

BALDOR • RELIANCE

Customer information packet

EM2531T

25HP, 1775RPM, 3PH, 60HZ, 284T, 4050M, OPSB, F1

Specifications

| | |
|--------------------------------|--|
| Enclosure | OPSB |
| Frame | 284T |
| Frame Material | Steel |
| Frequency | 50.00 Hz 60.00 Hz |
| Motor Letter Type | Three Phase |
| Output @ Frequency | 20.000 HP @ 50 HZ 25.000 HP @ 60 HZ |
| Phase | 3 |
| Synchronous Speed @ Frequency | 1500 RPM @ 50 HZ |
| Voltage @ Frequency | 380.0 V @ 50 HZ 230.0 V @ 60 HZ 190.0 V @ 50 HZ 460.0 V @ 60 HZ 415.0 V @ 50 HZ |
| Agency Approvals | UR WEEE CSA EEV NEMA PREMIUM CE NEMA_PREMIUM |
| Ambient Temperature | 40 °C |
| Auxillary Box | No Auxillary Box |
| Auxillary Box Lead Termination | None |
| Base Indicator | Rigid |
| Bearing Grease Type | Polyrex EM (-20F +300F) |
| Blower | None |
| Current @ Voltage | 64.000 A @ 208.0 V 60.000 A @ 230.0 V 58.000 A @ 190.0 V 30.000 A @ 460.0 V 30.000 A @ 415.0 V 29.000 A @ 380.0 V |

Part detail

| | |
|--------------|------------|
| Revision | J |
| Type | AC |
| Mech. spec. | 40G48 |
| Base | |
| Status | PRD/A |
| Elec. spec. | 40WGX806 |
| Layout | 40LYG048 |
| Eff. date | 08-01-2024 |
| CD Diagram | CD0005 |
| Poles | 04 |
| Leads | 9#10 |
| Proprietary | False |
| Created date | 11-19-2020 |

| | |
|-------------------------------|---------------------------|
| Design Code | A |
| Drip Cover | No Drip Cover |
| Duty Rating | CONT |
| Efficiency @ 100% Load | 93.6 % |
| Electrically Isolated Bearing | Not Electrically Isolated |
| Feedback Device | NO FEEDBACK |
| Front Shaft Indicator | None |
| Heater Indicator | No Heater |
| High Voltage Full Load Amps | 29.0 a |
| Insulation Class | F |
| Inverter Code | Inverter Ready |
| IP Rating | NONE |
| KVA Code | G |
| Lifting Lugs | Standard Lifting Lugs |
| Locked Bearing Indicator | No Locked Bearing |
| Motor Lead Quantity/Wire Size | 9 @ 10 AWG |
| Motor Lead Termination | Flying Leads |
| Motor Standards | NEMA |
| Motor Type | 4050M |
| Mounting Arrangement | F1 |
| Number of Poles | 4 |
| Overall Length | 25.06 IN |
| Power Factor | 82 |
| Product Family | General Purpose |
| Pulley End Bearing Type | Ball |
| Pulley Face Code | Standard |
| Pulley Shaft Indicator | Standard |
| Rodent Screen | None |
| Service Factor | 1.15 |
| Shaft Diameter | 1.875 IN |
| Shaft Ground Indicator | No Shaft Grounding |
| Shaft Rotation | Reversible |
| Shaft Slinger Indicator | No Slinger |
| Speed | 1475 rpm |

| | |
|-----------------------------------|---------------------|
| | 1775 rpm |
| Speed Code | Single Speed |
| Starting Method | Direct on line |
| Thermal Device - Bearing | None |
| Thermal Device - Winding | None |
| Vibration Sensor Indicator | No Vibration Sensor |
| Winding Thermal 1 | None |
| Winding Thermal 2 | None |

Nameplate

| NP4295L | | | | | | | | | |
|-----------------------|---------------------------|-------------|-----------------------|-------------|---|------------|--------------|--|----|
| CAT.NO. | EM2531T | | | | | | | | |
| SPEC. | 40G048X806 | | | | | IP | | | 23 |
| HP | 25HP/18.5KW//20HP/15KW | | | | | | | | |
| VOLTS | 230/460//190/380-415 | | | | | | | | |
| AMPS | 60/30//58/29-30 | | | | | | | | |
| R.P.M. (1/MIN) | 1775//1475 | | | | | | | | |
| FRAME | 284T | | HZ | 60//50 | | | PH | | 3 |
| SER.F. | 1.15 | CODE | G | DES. | A | | CLASS | | F |
| NEMA NOM. EFF. | 93.6//92.1 | | P.F. | 82 | | | | | |
| RATING | 40C AMB-CONT | | | | | WT. | 171 | | |
| CC | 010A | | USABLE AT 208V | | | | N/A | | |
| ENCL | OPSB | SN | | | | | | | |
| DE | 6311 | | ODE | 6309 | | | | | |
| | IE3-60:93.8(75%)93.1(50%) | | | | | | | | |
| | IE3-50:93.2(75%)92.2(50%) | | | | | | | | |
| | IC01 2:1 CT/20:1 VT | | | | | | | | |

Accessories

| Part number | Description | Multiplier |
|--------------------|--------------------|-------------------|
| 40-1400 | C FACE KIT | A8 |

AC Induction Motor Performance Data

Record # 92775

Typical performance - not guaranteed values

| Winding: 40WGX806-R004 | | Type: 4050M | | Enclosure: OPSB | |
|-------------------------------|----------------------|---------------------|--|----------------------------------|-------------------------|
| Nameplate Data | | | 460 V, 60 Hz: High Voltage Connection | | |
| Rated Output (HP) | 25//20 | | Full Load Torque | 73.81 LB-FT | |
| Volts | 230/460//190/380-415 | | Start Configuration | direct on line | |
| Full Load Amps | 60/30//58/29-30 | | Breakdown Torque | 232 LB-FT | |
| R.P.M. | 1775//1475 | | Pull-up Torque | 116 LB-FT | |
| Hz | 60//50 | Phase | 3 | Locked-rotor Torque | 133 LB-FT |
| NEMA Design Code | A KVA Code | | G | Starting Current | 192 A |
| Service Factor (S.F.) | | | 1.15 | No-load Current | 12.6 A |
| NEMA Nom. Eff. | 93.6 | Power Factor | 82 | Line-line Res. @ 25°C | 0.35407 Ω |
| Rating - Duty | | | 40C AMB-CONT | Temp. Rise @ Rated Load | 28°C |
| S.F. Amps | | | | Temp. Rise @ S.F. Load | 34°C |
| | | | | Locked-rotor Power Factor | 34.7 |
| | | | | Rotor inertia | 3.96 lb-ft ² |

Load Characteristics 460 V, 60 Hz, 25 HP

| % of Rated Load | 25 | 50 | 75 | 100 | 125 | 150 | S.F. |
|------------------------|-----------|-----------|-----------|------------|------------|------------|-------------|
| Power Factor | 45 | 67 | 78 | 82 | 85 | 85 | 84 |
| Efficiency | 89.4 | 93.1 | 93.8 | 93.6 | 93 | 92.1 | 93.2 |
| Speed | 1794.8 | 1789.5 | 1783.7 | 1777.6 | 1771 | 1763.2 | 1774 |
| Line amperes | 14.5 | 18.6 | 24.1 | 30.3 | 37.2 | 44.6 | 34.4 |

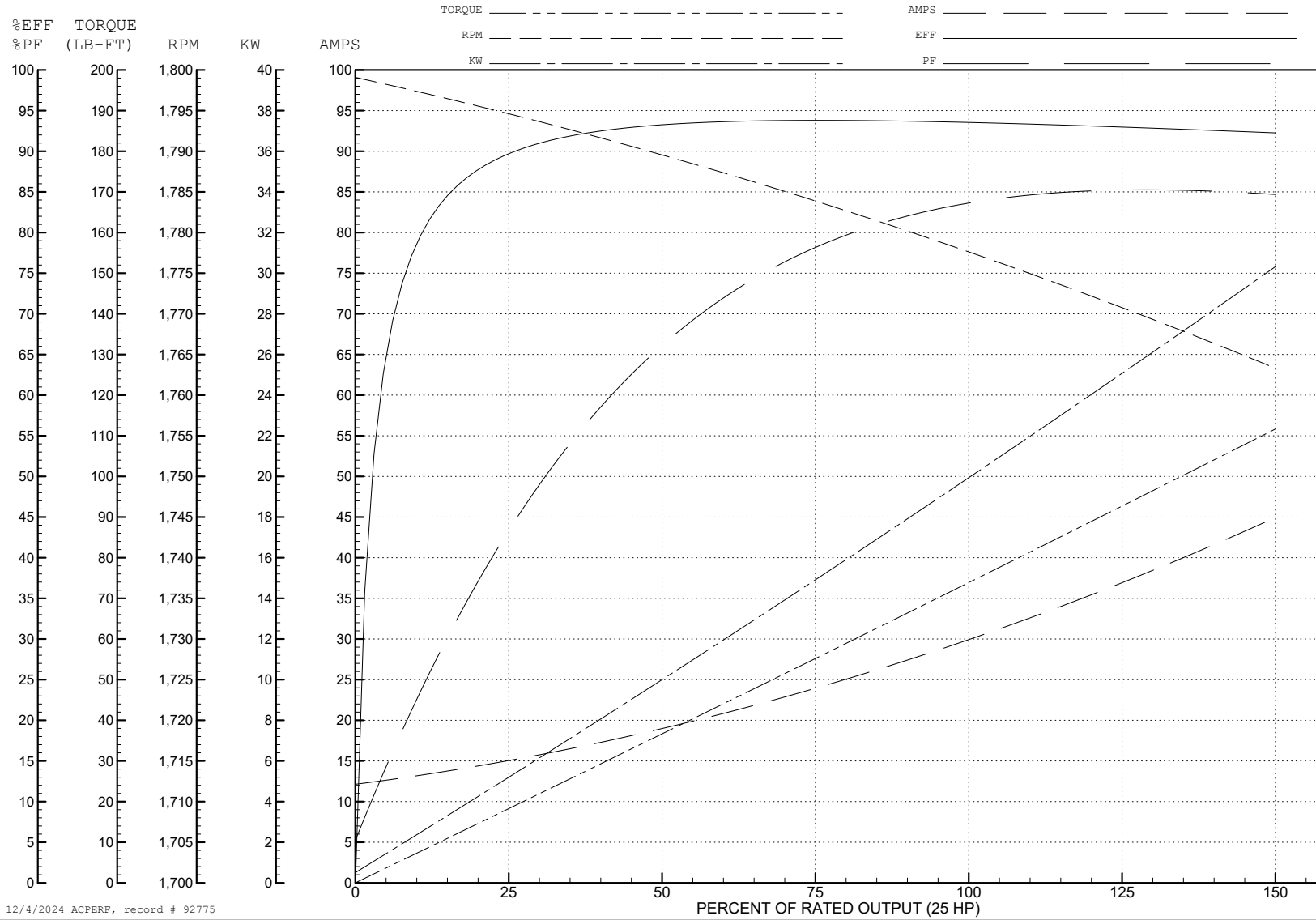
ABB Motors and Mechanical Inc.

WINDING # 40WGx806

Typical performance - not guaranteed values.

25 HP 3 PH 60 HZ 1777.6 RPM 460 V 4050M

TORQUES (LB-FT): PO=232 PU=116 LR=133 LRA=192



12/4/2024 ACPERF, record # 92775

AC Induction Motor Performance Data

Record # 92776

Typical performance - not guaranteed values

| Winding: 40WGX806-R004 | | Type: 4050M | Enclosure: OPSB | | | |
|------------------------|----------------------|--------------|--|-------------------------|-----------------------|---------|
| Nameplate Data | | | 415 V, 50 Hz: High Voltage Connection | | | |
| Rated Output (HP) | 25//20 | | Full Load Torque | 70.85 LB-FT | | |
| Volts | 230/460//190/380-415 | | Start Configuration | direct on line | | |
| Full Load Amps | 60/30//58/29-30 | | Breakdown Torque | 267 LB-FT | | |
| R.P.M. | 1775//1475 | | Pull-up Torque | 144 LB-FT | | |
| Hz | 60//50 | Phase | 3 | Locked-rotor Torque | 165 LB-FT | |
| NEMA Design Code | A | | KVA Code | G | Starting Current | 202 A |
| Service Factor (S.F.) | 1.15 | | No-load Current | 15.76 A | | |
| NEMA Nom. Eff. | 93.6 | Power Factor | 82 | | Line-line Res. @ 25°C | 0.335 Ω |
| Rating - Duty | 40C AMB-CONT | | Temp. Rise @ Rated Load | 27°C | | |
| S.F. Amps | | | Temp. Rise @ S.F. Load | 32°C | | |
| | | | Locked-rotor Power Factor | 38.7 | | |
| | | | Rotor inertia | 3.96 lb-ft ² | | |

Load Characteristics 415 V, 50 Hz, 20 HP

| % of Rated Load | 25 | 50 | 75 | 100 | 125 | 150 | S.F. |
|-----------------|-------|-------|-------|------|-------|-------|------|
| Power Factor | 35 | 56 | 68 | 75 | 80 | 82 | 78 |
| Efficiency | 87.8 | 92.2 | 93.2 | 93.1 | 92.7 | 92 | 92.9 |
| Speed | 1496 | 1491 | 1487 | 1482 | 1477 | 1471 | 1479 |
| Line amperes | 17.19 | 20.25 | 24.53 | 29.5 | 35.11 | 41.13 | 32.9 |

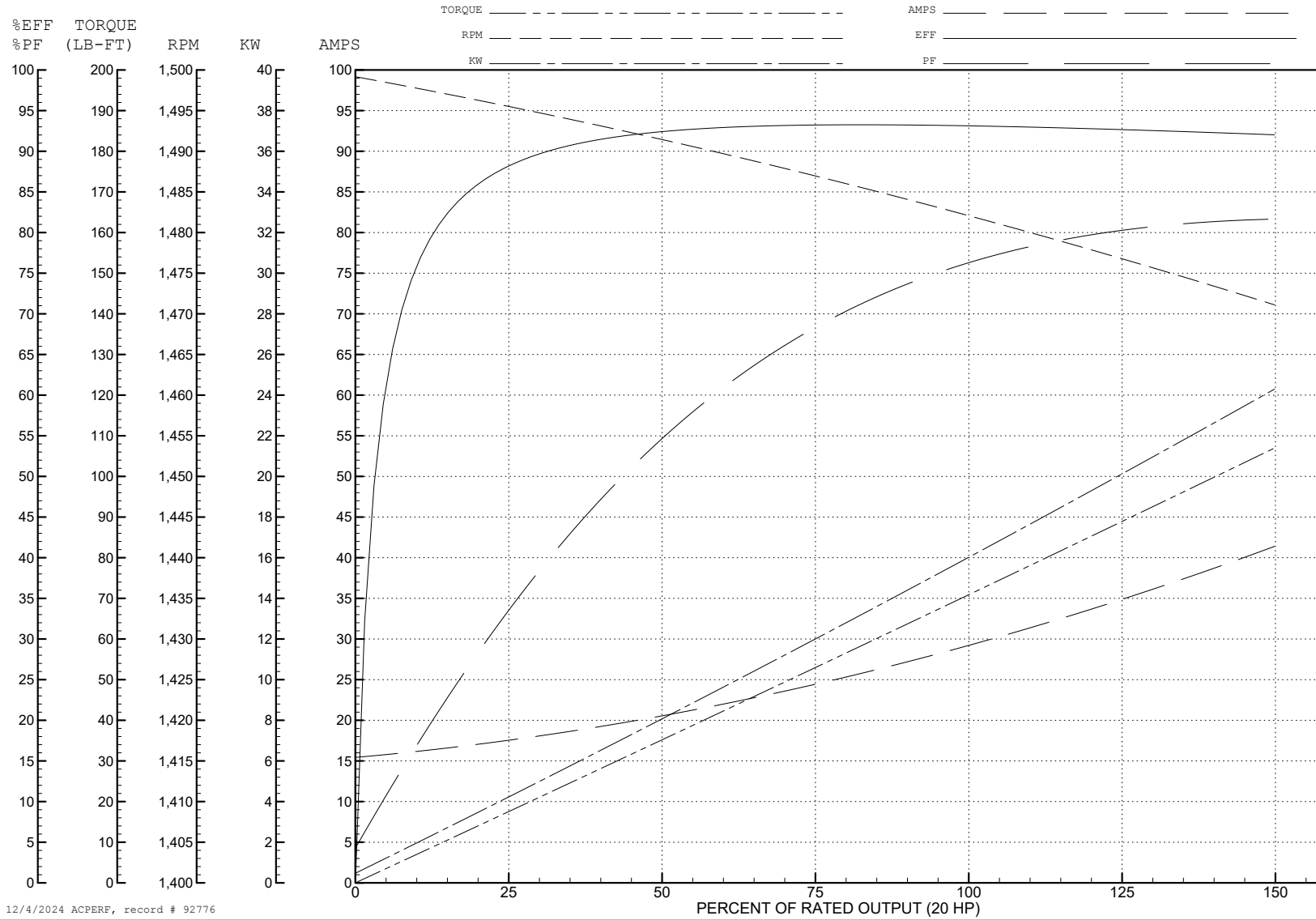
ABB Motors and Mechanical Inc.

WINDING # 40WGX806

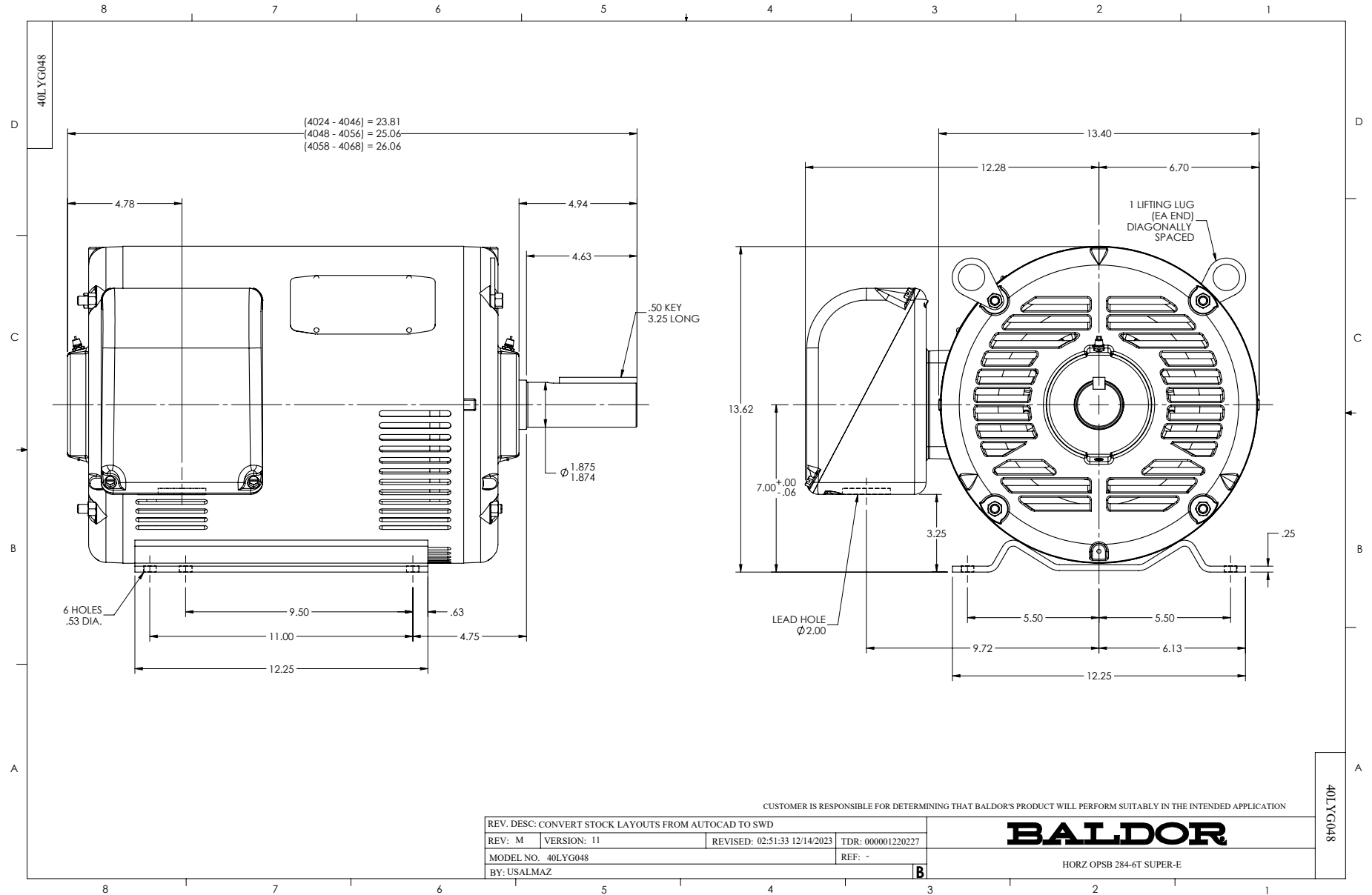
20 HP 3 PH 50 HZ 1482 RPM 415 V 4050M

Typical performance - not guaranteed values.

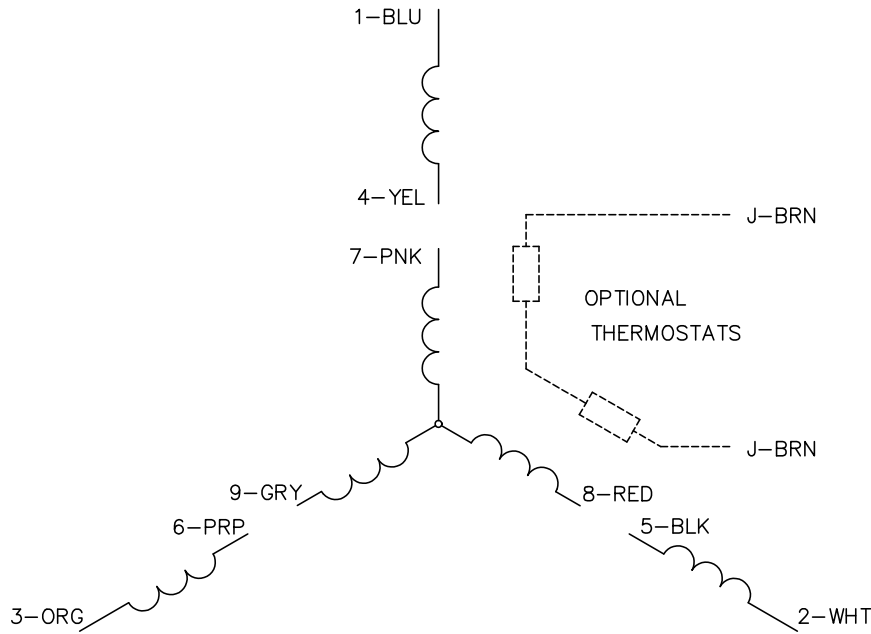
TORQUES (LB-FT): PO=267 PU=144 LR=165 LRA=202



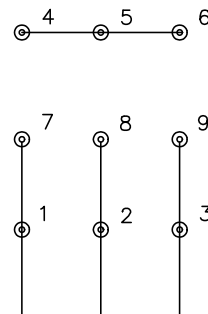
12/4/2024 ACPERF, record # 92776



CD0005

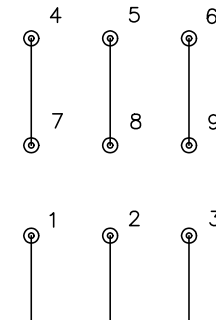


LOW VOLTAGE
(2Y)



LINE

HIGH VOLTAGE
(1Y)



LINE

NOTES:

1. INTERCHANGE ANY TWO LINE LEADS TO REVERSE ROTATION.
2. OPTIONAL THERMOSTATS ARE PROVIDED WHEN SPECIFIED.
3. ACTUAL NUMBER OF INTERNAL PARALLEL CIRCUITS MAY BE A MULTIPLE OF THOSE SHOWN ABOVE.
4. LEAD COLORS ARE OPTIONAL. LEADS MUST ALWAYS BE NUMBERED AS SHOWN.

CD0005

| | | | |
|---|---------|-------------------------|--------------|
| REV. DESC: REVISE TO SHOW OPTIONAL COLORS | | | |
| REV. LTR: E | BY: JLP | REVISED: 01/19/99 10:15 | TDR: 0171435 |
| S00000 | | FILE: AAA00005140 | MDL: - |
| | | MTL: - | |

BALDOR ELECTRIC Co.

3PH, DV, 9 LEADS