

# ABB BALDOR RELIANCE III

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## Customer information packet

### CEM4109T-G

40HP, 3530RPM, 3PH, 60HZ, 324TSC, TEFC, F1

Class - None

Division - Not Applicable

**Specifications**

|                                       |                                          |
|---------------------------------------|------------------------------------------|
| <b>Enclosure</b>                      | TEFC                                     |
| <b>Frame</b>                          | 324TSC                                   |
| <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<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>              | 88.000 A @ 230.0 V<br>44.000 A @ 460.0 V |
| <b>Design Code</b>                    | B                                        |
| <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>Heater Indicator</b>               | No Heater                                |
| <b>High Voltage Full Load Amps</b>    | 44.0 a                                   |

**Part Detail**

|                     |              |
|---------------------|--------------|
| <b>Revision</b>     | J            |
| <b>Type</b>         | AC           |
| <b>Mech. spec.</b>  |              |
| <b>Base</b>         |              |
| <b>Status</b>       | PRD/A        |
| <b>Elec. spec.</b>  | 12WGY940     |
| <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>           | H                     |
| <b>Inverter Code</b>              | Not Inverter          |
| <b>IP Rating</b>                  | NONE                  |
| <b>KVA Code</b>                   | F                     |
| <b>Lifting Lugs</b>               | Standard Lifting Lugs |
| <b>Locked Bearing Indicator</b>   | Locked Bearing        |
| <b>Motor Lead Termination</b>     | Flying Leads          |
| <b>Motor Standards</b>            | NEMA                  |
| <b>Motor Type</b>                 | 1256M                 |
| <b>Mounting Arrangement</b>       | F1                    |
| <b>Number of Poles</b>            | 2                     |
| <b>Overall Length</b>             | 28.78 IN              |
| <b>Power Factor</b>               | 91                    |
| <b>Product Family</b>             | General Purpose       |
| <b>Pulley Face Code</b>           | C-Face                |
| <b>Rodent Screen</b>              | None                  |
| <b>Service Factor</b>             | 1.15                  |
| <b>Shaft Diameter</b>             | 1.875 IN              |
| <b>Shaft Ground Indicator</b>     | Shaft Grounding       |
| <b>Shaft Rotation</b>             | Reversible            |
| <b>Speed</b>                      | 3530 rpm              |
| <b>Speed Code</b>                 | Single Speed          |
| <b>Starting Method</b>            | Direct on line        |
| <b>Thermal Device - Bearing</b>   | None                  |
| <b>Thermal Device - Winding</b>   | None                  |
| <b>Vibration Sensor Indicator</b> | No Vibration Sensor   |
| <b>Winding Thermal 1</b>          | None                  |
| <b>Winding Thermal 2</b>          | None                  |

**Nameplate**

| NP3443LUA |                            |                         |                |                           |        |         |        |      |            |      |      |
|-----------|----------------------------|-------------------------|----------------|---------------------------|--------|---------|--------|------|------------|------|------|
| CAT.NO.   | CEM4109T-G                 |                         |                | CUST. P/N                 |        |         |        | ENCL |            |      | TEFC |
| SPEC.     | 12-0000589                 | CC                      | 010A           | FRAME                     | 324TSC | SER.NO. |        |      |            |      |      |
| HP        | 40                         |                         | CLASS          | H                         | HZ     | 60      |        |      |            |      |      |
| R.P.M.    | 3530                       |                         | PH.            | 3                         | DES.   | B       |        |      |            |      |      |
| VOLTS     | 230/460                    |                         | CODE           |                           | F      | ODE BRG |        | 6311 | DE BRG     | 6312 |      |
| AMPS      | 88/44                      |                         |                |                           |        |         |        |      |            |      |      |
| RATING    | 40C AMB-CONT               |                         | NEMA NOM. EFF. |                           |        | 92.4    | GREASE |      | POLYREX EM |      |      |
| P.F.      | 91                         | SER.F.                  | 1.15           | CT6-60H(10:1)VT3-60H(20:1 |        |         |        |      |            |      |      |
| USABLE AT | 50HZ 40HP 190/380V 108/54A |                         |                | SF1.0                     |        |         |        |      |            |      |      |
| VOLTS     | AMPS                       | MAX. SPACE HEATER TEMP. |                |                           |        |         |        |      |            |      |      |

**AC Induction Motor Performance Data**

Record # 50749

Typical performance - not guaranteed values

| Winding: 12WGY940-R001 |    |         | Type: 1256M  |                                          | Enclosure: TEFC       |                         |
|------------------------|----|---------|--------------|------------------------------------------|-----------------------|-------------------------|
| Nameplate Data         |    |         |              | 460 V, 60 Hz:<br>High Voltage Connection |                       |                         |
| Rated Output (HP)      |    | 40      |              | Full Load Torque                         |                       | 59.1 LB-FT              |
| Volts                  |    | 230/460 |              | Start Configuration                      |                       | direct on line          |
| Full Load Amps         |    | 88/44   |              | Breakdown Torque                         |                       | 194 LB-FT               |
| R.P.M.                 |    | 3530    |              | Pull-up Torque                           |                       | 63.8 LB-FT              |
| Hz                     | 60 | Phase   | 3            | Locked-rotor Torque                      |                       | 80.9 LB-FT              |
| NEMA Design Code       |    | B       | KVA Code     | F                                        | Starting Current      |                         |
| Service Factor (S.F.)  |    | 1.15    |              | No-load Current                          |                       | 9.79 A                  |
| NEMA Nom. Eff.         |    | 92.4    | Power Factor | 91                                       | Line-line Res. @ 25°C |                         |
| Rating - Duty          |    | 40C     |              | AMB-CONT                                 |                       | Temp. Rise @ Rated Load |
| S.F. Amps              |    |         |              |                                          |                       | Temp. Rise @ S.F. Load  |

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

| % of Rated Load | 25     | 50     | 75     | 100    | 125  | 150    | S.F. |
|-----------------|--------|--------|--------|--------|------|--------|------|
| Power Factor    | 72     | 86     | 90     | 91     | 91   | 90     | 91   |
| Efficiency      | 86.8   | 91.4   | 92.5   | 92.4   | 91.8 | 91     | 92   |
| Speed           | 3587.9 | 3575.1 | 3561.2 | 3546.1 | 3529 | 3509.8 | 3536 |
| Line amperes    | 15.1   | 23.7   | 33.6   | 44.3   | 56   | 68.5   | 51.3 |

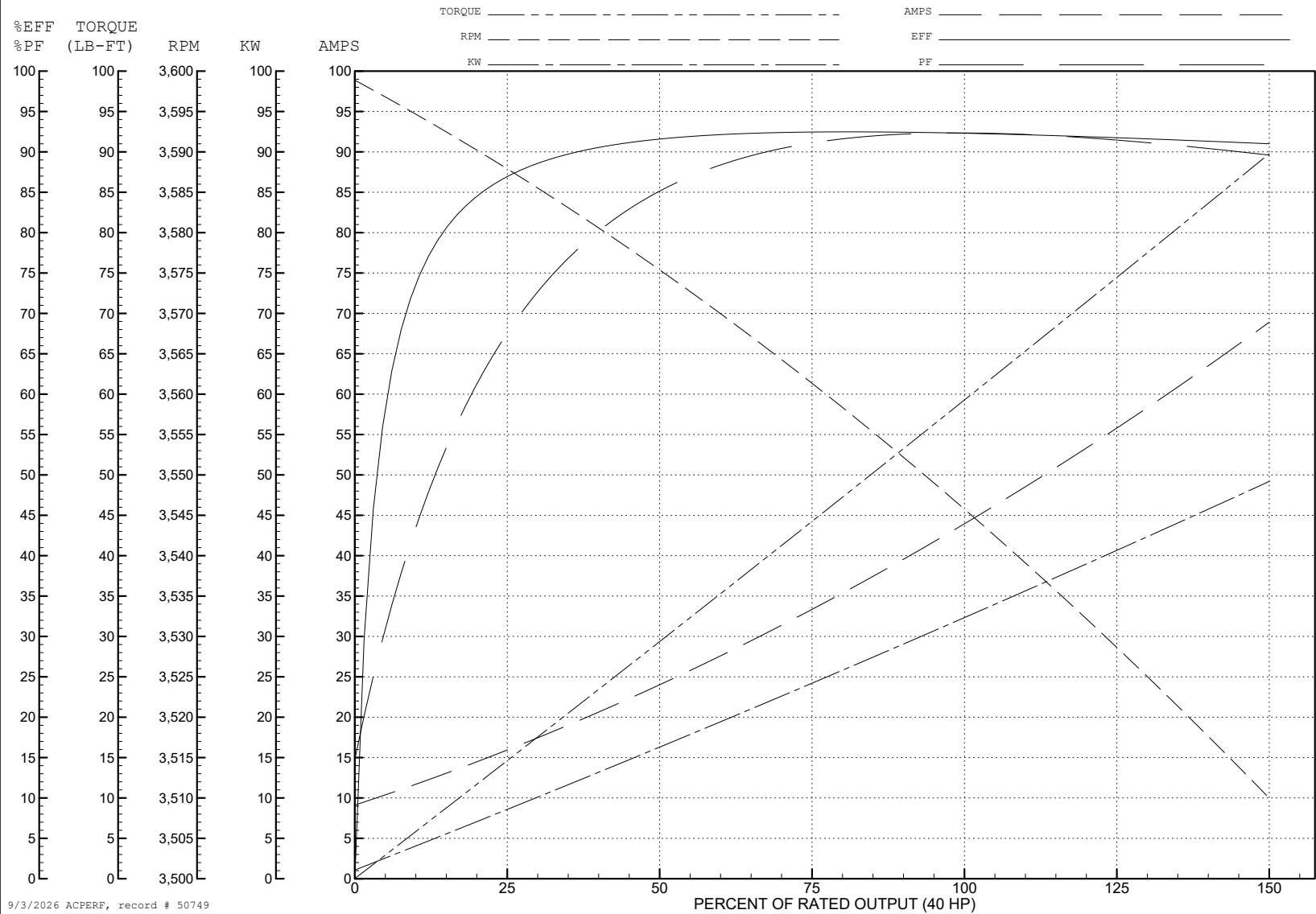
ABB Motors and Mechanical Inc.

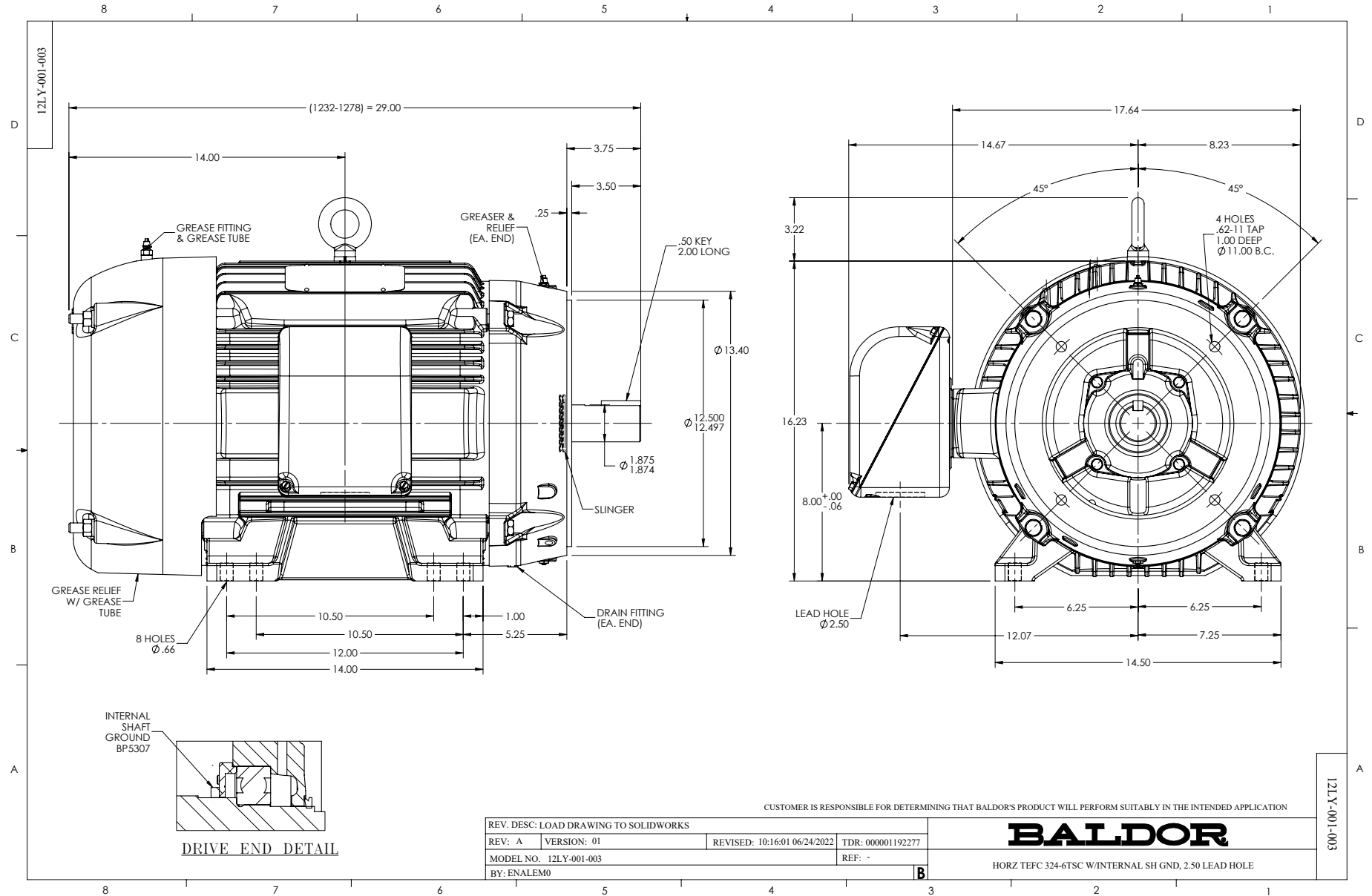
WINDING # 12WGY940

Typical performance - not guaranteed values.

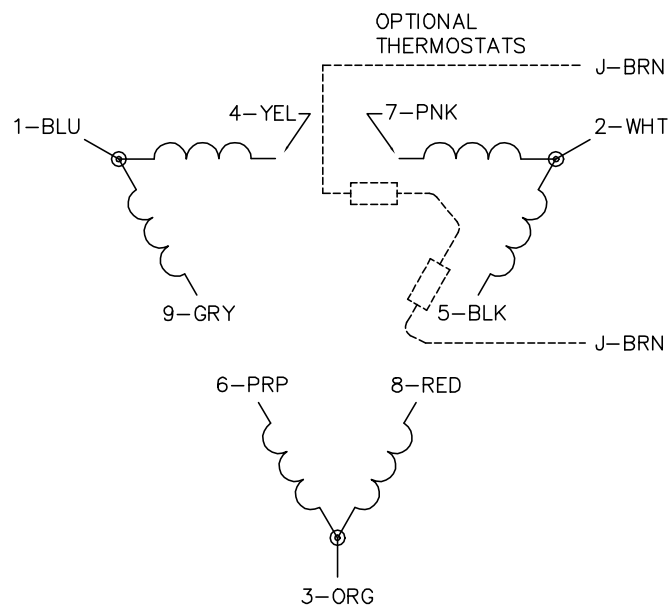
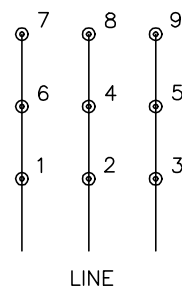
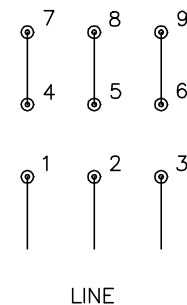
40 HP 3 PH 60 HZ 3530 RPM 460 V 1256M

TORQUES (LB-FT): PO=194 PU=63.8 LR=80.9 LRA=284





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.

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

CD0180