

# ABB BALDOR RELIANCE III

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## Customer information packet

### CEM4114T-G

50HP, 3530RPM, 3PH, 60HZ, 326TSC, TEFC, F1

Class - None

Division - Not Applicable

**Specifications**

|                                       |                                           |
|---------------------------------------|-------------------------------------------|
| <b>Enclosure</b>                      | TEFC                                      |
| <b>Frame</b>                          | 326TSC                                    |
| <b>Frame Material</b>                 | Iron                                      |
| <b>Frequency</b>                      | 60.00 Hz                                  |
| <b>Haz Area Class and Group</b>       | None                                      |
| <b>Haz Area Division</b>              | Not Applicable                            |
| <b>Motor Letter Type</b>              | Three Phase                               |
| <b>Output @ Frequency</b>             | 50.000 HP @ 60 HZ                         |
| <b>Phase</b>                          | 3                                         |
| <b>Synchronous Speed @ Frequency</b>  | 3600 RPM @ 60 HZ                          |
| <b>Voltage @ Frequency</b>            | 230.0 V @ 60 HZ<br>460.0 V @ 60 HZ        |
| <b>Agency Approvals</b>               | CSA<br>CSA EEV<br>NEMA PREMIUM<br>UR      |
| <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>              | 55.000 A @ 460.0 V<br>110.000 A @ 230.0 V |
| <b>Design Code</b>                    | B                                         |
| <b>Drip Cover</b>                     | No Drip Cover                             |
| <b>Duty Rating</b>                    | CONT                                      |
| <b>Efficiency @ 100% Load</b>         | 93.0 %                                    |
| <b>Electrically Isolated Bearing</b>  | Not Electrically Isolated                 |
| <b>Feedback Device</b>                | NO FEEDBACK                               |
| <b>Heater Indicator</b>               | No Heater                                 |
| <b>High Voltage Full Load Amps</b>    | 55.0 a                                    |

**Part Detail**

|                     |              |
|---------------------|--------------|
| <b>Revision</b>     | G            |
| <b>Type</b>         | AC           |
| <b>Mech. spec.</b>  |              |
| <b>Base</b>         |              |
| <b>Status</b>       | PRD/A        |
| <b>Elec. spec.</b>  | 12WGY830     |
| <b>Layout</b>       | 12LY-001-003 |
| <b>Eff. date</b>    | 03-02-2026   |
| <b>CD Diagram</b>   | CD0180       |
| <b>Poles</b>        | 02           |
| <b>Leads</b>        | 9#8          |
| <b>Proprietary</b>  | False        |
| <b>Created date</b> | 12-16-2019   |

|                                   |                              |
|-----------------------------------|------------------------------|
| <b>Insulation Class</b>           | <b>H</b>                     |
| <b>Inverter Code</b>              | <b>Inverter Duty</b>         |
| <b>IP Rating</b>                  | <b>NONE</b>                  |
| <b>KVA Code</b>                   | <b>F</b>                     |
| <b>Lifting Lugs</b>               | <b>Standard Lifting Lugs</b> |
| <b>Locked Bearing Indicator</b>   | <b>Locked Bearing</b>        |
| <b>Motor Lead Termination</b>     | <b>Flying Leads</b>          |
| <b>Motor Standards</b>            | <b>NEMA</b>                  |
| <b>Motor Type</b>                 | <b>1266M</b>                 |
| <b>Mounting Arrangement</b>       | <b>F1</b>                    |
| <b>Number of Poles</b>            | <b>2</b>                     |
| <b>Overall Length</b>             | <b>28.78 IN</b>              |
| <b>Power Factor</b>               | <b>91</b>                    |
| <b>Product Family</b>             | <b>General Purpose</b>       |
| <b>Pulley Face Code</b>           | <b>C-Face</b>                |
| <b>Rodent Screen</b>              | <b>None</b>                  |
| <b>Service Factor</b>             | <b>1.15</b>                  |
| <b>Shaft Diameter</b>             | <b>1.875 IN</b>              |
| <b>Shaft Ground Indicator</b>     | <b>Shaft Grounding</b>       |
| <b>Shaft Rotation</b>             | <b>Reversible</b>            |
| <b>Speed</b>                      | <b>3530 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**

| NP3443LUA |                            |                         |                |                           |           |         |        |      |            |      |  |      |
|-----------|----------------------------|-------------------------|----------------|---------------------------|-----------|---------|--------|------|------------|------|--|------|
| CAT.NO.   | CEM4114T-G                 |                         |                |                           | CUST. P/N |         |        |      | ENCL       |      |  | TEFC |
| SPEC.     | 12-0000-1382               | CC                      | 010A           | FRAME                     | 326TSC    | SER.NO. |        |      |            |      |  |      |
| HP        | 50                         |                         | CLASS          | H                         | HZ        | 60      |        |      |            |      |  |      |
| R.P.M.    | 3530                       |                         | PH.            | 3                         | DES.      | B       |        |      |            |      |  |      |
| VOLTS     | 230/460                    |                         | CODE           |                           | F         | ODE BRG |        | 6311 | DE BRG     | 6312 |  |      |
| AMPS      | 110/55                     |                         |                |                           |           |         |        |      |            |      |  |      |
| RATING    | 40C AMB-CONT               |                         | NEMA NOM. EFF. |                           |           | 93      | GREASE |      | POLYREX EM |      |  |      |
| P.F.      | 91                         | SER.F.                  | 1.15           | CT6-60H(10:1)VT3-60H(20:1 |           |         |        |      |            |      |  |      |
| USABLE AT | 50HZ 50HP 190/380V 134/67A |                         |                | SF1.0                     |           |         |        |      |            |      |  |      |
| VOLTS     | AMPS                       | MAX. SPACE HEATER TEMP. |                |                           |           |         |        |      |            |      |  |      |

**AC Induction Motor Performance Data**

Record # 74207

Typical performance - not guaranteed values

| Winding: 12WGY830-R005 |    |              | Type: 1266M  |                                          | Enclosure: TEFC       |                         |         |
|------------------------|----|--------------|--------------|------------------------------------------|-----------------------|-------------------------|---------|
| Nameplate Data         |    |              |              | 460 V, 60 Hz:<br>High Voltage Connection |                       |                         |         |
| Rated Output (HP)      |    | 50           |              | Full Load Torque                         |                       | 74.5 LB-FT              |         |
| Volts                  |    | 230/460      |              | Start Configuration                      |                       | direct on line          |         |
| Full Load Amps         |    | 110/55       |              | Breakdown Torque                         |                       | 223 LB-FT               |         |
| R.P.M.                 |    | 3530         |              | Pull-up Torque                           |                       | 79.4 LB-FT              |         |
| Hz                     | 60 | Phase        | 3            | Locked-rotor Torque                      |                       | 99 LB-FT                |         |
| NEMA Design Code       |    | B            | KVA Code     | F                                        | Starting Current      |                         | 350 A   |
| Service Factor (S.F.)  |    | 1.15         |              | No-load Current                          |                       | 11 A                    |         |
| NEMA Nom. Eff.         |    | 93           | Power Factor | 91                                       | Line-line Res. @ 25°C |                         | 0.113 Ω |
| Rating - Duty          |    | 40C AMB-CONT |              | Temp. Rise @ Rated Load                  |                       | 78°C                    |         |
| S.F. Amps              |    |              |              | Temp. Rise @ S.F. Load                   |                       | 98°C                    |         |
|                        |    |              |              | Locked-rotor Power Factor                |                       | 20.1                    |         |
|                        |    |              |              | Rotor inertia                            |                       | 5.16 LB-FT <sup>2</sup> |         |

**Load Characteristics 460 V, 60 Hz, 50 HP**

| % of Rated Load | 25   | 50   | 75   | 100  | 125  | 150  | S.F. |
|-----------------|------|------|------|------|------|------|------|
| Power Factor    | 75   | 87   | 91   | 91   | 92   | 90   | 92   |
| Efficiency      | 90.9 | 93.3 | 93.6 | 92.9 | 92   | 90.6 | 92.4 |
| Speed           | 3583 | 3566 | 3549 | 3531 | 3510 | 3486 | 3518 |
| Line amperes    | 17.7 | 28.8 | 41.5 | 55.2 | 69.5 | 85.6 | 63.8 |

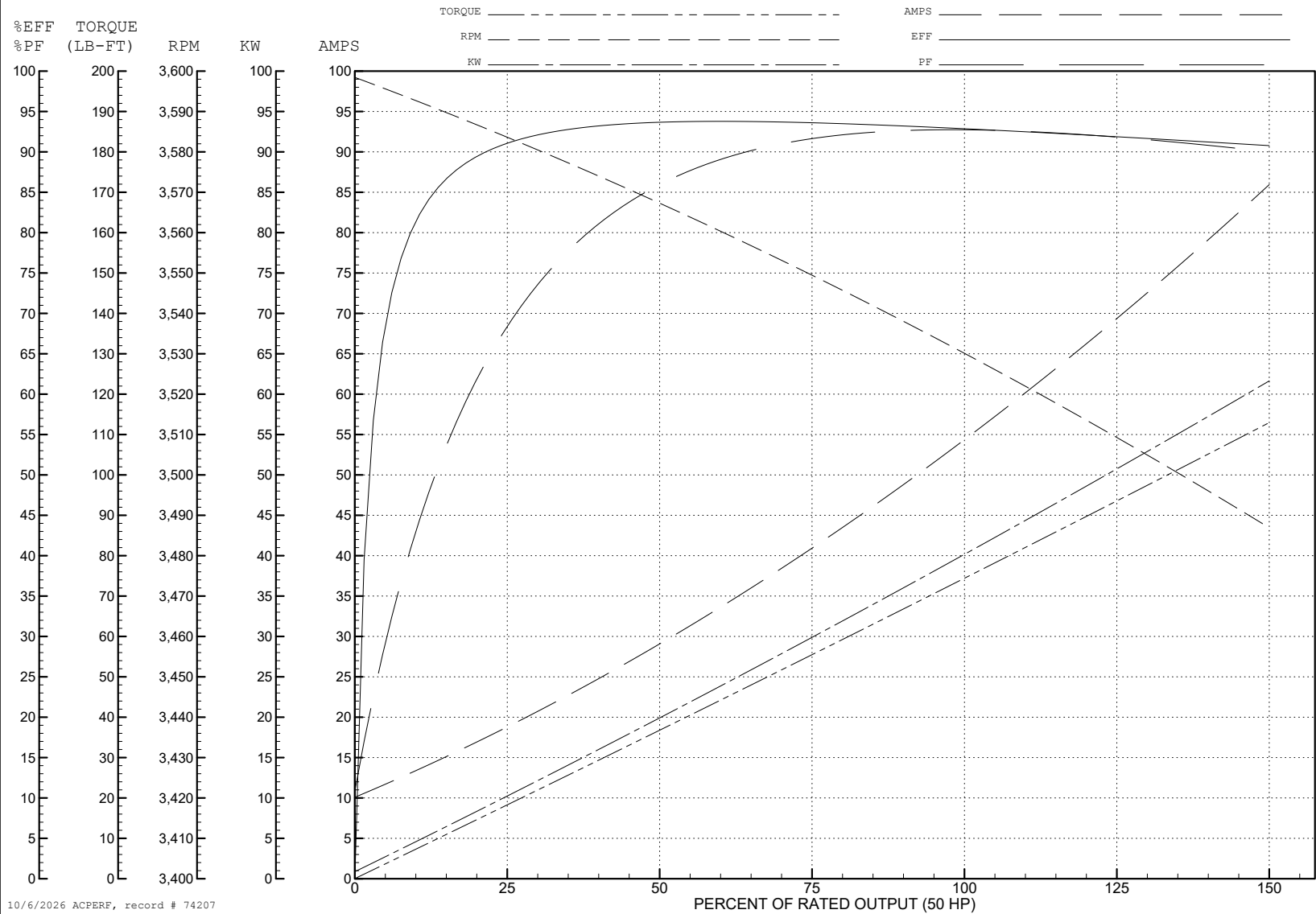
ABB Motors and Mechanical Inc.

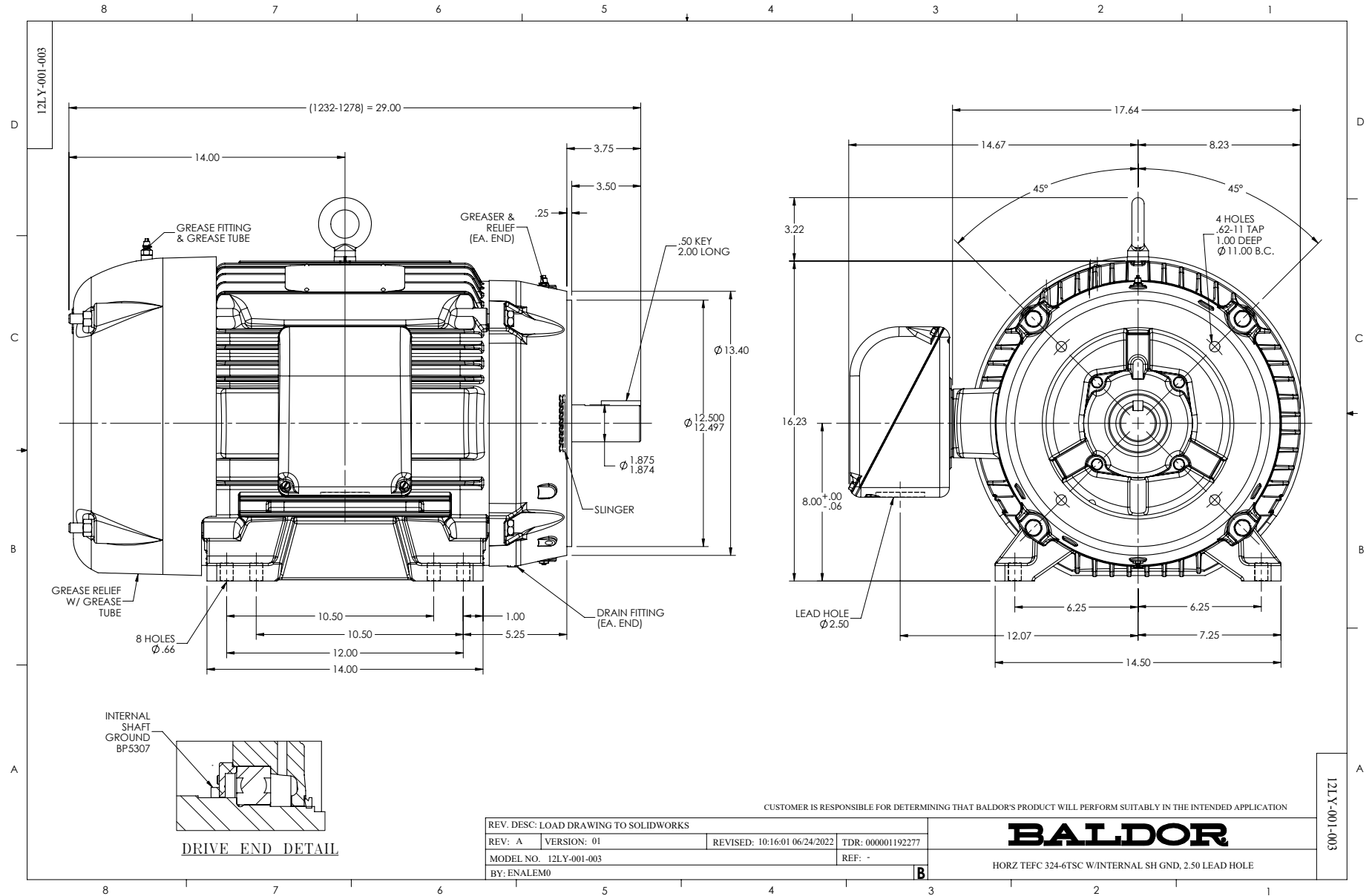
WINDING # 12WGY830

Typical performance - not guaranteed values.

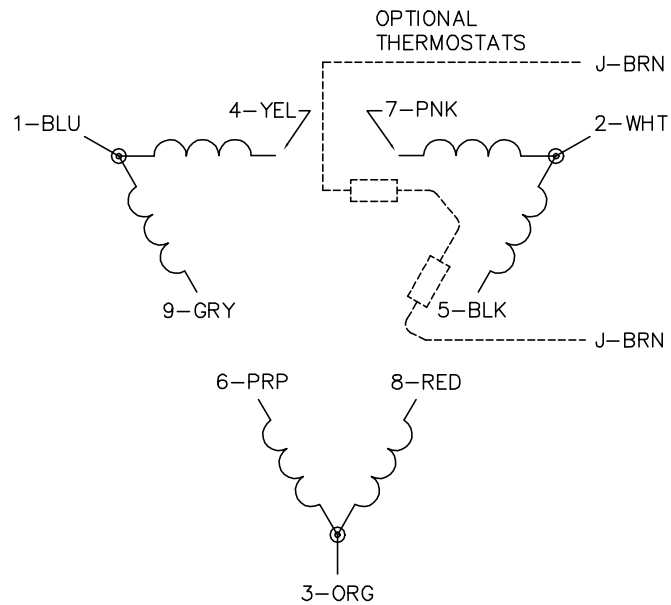
50 HP 3 PH 60 HZ 3530 RPM 460 V 1266M

TORQUES (LB-FT): PO=223 PU=79.4 LR=99 LRA=350

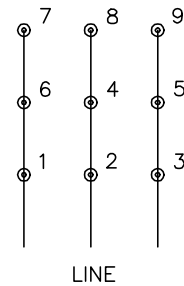




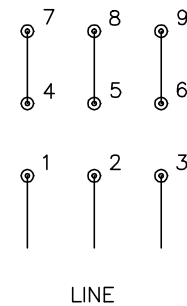
CD0180



LOW VOLTAGE  
(2D)



HIGH VOLTAGE  
(1D)



**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.

CD0180

REV. DESC: ADD CLASS CONN00000007

REV. LTR: D

VERSION: 01

TDR: 000001099922

FILE: \AAA\00005\148

REVISED: 10: 25: 29 02/19/2019

BY: ENBRIRO

MTL: —



**BALDOR - RELIANCE®**

3PH, DV, 9 LEADS, DELTA CONNECTION

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