

# ABB BALDOR RELIANCE III

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## Customer information packet

### EM4109T-G

40HP, 3530RPM, 3PH, 60HZ, 324TS, 1058M, TEFC, F

Class - None

Division - Not Applicable

**Specifications**

|                                       |                                                                 |
|---------------------------------------|-----------------------------------------------------------------|
| <b>Enclosure</b>                      | TEFC                                                            |
| <b>Frame</b>                          | 324TS                                                           |
| <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>             | 40.000 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 EEV<br>UR<br>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>              | 100.000 A @ 208.0 V<br>45.000 A @ 460.0 V<br>90.000 A @ 230.0 V |
| <b>Design Code</b>                    | A                                                               |
| <b>Drip Cover</b>                     | No Drip Cover                                                   |
| <b>Duty Rating</b>                    | CONT                                                            |
| <b>Efficiency @ 100% Load</b>         | 92.4 %                                                          |
| <b>Electrically Isolated Bearing</b>  | Not Electrically Isolated                                       |
| <b>Feedback Device</b>                | NO FEEDBACK                                                     |
| <b>Front Shaft Indicator</b>          | None                                                            |
| <b>Heater Indicator</b>               | No Heater                                                       |

**Part Detail**

|                     |            |
|---------------------|------------|
| <b>Revision</b>     | H          |
| <b>Type</b>         | AC         |
| <b>Mech. spec.</b>  | 10L266     |
| <b>Base</b>         |            |
| <b>Status</b>       | PRD/A      |
| <b>Elec. spec.</b>  | 10WGY652   |
| <b>Layout</b>       | 10LYL266   |
| <b>Eff. date</b>    | 11-19-2025 |
| <b>CD Diagram</b>   | CD0180     |
| <b>Poles</b>        | 02         |
| <b>Leads</b>        | 9#8        |
| <b>Proprietary</b>  | False      |
| <b>Created date</b> | 06-19-2018 |

|                               |                       |
|-------------------------------|-----------------------|
| High Voltage Full Load Amps   | 45.0 a                |
| Insulation Class              | H                     |
| Inverter Code                 | Inverter Ready        |
| KVA Code                      | H                     |
| Lifting Lugs                  | Standard 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                    | 1058M                 |
| Mounting Arrangement          | F1                    |
| Number of Poles               | 2                     |
| Overall Length                | 28.89 IN              |
| Power Factor                  | 90                    |
| Product Family                | General Purpose       |
| Pulley End Bearing Type       | Ball                  |
| Pulley Face Code              | Standard              |
| Pulley Shaft Indicator        | Standard              |
| 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                         | 3530 rpm              |
| Speed Code                    | Single Speed          |
| Starting Method               | Direct on line        |
| Thermal Device - Winding      | None                  |
| Vibration Sensor Indicator    | No Vibration Sensor   |
| Winding Thermal 1             | None                  |
| Winding Thermal 2             | None                  |

**Nameplate**

| NP3443LUA |                            |                         |                |                           |       |         |        |      |            |      |  |      |
|-----------|----------------------------|-------------------------|----------------|---------------------------|-------|---------|--------|------|------------|------|--|------|
| CAT.NO.   | EM4109T-G                  |                         |                | CUST. P/N                 |       |         |        | ENCL |            |      |  | TEFC |
| SPEC.     | 10L266Y652G1               | CC                      | 010A           | FRAME                     | 324TS | SER.NO. |        |      |            |      |  |      |
| HP        | 40                         |                         | CLASS          | H                         | HZ    | 60      |        |      |            |      |  |      |
| R.P.M.    | 3530                       |                         | PH.            | 3                         | DES.  | A       |        |      |            |      |  |      |
| VOLTS     | 230/460                    |                         | CODE           |                           | H     | ODE BRG |        | 6309 | DE BRG     | 6312 |  |      |
| AMPS      | 90/45                      |                         |                |                           |       |         |        |      |            |      |  |      |
| RATING    | 40C AMB-CONT               |                         | NEMA NOM. EFF. |                           |       | 92.4    | GREASE |      | POLYREX EM |      |  |      |
| P.F.      | 90                         | SER.F.                  | 1.15           | CT6-60H(10:1)VT3-60H(20:1 |       |         |        |      |            |      |  |      |
| USABLE AT | 50HZ 40HP 190/380V 110/55A |                         |                | SF1.0                     |       |         |        |      |            |      |  |      |
| VOLTS     | AMPS                       | MAX. SPACE HEATER TEMP. |                |                           |       |         |        |      |            |      |  |      |

**AC Induction Motor Performance Data**

Record # 70959

Typical performance - not guaranteed values

| Winding: 10WGY652-R011 |    |              | Type: 1058M  |                                          | Enclosure: TEFC |                |
|------------------------|----|--------------|--------------|------------------------------------------|-----------------|----------------|
| Nameplate Data         |    |              |              | 460 V, 60 Hz:<br>High Voltage Connection |                 |                |
| Rated Output (HP)      |    | 40           |              | Full Load Torque                         |                 | 59.5 LB-FT     |
| Volts                  |    | 230/460      |              | Start Configuration                      |                 | direct on line |
| Full Load Amps         |    | 90/45        |              | Breakdown Torque                         |                 | 197 LB-FT      |
| R.P.M.                 |    | 3530         |              | Pull-up Torque                           |                 | 85.4 LB-FT     |
| Hz                     | 60 | Phase        | 3            | Locked-rotor Torque                      |                 | 125 LB-FT      |
| NEMA Design Code       |    | A            | KVA Code     | Starting Current                         |                 | 324 A          |
| Service Factor (S.F.)  |    | 1.15         |              | No-load Current                          |                 | 12 A           |
| NEMA Nom. Eff.         |    | 92.4         | Power Factor | Line-line Res. @ 25°C                    |                 | 0.14992 Ω      |
| Rating - Duty          |    | 40C AMB-CONT |              | Temp. Rise @ Rated Load                  |                 | 78°C           |
| S.F. Amps              |    |              |              | Temp. Rise @ S.F. Load                   |                 | 97°C           |
|                        |    |              |              | Locked-rotor Power Factor                |                 | 22.8           |
|                        |    |              |              | Rotor inertia                            |                 | 2.49 LB-FT2    |

**Load Characteristics 460 V, 60 Hz, 40 HP**

| % of Rated Load | 25     | 50     | 75     | 100    | 125    | 150    | S.F. |
|-----------------|--------|--------|--------|--------|--------|--------|------|
| Power Factor    | 65     | 82     | 88     | 90     | 90     | 91     | 90   |
| Efficiency      | 90.7   | 93.4   | 93.7   | 93.2   | 92.4   | 91.1   | 92.7 |
| Speed           | 3583.2 | 3567.3 | 3549.7 | 3530.6 | 3511.2 | 3484.5 | 3519 |
| Line amperes    | 16.3   | 24.7   | 34.3   | 45.1   | 56.3   | 70.6   | 51.8 |

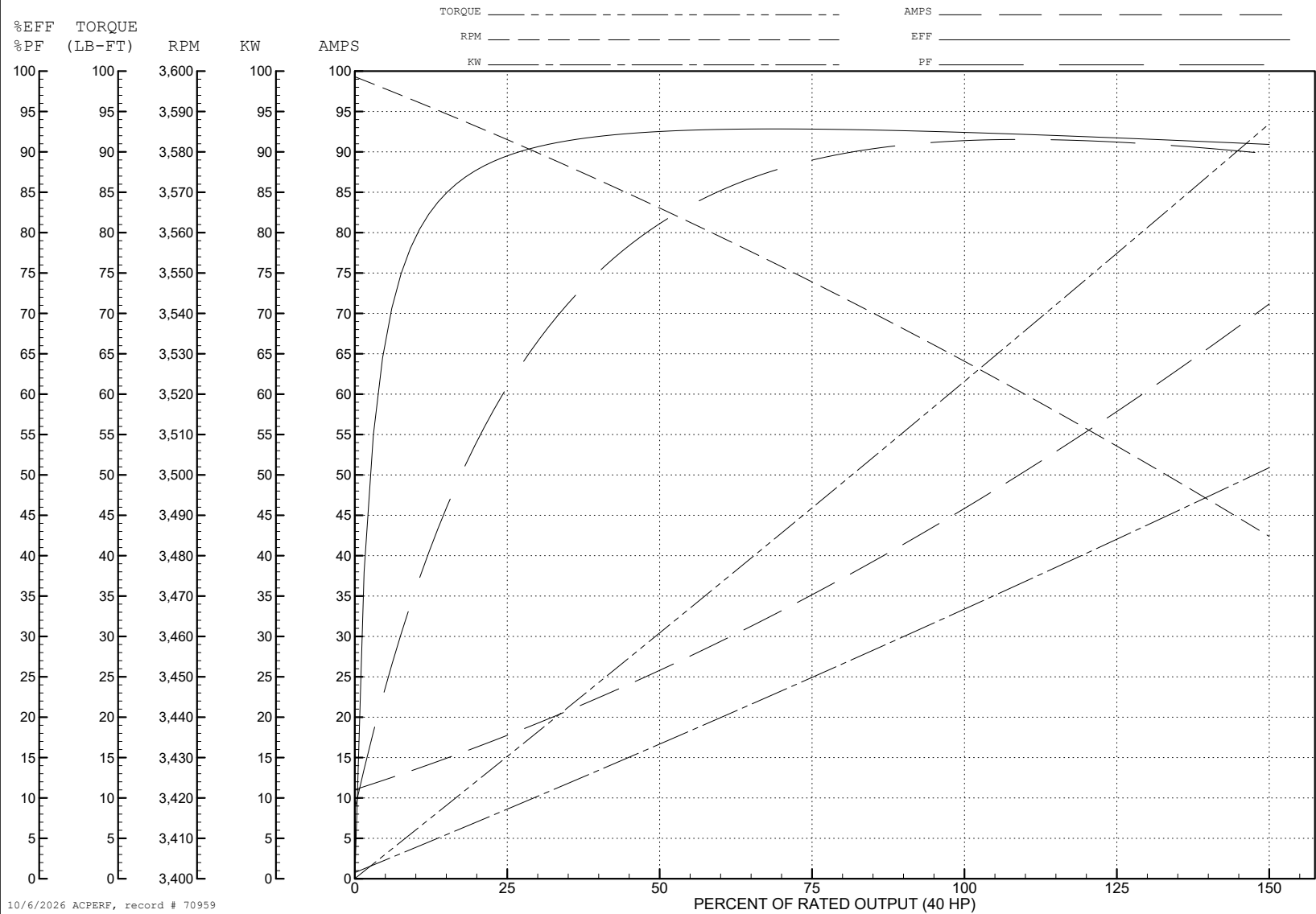
ABB Motors and Mechanical Inc.

WINDING # 10WGY652

Typical performance - not guaranteed values.

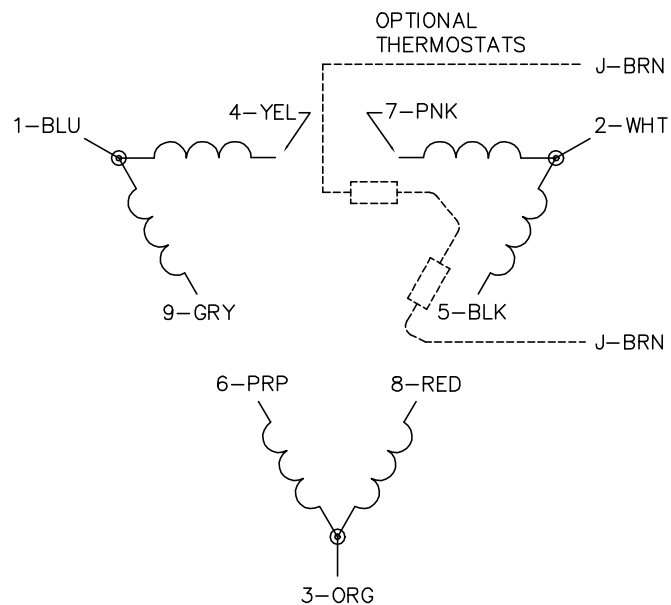
40 HP 3 PH 60 HZ 3530 RPM 460 V 1058M

TORQUES (LB-FT): PO=197 PU=85.4 LR=125 LRA=324

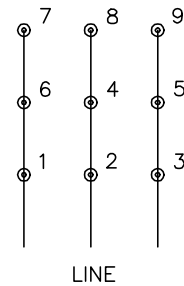




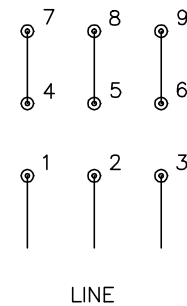
CD0180



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