

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



Customer : GOL PUMP TECHNOLOGY, INC.

Product line : W22 - IE3 Premium Efficiency

| | | | |
|-----------------------|-----------------|-----------------------------|--------------------------|
| Frame | : 180M | Locked rotor time | : 20 s (hot) 36 s (cold) |
| Output | : 22 kW | Temperature rise | : 80 K |
| Poles | : 4 | Duty cycle | : S1 |
| Frequency | : 60 Hz | Ambient temperature | : -20 °C to +40 °C |
| Rated voltage | : 230/460 V | Altitude | : 3280 ft |
| Rated current | : 72.9/36.4 A | Protection degree | : IP55 |
| L. R. Amperes | : 583/292 A | Cooling method | : IC411 - TEFC |
| LRC | : 8.0 | Mounting | : B35T |
| No load current | : 33.5/16.7 A | Rotation ¹ | : Both |
| Rated speed | : 1770 rpm | Noise level ² | : 63.0 dB(A) |
| Slip | : 1.67 % | Vibration class | : A |
| Rated torque | : 119 Nm | Starting method | : Direct On Line |
| Locked rotor torque | : 340 % | Coupling | : Direct |
| Pull up torque | : 255 % | Approx. weight ³ | : 388 lb |
| Breakdown torque | : 320 % | Painting plan | : 203A |
| Insulation class | : F | Color | : RAL 5009 |
| Service factor | : 1.25 | Design | : N |
| Moment of inertia (J) | : 4.55 sq.ft.lb | | |

| | | | | | |
|----------------|------|------|------|-------------------------------------|-----|
| Output | 50% | 75% | 100% | Load type | : - |
| Efficiency (%) | 92.8 | 93.3 | 93.6 | Load torque | : - |
| Power Factor | 0.66 | 0.76 | 0.81 | Load inertia (J=GD ² /4) | : - |

| | | | | |
|----------------------|-------------------------|-----------------------------|------------------|------------|
| Bearing type | Drive end 6311-ZZ-C3 | Non drive end 6211-ZZ-C3 | Foundation loads | |
| Lubrication interval | - | - | Max. traction | : 4585.3 N |
| Lubricant amount | - | - | Max. compression | : 6311.9 N |
| Lubricant type | MOBIL POLYREX EM | | | |

Notes
See notes on page 2.

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 be changed 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.

| Rev. | Changes Summary | Rev. | Checked | Date |
|--------------|-----------------|------------|---------|------|
| | | | | |
| Performed by | johnson | 1228358538 | | |
| Checked by | AUTOMATICO | Page | Rev. | |
| Date | 02/11/2021 | 1 / 5 | 1 | |

DATA SHEET

Three Phase Induction Motor - Squirrel Cage



Customer : GOL PUMP TECHNOLOGY, INC.

Product line : W22 - IE3 Premium Efficiency

Thermal protection

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

Notes

| | | | | |
|-----------|---------------|---------------|-----------|----------------|
| Standards | Specification | : IEC 60034-1 | Vibration | : IEC 60034-14 |
| | Test | : IEC 60034-2 | Tolerance | : IEC 60034-1 |
| | Noise | : IEC 60034-9 | | |

| | |
|--|--|
| 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 be changed 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. |
|--|--|

| Rev. | Changes Summary | Rev. | Checked | Date | |
|--------------|-----------------|------------|---------|---------------|------|
| | | | | | |
| Performed by | johnson | 1228358538 | | Page 2 / 5 | |
| Checked by | AUTOMATICO | | | | Rev. |
| Date | 02/11/2021 | | | | 1 |

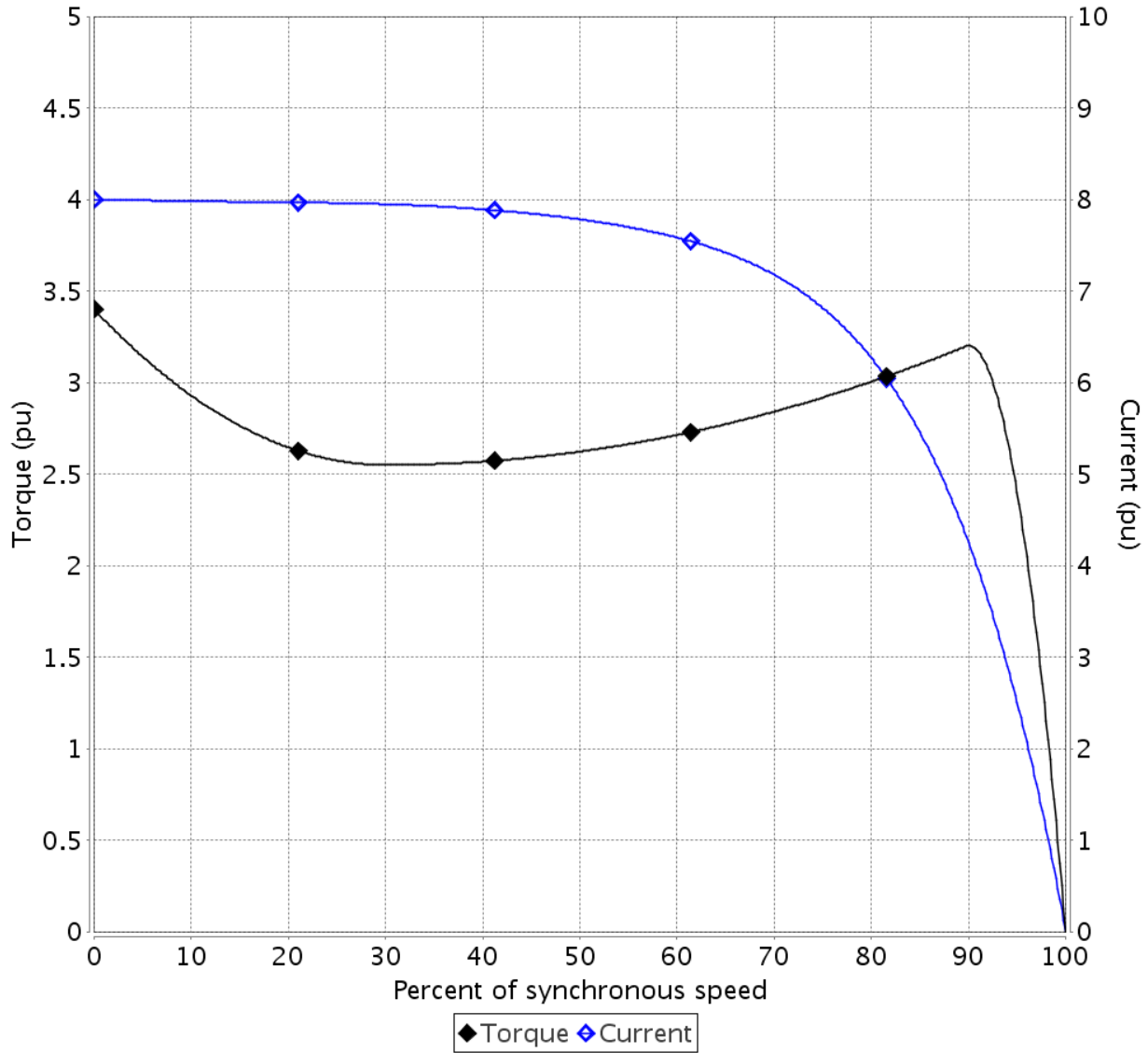
TORQUE AND CURRENT VS SPEED CURVE

Three Phase Induction Motor - Squirrel Cage



Customer : GOL PUMP TECHNOLOGY, INC.

Product line : W22 - IE3 Premium Efficiency



Performance : 22 kW 230/460 V 60 Hz 4P 180M

| | | | |
|---------------------|---------------|-----------------------|-----------------|
| Rated current | : 72.9/36.4 A | Moment of inertia (J) | : 4.55 sq.ft.lb |
| LRC | : 8.0 | Duty cycle | : S1 |
| Rated torque | : 119 Nm | Insulation class | : F |
| Locked rotor torque | : 340 % | Service factor | : 1.25 |
| Breakdown torque | : 320 % | Temperature rise | : 80 K |
| Rated speed | : 1770 rpm | Design | : N |

Locked rotor time 100% : 20 s (hot) 36 s (cold)

Load inertia (J=GD²/4) : 4.55 sq.ft.lb

| Rev. | Changes Summary | Rev. | Checked | Date |
|--------------|-----------------|------------------------------------|---------|------|
| Performed by | johnson | 1228358538 Page 3 / 5 Rev. 1 | | |
| Checked by | AUTOMATICO | | | |
| Date | 02/11/2021 | | | |

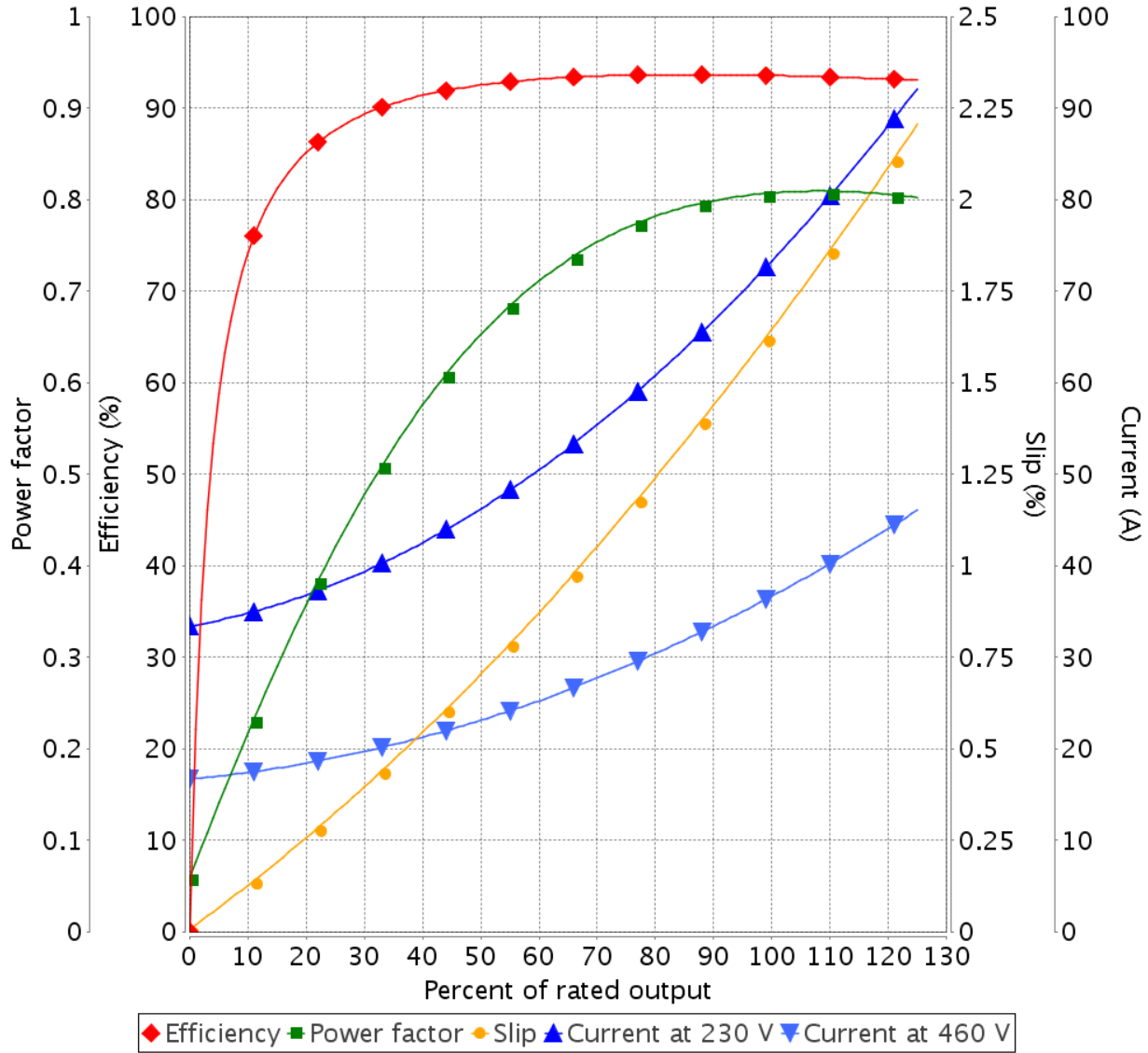
LOAD PERFORMANCE CURVE

Three Phase Induction Motor - Squirrel Cage



Customer : GOL PUMP TECHNOLOGY, INC.

Product line : W22 - IE3 Premium Efficiency



Performance : 22 kW 230/460 V 60 Hz 4P 180M

| | | | |
|---------------------|---------------|-----------------------|-----------------|
| Rated current | : 72.9/36.4 A | Moment of inertia (J) | : 4.55 sq.ft.lb |
| LRC | : 8.0 | Duty cycle | : S1 |
| Rated torque | : 119 Nm | Insulation class | : F |
| Locked rotor torque | : 340 % | Service factor | : 1.25 |
| Breakdown torque | : 320 % | Temperature rise | : 80 K |
| Rated speed | : 1770 rpm | Design | : N |

| Rev. | Changes Summary | Rev. | Checked | Date |
|--------------|-----------------|------------|---------|------|
| Performed by | johnson | 1228358538 | | |
| Checked by | | Page | Rev. | |
| Date | 02/11/2021 | 4 / 5 | 1 | |

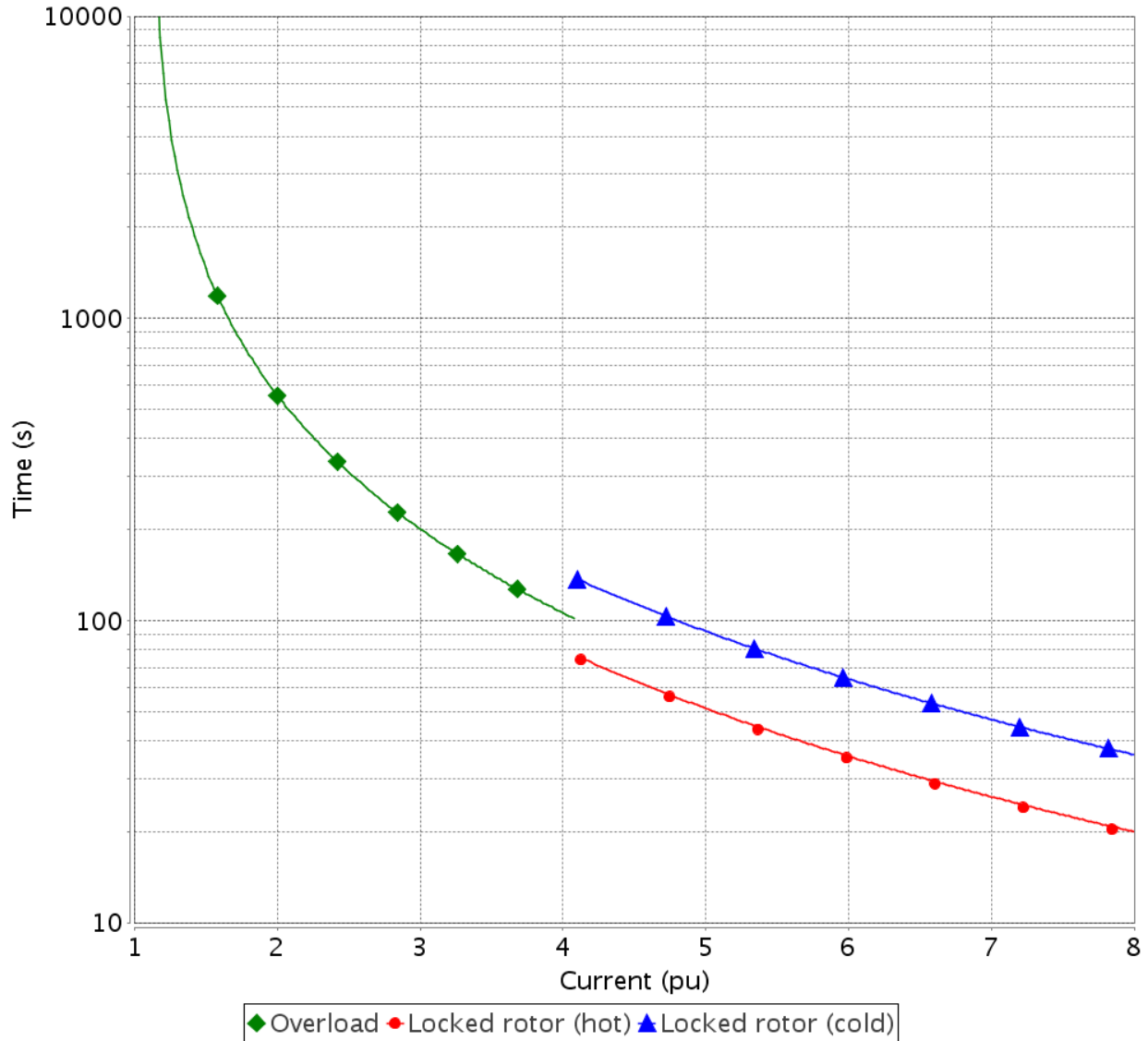
THERMAL LIMIT CURVE

Three Phase Induction Motor - Squirrel Cage



Customer : GOL PUMP TECHNOLOGY, INC.

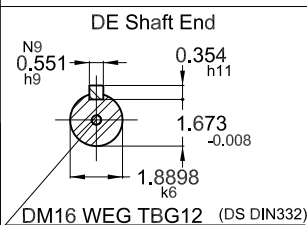
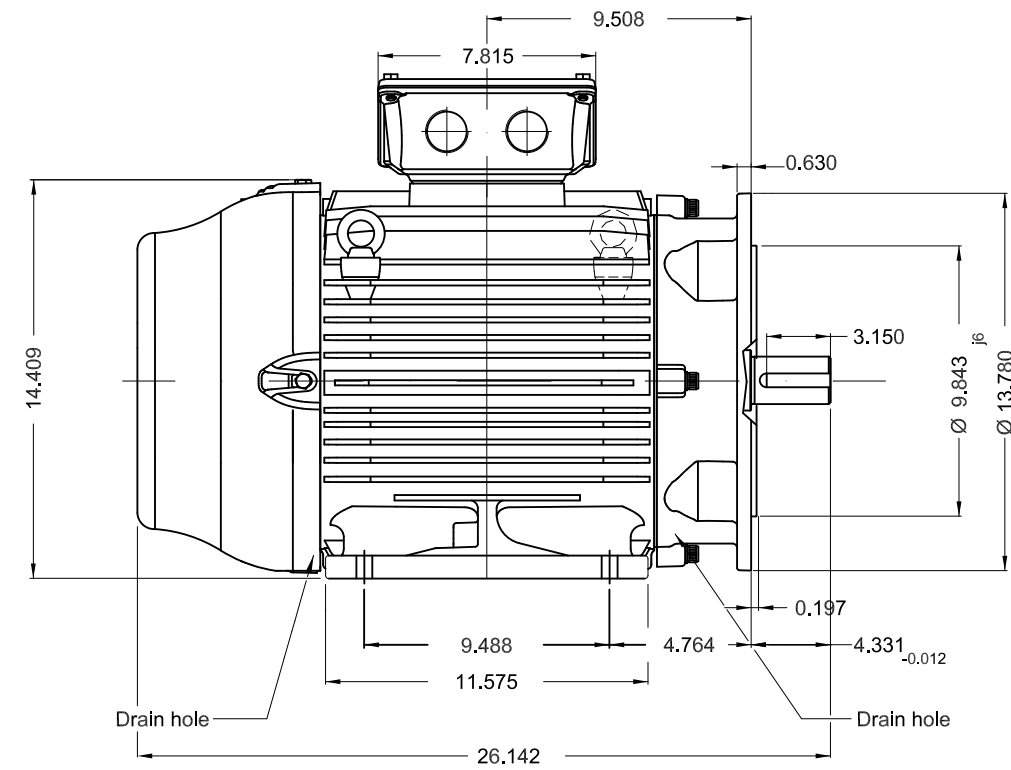
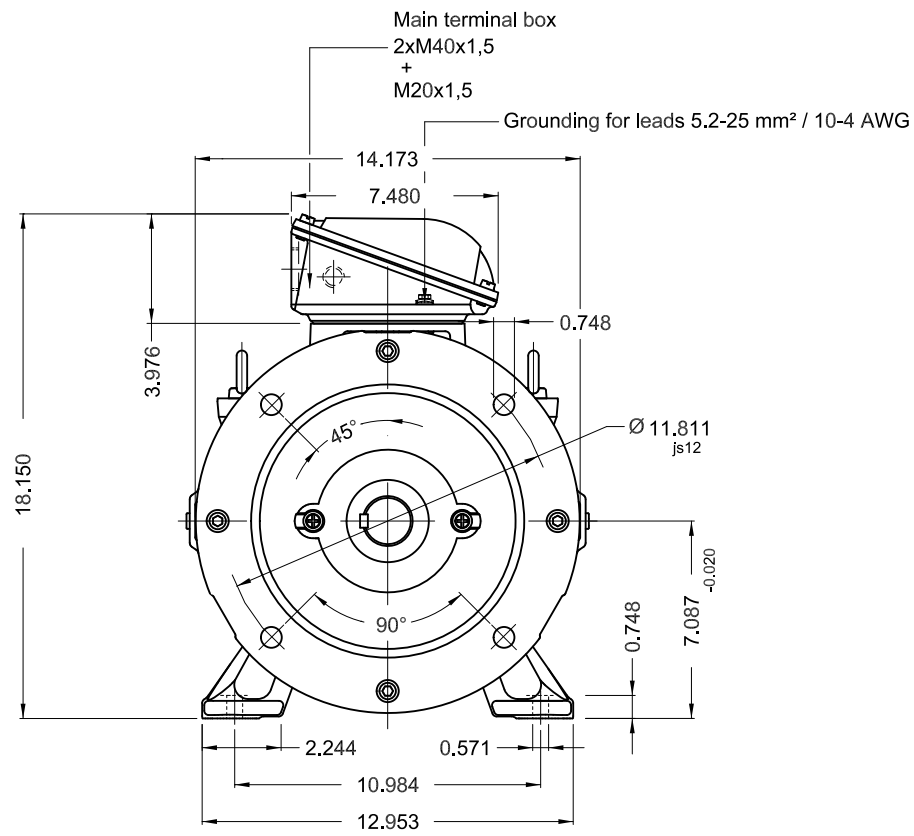
Product line : W22 - IE3 Premium Efficiency



Performance : 22 kW 230/460 V 60 Hz 4P 180M

| | | | |
|---------------------|---------------|-----------------------|-----------------|
| Rated current | : 72.9/36.4 A | Moment of inertia (J) | : 4.55 sq.ft.lb |
| LRC | : 8.0 | Duty cycle | : S1 |
| Rated torque | : 119 Nm | Insulation class | : F |
| Locked rotor torque | : 340 % | Service factor | : 1.25 |
| Breakdown torque | : 320 % | Temperature rise | : 80 K |
| Rated speed | : 1770 rpm | Design | : N |
| Heating constant | : 26.9 min | | |
| Cooling constant | : 80.7 min | | |

| Rev. | Changes Summary | | Rev. | Checked | Date |
|--------------|-----------------|--|------------|---------|------|
| Performed by | johnson | | 1228358538 | | |
| Checked by | | | Page | Rev. | |
| Date | 02/11/2021 | | 5 / 5 | 1 | |



Color RAL 5009
 Painting plan 203A
 Mounting B35T

22 kW 04 Poles 60 Hz

GOL PUMP TECHNOLOGY, INC.

| ECM | LOC | SUMMARY OF MODIFICATIONS | EXECUTED | CHECKED | RELEASED | DATE | VER |
|----------|-----------|-------------------------------------|---------------------|---------|----------|------|-----|
| EXECUTED | PIRWBUSER | THREE PHASE W22 MOTOR - PREMIUM EFF | | | | | |
| CHECKED | | FRAME 180M IP55 TEFC | | | | | |
| RELEASED | | | | | | | |
| REL DT. | WMO | Jaragua do Sul | Product Engineering | | | | |

PREVIEW
 WDD



SHEET 1 / 1

Dimensions in inches

XME A3