

# ABB BALDOR RELIANCE III

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## Customer information packet

### EM2539T-5G

40HP, 1770RPM, 3PH, 60HZ, 324T, 4064M, OPSB, F1

**Specifications**

|                                       |                           |
|---------------------------------------|---------------------------|
| <b>Enclosure</b>                      | OPSB                      |
| <b>Frame</b>                          | 324T                      |
| <b>Frame Material</b>                 | Steel                     |
| <b>Frequency</b>                      | 60.00 Hz                  |
| <b>Motor Letter Type</b>              | Three Phase               |
| <b>Output @ Frequency</b>             | 40.000 HP @ 60 HZ         |
| <b>Phase</b>                          | 3                         |
| <b>Synchronous Speed @ Frequency</b>  | 1800 RPM @ 60 HZ          |
| <b>Voltage @ Frequency</b>            | 575.0 V @ 60 HZ           |
| <b>Agency Approvals</b>               | CSA EEV                   |
|                                       | UR                        |
|                                       | CSA                       |
| <b>Ambient Temperature</b>            | 40 °C                     |
| <b>Auxiliary Box</b>                  | NO AUXILLARY BOX          |
| <b>Auxiliary Box Lead Termination</b> | None                      |
| <b>Base Indicator</b>                 | Rigid                     |
| <b>Bearing Grease Type</b>            | Polyrex EM (-20F +300F)   |
| <b>Blower</b>                         | None                      |
| <b>Current @ Voltage</b>              | 40.000 A @ 575.0 V        |
| <b>Design Code</b>                    | A                         |
| <b>Drip Cover</b>                     | No Drip Cover             |
| <b>Duty Rating</b>                    | CONT                      |
| <b>Efficiency @ 100% Load</b>         | 94.1 %                    |
| <b>Electrically Isolated Bearing</b>  | Not Electrically Isolated |
| <b>Feedback Device</b>                | NO FEEDBACK               |
| <b>Front Face Code</b>                | Standard                  |
| <b>Front Shaft Indicator</b>          | None                      |
| <b>Heater Indicator</b>               | No Heater                 |
| <b>High Voltage Full Load Amps</b>    | 40.0 a                    |
| <b>Insulation Class</b>               | H                         |
| <b>Inverter Code</b>                  | Inverter Ready            |
| <b>KVA Code</b>                       | H                         |

**Part Detail**

|                     |            |
|---------------------|------------|
| <b>Revision</b>     | P          |
| <b>Type</b>         | AC         |
| <b>Mech. spec.</b>  | 40E245     |
| <b>Base</b>         |            |
| <b>Status</b>       | PRD/A      |
| <b>Elec. spec.</b>  | 40WGX786   |
| <b>Layout</b>       | 40LYE245   |
| <b>Eff. date</b>    | 06-27-2024 |
| <b>CD Diagram</b>   | CD0006     |
| <b>Poles</b>        | 04         |
| <b>Leads</b>        | 3#8        |
| <b>Proprietary</b>  | False      |
| <b>Created date</b> | 09-11-2013 |

|                                      |                              |
|--------------------------------------|------------------------------|
| <b>Lifting Lugs</b>                  | <b>Standard Lifting Lugs</b> |
| <b>Locked Bearing Indicator</b>      | <b>No Locked Bearing</b>     |
| <b>Motor Lead Exit</b>               | <b>Ko Box</b>                |
| <b>Motor Lead Quantity/Wire Size</b> | <b>3 @ 8 AWG</b>             |
| <b>Motor Lead Termination</b>        | <b>Flying Leads</b>          |
| <b>Motor Standards</b>               | <b>NEMA</b>                  |
| <b>Motor Type</b>                    | <b>4064M</b>                 |
| <b>Mounting Arrangement</b>          | <b>F1</b>                    |
| <b>Number of Poles</b>               | <b>4</b>                     |
| <b>Overall Length</b>                | <b>27.19 IN</b>              |
| <b>Power Factor</b>                  | <b>81</b>                    |
| <b>Product Family</b>                | <b>General Purpose</b>       |
| <b>Pulley End Bearing Type</b>       | <b>Ball</b>                  |
| <b>Pulley Face Code</b>              | <b>Standard</b>              |
| <b>Pulley Shaft Indicator</b>        | <b>Standard</b>              |
| <b>Rodent Screen</b>                 | <b>None</b>                  |
| <b>Service Factor</b>                | <b>1.15</b>                  |
| <b>Shaft Diameter</b>                | <b>2.125 IN</b>              |
| <b>Shaft Extension Location</b>      | <b>Pulley End</b>            |
| <b>Shaft Ground Indicator</b>        | <b>Shaft Grounding</b>       |
| <b>Shaft Rotation</b>                | <b>Reversible</b>            |
| <b>Shaft Slinger Indicator</b>       | <b>No Slinger</b>            |
| <b>Speed</b>                         | <b>1770 rpm</b>              |
| <b>Speed Code</b>                    | <b>Single Speed</b>          |
| <b>Starting Method</b>               | <b>Direct on line</b>        |
| <b>Thermal Device - Bearing</b>      | <b>None</b>                  |
| <b>Thermal Device - Winding</b>      | <b>None</b>                  |
| <b>Vibration Sensor Indicator</b>    | <b>No Vibration Sensor</b>   |
| <b>Winding Thermal 1</b>             | <b>None</b>                  |
| <b>Winding Thermal 2</b>             | <b>None</b>                  |

**Nameplate**

| NP3554L   |              |                         |              |                     |     |         |         |            |        |      |      |      |
|-----------|--------------|-------------------------|--------------|---------------------|-----|---------|---------|------------|--------|------|------|------|
| CAT.NO.   | EM2539T-5G   |                         |              | P/N                 |     |         |         |            |        |      | ENCL | OPSB |
| SPEC.     | 40E245X786G1 | CC                      | 010A         | FRAME               |     | 324T    | SER.NO. |            |        |      |      |      |
| HP        | 40           |                         | CLASS        |                     | H   | HZ      | 60      |            |        |      |      |      |
| RPM       | 1770         |                         | PH           | 3                   | DES |         | A       |            |        |      |      |      |
| VOLTS     | 575          |                         | CODE         |                     | H   | ODE BRG |         | 6309       | DE BRG | 6312 |      |      |
| AMPS      | 40           |                         |              |                     |     |         |         |            |        |      |      |      |
| RATING    | 40C AMB-CONT |                         | NEMA-NOM-EFF |                     |     | 94.1    | GREASE  | POLYREX EM |        |      |      |      |
| PF        | 81           | SER.F.                  | 1.15         | VPWM INVERTER READY |     |         |         |            |        |      |      |      |
|           |              |                         |              |                     |     |         |         |            |        |      |      |      |
| HTR-VOLTS | HTR-AMPS     | MAX. SPACE HEATER TEMP. |              |                     |     |         |         |            |        |      |      |      |

**AC Induction Motor Performance Data**

Record # 50231

Typical performance - not guaranteed values

| Winding: 40WGX786-R002 |    |              |              | Type: 4064M                           |  | Enclosure: OPSB       |  |         |
|------------------------|----|--------------|--------------|---------------------------------------|--|-----------------------|--|---------|
| Nameplate Data         |    |              |              | 575 V, 60 Hz:<br>Single Voltage Motor |  |                       |  |         |
| Rated Output (HP)      |    | 40           |              | Full Load Torque                      |  | 119 LB-FT             |  |         |
| Volts                  |    | 575          |              | Start Configuration                   |  | direct on line        |  |         |
| Full Load Amps         |    | 40           |              | Breakdown Torque                      |  | 438 LB-FT             |  |         |
| R.P.M.                 |    | 1770         |              | Pull-up Torque                        |  | 192 LB-FT             |  |         |
| Hz                     | 60 | Phase        | 3            | Locked-rotor Torque                   |  | 253 LB-FT             |  |         |
| NEMA Design Code       |    | A            | KVA Code     | H                                     |  | Starting Current      |  | 272 A   |
| Service Factor (S.F.)  |    | 1.15         |              | No-load Current                       |  | 17.9 A                |  |         |
| NEMA Nom. Eff.         |    | 94.1         | Power Factor | 81                                    |  | Line-line Res. @ 25°C |  | 0.224 Ω |
| Rating - Duty          |    | 40C AMB-CONT |              | Temp. Rise @ Rated Load               |  | 41°C                  |  |         |
| S.F. Amps              |    |              |              | Temp. Rise @ S.F. Load                |  | 50°C                  |  |         |
|                        |    |              |              | Locked-rotor Power Factor             |  | 32                    |  |         |
|                        |    |              |              | Rotor inertia                         |  | 5.09 LB-FT2           |  |         |

**Load Characteristics 575 V, 60 Hz, 40 HP**

| % of Rated Load | 25   | 50   | 75   | 100  | 125  | 150  | S.F. |
|-----------------|------|------|------|------|------|------|------|
| Power Factor    | 41   | 63   | 75   | 81   | 84   | 84   | 83   |
| Efficiency      | 90.1 | 93.2 | 94   | 93.8 | 93.3 | 92.9 | 93.5 |
| Speed           | 1793 | 1785 | 1778 | 1771 | 1763 | 1754 | 1766 |
| Line amperes    | 20.3 | 25.5 | 32.1 | 39.6 | 48   | 57.4 | 44.6 |

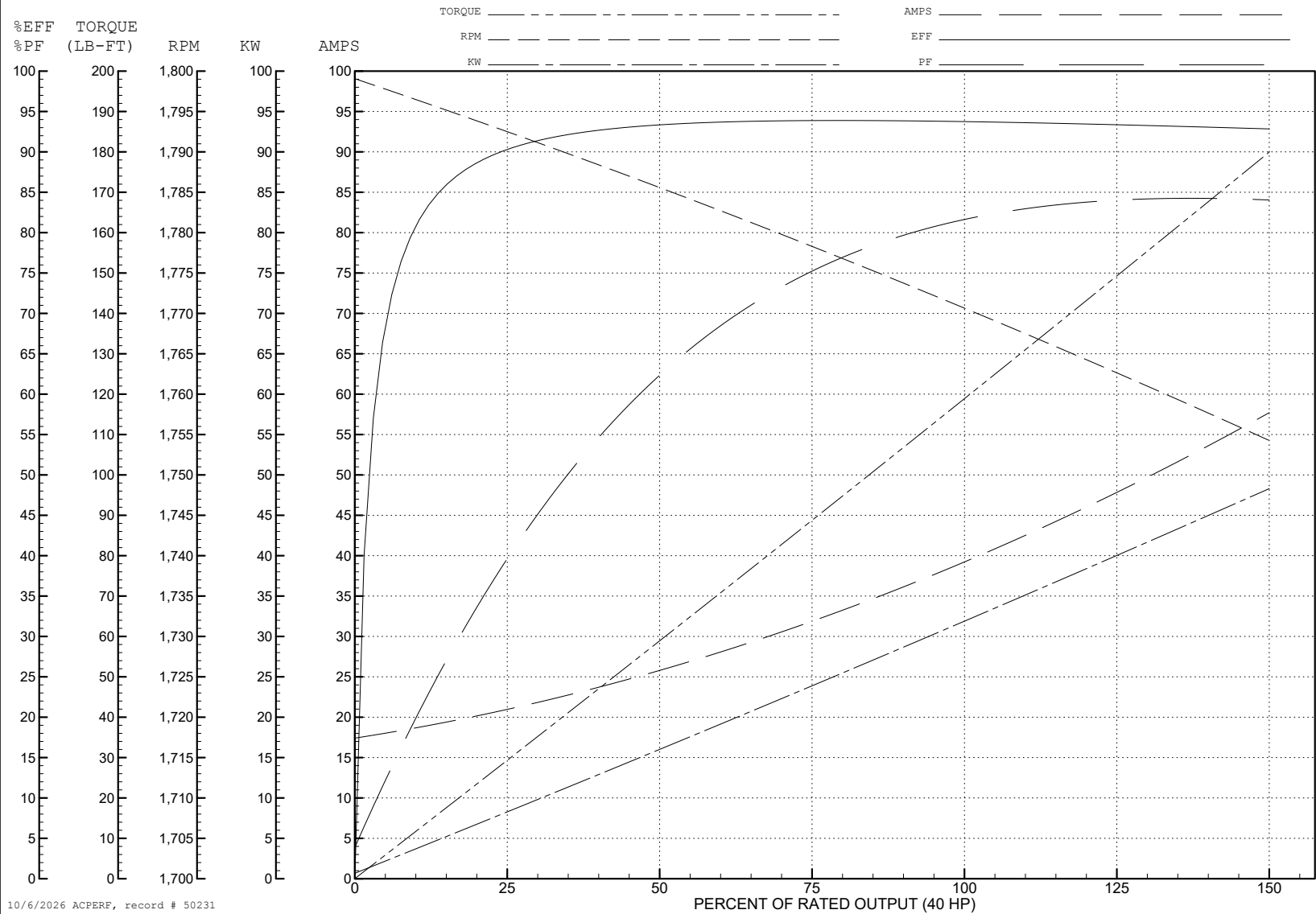
ABB Motors and Mechanical Inc.

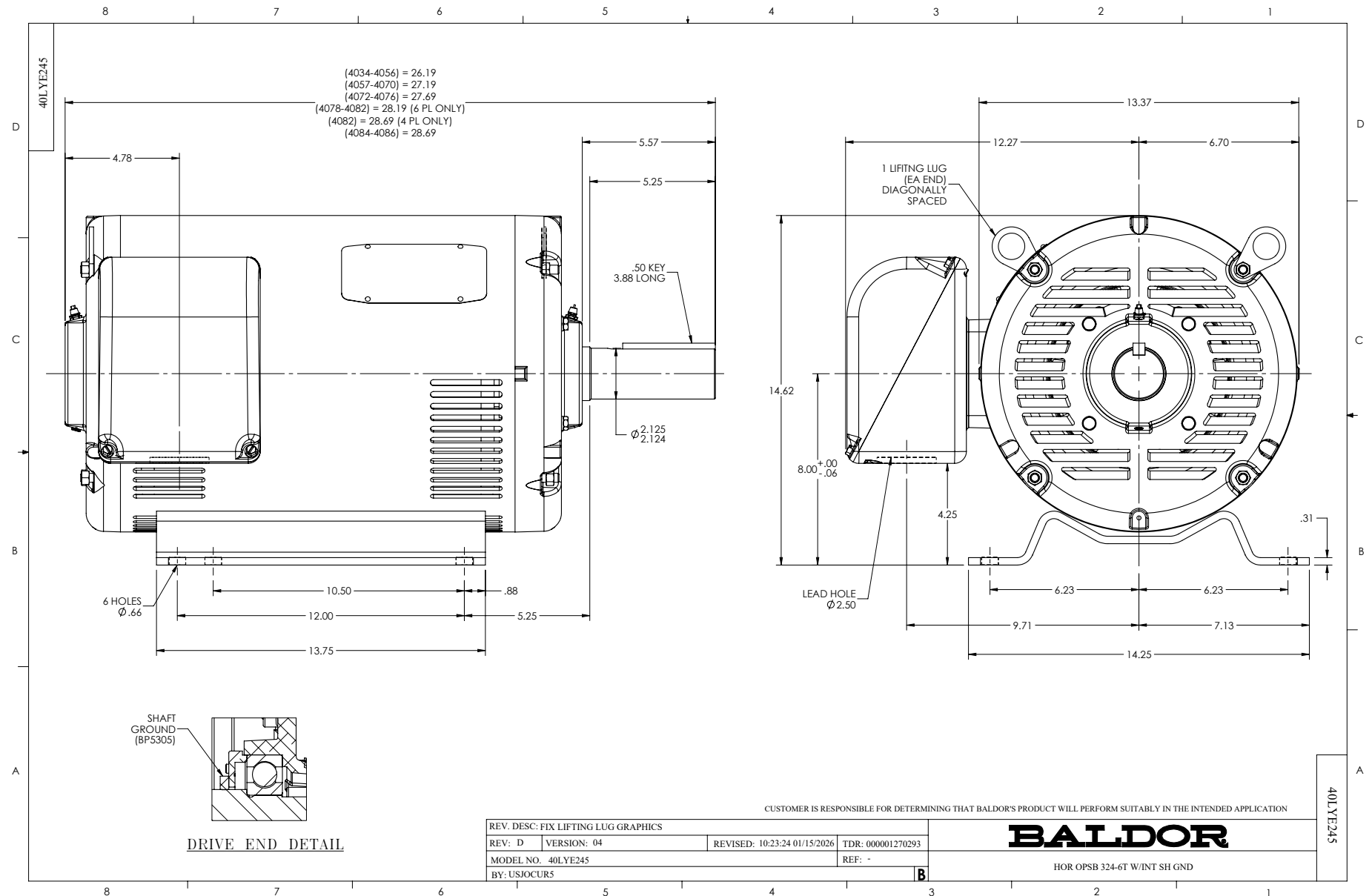
WINDING # 40WGX786

Typical performance - not guaranteed values.

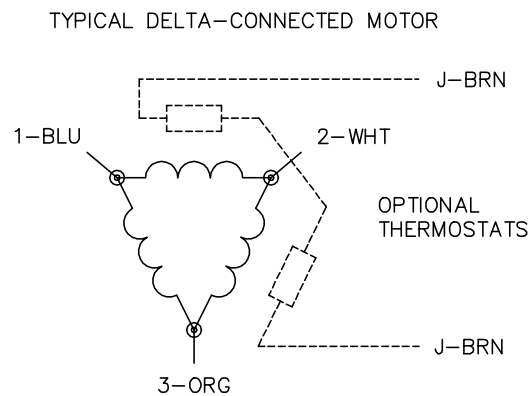
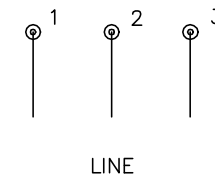
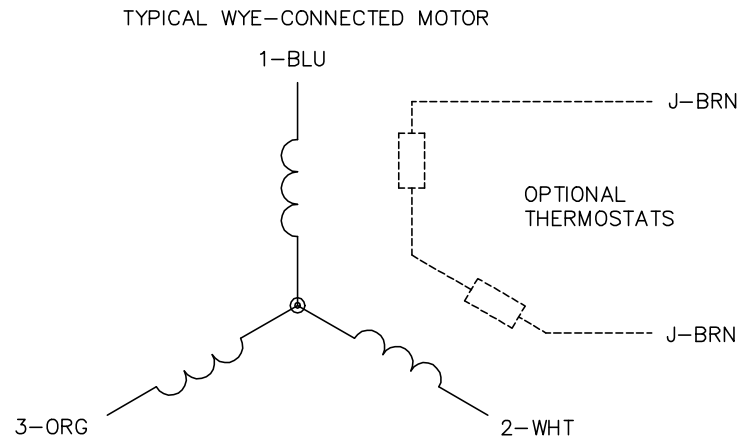
40 HP 3 PH 60 HZ 1770 RPM 575 V 4064M

TORQUES (LB-FT): PO=438 PU=192 LR=253 LRA=272





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.

CD0006

REV. DESC: ADD CLASS CONN00000007

REV. LTR: E

VERSION: 01

TDR: 000001099922

FILE: \AAA\00005\141

REVISED: 10: 24: 49 02/19/2019

BY: ENBRIRO

MTL: —



**BALDOR - RELIANCE®**

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

SH 1 of 1