

# ABB BALDOR RELIANCE III

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## Customer information packet

### ECP4102T

20HP, 1180RPM, 3PH, 60HZ, 286T, 1054M, TEFC, F1

Class - CLI GP A,B,C,D

Division - Division II

**Specifications**

|                                       |                                                                |
|---------------------------------------|----------------------------------------------------------------|
| <b>Enclosure</b>                      | TEFC                                                           |
| <b>Frame</b>                          | 286T                                                           |
| <b>Frame Material</b>                 | Iron                                                           |
| <b>Frequency</b>                      | 60.00 Hz                                                       |
| <b>Haz Area Class and Group</b>       | CLI GP A,B,C,D                                                 |
| <b>Haz Area Division</b>              | Division II                                                    |
| <b>Motor Letter Type</b>              | Three Phase                                                    |
| <b>Output @ Frequency</b>             | 20.000 HP @ 60 HZ                                              |
| <b>Phase</b>                          | 3                                                              |
| <b>Synchronous Speed @ Frequency</b>  | 1200 RPM @ 60 HZ                                               |
| <b>Voltage @ Frequency</b>            | 460.0 V @ 60 HZ<br>230.0 V @ 60 HZ                             |
| <b>Agency Approvals</b>               | CCSA US<br>CSA EEV<br>NEMA PREMIUM<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>Constant Torque Speed Range</b>    | 1.0                                                            |
| <b>Current @ Voltage</b>              | 56.000 A @ 208.0 V<br>54.000 A @ 230.0 V<br>27.000 A @ 460.0 V |
| <b>Design Code</b>                    | A                                                              |
| <b>Drip Cover</b>                     | No Drip Cover                                                  |
| <b>Duty Rating</b>                    | CONT                                                           |
| <b>Efficiency @ 100% Load</b>         | 91.7 %                                                         |
| <b>Electrically Isolated Bearing</b>  | Not Electrically Isolated                                      |

**Part Detail**

|                     |            |
|---------------------|------------|
| <b>Revision</b>     | L          |
| <b>Type</b>         | AC         |
| <b>Mech. spec.</b>  | 10H292     |
| <b>Base</b>         |            |
| <b>Status</b>       | PRD/A      |
| <b>Elec. spec.</b>  | 10WGY730   |
| <b>Layout</b>       | 10LYH292   |
| <b>Eff. date</b>    | 09-29-2025 |
| <b>CD Diagram</b>   | CD0180     |
| <b>Poles</b>        | 06         |
| <b>Leads</b>        | 9#10       |
| <b>Proprietary</b>  | False      |
| <b>Created date</b> | 08-11-2017 |

|                                      |                                    |
|--------------------------------------|------------------------------------|
| <b>Feedback Device</b>               | <b>NO FEEDBACK</b>                 |
| <b>Front Face Code</b>               | <b>Standard</b>                    |
| <b>Front Shaft Indicator</b>         | <b>None</b>                        |
| <b>Haz Area Temp Code</b>            | <b>T3C</b>                         |
| <b>Heater Indicator</b>              | <b>No Heater</b>                   |
| <b>High Voltage Full Load Amps</b>   | <b>27.0 a</b>                      |
| <b>Insulation Class</b>              | <b>F</b>                           |
| <b>Inverter Code</b>                 | <b>Inverter Duty</b>               |
| <b>KVA Code</b>                      | <b>H</b>                           |
| <b>Lifting Lugs</b>                  | <b>Standard Lifting Lugs</b>       |
| <b>Locked Bearing Indicator</b>      | <b>Locked Bearing</b>              |
| <b>Max Speed</b>                     | <b>1800 rpm</b>                    |
| <b>Motor Lead Exit</b>               | <b>Ko Box</b>                      |
| <b>Motor Lead Quantity/Wire Size</b> | <b>9 @ 10 AWG</b>                  |
| <b>Motor Lead Termination</b>        | <b>Flying Leads</b>                |
| <b>Motor Standards</b>               | <b>NEMA</b>                        |
| <b>Motor Type</b>                    | <b>1054M</b>                       |
| <b>Mounting Arrangement</b>          | <b>F1</b>                          |
| <b>Number of Poles</b>               | <b>6</b>                           |
| <b>Overall Length</b>                | <b>28.00 IN</b>                    |
| <b>Power Factor</b>                  | <b>77</b>                          |
| <b>Product Family</b>                | <b>Super-E Chemical Processing</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>1.875 IN</b>                    |
| <b>Shaft Extension Location</b>      | <b>Pulley End</b>                  |
| <b>Shaft Ground Indicator</b>        | <b>No Shaft Grounding</b>          |
| <b>Shaft Rotation</b>                | <b>Reversible</b>                  |
| <b>Shaft Slinger Indicator</b>       | <b>Shaft Slinger</b>               |
| <b>Speed</b>                         | <b>1180 rpm</b>                    |
| <b>Speed Code</b>                    | <b>Single Speed</b>                |

|                            |                     |
|----------------------------|---------------------|
| 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**

| NP3241     |              |                    |    |              |           |      |    |                         |          |           |      |            |            |      |   |          |  |    |
|------------|--------------|--------------------|----|--------------|-----------|------|----|-------------------------|----------|-----------|------|------------|------------|------|---|----------|--|----|
| CAT.NO.    | ECP4102T     |                    |    | P/N          |           |      |    |                         |          | ENCLOSURE |      | TEFC       |            |      |   |          |  |    |
| SPEC.      | 10H292Y730G1 |                    | 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       | 230/460      |                    |    | MOTOR WEIGHT |           |      |    | 437                     |          |           |      |            |            |      |   |          |  |    |
| AMP        | 54/27        |                    |    | SER.F.       |           | 1.15 | PF | 77                      | ODE BRG  |           | 6311 | DE BRG     |            | 6311 |   |          |  |    |
| RATING     | 40C AMB-CONT |                    |    | NEMA-NOM-EFF |           |      |    | 91.7                    |          | 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 |      | O | VT HZ TO |  | 60 |

**Parts List**

| Part number  | Description                              | Quantity |
|--------------|------------------------------------------|----------|
| SA343150     | SA 10H292Y730G1                          | 1.000 ea |
| RA331595     | RA 10H292Y730G1                          | 1.000 ea |
| 09FN3001C02  | EXTERNAL FAN, PLASTIC (COMES W/SCREW FRO | 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 |
| 10CB1503P    | CONDUIT BOX LIPPED, 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 |
| 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 |
| 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 |
| 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 |
| 10FH1007P    | FAN COVER, CAST W/EPOXY PRIMER           | 1.000 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 |
| MJ5002A01    | SILICON RUBBER SEALANT, 732CL 10.3 OZ TU | 0.033 ea |

|                |                                          |          |
|----------------|------------------------------------------|----------|
| 10CB1000A352P  | CONDUIT BOX, MACH W/EPOXY PRIMER         | 1.000 ea |
| WD1000B25      | GND LUG, BURNDY L125HP OR T&B L125HP-BB  | 1.000 ea |
| 19XW3118G08    | .31-18X.50,HEX WSHR HD,TAPTITE 2,GREEN   | 1.000 ea |
| MJ5002A01      | SILICON RUBBER SEALANT, 732CL 10.3 OZ TU | 0.025 ea |
| 10EP1110A44LP5 | FREP, MACH W/PRIMER & MG1025L14          | 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                 | 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 |
| HA4054         | SHORT T-DRAIN FITTING, .125" N.P.T.      | 1.000 ea |
| HW2500A25      | WOODRUFF KEY USA #1008 #BLOW CARBON STEE | 1.000 ea |
| MG1025N19      | WILKOFAS, 778.50, RELIANCE BLUE-GREEN 8  | 0.125 ga |
| 85XU0407S04    | 4X1/4 U DRIVE PIN STAINLESS              | 4.000 ea |
| LB1002N        | LABEL,MARINE DUTY (ON ROLLS)             | 1.000 ea |
| LB1624         | COMBINED WARNING LABEL, ISO/ANSI PICTOGR | 1.000 ea |
| LC0181         | CONNECTION LABEL                         | 1.000 ea |
| NP3241         | SS SUPER-E INV UL CSA-EEV PREM CC        | 1.000 ea |
| 10PA1000       | PACKAGING GROUP COMBINED PRINT PK1023A06 | 1.000 ea |
| LB1449         | DIV-2/NEC WARNING LABEL                  | 1.000 ea |
| MN416A01       | TAG-INSTAL-MAINT no wire (2500 bx)11/25  | 1.000 ea |

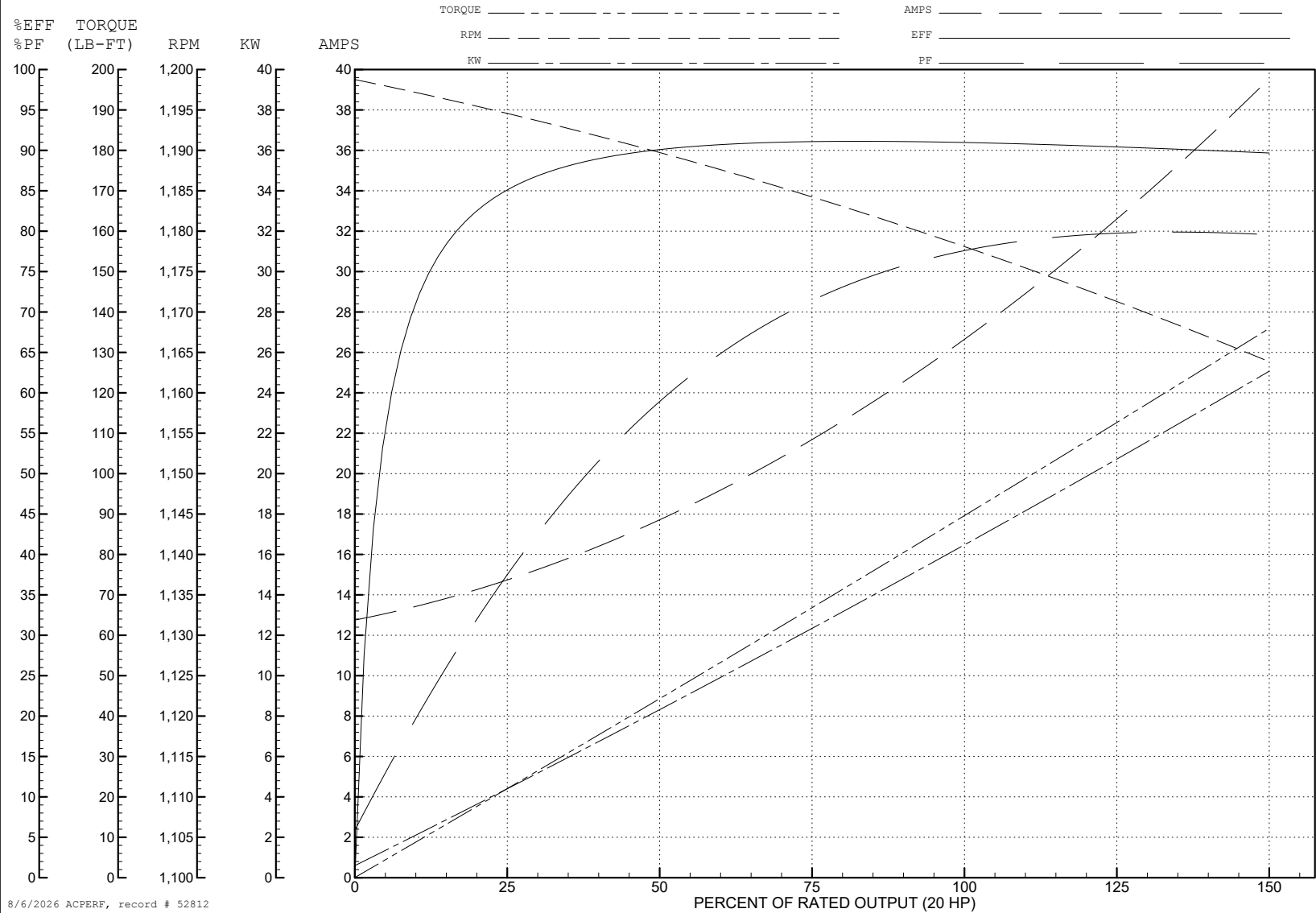
ABB Motors and Mechanical Inc.

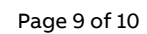
WINDING # 10WGY730

Typical performance - not guaranteed values.

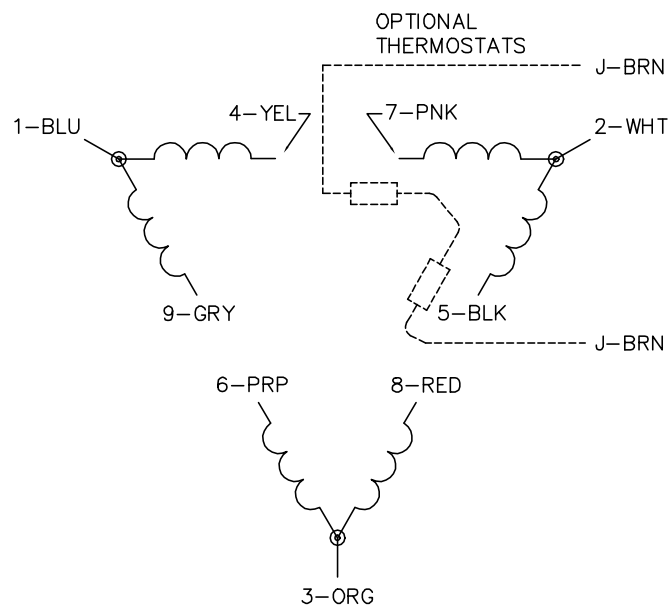
20 HP 3 PH 60 HZ 1180 RPM 460 V 1054M

TORQUES (LB-FT): PO=276 PU=115 LR=166 LRA=165





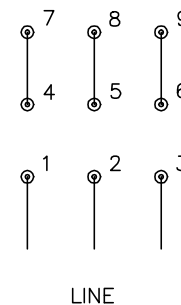
CD0180



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

SH 1 of 1