

BALDOR® • RELIANCE 

Product Information Packet

EM4109T

40HP,3530RPM,3PH,60HZ,324TS,1058M,TEFC,F

| Part Detail | | | | | | | |
|-------------|--------|-------------|------------|-------------|--------|---------------|------------|
| Revision: | - | Status: | PRD/A | Change #: | | Proprietary: | No |
| Type: | AC | Elec. Spec: | 10WGY652 | CD Diagram: | CD0180 | Mfg Plant: | |
| Mech. Spec: | 10F371 | Layout: | 10LYF371 | Poles: | 02 | Created Date: | 05-31-2018 |
| Base: | RG | Eff. Date: | 06-01-2018 | Leads: | 9#8 | | |

| Specs | | | |
|---------------------------------|-------------------------|--------------------------------|-----------------------|
| Catalog Number: | EM4109T | Heater Indicator: | No Heater |
| Enclosure: | TEFC | Insulation Class: | F |
| Frame: | 324TS | Inverter Code: | Inverter Ready |
| Frame Material: | Iron | KVA Code: | H |
| Output @ Frequency: | 40.000 HP @ 60 HZ | Lifting Lugs: | Standard Lifting Lugs |
| Synchronous Speed @ Frequency: | 3600 RPM @ 60 HZ | Locked Bearing Indicator: | Locked Bearing |
| Voltage @ Frequency: | 460.0 V @ 60 HZ | Motor Lead Quantity/Wire Size: | 9 @ 8 AWG |
| | 230.0 V @ 60 HZ | Motor Lead Exit: | Ko Box |
| XP Class and Group: | None | Motor Lead Termination: | Flying Leads |
| XP Division: | Not Applicable | Motor Type: | 1058M |
| Agency Approvals: | UR | Mounting Arrangement: | F1 |
| | CSA EEV | Power Factor: | 90 |
| | CSA | Product Family: | General Purpose |
| Auxillary Box: | No Auxillary Box | Pulley End Bearing Type: | Ball |
| Auxillary Box Lead Termination: | None | Pulley Face Code: | Standard |
| Base Indicator: | Rigid | Pulley Shaft Indicator: | Standard |
| Bearing Grease Type: | Polyrex EM (-20F +300F) | Rodent Screen: | None |
| Blower: | None | Shaft Extension Location: | Pulley End |

| | | | |
|---------------------------------------|---------------------------|------------------------------------|---------------------|
| Current @ Voltage: | 100.000 A @ 208.0 V | Shaft Ground Indicator: | No Shaft Grounding |
| | 45.000 A @ 460.0 V | Shaft Rotation: | Reversible |
| | 90.000 A @ 230.0 V | Shaft Slinger Indicator: | Shaft Slinger |
| Design Code: | A | Speed Code: | Single Speed |
| Drip Cover: | No Drip Cover | Motor Standards: | NEMA |
| Duty Rating: | CONT | Starting Method: | Direct on line |
| Electrically Isolated Bearing: | Not Electrically Isolated | Thermal Device - Bearing: | NONE (OLD) |
| Feedback Device: | NO FEEDBACK | Thermal Device - Winding: | None |
| Front Face Code: | Standard | Vibration Sensor Indicator: | No Vibration Sensor |
| Front Shaft Indicator: | None | Winding Thermal 1: | None |
| | | Winding Thermal 2: | None |

| | | | | | | | | | | | |
|----------------------------|----------------------------|--|--------|----------------|-------|----------------------------|---------|------------|---------|--------|------|
| Nameplate NP3443LUA | | | | | | | | | | | |
| CAT.NO. | EM4109T | | | CUST. P/N | | | | ENCL | TEFC | | |
| SPEC. | 10F371Y652G1 | | CC | 010A | | FRAME | 324TS | | SER.NO. | | |
| HP | 40 | | CLASS | F | | HZ | 60 | | | | |
| R.P.M. | 3530 | | PH. | 3 | | DES. | A | | | | |
| VOLTS | 230/460 | | | CODE | H | | ODE BRG | 6309 | | DE BRG | 6312 |
| AMPS | 90/45 | | | USABLE AT 208V | 100 | | | | | | |
| RATING | 40C AMB-CONT | | | NEMA NOM. EFF. | 92.4 | | GREASE | POLYREX EM | | | |
| P.F. | 90 | | SER.F. | 1.15 | | CT6-60H(10:1)VT3-60H(20:1) | | | | | |
| USABLE AT | 50Hz 40HP 190/380V 110/55A | | | | 1.0SF | | | | | | |
| VOLTS | | | AMPS | | | MAX. SPACE HEATER TEMP. | | | | | |

| Parts List | | |
|-------------|--|----------|
| Part Number | Description | Quantity |
| SA356555 | SA 10F371Y652G1 | 1.000 EA |
| RA345507 | RA 10F371Y652G1 | 1.000 EA |
| 37FN3002C03 | EXFN, PLASTIC, 6.00 OD, 1.690 ID | 1.000 EA |
| 10CB3001 | CONDUIT BOX CAST W/2.500 LEAD HOLE | 1.000 EA |
| 10XN3118K12 | 5/16-18 X .75 GRADE 5, ZINC PLATED | 4.000 EA |
| HW1001A31 | LOCKWASHER 5/16, ZINC PLT.591 OD, .319 I | 4.000 EA |
| WD1000B16 | T&B CX70TN TERMINAL | 1.000 EA |
| 51XF2520A08 | SCREW, HEX SER SLT HD, ZN 1/4-20 X .50 L | 1.000 EA |
| 10EP1106A01 | FR ENDPLATE, MACH | 1.000 EA |
| HA4051A00 | PLASTIC CAP FOR GREASE FITTING | 1.000 EA |
| XY3816A12 | 3/8-16 FINISHED NUT | 4.000 EA |
| HW1001A38 | LOCKWASHER 3/8, ZINC PLT .688 OD, .382 I | 4.000 EA |
| HW5100A11 | W3917-042 WVY WSHR (WB) | 1.000 EA |
| 10XN2520K32 | 1/4-20 X 2.00 HX HD SCRW GRADE 5, ZINC P | 2.000 EA |
| HW1001A25 | LOCKWASHER 1/4, ZINC PLT .493 OD, .255 I | 2.000 EA |
| 10XN3118K44 | 5/16-18 X 2.75" HEX HD, GRADE 5 | 4.000 EA |
| HW1001A31 | LOCKWASHER 5/16, ZINC PLT.591 OD, .319 I | 4.000 EA |
| 10EP1108A01 | PULLEY ENDPLATE - 312 BRG.- ENCL. | 1.000 EA |
| HA4051A00 | PLASTIC CAP FOR GREASE FITTING | 1.000 EA |
| HA3113A15 | THRUBOLT 3/8-16 X 18.875 W/3.50 THD LENG | 4.000 EA |
| HW1001A38 | LOCKWASHER 3/8, ZINC PLT .688 OD, .382 I | 4.000 EA |
| 10FH4000 | 310 FAN HOUSING STAMPED | 1.000 EA |
| 51XF2520A08 | SCREW, HEX SER SLT HD, ZN 1/4-20 X .50 L | 4.000 EA |
| 10CB3500SP | CONDUIT BOX LID, CAST | 1.000 EA |

| Parts List (continued) | | |
|------------------------|--|----------|
| Part Number | Description | Quantity |
| 51XW2520A12 | .25-20 X .75, TAPTITE II, HEX WSHR SLTD | 4.000 EA |
| HW4600B41 | V-RING SLINGER 2.125 X 2.880 X 0.280 | 1.000 EA |
| HW2501H18 | KEY, 1/2 SQ X 2.000 | 1.000 EA |
| LB1115N | LABEL,LIFTING DEVICE (ON ROLLS) | 1.000 EA |
| 12GS1000SP | GASKET | 1.000 EA |
| HW4500A21 | 1618BALEMITE FITTING 825 UNIVERSAL | 1.000 EA |
| HA4017A01 | 1/8 X 4 GREASE EXT (F/S) | 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 |
| HW4500A03 | GREASE FITTING, .125 NPT 1610(ALEMITE) 8 | 1.000 EA |
| HW4500A17 | 317400 ALEMITE GREASE RELIEF | 1.000 EA |
| HA4054 | SHORT T-DRAIN FITTING, .125" N.P.T. | 1.000 EA |
| 10GS1000SP | GASKET, CONDUIT BOX LID | 1.000 EA |
| HW2500A25 | WOODRUFF KEY USA #1008 #BLOW CARBON STEE | 1.000 EA |
| 51XB1214A20 | 12-14X1.25 HXWSSLD SERTYB | 1.000 EA |
| MG1000Y03 | MUNSELL 2.53Y 6.70/ 4.60, GLOSS 20, | 0.125 GA |
| 85XU0407S04 | 4X1/4 U DRIVE PIN STAINLESS | 4.000 EA |
| MN416A01 | TAG-INSTAL-MAINT no wire (1200/bx) 5/18 | 1.000 EA |
| LB1119N | WARNING LABEL | 1.000 EA |
| LC0181 | CONNECTION LABEL | 1.000 EA |
| NP3443LUA | SS SUPER-E UL CSA-EEV PREM CC | 1.000 EA |
| 12PA1000 | PACKAGING GROUP PRINT PK1024A06 | 1.000 EA |
| FE-0000022 | ZRTG FE ASSEMBLY | 1.000 EA |

| | | |
|------------|------------------|----------|
| PE-0000013 | ZRTG PE ASSEMBLY | 1.000 EA |
|------------|------------------|----------|

| Accessories | | |
|--------------------|--------------------|-------------------|
| Part Number | Description | Multiplier |
| 12-1105 | C FACE KIT | A8 |
| 12EP1501A03SP | D-FLANGE KIT | A8 |

AC Induction Motor Performance Data

Record # 30898 - Typical performance - not guaranteed values

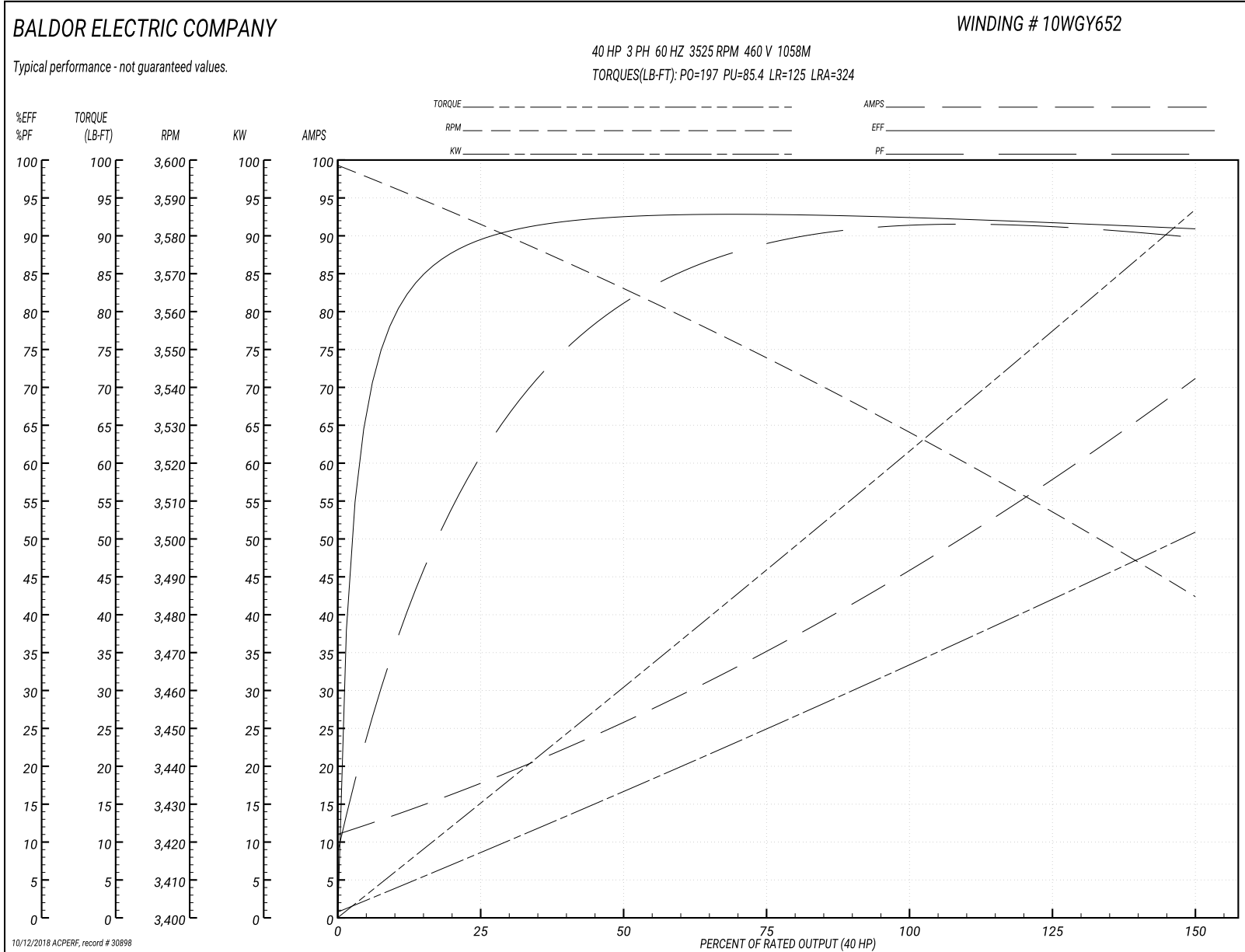
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|-------------------------------|--------------------|------------------------|
| Winding: 10WGY652-R001 | Type: 1058M | Enclosure: TEFC |
|-------------------------------|--------------------|------------------------|

| Nameplate Data | | | | 460 V, 60 Hz: High Voltage Connection | |
|-----------------------|--------------|--------------|----|--|-------------------------|
| Rated Output (HP) | 40 | | | Full Load Torque | 59.5 LB-FT |
| Volts | 230/460 | | | Start Configuration | direct on line |
| Full Load Amps | 90/45 | | | Breakdown Torque | 197 LB-FT |
| R.P.M. | 3525 | | | Pull-up Torque | 85.4 LB-FT |
| Hz | 60 | Phase | 3 | Locked-rotor Torque | 125 LB-FT |
| NEMA Design Code | B | KVA Code | H | Starting Current | 324 A |
| Service Factor (S.F.) | 1.15 | | | No-load Current | 12 A |
| NEMA Nom. Eff. | 92.4 | Power Factor | 90 | Line-line Res. @ 25°C | 0.14992 Ω |
| Rating - Duty | 40C AMB-CONT | | | Temp. Rise @ Rated Load | 78°C |
| S.F. Amps | | | | Temp. Rise @ S.F. Load | 97°C |
| | | | | Locked-rotor Power Factor | 23 |
| | | | | Rotor inertia | 2.49 LB-FT ² |

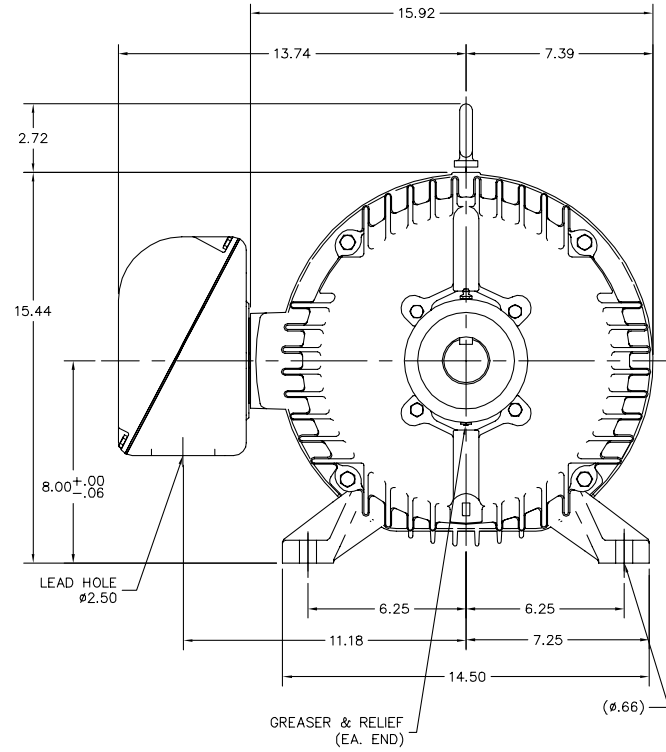
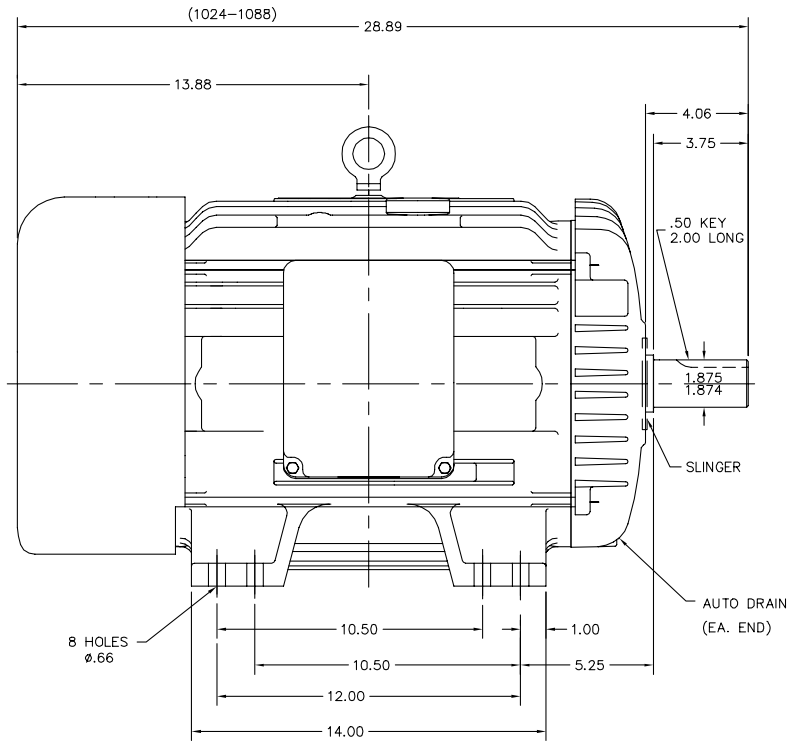
Load Characteristics 460 V, 60 Hz, 40 HP

| % of Rated Load | 25 | 50 | 75 | 100 | 125 | 150 | S.F. |
|-----------------|--------|--------|--------|--------|--------|--------|------|
| Power Factor | 65 | 82 | 88 | 90 | 90 | 91 | 90 |
| Efficiency | 90.7 | 93.4 | 93.7 | 93.2 | 92.4 | 91.1 | 92.7 |
| Speed | 3583.2 | 3567.3 | 3549.7 | 3530.6 | 3511.2 | 3484.5 | 3519 |
| Line amperes | 16.3 | 24.7 | 34.3 | 45.1 | 56.3 | 70.6 | 51.8 |

Performance Graph at 460V, 60Hz, 40.0HP Typical performance - Not guaranteed values



10LYF371



10LYF371

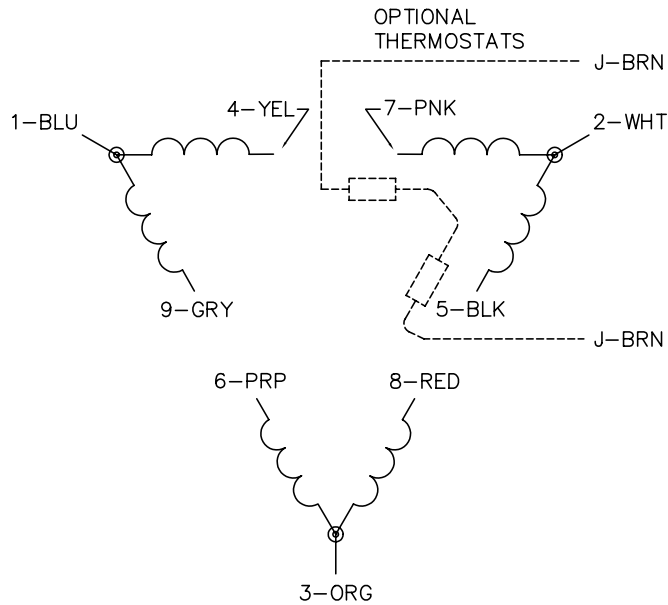
CUSTOMER IS RESPONSIBLE FOR DETERMINING THAT BALDOR'S PRODUCT WILL PERFORM SUITABLY IN THE INTENDED APPLICATION.

| | | |
|---------------------------------|------------------------------|-------------------|
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| REV. LTR: J | VERSION: 08 | TDR: 000000857835 |
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| MTL: - | | |

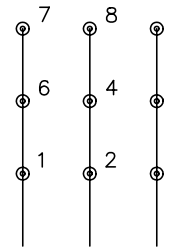
BALDOR

TEFC HORZ 324-6TS W/THRU T'BOLT DESIGN
SH 1 of 1

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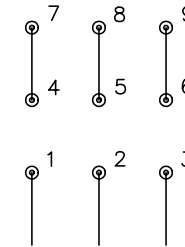


LOW VOLTAGE
(2D)



LINE

HIGH VOLTAGE
(1D)



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.

| | | | |
|---|---------|------------------------|--------------|
| REV. DESC: REVISE TO SHOW OPTIONAL COLORS | | | |
| REV. LTR: C | BY: JLP | REVISED: 01/21/99 2:28 | TDR: 0171435 |
| 0810D0 | | FILE: AAA00005148 | MDL: - |
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3PH, DV, 9 LEADS, DELTA CONNECTION

CD0180

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