

BALDOR® • RELIANCE 

Product Information Packet

ECP4102T-5

20HP,1180RPM,3PH,60HZ,286T,1062M,TEFC,F1

| Part Detail | | | | | | | |
|-------------|--------|-------------|------------|-------------|--------|---------------|------------|
| Revision: | Y | Status: | PRD/A | Change #: | | Proprietary: | No |
| Type: | AC | Elec. Spec: | 10WGY161 | CD Diagram: | CD0006 | Mfg Plant: | |
| Mech. Spec: | 10H292 | Layout: | 10LYH292 | Poles: | 06 | Created Date: | 01-09-2013 |
| Base: | RG | Eff. Date: | 06-28-2018 | Leads: | 3#10 | | |

| Specs | | | |
|---------------------------------|-------------------------|--------------------------------|-----------------------------|
| Catalog Number: | ECP4102T-5 | Inverter Code: | Inverter Duty |
| Enclosure: | TEFC | KVA Code: | H |
| Frame: | 286T | Lifting Lugs: | Standard Lifting Lugs |
| Frame Material: | Iron | Locked Bearing Indicator: | Locked Bearing |
| Output @ Frequency: | 20.000 HP @ 60 HZ | Motor Lead Quantity/Wire Size: | 3 @ 10 AWG |
| Synchronous Speed @ Frequency: | 1200 RPM @ 60 HZ | Motor Lead Exit: | Ko Box |
| Voltage @ Frequency: | 575.0 V @ 60 HZ | Motor Lead Termination: | Flying Leads |
| XP Class and Group: | None | Motor Type: | 1062M |
| XP Division: | Not Applicable | Mounting Arrangement: | F1 |
| Agency Approvals: | CSA | Power Factor: | 78 |
| | CSA EEV | Product Family: | Super-E Chemical Processing |
| | UR | Pulley End Bearing Type: | Ball |
| Auxillary Box: | No Auxillary Box | Pulley Face Code: | Standard |
| Auxillary Box Lead Termination: | None | Pulley Shaft Indicator: | Standard |
| Base Indicator: | Rigid | Rodent Screen: | None |
| Bearing Grease Type: | Polyrex EM (-20F +300F) | RoHS Status: | ROHS NON-COMPLIANT |
| Blower: | None | Shaft Extension Location: | Pulley End |
| Constant Torque Speed Range: | 1.0 | Shaft Ground Indicator: | No Shaft Grounding |

| | | | |
|---------------------------------------|---------------------------|------------------------------------|---------------------|
| Current @ Voltage: | 20.600 A @ 575.0 V | Shaft Rotation: | Reversible |
| Design Code: | A | Shaft Slinger Indicator: | Shaft Slinger |
| Drip Cover: | No Drip Cover | Speed Code: | Single Speed |
| Duty Rating: | CONT | Motor Standards: | NEMA |
| Electrically Isolated Bearing: | Not Electrically Isolated | Starting Method: | Direct on line |
| Feedback Device: | NO FEEDBACK | Thermal Device - Bearing: | NONE (OLD) |
| Front Face Code: | Standard | Thermal Device - Winding: | None |
| Front Shaft Indicator: | None | Vibration Sensor Indicator: | No Vibration Sensor |
| Heater Indicator: | No Heater | Winding Thermal 1: | None |
| Insulation Class: | F | Winding Thermal 2: | None |
| | | XP Temp Code: | T3C |

| Nameplate NP3241 | | | | | | | | | | | |
|------------------|--------------|--------------------|------|-----------|------------|-------------------------|------|------------|------|----------|----|
| CAT.NO. | ECP4102T-5 | P/N | | ENCLOSURE | TEFC | | | | | | |
| SPEC. | 10H292Y161G1 | CC | 010A | FRAME | 286T | S/N | | | | | |
| HP | 20 | CLASS | F | HZ | 60 | DES | A | | | | |
| RPM | 1180 | RPM MAX | 1800 | PH | 3 | KVA-CODE | H | | | | |
| VOLT | 575 | MOTOR WEIGHT | 455 | | | | | | | | |
| AMP | 20.6 | SER.F. | 1.15 | PF | 78 | ODE BRG | 6311 | DE BRG | 6311 | | |
| RATING | 40C AMB-CONT | NEMA-NOM-EFF | 93 | GREASE | POLYREX EM | | | | | | |
| | | | | INV.TYPE | PWM | | | | | | |
| TEMP CODE | T3C | INVERTER-TEMP-CODE | 180 | | | | | | | | |
| TEMP = | 160 | C HP FR | 60 | C HP TO | 90 | | | | | | |
| CT HZ FROM | 1.0 | CT HZ TO | 60 | | | | | | | | |
| HTR-VOLTS | | HTR-AMPS | | HTR-WATTS | | MAX. SPACE HEATER TEMP. | | VT HZ FROM | 0 | VT HZ TO | 60 |

| Parts List | | |
|--------------|--|----------|
| Part Number | Description | Quantity |
| SA256683 | SA 10H292Y161G1 | 1.000 EA |
| RA243471 | RA 10H292Y161G1 | 1.000 EA |
| 09FN3001B02 | EXTERNAL FAN, PLASTIC | 1.000 EA |
| 10CB1000A09P | CONDUIT BOX, MACH W/EPOXY PRIMER | 1.000 EA |
| 09GS1010 | GASKET, DWG, LEADWIRE SEPERATOR | 1.000 EA |
| 10XN3118K16 | 5/16-18 X 1' GRADE #5, STL, ZINC PLATE | 4.000 EA |
| HW1001A31 | LOCKWASHER 5/16, ZINC PLT.591 OD, .319 I | 4.000 EA |
| 10CB1503A01P | CONDUIT BOX LIPPED LID, MACH W/EPXY PRMR | 1.000 EA |
| WD1000B16 | T&B CX70TN TERMINAL | 1.000 EA |
| 10XN2520K06 | 1/4-20 X 3/8" HX HD SCREWGRADE 5, ZINC P | 1.000 EA |
| HW1001A25 | LOCKWASHER 1/4, ZINC PLT .493 OD, .255 I | 1.000 EA |
| 10XN3816K28 | 3/8-16 X 1.75 HEX HD CAP SCREW, GRADE 5 | 4.000 EA |
| HW1001A38 | LOCKWASHER 3/8, ZINC PLT .688 OD, .382 I | 4.000 EA |
| HA4017A11 | 1/8 X 2.75 GREASE EXT (F/S) | 1.000 EA |
| HA4017A03 | .125 X 1.75 GREASE EXT (F/S) | 1.000 EA |
| HW4019A01 | PIPE COUPLING 1/8 NPT,STEEL,ZINC COATING | 1.000 EA |
| HW4600B40 | V-RING SLINGER 2.000 X 2.680 X .28 VITON | 1.000 EA |
| HW5100A13 | W4627-047 WVY WSHER | 1.000 EA |
| HW4500A20 | 1/8NPT SL PIPE PLUG | 1.000 EA |
| 10XN3118K40 | 5/16-18 X 2.50" HEX HD, GRADE 5 | 4.000 EA |
| 10EP1110A47P | PU ENDPLATE, MACH W/PRIMER | 1.000 EA |
| 10FH1007P | FAN COVER, CAST W/EPOXY PRIMER | 1.000 EA |
| 10XN3816K28 | 3/8-16 X 1.75 HEX HD CAP SCREW, GRADE 5 | 4.000 EA |
| HW1001A38 | LOCKWASHER 3/8, ZINC PLT .688 OD, .382 I | 4.000 EA |

| Parts List (continued) | | |
|------------------------|--|----------|
| Part Number | Description | Quantity |
| HW4500A20 | 1/8NPT SL PIPE PLUG | 1.000 EA |
| HW4600B40 | V-RING SLINGER 2.000 X 2.680 X .28 VITON | 1.000 EA |
| 10XN3118K40 | 5/16-18 X 2.50" HEX HD, GRADE 5 | 4.000 EA |
| 10XN3118K20 | 5/16-18 X 1 1/4 GRADE 5 STEEL ZC PLATED | 3.000 EA |
| HW1001A31 | LOCKWASHER 5/16, ZINC PLT.591 OD, .319 I | 3.000 EA |
| 14GS1003 | GASKET CONDUIT BOX LID, NEOP | 1.000 EA |
| 10XN2520K16 | 1/4-20 X 1" HX HD SCRW GRADE 5, ZINC P | 4.000 EA |
| HW1001A25 | LOCKWASHER 1/4, ZINC PLT .493 OD, .255 I | 4.000 EA |
| HW2501H29 | KEY, 1/2 SQ X 3.375 | 1.000 EA |
| MJ5001A27 | 32220KN GRAY SEALER *MIN BUY 4 QTS=1GAL | 0.031 QT |
| MJ5001A14 | DYNAPRO SEALANT, CP MTR VC#2508050 (603 | 0.033 EA |
| MJ5002A01 | SILICON RUBBER SEALANT, 732CL 10.3 OZ TU | 0.025 EA |
| LB1115N | LABEL,LIFTING DEVICE (ON ROLLS) | 1.000 EA |
| 10EP1110A44GP6 | FREP, MACH W/PRIMER & GREEN PAINT | 1.000 EA |
| MN416A01 | TAG-INSTAL-MAINT no wire (1200/bx) 5/18 | 1.000 EA |
| LB1002N | LABEL,MARINE DUTY (ON ROLLS) | 1.000 EA |
| HA4051A00 | PLASTIC CAP FOR GREASE FITTING | 1.000 EA |
| HW4500A21 | 1618BALEMITE FITTING 825 UNIVERSAL | 1.000 EA |
| HW4500A17 | 317400 ALEMITE GREASE RELIEF | 1.000 EA |
| HA4054 | SHORT T-DRAIN FITTING, .125" N.P.T. | 1.000 EA |
| MJ1000A02 | GREASE, POLYREX EM EXXON (USe 4824-15A) | 0.130 LB |
| HA4051A00 | PLASTIC CAP FOR GREASE FITTING | 1.000 EA |
| HW4500A17 | 317400 ALEMITE GREASE RELIEF | 1.000 EA |
| HW4500A03 | GREASE FITTING, .125 NPT 1610(ALEMITE) 8 | 1.000 EA |

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| | | |
|-------------|--|----------|
| HA4054 | SHORT T-DRAIN FITTING, .125" N.P.T. | 1.000 EA |
| HW2500A25 | WOODRUFF KEY USA #1008 #BLOW CARBON STEE | 1.000 EA |
| 51XB1214A20 | 12-14X1.25 HXWSSLD SERTYB | 1.000 EA |
| MG1025N19 | WILKOFAS, 778.50, RELIANCE BLUE-GREEN | 0.070 GA |
| 85XU0407S04 | 4X1/4 U DRIVE PIN STAINLESS | 4.000 EA |
| LB1119N | WARNING LABEL | 1.000 EA |
| LC0006 | CONNECTION LABEL | 1.000 EA |
| NP3241 | SS SUPER-E INV UL CSA-EEV PREM CC | 1.000 EA |
| LB1449 | DIV-2/NEC WARNING LABEL | 1.000 EA |
| 10PA1000 | PACKAGING GROUP COMBINED PRINT PK1023A06 | 1.000 EA |

AC Induction Motor Performance Data

Record # 47253 - Typical performance - not guaranteed values

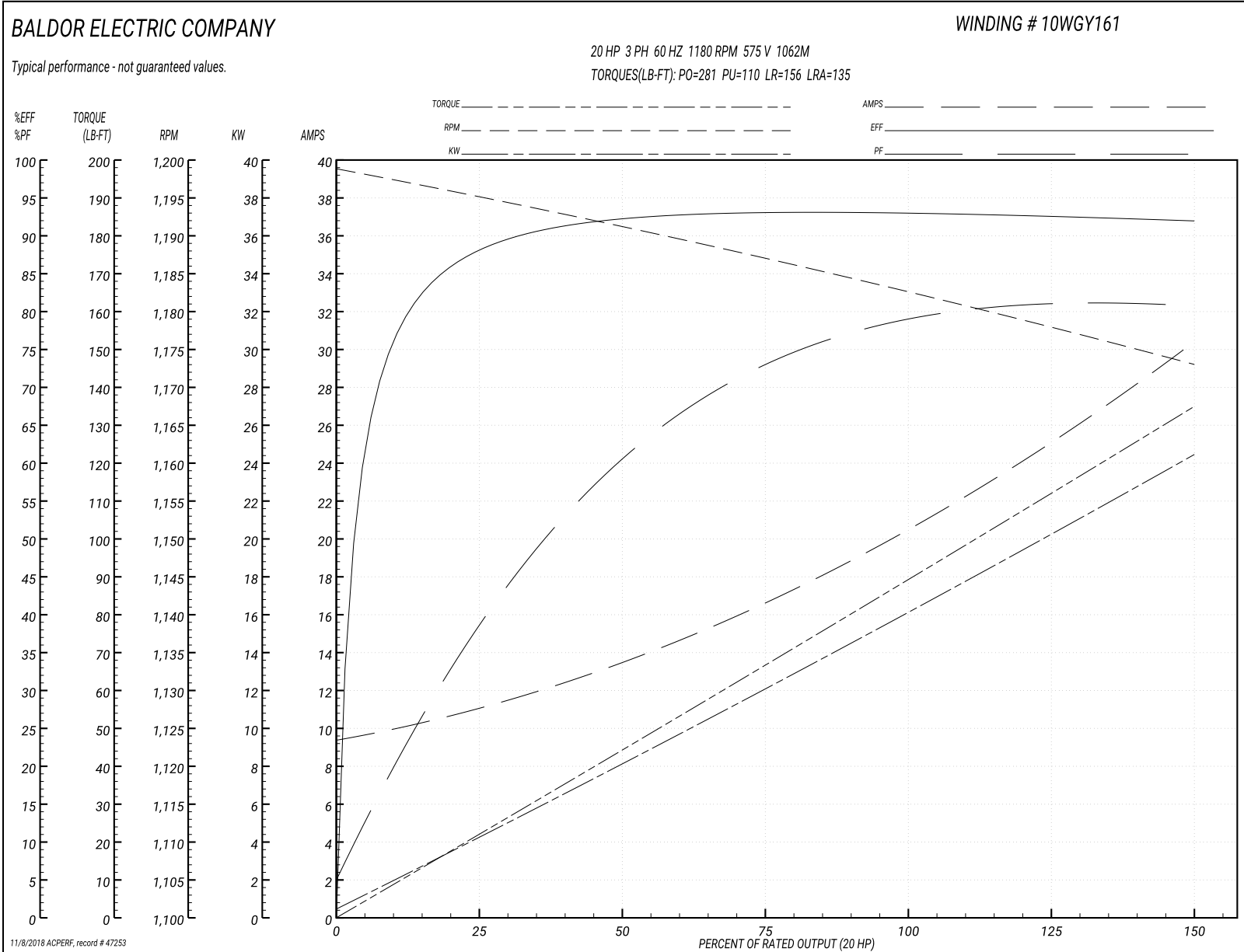
| | | |
|-------------------------------|--------------------|------------------------|
| Winding: 10WGY161-R004 | Type: 1062M | Enclosure: TEFC |
|-------------------------------|--------------------|------------------------|

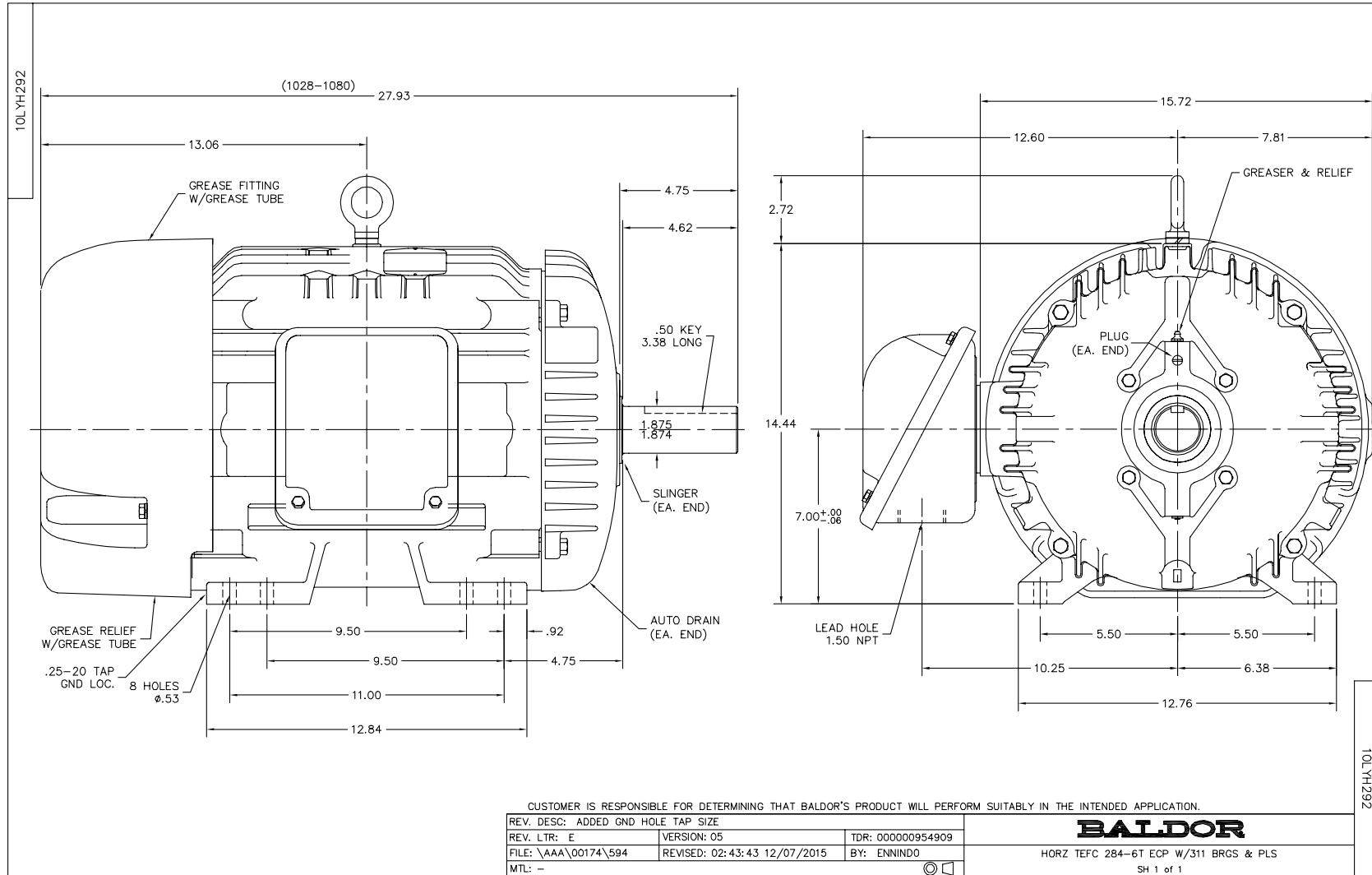
| Nameplate Data | | | | 575 V, 60 Hz: Single Voltage Motor | |
|-----------------------|--------------|--------------|----|---------------------------------------|-------------------------|
| Rated Output (HP) | 20 | | | Full Load Torque | 89 LB-FT |
| Volts | 575 | | | Start Configuration | direct on line |
| Full Load Amps | 20.6 | | | Breakdown Torque | 281 LB-FT |
| R.P.M. | 1180 | | | Pull-up Torque | 110 LB-FT |
| Hz | 60 | Phase | 3 | Locked-rotor Torque | 156 LB-FT |
| NEMA Design Code | A | KVA Code | H | Starting Current | 135 A |
| Service Factor (S.F.) | 1.15 | | | No-load Current | 9.64 A |
| NEMA Nom. Eff. | 93 | Power Factor | 78 | Line-line Res. @ 25°C | 0.593 Ω |
| Rating - Duty | 40C AMB-CONT | | | Temp. Rise @ Rated Load | 48°C |
| S.F. Amps | | | | Temp. Rise @ S.F. Load | 58°C |
| | | | | Rotor inertia | 7.59 LB-FT ² |

Load Characteristics 575 V, 60 Hz, 20 HP

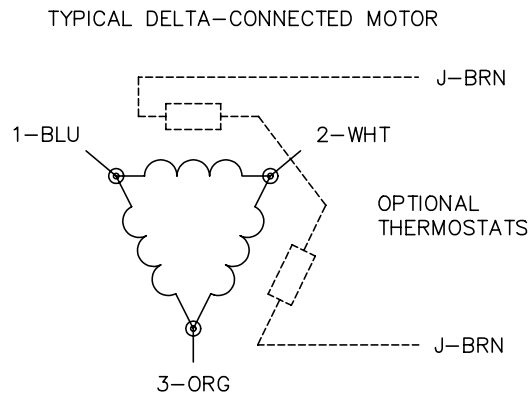
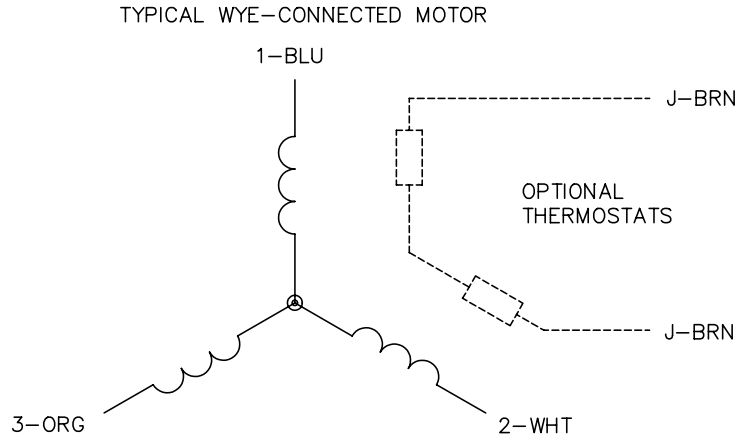
| % of Rated Load | 25 | 50 | 75 | 100 | 125 | 150 | S.F. |
|-----------------|------|------|------|------|------|------|------|
| Power Factor | 40 | 62 | 73 | 78 | 80 | 81 | 79 |
| Efficiency | 87.4 | 92.1 | 93.2 | 93.2 | 92.4 | 92 | 92.7 |
| Speed | 1195 | 1191 | 1187 | 1183 | 1178 | 1173 | 1180 |
| Line amperes | 10.7 | 13.4 | 16.7 | 20.6 | 25.1 | 30.2 | 23.3 |

Performance Graph at 575V, 60Hz, 20.0HP Typical performance - Not guaranteed values





CD0006



NOTES:

1. THREE LEAD MOTOR MAY BE EITHER WYE CONNECTED OR DELTA CONNECTED.
2. INTERCHANGE ANY TWO LINE LEADS TO REVERSE ROTATION.
3. OPTIONAL THERMOSTATS ARE PROVIDED WHEN SPECIFIED.
4. ACTUAL NUMBER OF INTERNAL PARALLEL CIRCUITS MAY VARY.
5. LEAD COLORS ARE OPTIONAL. LEADS MUST BE NUMBERED AS SHOWN.

| | | | |
|---|---------|------------------------|--------------|
| REV. DESC: REVISE TO SHOW OPTIONAL COLORS | | | |
| REV. LTR: D | BY: JLP | REVISED: 01/21/99 4:02 | TDR: 0171435 |
| 9000D | | FILE: AAA00005141 | MDL: - |
| | | MTL: - | |

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3PH, SV, 3 LEADS, WYE OR DELTA CONNECTED

CD0006

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