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# Customer information packet

## CEM2542T-G

50HP, 3525RPM, 3PH, 60HZ, 324TSC, OPSB, F1

## Specifications

|                                |                                           |
|--------------------------------|-------------------------------------------|
| Enclosure                      | OPSB                                      |
| Frame                          | 324TSC                                    |
| Frame Material                 | Steel                                     |
| Frequency                      | 60.00 Hz                                  |
| Motor Letter Type              | Three Phase                               |
| Output @ Frequency             | 50.000 HP @ 60 HZ                         |
| Phase                          | 3                                         |
| Synchronous Speed @ Frequency  | 3600 RPM @ 60 HZ                          |
| Voltage @ Frequency            | 230.0 V @ 60 HZ<br>460.0 V @ 60 HZ        |
| Agency Approvals               | CSA<br>CSA EEV<br>NEMA PREMIUM<br>UR      |
| Ambient Temperature            | 40 °C                                     |
| Auxiliary Box                  | NO AUXILLARY BOX                          |
| Auxiliary Box Lead Termination | None                                      |
| Base Indicator                 | Rigid                                     |
| Bearing Grease Type            | Polyrex EM (-20F +300F)                   |
| Blower                         | None                                      |
| Current @ Voltage              | 112.000 A @ 230.0 V<br>56.000 A @ 460.0 V |
| Design Code                    | A                                         |
| Drip Cover                     | No Drip Cover                             |
| Duty Rating                    | CONT                                      |
| Efficiency @ 100% Load         | 93.0 %                                    |
| Electrically Isolated Bearing  | Not Electrically Isolated                 |
| Feedback Device                | NO FEEDBACK                               |
| Heater Indicator               | No Heater                                 |
| High Voltage Full Load Amps    | 56.0 a                                    |
| Insulation Class               | H                                         |
| Inverter Code                  | Inverter Ready                            |

## Part detail

|              |            |
|--------------|------------|
| Revision     | D          |
| Type         | AC         |
| Mech. spec.  |            |
| Base         |            |
| Status       | PRD/A      |
| Elec. spec.  | 40WGW803   |
| Layout       | 40LYE451   |
| Eff. date    | 06-27-2024 |
| CD Diagram   | CD0180     |
| Poles        | 02         |
| Leads        | 9#8        |
| Proprietary  | False      |
| Created date | 03-06-2020 |

|                            |                       |
|----------------------------|-----------------------|
| IP Rating                  | NONE                  |
| KVA Code                   | G                     |
| Lifting Lugs               | Standard Lifting Lugs |
| Locked Bearing Indicator   | Locked Bearing        |
| Motor Lead Termination     | Flying Leads          |
| Motor Standards            | NEMA                  |
| Motor Type                 | 4058M                 |
| Mounting Arrangement       | F1                    |
| Number of Poles            | 2                     |
| Overall Length             | 25.68 IN              |
| Power Factor               | 90                    |
| Product Family             | General Purpose       |
| Pulley Face Code           | C-Face                |
| Rodent Screen              | None                  |
| Service Factor             | 1.15                  |
| Shaft Diameter             | 1.875 IN              |
| Shaft Ground Indicator     | Shaft Grounding       |
| Shaft Rotation             | Reversible            |
| Speed                      | 3525 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

| NP3554LUA |                            |        |              |       |                           |         |        |            |      |      |
|-----------|----------------------------|--------|--------------|-------|---------------------------|---------|--------|------------|------|------|
| CAT.NO.   | CEM2542T-G                 |        |              | P/N   |                           |         |        |            | ENCL | OPSE |
| SPEC.     | 40-0000826                 | CC     | 010A         | FRAME | 324TSC                    | SER.NO. |        |            |      |      |
| HP        | 50                         |        | CLASS        | H     | HZ                        | 60      |        |            |      |      |
| RPM       | 3525                       |        | PH           | 3     | DES                       | A       |        |            |      |      |
| VOLTS     | 230/460                    |        |              | CODE  | G                         | ODE BRG | 6309   | DE BRG     | 6312 |      |
| AMPS      | 112/56                     |        |              |       |                           |         |        |            |      |      |
| RATING    | 40C AMB-CONT               |        | NEMA-NOM-EFF |       |                           | 93      | GREASE | POLYREX EM |      |      |
| PF        | 90                         | SER.F. | 1.15         |       | CT30-60(2:1) VT3-60(20:1) |         |        |            |      |      |
| USABLE AT | 50HZ 50HP 190/380V 138/69A |        |              | SF1.0 |                           |         |        |            |      |      |
| HTR-VOLTS | HTR-AMPS                   |        |              |       | MAX. SPACE HEATER TEMP.   |         |        |            |      |      |

**AC Induction Motor Performance Data**

Record # 53039

Typical performance - not guaranteed values

| Winding: 40WGW803-R006 |    |              | Type: 4058M  |                                          | Enclosure: OPSB       |                |          |
|------------------------|----|--------------|--------------|------------------------------------------|-----------------------|----------------|----------|
| Nameplate Data         |    |              |              | 460 V, 60 Hz:<br>High Voltage Connection |                       |                |          |
| Rated Output (HP)      |    | 50           |              | Full Load Torque                         |                       | 74.7 LB-FT     |          |
| Volts                  |    | 230/460      |              | Start Configuration                      |                       | direct on line |          |
| Full Load Amps         |    | 112/56       |              | Breakdown Torque                         |                       | 168 LB-FT      |          |
| R.P.M.                 |    | 3525         |              | Pull-up Torque                           |                       | 115 LB-FT      |          |
| Hz                     | 60 | Phase        | 3            | Locked-rotor Torque                      |                       | 135 LB-FT      |          |
| NEMA Design Code       |    | A            | KVA Code     | G                                        | Starting Current      |                | 376 A    |
| Service Factor (S.F.)  |    | 1.15         |              | No-load Current                          |                       | 14.2 A         |          |
| NEMA Nom. Eff.         |    | 93           | Power Factor | 90                                       | Line-line Res. @ 25°C |                | 0.1415 Ω |
| Rating - Duty          |    | 40C AMB-CONT |              | Temp. Rise @ Rated Load                  |                       | 47°C           |          |
| S.F. Amps              |    |              |              | Temp. Rise @ S.F. Load                   |                       | 60°C           |          |
|                        |    |              |              | Locked-rotor Power Factor                |                       | 23.2           |          |
|                        |    |              |              | Rotor inertia                            |                       | 2.49 LB-FT2    |          |

**Load Characteristics 460 V, 60 Hz, 50 HP**

| % of Rated Load | 25     | 50     | 75     | 100    | 125    | 150    | S.F. |
|-----------------|--------|--------|--------|--------|--------|--------|------|
| Power Factor    | 66     | 83     | 88     | 90     | 90     | 90     | 90   |
| Efficiency      | 92.9   | 94.4   | 94.1   | 93.3   | 92.2   | 90.5   | 92.6 |
| Speed           | 3581.7 | 3565.2 | 3545.9 | 3526.6 | 3505.2 | 3475.1 | 3514 |
| Line amperes    | 20     | 30.4   | 42.8   | 56.3   | 70.7   | 89.9   | 64.9 |

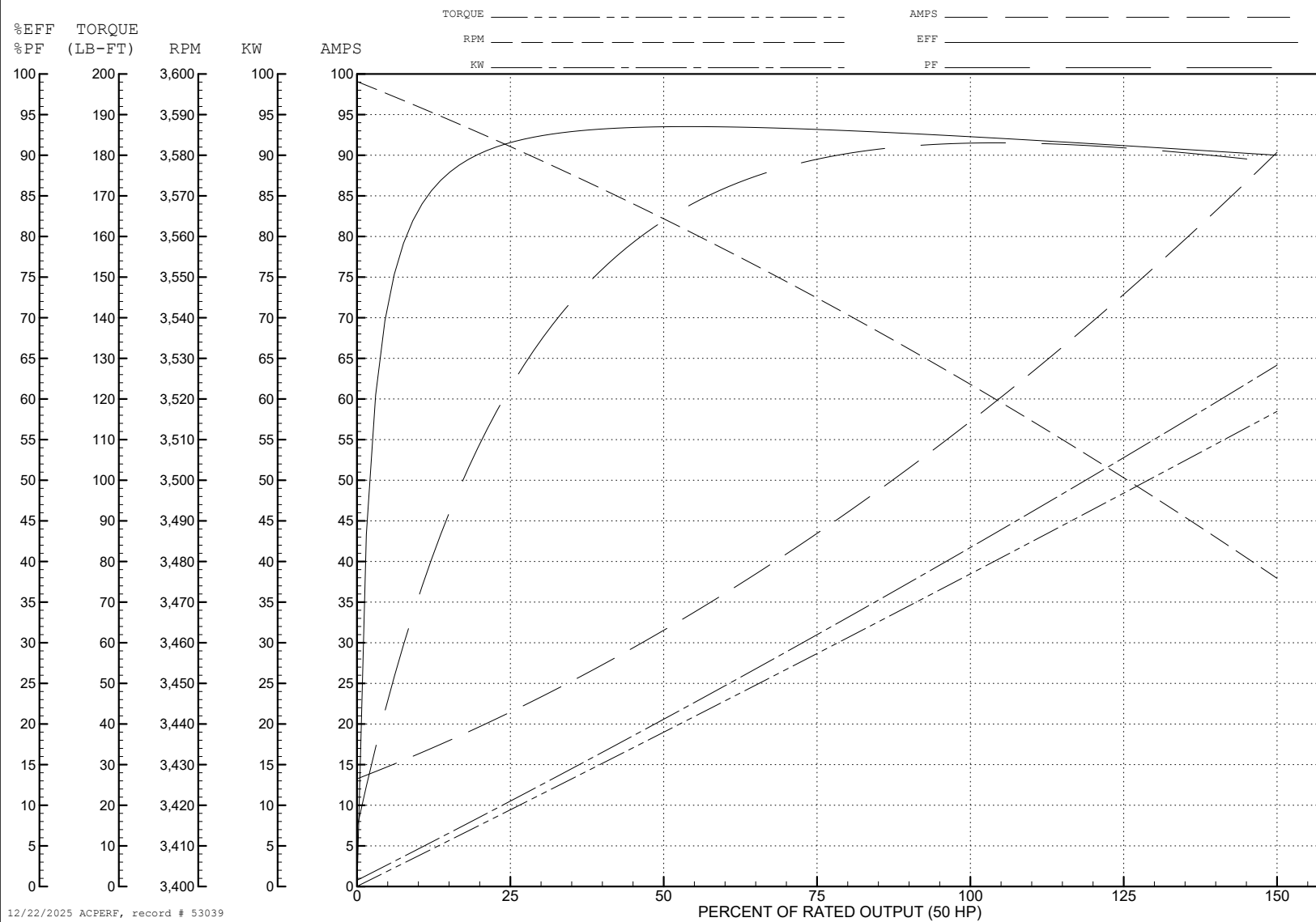
ABB Motors and Mechanical Inc.

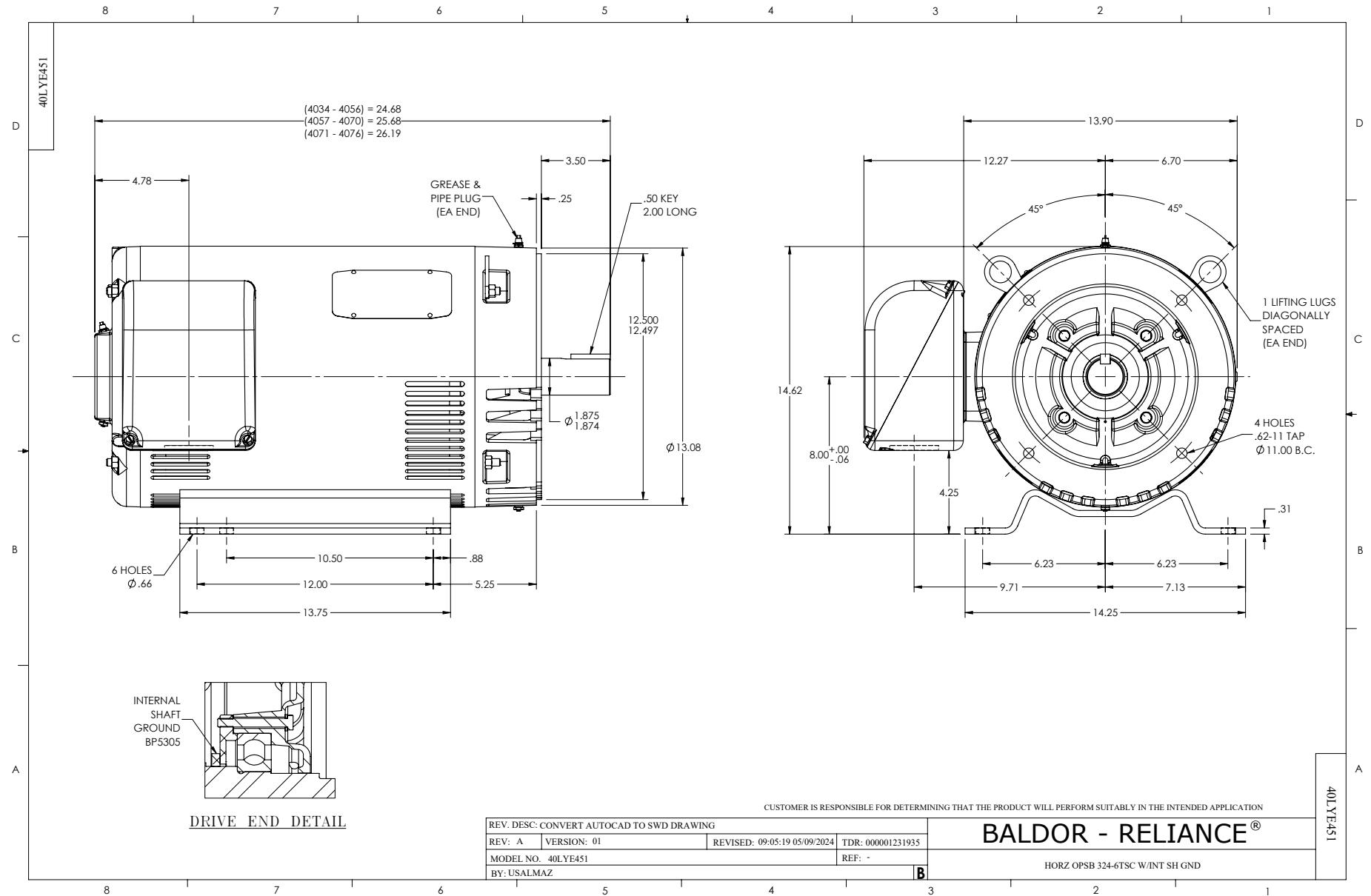
WINDING # 40WGW803

Typical performance - not guaranteed values.

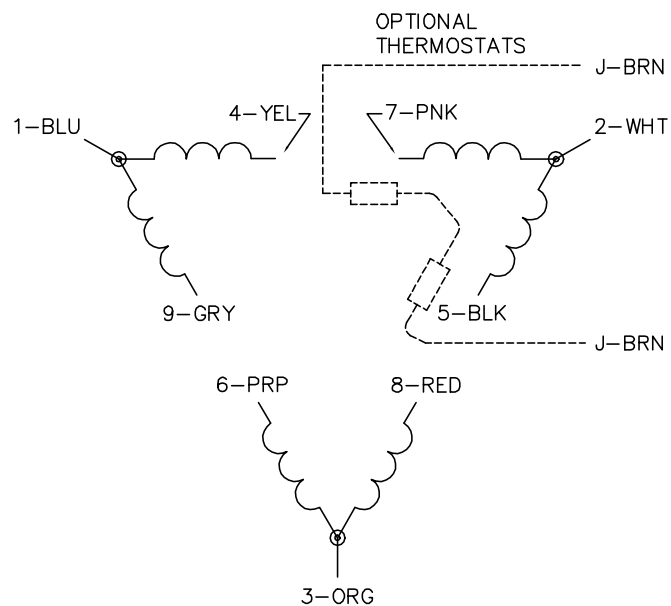
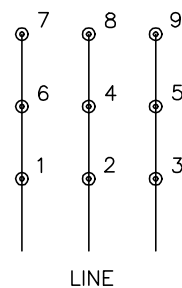
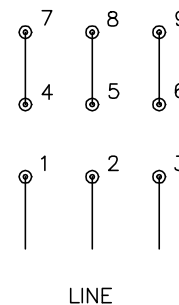
50 HP 3 PH 60 HZ 3525 RPM 460 V 4058M

TORQUES (LB-FT): PO=168 PU=115 LR=135 LRA=376





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

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