

# ABB BALDOR RELIANCE III

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## Customer information packet

### ECTM4104T-G-AO

30 AIR OVERHP, 1760RPM, 3PH, 60HZ, 286T, 1056

Class - None

Division - Not Applicable

**Specifications**

|                                       |                                                                |
|---------------------------------------|----------------------------------------------------------------|
| <b>Enclosure</b>                      | TEAO                                                           |
| <b>Frame</b>                          | 286T                                                           |
| <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>             | 30.000 HP @ 60 HZ                                              |
| <b>Phase</b>                          | 3                                                              |
| <b>Synchronous Speed @ Frequency</b>  | 1800 RPM @ 60 HZ                                               |
| <b>Voltage @ Frequency</b>            | 230.0 V @ 60 HZ<br>460.0 V @ 60 HZ                             |
| <b>Agency Approvals</b>               | 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>Current @ Voltage</b>              | 76.000 A @ 230.0 V<br>70.500 A @ 208.0 V<br>38.000 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>         | 93.6 %                                                         |
| <b>Electrically Isolated Bearing</b>  | Not Electrically Isolated                                      |
| <b>Feedback Device</b>                | NO FEEDBACK                                                    |
| <b>Front Shaft Indicator</b>          | None                                                           |

**Part Detail**

|                     |            |
|---------------------|------------|
| <b>Revision</b>     | G          |
| <b>Type</b>         | AC         |
| <b>Mech. spec.</b>  | 10T008     |
| <b>Base</b>         |            |
| <b>Status</b>       | PRD/A      |
| <b>Elec. spec.</b>  | 10WGY538   |
| <b>Layout</b>       | 10LYT008   |
| <b>Eff. date</b>    | 06-05-2026 |
| <b>CD Diagram</b>   | CD0180     |
| <b>Poles</b>        | 04         |
| <b>Leads</b>        | 9#8        |
| <b>Proprietary</b>  | False      |
| <b>Created date</b> | 03-25-2022 |

|                               |                              |
|-------------------------------|------------------------------|
| Heater Indicator              | Heater Included, 120 V       |
| High Voltage Full Load Amps   | 38.0 a                       |
| Insulation Class              | F                            |
| Inverter Code                 | Inverter Ready               |
| KVA Code                      | J                            |
| Lifting Lugs                  | Vertical Lifting Lugs        |
| Locked Bearing Indicator      | Locked Bearing               |
| Motor Lead Quantity/Wire Size | 9 @ 8 AWG                    |
| Motor Lead Termination        | Flying Leads                 |
| Motor Standards               | NEMA                         |
| Motor Type                    | 1056M                        |
| Mounting Arrangement          | F1                           |
| Number of Poles               | 4                            |
| Overall Length                | 25.71 IN                     |
| Power Factor                  | 80                           |
| Product Family                | Chemical Processing (Not DC) |
| Pulley End Bearing Type       | Sealed Bearing               |
| Pulley Face Code              | Standard                     |
| Pulley Shaft Indicator        | Tapped & Key                 |
| Rodent Screen                 | None                         |
| Service Factor                | 1.15                         |
| Shaft Diameter                | 1.875 IN                     |
| Shaft Ground Indicator        | Shaft Grounding              |
| Shaft Rotation                | Reversible                   |
| Shaft Slinger Indicator       | Shaft Slinger                |
| Speed                         | 1760 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**

| NP2178       |                 |      |    |      |    |    |   |  |  |
|--------------|-----------------|------|----|------|----|----|---|--|--|
| CAT.NO.      | ECTM4104T-G-AO  |      |    |      |    |    |   |  |  |
| SPEC.        | 10T008Y538G1    |      |    |      |    |    |   |  |  |
| HP           | 30 AIR OVER     |      |    |      |    |    |   |  |  |
| VOLTS        | 230/460         |      |    |      |    |    |   |  |  |
| AMP          | 76/38           |      |    |      |    |    |   |  |  |
| RPM          | 1760            |      |    |      |    |    |   |  |  |
| FRAME        | 286T            | HZ   |    | 60   | PH |    | 3 |  |  |
| SER.F.       | 1.15            | CODE | J  | DES  | A  | CL | F |  |  |
| NEMA-NOM-EFF | 93.6            | PF   | 80 |      |    |    |   |  |  |
| RATING       | 40C AMB-CONT    |      |    |      |    |    |   |  |  |
| CC           |                 |      |    |      |    |    |   |  |  |
| DE           | 6311            | ODE  |    | 6309 |    |    |   |  |  |
| ENCL         | TEAO            | SN   |    |      |    |    |   |  |  |
|              | INV DUT 20:1 VT |      |    |      |    |    |   |  |  |

**AC Induction Motor Performance Data**

Record # 35485

Typical performance - not guaranteed values

| Winding: 10WGY538-R005 |    |              |              | Type: 1056M                              |                       | Enclosure: TEAO |           |
|------------------------|----|--------------|--------------|------------------------------------------|-----------------------|-----------------|-----------|
| Nameplate Data         |    |              |              | 460 V, 60 Hz:<br>High Voltage Connection |                       |                 |           |
| Rated Output (HP)      |    | 30 AIR OVER  |              | Full Load Torque                         |                       | 88.7 LB-FT      |           |
| Volts                  |    | 230/460      |              | Start Configuration                      |                       | direct on line  |           |
| Full Load Amps         |    | 76/38        |              | Breakdown Torque                         |                       | 330 LB-FT       |           |
| R.P.M.                 |    | 1760         |              | Pull-up Torque                           |                       | 142 LB-FT       |           |
| Hz                     | 60 | Phase        | 3            | Locked-rotor Torque                      |                       | 178 LB-FT       |           |
| NEMA Design Code       |    | A            | KVA Code     | J                                        | Starting Current      |                 | 270 A     |
| Service Factor (S.F.)  |    | 1.15         |              | No-load Current                          |                       | 17.9 A          |           |
| NEMA Nom. Eff.         |    | 93.6         | Power Factor | 80                                       | Line-line Res. @ 25°C |                 | 0.19377 Ω |
| Rating - Duty          |    | 40C AMB-CONT |              | Temp. Rise @ Rated Load                  |                       | 64°C            |           |
| S.F. Amps              |    |              |              | Temp. Rise @ S.F. Load                   |                       | 76°C            |           |
|                        |    |              |              | Locked-rotor Power Factor                |                       | 31              |           |
|                        |    |              |              | Rotor inertia                            |                       | 4.47 LB-FT2     |           |

**Load Characteristics 460 V, 60 Hz, 30 HP**

| % of Rated Load | 25     | 50     | 75     | 100    | 125    | 150    | S.F. |
|-----------------|--------|--------|--------|--------|--------|--------|------|
| Power Factor    | 41     | 63     | 73     | 80     | 82     | 85     | 81   |
| Efficiency      | 87.6   | 92.3   | 93.5   | 93.7   | 93.4   | 92.9   | 93.5 |
| Speed           | 1792.2 | 1787.6 | 1782.4 | 1776.5 | 1770.3 | 1762.1 | 1773 |
| Line amperes    | 19.8   | 24.3   | 30.7   | 37.6   | 45.6   | 55.2   | 42.4 |

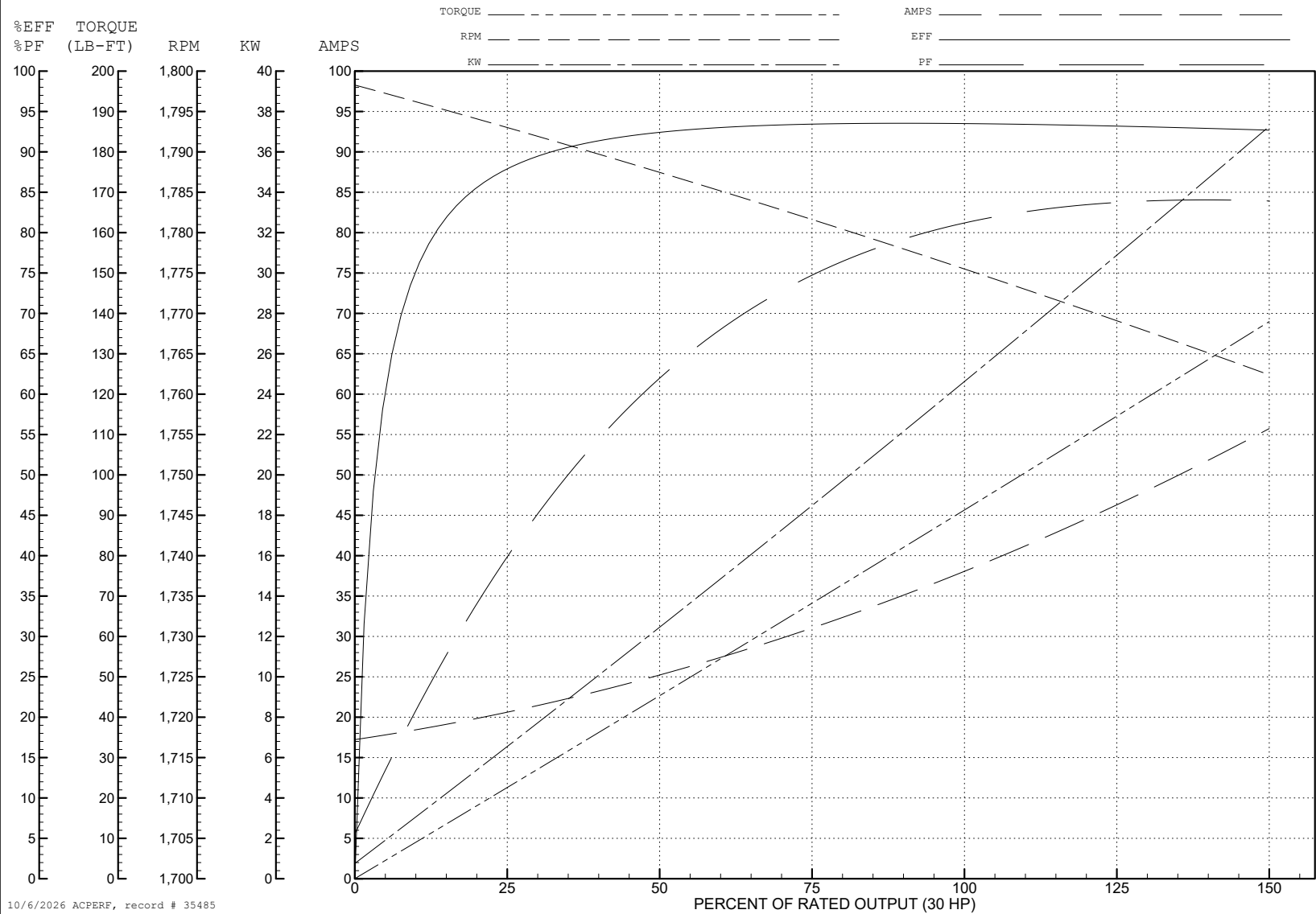
ABB Motors and Mechanical Inc.

WINDING # 10WGY538

Typical performance - not guaranteed values.

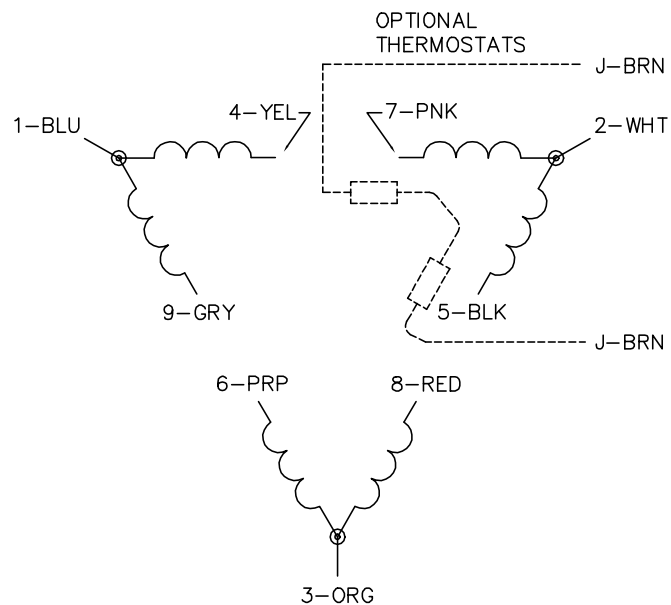
30 HP 3 PH 60 HZ 1760 RPM 460 V 1056M

TORQUES (LB-FT): PO=330 PU=142 LR=178 LRA=270

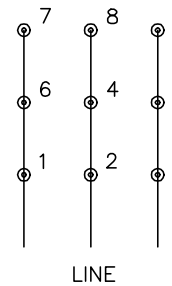




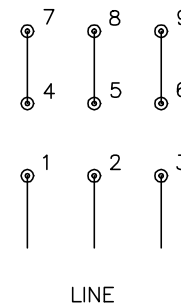
CD0180



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