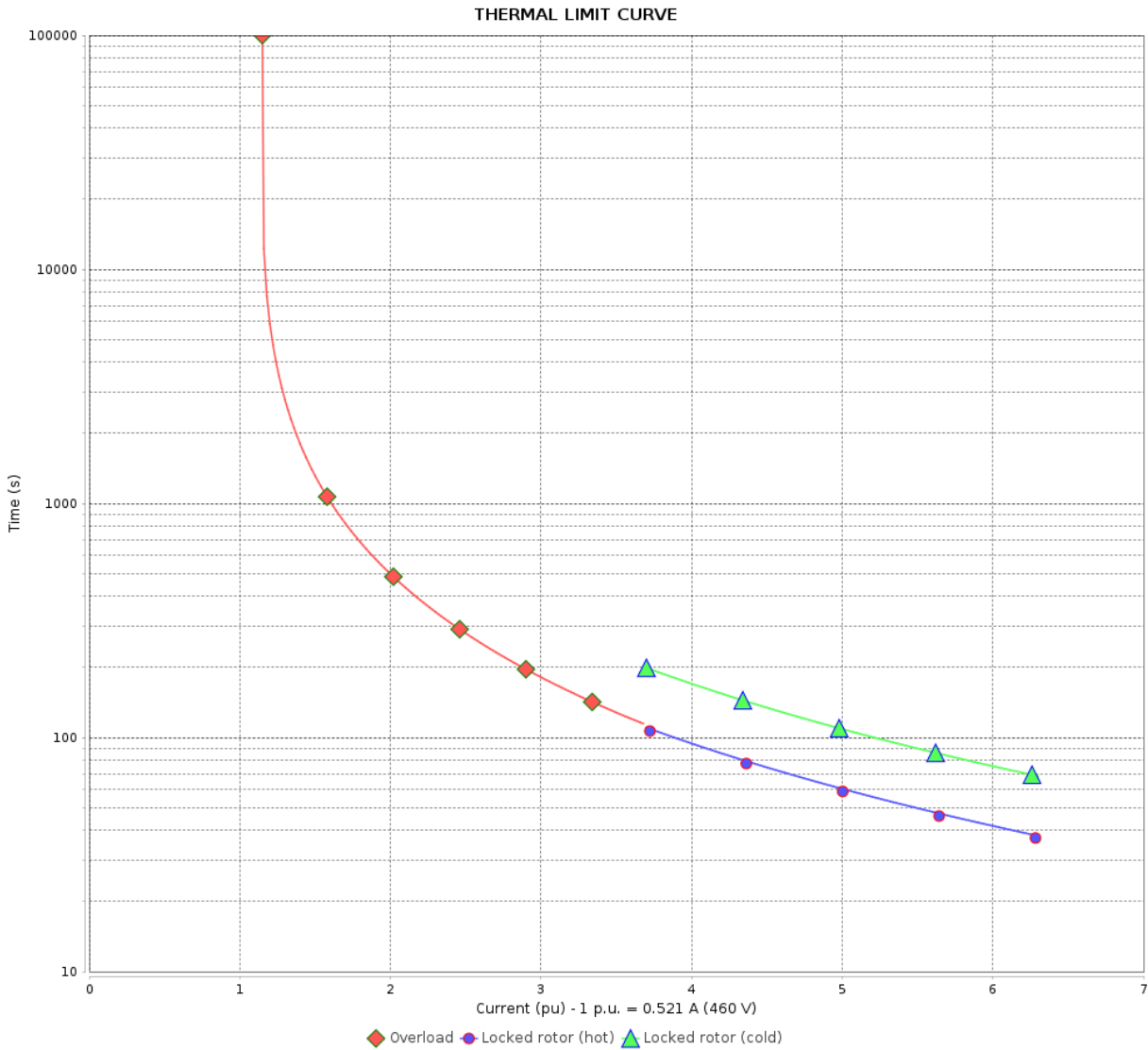
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 Service factor :
 Temperature rise : 80 K

Heating constant

Cooling constant

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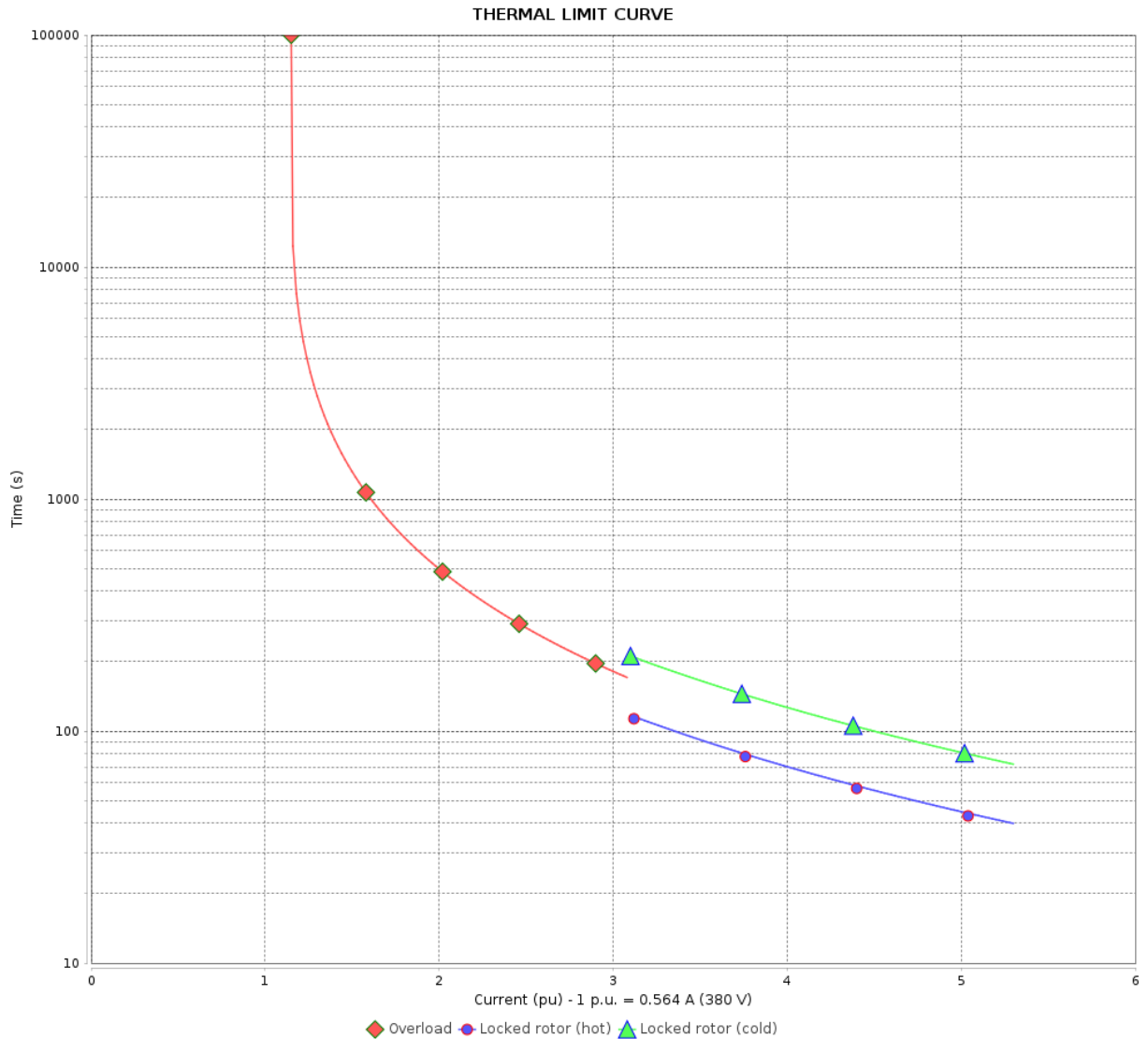
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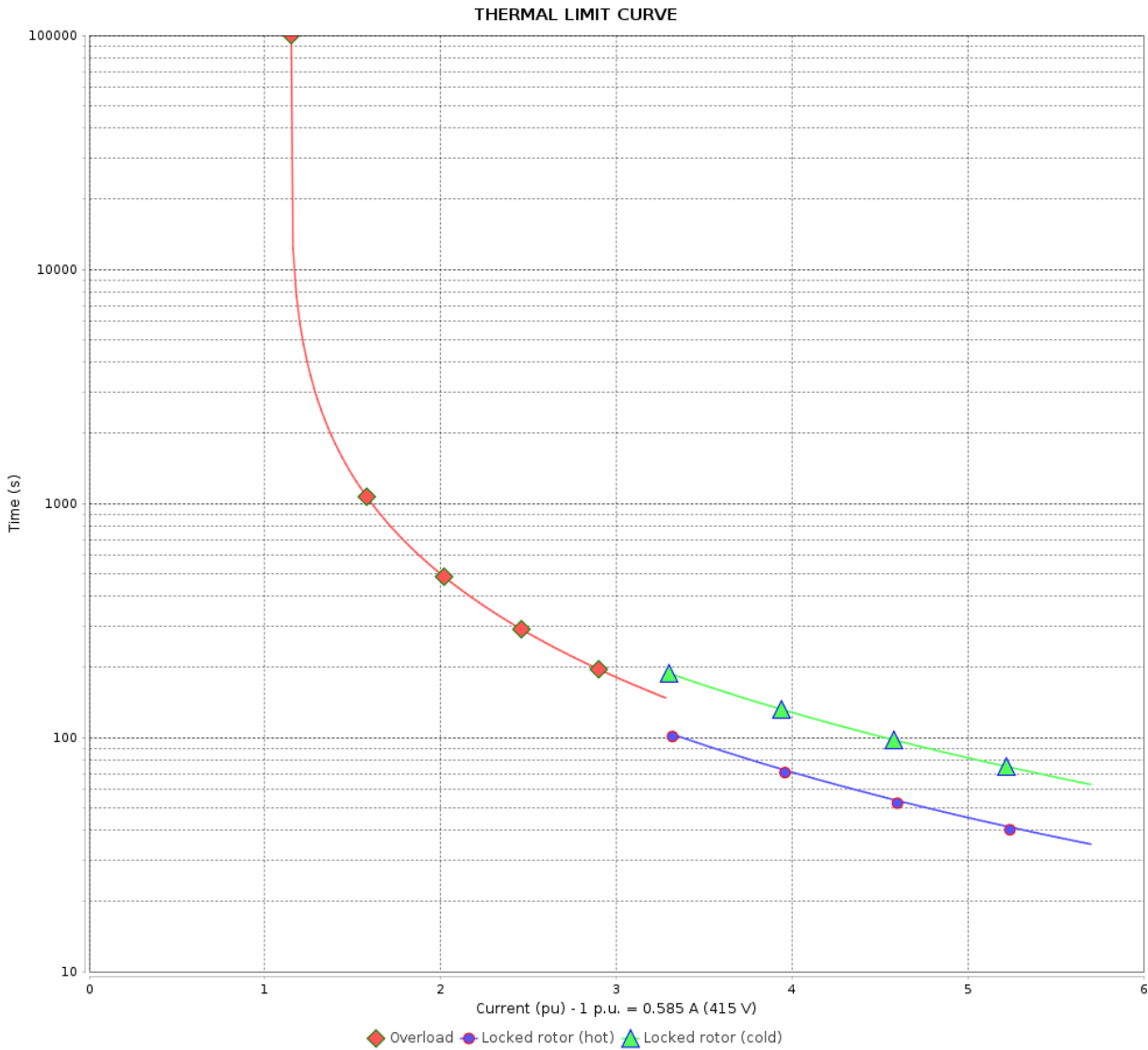
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| Performed by | 09/09/2022 | Page | | Revision |
| Checked by | | 10 / 13 | | |
| Date | | | | |

VFD OPERATION CURVE

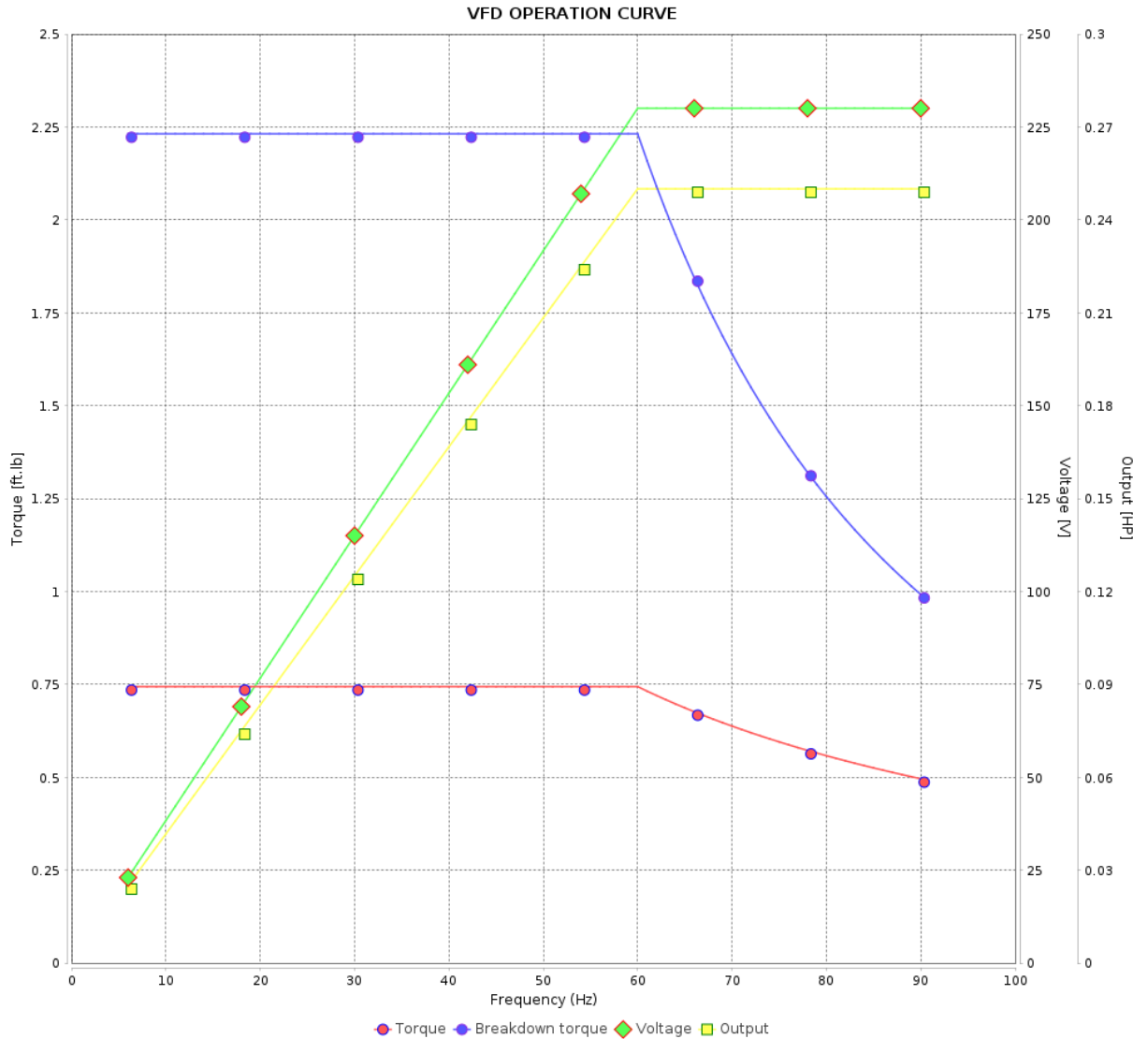
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| | | | | |
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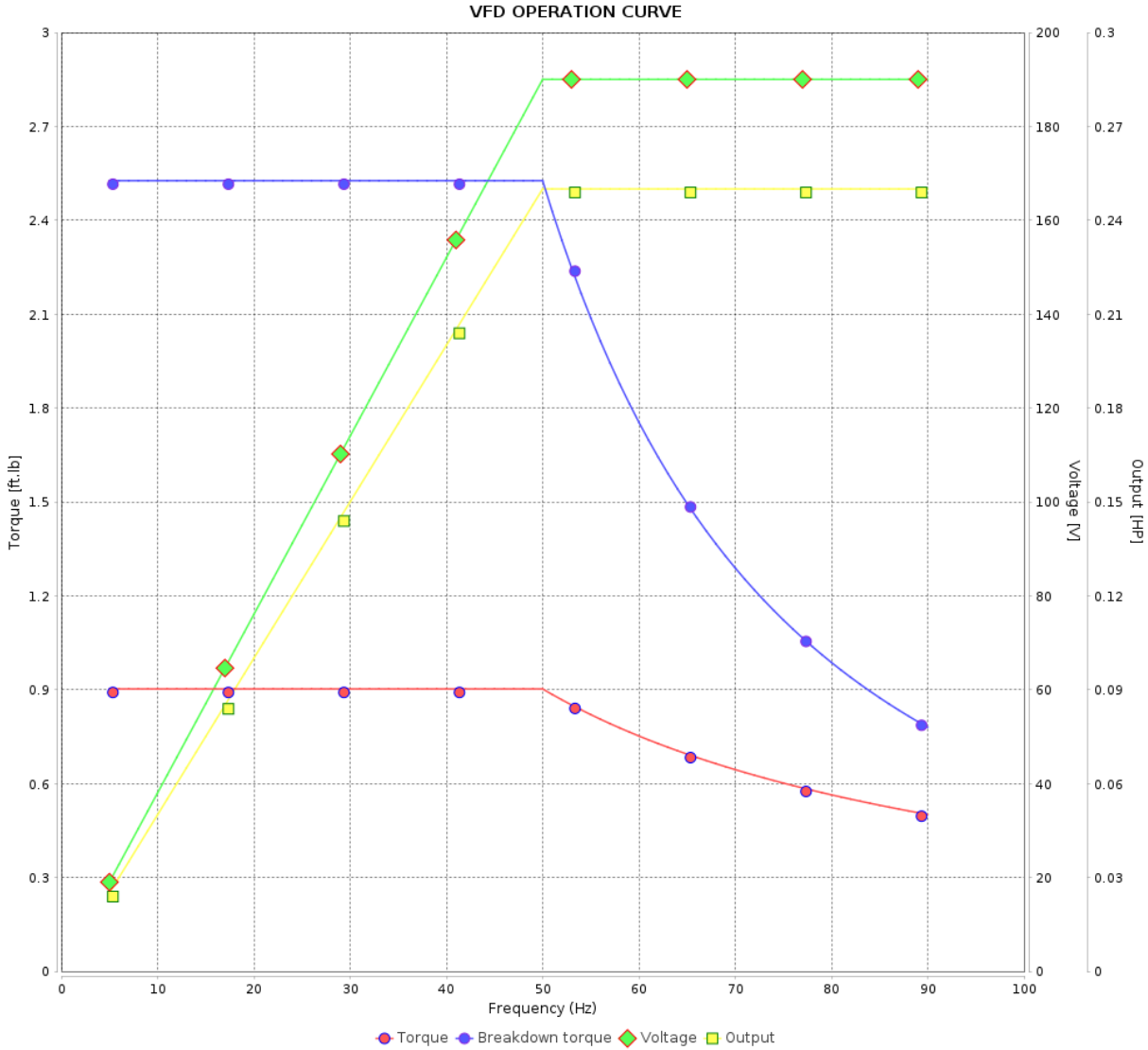
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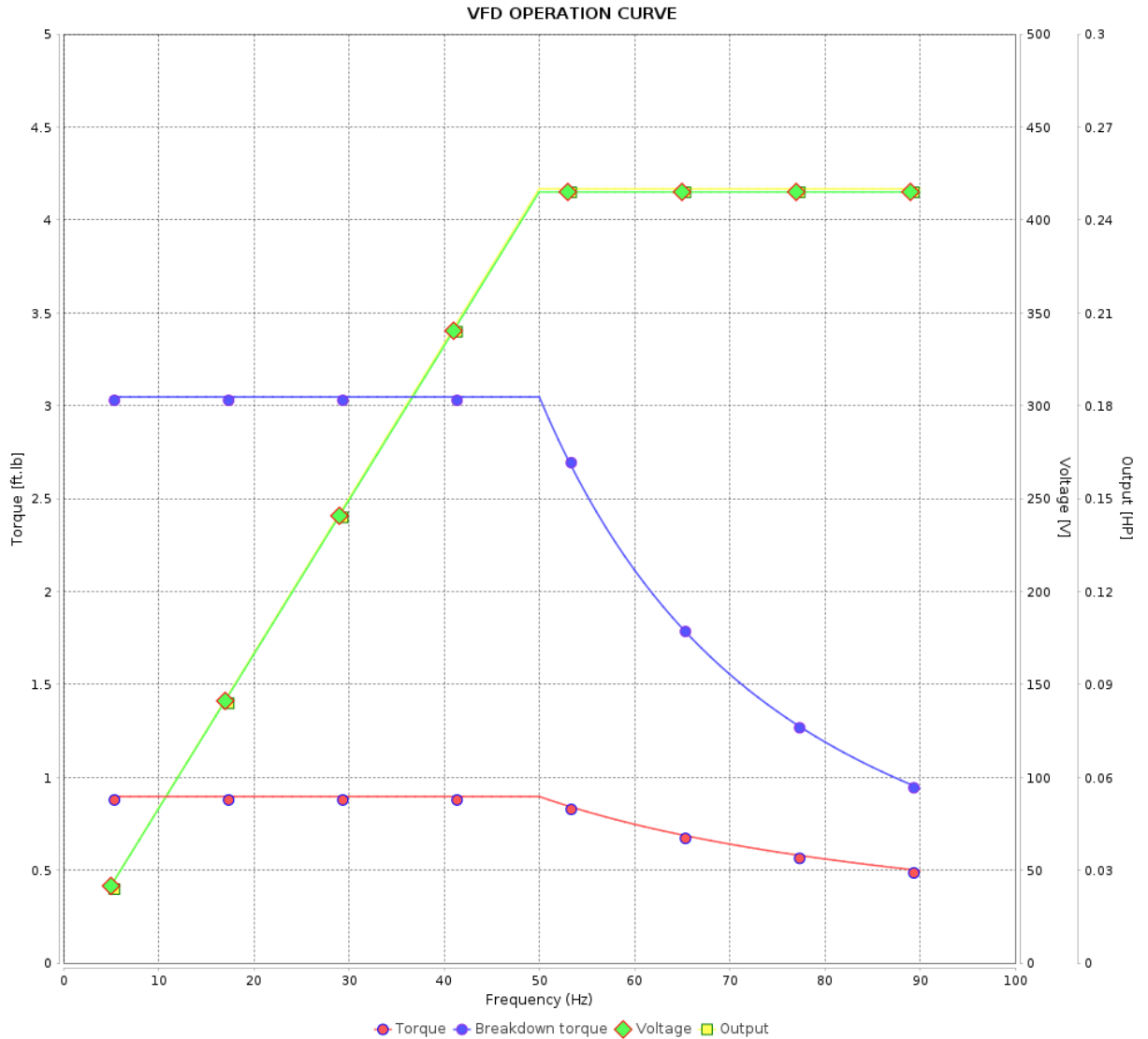
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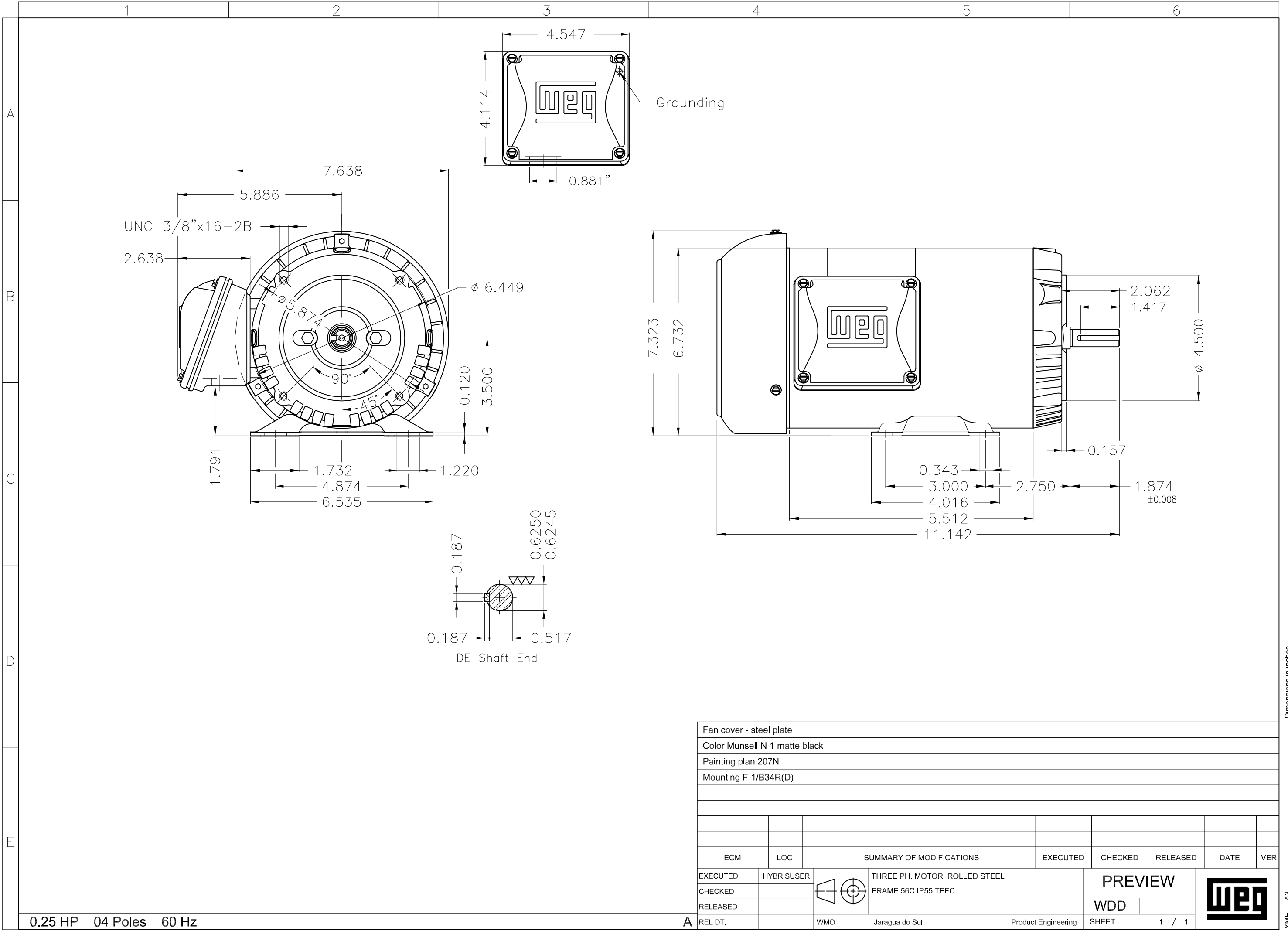


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| | | | | |
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Fan cover - steel plate
 Color Munsell N 1 matte black
 Painting plan 207N
 Mounting F-1/B34R(D)

| ECM | LOC | SUMMARY OF MODIFICATIONS | EXECUTED | CHECKED | RELEASED | DATE | VER |
|----------|------------|------------------------------|---------------------|-------------|----------|---|-----|
| EXECUTED | HYBRISUSER | THREE PH. MOTOR ROLLED STEEL | | | | | |
| CHECKED | | FRAME 56C IP55 TEFC | | | | | |
| RELEASED | | | | | | | |
| REL DT. | WMO | Jaragua do Sul | Product Engineering | SHEET 1 / 1 | | PREVIEW WDD  | |

0.25 HP 04 Poles 60 Hz



MADE IN BRAZIL

MAT: 14796862

W01.TE0IC0X0X

MODEL .2518ES3E56C-S

01SEP2022 B/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 0.25 |
| FR 56C | | KW 0.18 |
| DUTY CONT. | | V 208-230/460 |
| ALT 1000 m.a.s.l. | | A 1.15-1.04/0.521 |
| INS CL F AT 80K | IP55 | SFA 1.15-1.20/0.599 |
| AMB 40°C | DES - | SF 1.15 |
| ENCL TEFC | CODE M | PF 0.62 |
| USABLE @ 208V SF1.00 | | RPM 1765 |
| | | NEMA NOM. EFF 70.0% |

| |
|--|
| ALTERNATE RATING: 0.25HP 50Hz 190-220/380-415V SF1.15 |
| 1.13-1.10/0.564-0.585A 1455RPM EFF 67.9% (IE2) IEC 60034-1 |

For safe area-Inverter duty motor For 60Hz use on VPWM 1000:1 VT, 10:1 CT

| | | |
|------------|-------------|------------------|
| DE 6203-ZZ | ODE 6202-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.

