

# ABB BALDOR RELIANCE III

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## Customer information packet

### GNEM4102T-G

20HP//15KW, 1180//980RPM, 3PH, 60//50HZ, 286

Class - None

Division - Not Applicable

**Specifications**

|                                       |                                                                                             |
|---------------------------------------|---------------------------------------------------------------------------------------------|
| <b>Enclosure</b>                      | TEFC                                                                                        |
| <b>Frame</b>                          | 286T                                                                                        |
| <b>Frame Material</b>                 | Iron                                                                                        |
| <b>Frequency</b>                      | 50.00 Hz<br>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>             | 20.000 HP @ 60 HZ<br>15.000 KW @ 50 HZ                                                      |
| <b>Phase</b>                          | 3                                                                                           |
| <b>Synchronous Speed @ Frequency</b>  | 1200 RPM @ 60 HZ                                                                            |
| <b>Voltage @ Frequency</b>            | 190.0 V @ 50 HZ<br>208.0 V @ 60 HZ<br>230.0 V @ 60 HZ<br>380.0 V @ 50 HZ<br>460.0 V @ 60 HZ |
| <b>Agency Approvals</b>               | CE<br>WEEE<br>UKCA<br>CURUSEEV<br>IE3<br>NEMA PREMIUM                                       |
| <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>              | 66.000 A @ 190.0 V<br>58.000 A @ 230.0 V<br>58.000 A @ 208.0 V                              |

**Part Detail**

|                     |            |
|---------------------|------------|
| <b>Revision</b>     | F          |
| <b>Type</b>         | AC         |
| <b>Mech. spec.</b>  | 10H279     |
| <b>Base</b>         |            |
| <b>Status</b>       | PRD/A      |
| <b>Elec. spec.</b>  | 10WGZ615   |
| <b>Layout</b>       | 10LYH279   |
| <b>Eff. date</b>    | 07-24-2026 |
| <b>CD Diagram</b>   | CD0180     |
| <b>Poles</b>        | 06         |
| <b>Leads</b>        | 9#10       |
| <b>Proprietary</b>  | False      |
| <b>Created date</b> | 09-20-2023 |

|                               |                           |
|-------------------------------|---------------------------|
|                               | 33.000 A @ 380.0 V        |
|                               | 29.000 A @ 460.0 V        |
| Design Code                   | A                         |
| Drip Cover                    | No Drip Cover             |
| Duty Rating                   | CONT                      |
| Efficiency @ 100% Load        | 91.7 %                    |
| 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              | H                         |
| Inverter Code                 | Inverter Duty             |
| KVA Code                      | K                         |
| Lifting Lugs                  | Standard Lifting Lugs     |
| Locked Bearing Indicator      | Locked Bearing            |
| Motor Lead Quantity/Wire Size | 9 @ 10 AWG                |
| Motor Lead Termination        | Flying Leads              |
| Motor Standards               | NEMA                      |
| Motor Type                    | 1064M                     |
| Mounting Arrangement          | F1                        |
| Number of Poles               | 6                         |
| Overall Length                | 27.76 IN                  |
| Power Factor                  | 70                        |
| Product Family                | General Purpose           |
| Pulley End Bearing Type       | Ball                      |
| Pulley Face Code              | Standard                  |
| Pulley Shaft Indicator        | Standard                  |
| Rodent Screen                 | None                      |
| RoHS Status                   | ROHS COMPLIANT            |
| Service Factor                | 1.15                      |
| Shaft Diameter                | 1.875 IN                  |
| Shaft Ground Indicator        | Shaft Grounding           |
| Shaft Rotation                | Reversible                |

|                            |                     |
|----------------------------|---------------------|
| Shaft Slinger Indicator    | Shaft Slinger       |
| Speed                      | 1180 rpm            |
|                            | 980 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**

| NP4304L        |                               |                |          |        |    |       |       |  |    |
|----------------|-------------------------------|----------------|----------|--------|----|-------|-------|--|----|
| CAT.NO.        | GNEM4102T-G                   |                |          |        |    |       |       |  |    |
| SPEC.          | 10H279Z615G1                  |                |          |        |    |       |       |  |    |
| HP             | 20HP//15KW                    |                |          |        |    | PH    | 3     |  |    |
| VOLTS          | 208-230/460//190/380          |                |          |        |    |       |       |  |    |
| AMPS           | 58/29//66/33                  |                |          |        |    |       |       |  |    |
| R.P.M. (1/MIN) | 1180//980                     |                |          |        |    | WT.   | 205KG |  | KG |
| FRAME          | 286T                          |                | HZ       | 60//50 |    | I.P.  | 54    |  |    |
| SER.F.         | 1.15                          | CODE           | K        | DES.   | A  | CLASS | H     |  |    |
| NOM.EFF.       | 91.7//91.2                    |                | % (100%) |        |    |       |       |  |    |
| P.F.           | 70                            | IC411, 10:1 VT |          |        |    |       |       |  |    |
| RATING         | 40C AMB-S1 CONT               |                |          |        | CC | 010A  |       |  |    |
| DE             | 6311                          |                | ODE      | 6309   |    |       |       |  |    |
| ENCL           | TEFC                          | SN             |          |        |    |       |       |  |    |
|                | SFA 66/33//74/37              |                |          |        |    |       |       |  |    |
|                | IE3-50HZ 90.9(75%), 89.6(50%) |                |          |        |    |       |       |  |    |
|                | IE3-60HZ 90.8(75%), 88.8(50%) |                |          |        |    |       |       |  |    |

**AC Induction Motor Performance Data**

Record # 102714

Typical performance - not guaranteed values

| Winding: 39WGX503-R004 |        |                      |              | Type: 3960M                              |                       | Enclosure: OPSB |         |
|------------------------|--------|----------------------|--------------|------------------------------------------|-----------------------|-----------------|---------|
| Nameplate Data         |        |                      |              | 380 V, 50 Hz:<br>High Voltage Connection |                       |                 |         |
| Rated Output (HP)      |        | 10HP//7.5KW          |              | Full Load Torque                         |                       | 53.04 LB-FT     |         |
| Volts                  |        | 208-230/460//190/380 |              | Start Configuration                      |                       | direct on line  |         |
| Full Load Amps         |        | 31/15.5//36/18       |              | Breakdown Torque                         |                       | 176 LB-FT       |         |
| R.P.M.                 |        | 1180//980            |              | Pull-up Torque                           |                       | 70.2 LB-FT      |         |
| Hz                     | 60//50 | Phase                | 3            | Locked-rotor Torque                      |                       | 85.5 LB-FT      |         |
| NEMA Design Code       |        | A                    | KVA Code     | K                                        | Starting Current      |                 | 110 A   |
| Service Factor (S.F.)  |        | 1.15                 |              | No-load Current                          |                       | 9.46 A          |         |
| NEMA Nom. Eff.         |        | 91.7                 | Power Factor | 66                                       | Line-line Res. @ 25°C |                 | 0.578 Ω |
| Rating - Duty          |        | 40C AMB-CONT         |              | Temp. Rise @ Rated Load                  |                       | 21°C            |         |
| S.F. Amps              |        |                      |              | Temp. Rise @ S.F. Load                   |                       | 26°C            |         |
|                        |        |                      |              | Locked-rotor Power Factor                |                       | 28.1            |         |
|                        |        |                      |              | Rotor inertia                            |                       | 4.82 lb-ft²     |         |

**Load Characteristics 380 V, 50 Hz, 10 HP**

| % of Rated Load | 25    | 50    | 75    | 100  | 125  | 150  | S.F. |
|-----------------|-------|-------|-------|------|------|------|------|
| Power Factor    | 33    | 51    | 63    | 69   | 73   | 74   | 71   |
| Efficiency      | 84.5  | 90.2  | 91.6  | 91.8 | 91.2 | 90.3 | 91.4 |
| Speed           | 996   | 992   | 988   | 983  | 978  | 972  | 980  |
| Line amperes    | 10.25 | 12.06 | 14.67 | 17.7 | 21.5 | 25.3 | 20   |

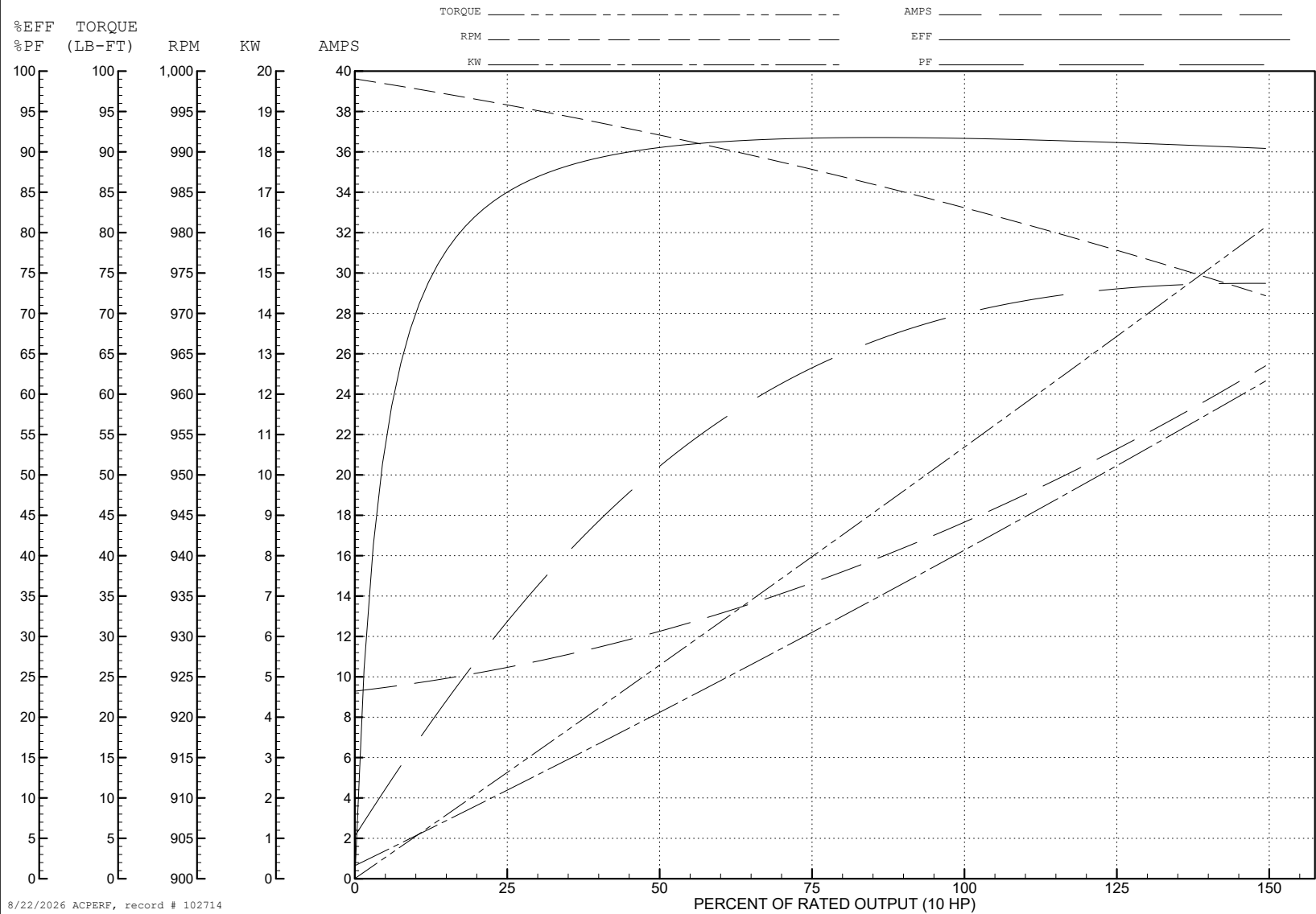
ABB Motors and Mechanical Inc.

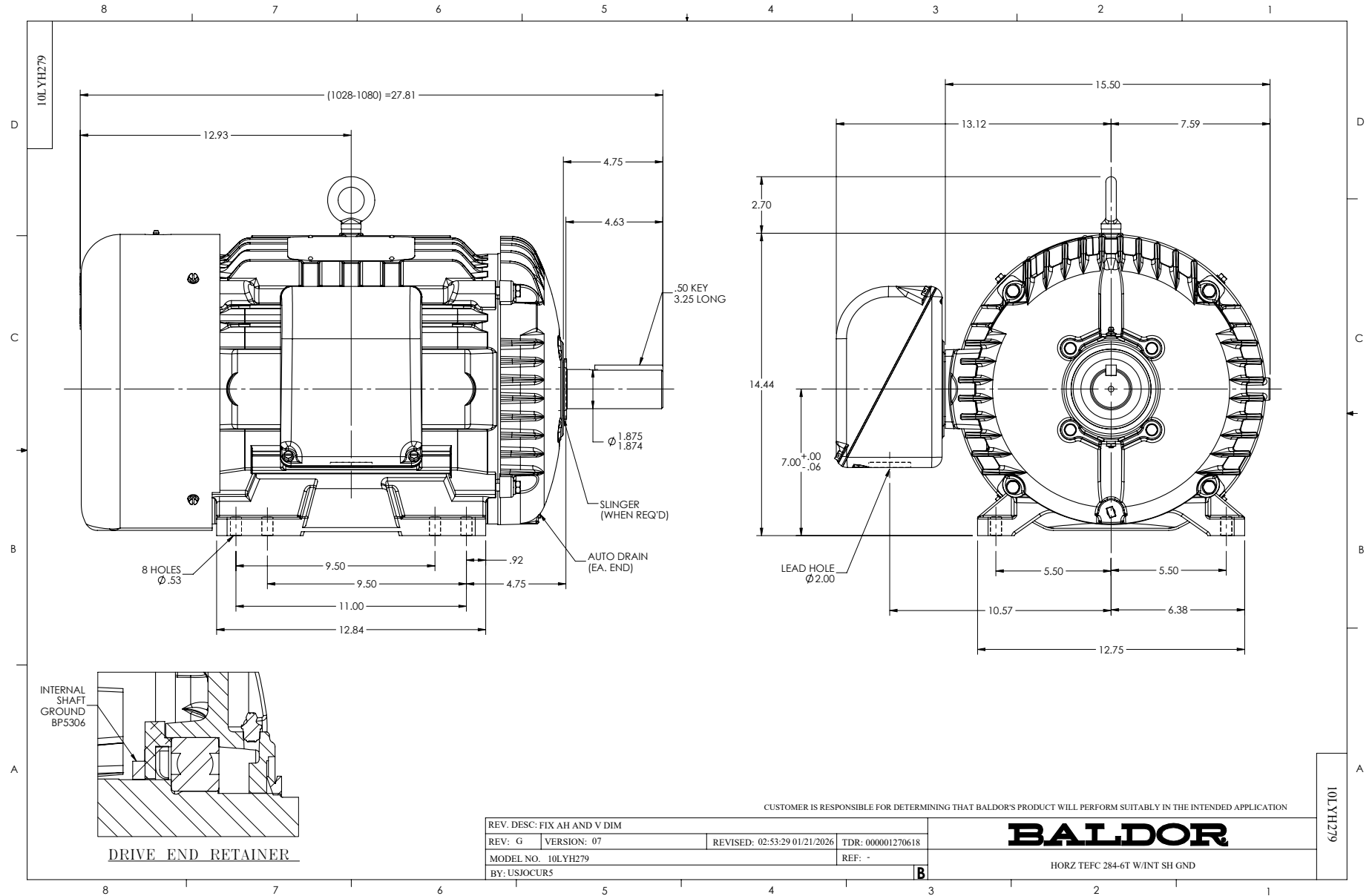
WINDING # 39WGX503

Typical performance - not guaranteed values.

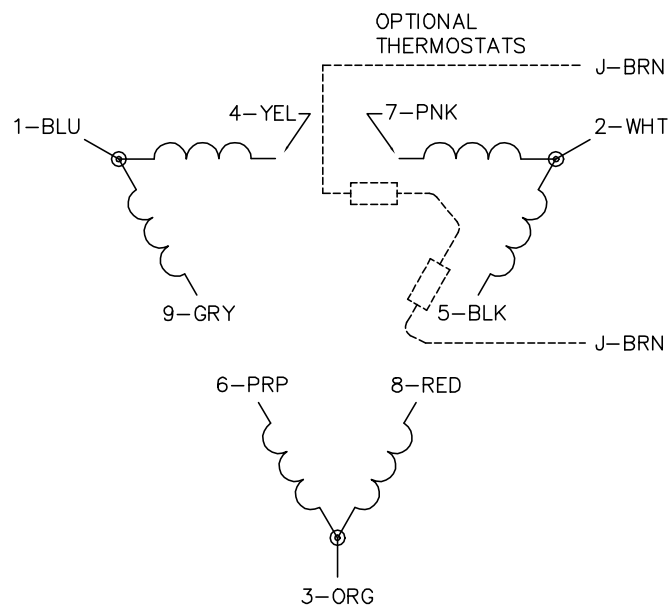
10 HP 3 PH 50 HZ 983 RPM 380 V 3960M

TORQUES (LB-FT): PO=176 PU=70.2 LR=85.5 LRA=110

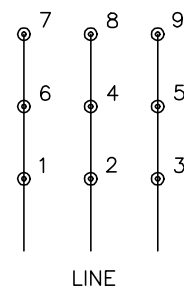




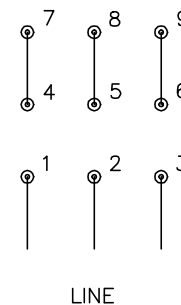
CD0180



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: ENBRI0

MTL: -



**BALDOR - RELIANCE®**

3PH, DV, 9 LEADS, DELTA CONNECTION

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