

# ABB BALDOR RELIANCE III

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## Customer information packet

### CEM2550T-4G

100HP, 3525RPM, 3PH, 60HZ, 365TSC, OPSB, F1

**Specifications**

|                                |                                            |
|--------------------------------|--------------------------------------------|
| Enclosure                      | OPSB                                       |
| Frame                          | 365TSC                                     |
| Frame Material                 | Steel                                      |
| Frequency                      | 60.00 Hz                                   |
| Motor Letter Type              | Three Phase                                |
| Output @ Frequency             | 100.000 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              | 109.000 A @ 460.0 V<br>218.000 A @ 230.0 V |
| Design Code                    | A                                          |
| Drip Cover                     | No Drip Cover                              |
| Duty Rating                    | CONT                                       |
| Efficiency @ 100% Load         | 93.6 %                                     |
| Electrically Isolated Bearing  | Electrically Isolated Bearings             |
| Feedback Device                | NO FEEDBACK                                |
| Heater Indicator               | No Heater                                  |
| High Voltage Full Load Amps    | 109.0 a                                    |
| Insulation Class               | H                                          |
| Inverter Code                  | Not Inverter                               |

**Part Detail**

|              |              |
|--------------|--------------|
| Revision     | F            |
| Type         | AC           |
| Mech. spec.  |              |
| Base         |              |
| Status       | PRD/A        |
| Elec. spec.  | 42WGW968     |
| Layout       | 42LY-000-037 |
| Eff. date    | 07-10-2024   |
| CD Diagram   | CD0006       |
| Poles        | 02           |
| Leads        | 3#4          |
| Proprietary  | False        |
| Created date | 09-16-2020   |

|                                   |                       |
|-----------------------------------|-----------------------|
| <b>IP Rating</b>                  | NONE                  |
| <b>KVA Code</b>                   | G                     |
| <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>                 | 4272M                 |
| <b>Mounting Arrangement</b>       | F1                    |
| <b>Number of Poles</b>            | 2                     |
| <b>Overall Length</b>             | 27.81 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>                      | 3525 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**

| NP3554LUA |                           |        |                         |              |                           |       |        |         |         |            |      |      |
|-----------|---------------------------|--------|-------------------------|--------------|---------------------------|-------|--------|---------|---------|------------|------|------|
| CAT.NO.   | CEM2550T-4G               |        |                         |              | P/N                       |       |        |         |         |            | ENCL | OPSB |
| SPEC.     | 42-0000-0089              |        | CC                      | 010A         |                           | FRAME | 365TSC |         | SER.NO. |            |      |      |
| HP        | 100                       |        |                         | CLASS        |                           | F     | HZ     | 60      |         |            |      |      |
| RPM       | 3540                      |        |                         | PH           | 3                         | DES   |        | A       |         |            |      |      |
| VOLTS     | 460                       |        |                         |              | CODE                      |       | G      | ODE BRG | 6311    | DE BRG     | 6313 |      |
| AMPS      | 110                       |        |                         |              |                           |       |        |         |         |            |      |      |
| RATING    | 40C AMB-CONT              |        |                         | NEMA-NOM-EFF |                           |       |        | 93.6    | GREASE  | POLYREX EM |      |      |
| PF        | 91                        | SER.F. | 1.15                    |              | CT30-60(2:1) VT3-60(20:1) |       |        |         |         |            |      |      |
| USABLE AT | 50HZ 75HP 380V 100A SF1.0 |        |                         |              |                           |       |        |         |         |            |      |      |
| HTR-VOLTS | HTR-AMPS                  |        | MAX. SPACE HEATER TEMP. |              |                           |       |        |         |         |            |      |      |

**AC Induction Motor Performance Data**

Record # 48166

Typical performance - not guaranteed values

| Winding: 42WGW968-R001 |      |              | Type: 4266M                              |                       | Enclosure: OPSB |                |
|------------------------|------|--------------|------------------------------------------|-----------------------|-----------------|----------------|
| Nameplate Data         |      |              | 460 V, 60 Hz:<br>High Voltage Connection |                       |                 |                |
| Rated Output (HP)      |      | 100          | Full Load Torque                         |                       |                 | 148 LB-FT      |
| Volts                  |      | 460          | Start Configuration                      |                       |                 | direct on line |
| Full Load Amps         |      | 110          | Breakdown Torque                         |                       |                 | 483 LB-FT      |
| R.P.M.                 |      | 3540         | Pull-up Torque                           |                       |                 | 172 LB-FT      |
| Hz                     | 60   | Phase        | 3                                        | Locked-rotor Torque   |                 | 245 LB-FT      |
| NEMA Design Code       | A    | KVA Code     | G                                        | Starting Current      |                 | 771 A          |
| Service Factor (S.F.)  |      | 1.15         | No-load Current                          |                       |                 | 23.5 A         |
| NEMA Nom. Eff.         | 93.6 | Power Factor | 91                                       | Line-line Res. @ 25°C |                 | 0.0539 Ω       |
| Rating - Duty          |      | 40C AMB-CONT | Temp. Rise @ Rated Load                  |                       |                 | 45°C           |
| S.F. Amps              |      |              | Temp. Rise @ S.F. Load                   |                       |                 | 55°C           |
|                        |      |              | Locked-rotor Power Factor                |                       |                 | 20.7           |
|                        |      |              | Rotor inertia                            |                       |                 | 5.16 LB-FT2    |

**Load Characteristics 460 V, 60 Hz, 100 HP**

| % of Rated Load | 25   | 50   | 75   | 100  | 125  | 150  | S.F. |
|-----------------|------|------|------|------|------|------|------|
| Power Factor    | 72   | 87   | 90   | 91   | 91   | 89   | 91   |
| Efficiency      | 91.3 | 93.9 | 94   | 93.6 | 92.7 | 91.6 | 93   |
| Speed           | 3584 | 3568 | 3552 | 3536 | 3518 | 3496 | 3525 |
| Line amperes    | 36.1 | 57.7 | 82.8 | 110  | 138  | 169  | 127  |

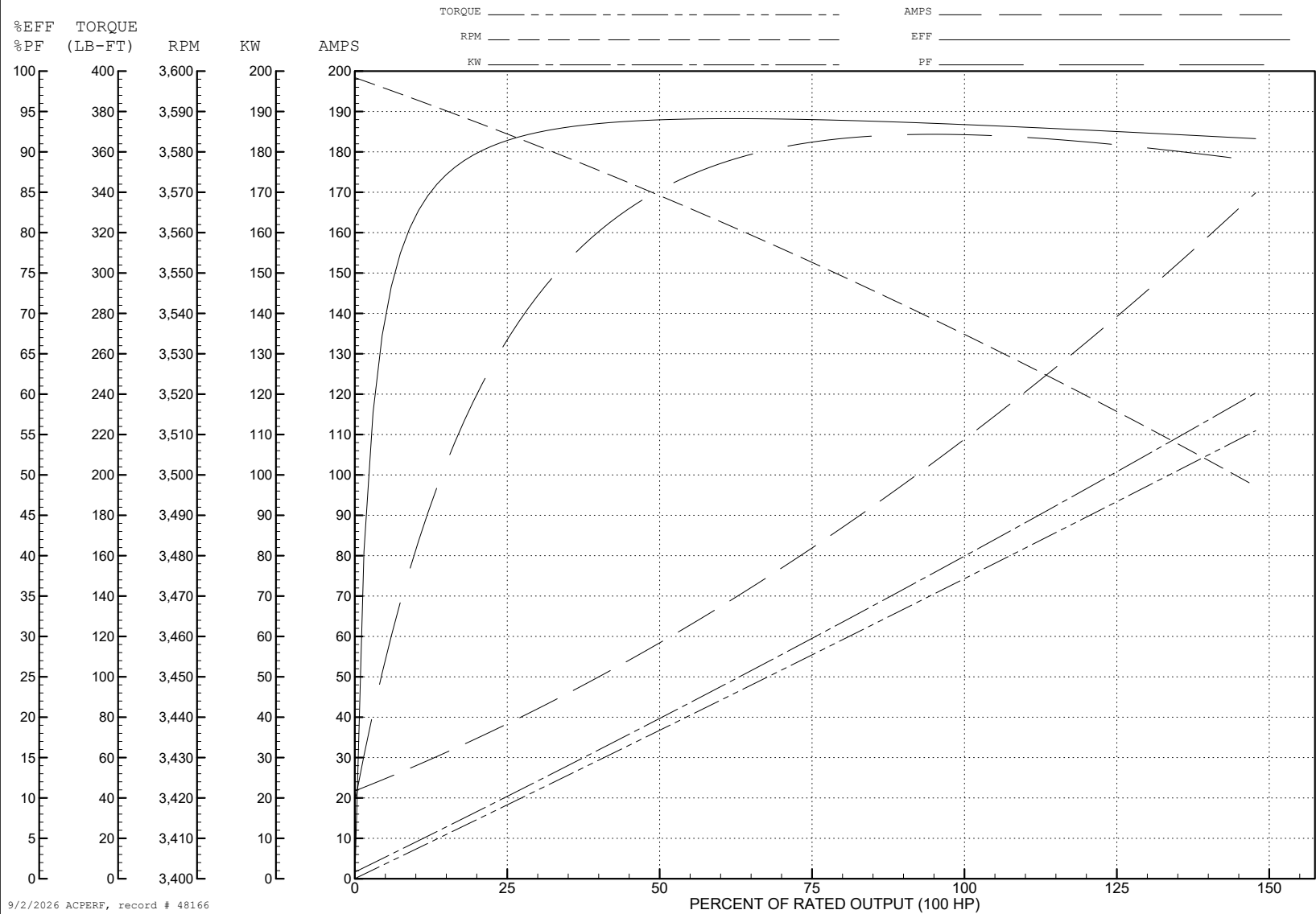
ABB Motors and Mechanical Inc.

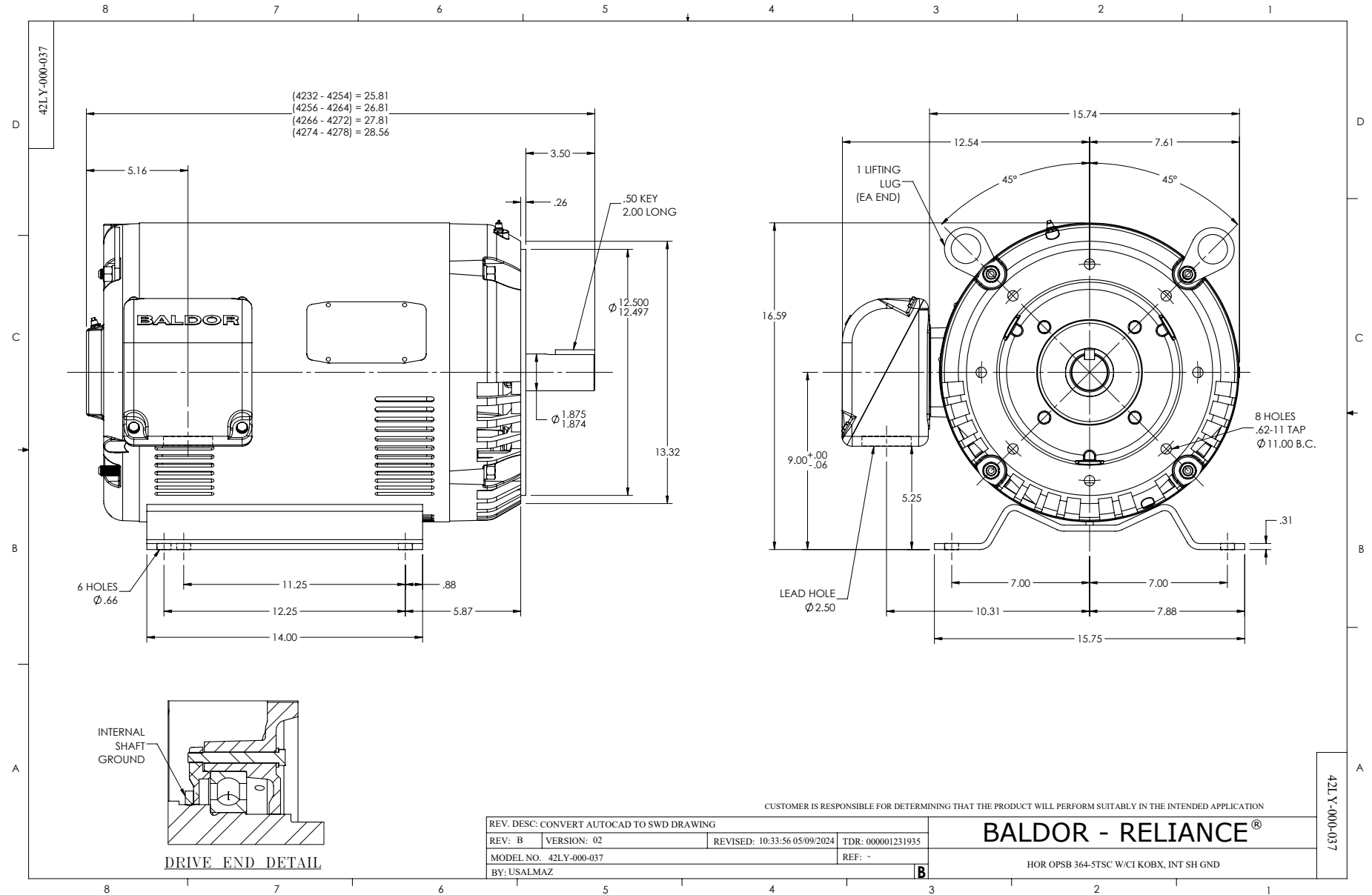
WINDING # 42WGW968

Typical performance - not guaranteed values.

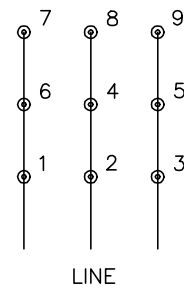
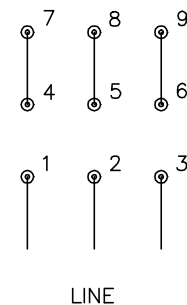
100 HP 3 PH 60 HZ 3540 RPM 460 V 4266M

TORQUES (LB-FT): PO=483 PU=172 LR=245 LRA=771





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: —

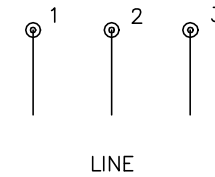
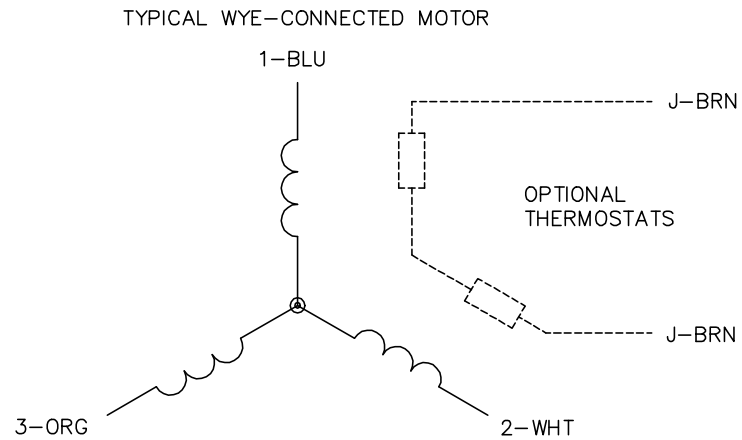

**BALDOR - RELIANCE®**

3PH, DV, 9 LEADS, DELTA CONNECTION

SH 1 of 1

CD0180

CD0006


**NOTES:**

1. THREE LEAD MOTOR MAY BE EITHER WYE CONNECTED OR DELTA CONNECTED.
2. INTERCHANGE ANY TWO LINE LEADS TO REVERSE ROTATION.
3. OPTIONAL THERMOSTATS ARE PROVIDED WHEN SPECIFIED.
4. ACTUAL NUMBER OF INTERNAL PARALLEL CIRCUITS MAY VARY.
5. LEAD COLORS ARE OPTIONAL. LEADS MUST BE NUMBERED AS SHOWN.

CD0006

REV. DESC: ADD CLASS CONN00000007

REV. LTR: E

VERSION: 01

TDR: 000001099922

FILE: \AAA\00005\141

REVISED: 10: 24: 49 02/19/2019

BY: ENBRIRO

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**BALDOR - RELIANCE®**

3PH, SV, 3 LEADS, WYE OR DELTA CONNECTED

SH 1 of 1