

# ABB BALDOR RELIANCE III

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## Customer information packet

### EM2547T-8

60HP, 1775RPM, 3PH, 60HZ, 364T, 4278M, OPSB, F1

**Specifications**

|                                |                                                     |
|--------------------------------|-----------------------------------------------------|
| Enclosure                      | OPSB                                                |
| Frame                          | 364T                                                |
| Frame Material                 | Steel                                               |
| Frequency                      | 60.00 Hz                                            |
| Motor Letter Type              | Three Phase                                         |
| Output @ Frequency             | 60.000 HP @ 60 HZ                                   |
| Phase                          | 3                                                   |
| Synchronous Speed @ Frequency  | 1800 RPM @ 60 HZ                                    |
| Voltage @ Frequency            | 200.0 V @ 60 HZ                                     |
| Agency Approvals               | CURUSEEV<br>NEMA PREMIUM (OLD LOGO)<br>NEMA PREMIUM |
| 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              | 153.000 A @ 208.0 V<br>160.000 A @ 200.0 V          |
| Design Code                    | A                                                   |
| Drip Cover                     | No Drip Cover                                       |
| Duty Rating                    | CONT                                                |
| Efficiency @ 100% Load         | 95.0 %                                              |
| Electrically Isolated Bearing  | Not Electrically Isolated                           |
| Feedback Device                | NO FEEDBACK                                         |
| Front Face Code                | Standard                                            |
| Front Shaft Indicator          | None                                                |
| Heater Indicator               | No Heater                                           |
| High Voltage Full Load Amps    | 160.0 a                                             |
| Insulation Class               | F                                                   |
| Inverter Code                  | Inverter Ready                                      |

**Part Detail**

|              |            |
|--------------|------------|
| Revision     | V          |
| Type         | AC         |
| Mech. spec.  | 42E211     |
| Base         |            |
| Status       | PRD/A      |
| Elec. spec.  | 42WGW588   |
| Layout       | 42LYE211   |
| Eff. date    | 02-12-2024 |
| CD Diagram   | CD0695     |
| Poles        | 04         |
| Leads        | 6#4        |
| Proprietary  | False      |
| Created date | 07-27-2009 |

|                                      |                       |
|--------------------------------------|-----------------------|
| <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 Exit</b>               | Ko Box                |
| <b>Motor Lead Quantity/Wire Size</b> | 6 @ 4 AWG             |
| <b>Motor Lead Termination</b>        | Flying Leads          |
| <b>Motor Standards</b>               | NEMA                  |
| <b>Motor Type</b>                    | 4278M                 |
| <b>Mounting Arrangement</b>          | F1                    |
| <b>Number of Poles</b>               | 4                     |
| <b>Overall Length</b>                | 30.69 IN              |
| <b>Power Factor</b>                  | 87                    |
| <b>Product Family</b>                | General Purpose       |
| <b>Pulley End Bearing Type</b>       | Ball                  |
| <b>Pulley Face Code</b>              | Standard              |
| <b>Pulley Shaft Indicator</b>        | Standard              |
| <b>Rodent Screen</b>                 | None                  |
| <b>Service Factor</b>                | 1.15                  |
| <b>Shaft Diameter</b>                | 2.375 IN              |
| <b>Shaft Extension Location</b>      | Pulley End            |
| <b>Shaft Ground Indicator</b>        | No Shaft Grounding    |
| <b>Shaft Rotation</b>                | Reversible            |
| <b>Shaft Slinger Indicator</b>       | No Slinger            |
| <b>Speed</b>                         | 1775 rpm              |
| <b>Speed Code</b>                    | Single Speed          |
| <b>Starting Method</b>               | Part Winding          |
| <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**

| NP2138L      |              |    |    |        |  |        |  |            |           |     |      |         |  |      |        |      |
|--------------|--------------|----|----|--------|--|--------|--|------------|-----------|-----|------|---------|--|------|--------|------|
| CAT.NO.      | EM2547T-8    |    |    | P/N    |  |        |  |            | ENCLOSURE |     | OPSB |         |  |      |        |      |
| SPEC.        | 42E211W588   |    | CC | 010A   |  | FRAME  |  | 364T       |           | S/N |      |         |  |      |        |      |
| HP           | 60           |    |    | CLASS  |  | F      |  | HZ         |           | 60  |      |         |  |      |        |      |
| RPM          | 1775         |    |    | PH     |  | 3      |  | DES        |           | A   |      |         |  |      |        |      |
| VOLT         | 200          |    |    |        |  |        |  | KVA-CODE   |           | G   |      | ODE BRG |  | 6311 | DE BRG | 6313 |
| AMP          | 160          |    |    |        |  |        |  |            |           |     |      |         |  |      |        |      |
| RATING       | 40C AMB-CONT |    |    |        |  | GREASE |  | POLYREX EM |           |     |      |         |  |      |        |      |
| NEMA-NOM-EFF | 95           | PF | 87 | SER.F. |  | 1.15   |  |            |           |     |      |         |  |      |        |      |
|              |              |    |    |        |  |        |  |            |           |     |      |         |  |      |        |      |
| HTR-VOLTS    | HTR-AMPS     |    |    |        |  |        |  |            |           |     |      |         |  |      |        |      |

**Parts List**

| Part number | Description                              | Quantity |
|-------------|------------------------------------------|----------|
| SA184450    | SA 42E211W588                            | 1.000 ea |
| RA172285    | RA 42E211W588                            | 1.000 ea |
| HA6360      | LIFTING LUG FOR 42 FRAME MOTORS.         | 2.000 ea |
| HA6017      | CAST ADAPTER, 40,42 KOBX                 | 1.000 ea |
| 19XW3118A12 | .31-18 X .75 HEX WASHER HEAD TAPTITE II  | 2.000 ea |
| HW1001A31   | LOCKWASHER 5/16, ZINC PLT.591 OD, .319 I | 2.000 ea |
| WD1000B25   | GND LUG, BURNDY L125HP OR T&B L125HP-BB  | 1.000 ea |
| 19XW3118G08 | .31-18X.50,HEX WSHR HD,TAPTITE 2,GREEN   | 1.000 ea |
| 10CB3002    | CONDUIT BOX CAST W/3.625 LEAD HOLE       | 1.000 ea |
| 19XW3118A12 | .31-18 X .75 HEX WASHER HEAD TAPTITE II  | 4.000 ea |
| HW1001A31   | LOCKWASHER 5/16, ZINC PLT.591 OD, .319 I | 4.000 ea |
| 42EP3200A01 | FR ENDPLATE, MACH                        | 1.000 ea |
| HW5100A13   | W4627-047 WVY WSHR                       | 1.000 ea |
| 42EP1202A01 | STD PU ENDPLATE MODEL 42 313 BRG.        | 1.000 ea |
| 10XN3816K44 | 3/8-16 X 2.75 HEX HD CAP SCREW, GRADE 5  | 4.000 ea |
| HW1001A38   | LOCKWASHER 3/8, ZINC PLT .688 OD, .382 I | 4.000 ea |
| XY5013A12   | NUT,1/2-13,HEX,STEEL,ZINCPLATED          | 8.000 ea |
| 10CB3500SP  | CONDUIT BOX LID, CAST                    | 1.000 ea |
| 51XW2520A12 | .25-20 X .75, TAPTITE II, HEX WSHR SLTD  | 4.000 ea |
| HW2501J36   | KEY, 5/8 SQ X 4.250                      | 1.000 ea |
| MN416A01    | TAG-INSTAL-MAINT no wire (2500 bx)11/25  | 1.000 ea |
| HA4051A00   | PLASTIC CAP FOR GREASE FITTING           | 1.000 ea |
| HW4500A03   | GREASE FITTING, .125 NPT 1610(ALEMITE) 8 | 1.000 ea |
| HW4500A20   | 1/8NPT SL PIPE PLUG                      | 1.000 ea |
| MJ1000A02   | GREASE, POLYREX EM EXXON                 | 0.030 lb |
| HA4051A00   | PLASTIC CAP FOR GREASE FITTING           | 1.000 ea |
| HW4500A03   | GREASE FITTING, .125 NPT 1610(ALEMITE) 8 | 1.000 ea |
| HW4500A20   | 1/8NPT SL PIPE PLUG                      | 1.000 ea |
| MG1050Y01   | CELEROL BALDOR GOLD *5 GALLON BUCKET*    | 0.080 ga |
| 85XU0407S04 | 4X1/4 U DRIVE PIN STAINLESS              | 4.000 ea |
| 42AD2001A01 | BAFFLE PLATE 42 OPEN, SLOTTED BAND MTRS  | 1.000 ea |

|             |                                          |          |
|-------------|------------------------------------------|----------|
| 42AD2001A01 | BAFFLE PLATE 42 OPEN, SLOTTED BAND MTRS  | 1.000 ea |
| HA3151A12   | THRUBOLT STUD 1/2-13 X 23.00             | 4.000 ea |
| LB1624      | COMBINED WARNING LABEL, ISO/ANSI PICTOGR | 1.000 ea |
| LC0695      | CONNECTION LABEL                         | 1.000 ea |
| NP2138L     | ALUM SUPER-E UL PREM CC (300             | 1.000 ea |
| 42PA1000    | PACKAGING GROUP PRINT PK1024A07          | 1.000 ea |
| PE-0000013  | ZRTG PE ASSEMBLY                         | 1.000 ea |

**Accessories**

| Part number | Description | Multiplier |
|-------------|-------------|------------|
| 42-1400     | C FACE KIT  | A8         |

**AC Induction Motor Performance Data**

Record # 13773

Typical performance - not guaranteed values

| Winding: 42WGW588-R001 |          |      | Type: 4278M                           |   | Enclosure: OPSB           |                       |             |          |
|------------------------|----------|------|---------------------------------------|---|---------------------------|-----------------------|-------------|----------|
| Nameplate Data         |          |      | 200 V, 60 Hz:<br>Single Voltage Motor |   |                           |                       |             |          |
| Rated Output (HP)      |          | 60   | Full Load Torque                      |   | 177 LB-FT                 |                       |             |          |
| Volts                  |          | 200  | Start Configuration                   |   | direct on line            |                       |             |          |
| Full Load Amps         |          | 160  | Breakdown Torque                      |   | 624 LB-FT                 |                       |             |          |
| R.P.M.                 |          | 1775 | Pull-up Torque                        |   | 245 LB-FT                 |                       |             |          |
| Hz                     | 60 Phase | 3    | Locked-rotor Torque                   |   | 314 LB-FT                 |                       |             |          |
| NEMA Design Code       |          | A    | KVA Code                              | G | Starting Current          |                       | 1080 A      |          |
| Service Factor (S.F.)  |          | 1.15 | No-load Current                       |   | 51.1 A                    |                       |             |          |
| NEMA Nom. Eff.         |          | 95   | Power Factor                          |   | 87                        | Line-line Res. @ 25°C |             | 0.0158 Ω |
| Rating - Duty          |          | 40C  | AMB-CONT                              |   | Temp. Rise @ Rated Load   |                       | 30°C        |          |
| S.F. Amps              |          |      |                                       |   | Temp. Rise @ S.F. Load    |                       | 40°C        |          |
|                        |          |      |                                       |   | Locked-rotor Power Factor |                       | 26.2        |          |
|                        |          |      |                                       |   | Rotor inertia             |                       | 10.4 LB-FT2 |          |

**Load Characteristics 200 V, 60 Hz, 60 HP**

| % of Rated Load | 25   | 50   | 75   | 100  | 125  | 150  | S.F.  |
|-----------------|------|------|------|------|------|------|-------|
| Power Factor    | 56   | 77   | 85   | 87   | 89   | 89   | 88    |
| Efficiency      | 92.6 | 94.9 | 95.3 | 95   | 94.6 | 93.7 | 94.8  |
| Speed           | 1793 | 1787 | 1781 | 1775 | 1769 | 1762 | 1771  |
| Line amperes    | 62.8 | 89   | 120  | 155  | 192  | 233  | 177.2 |



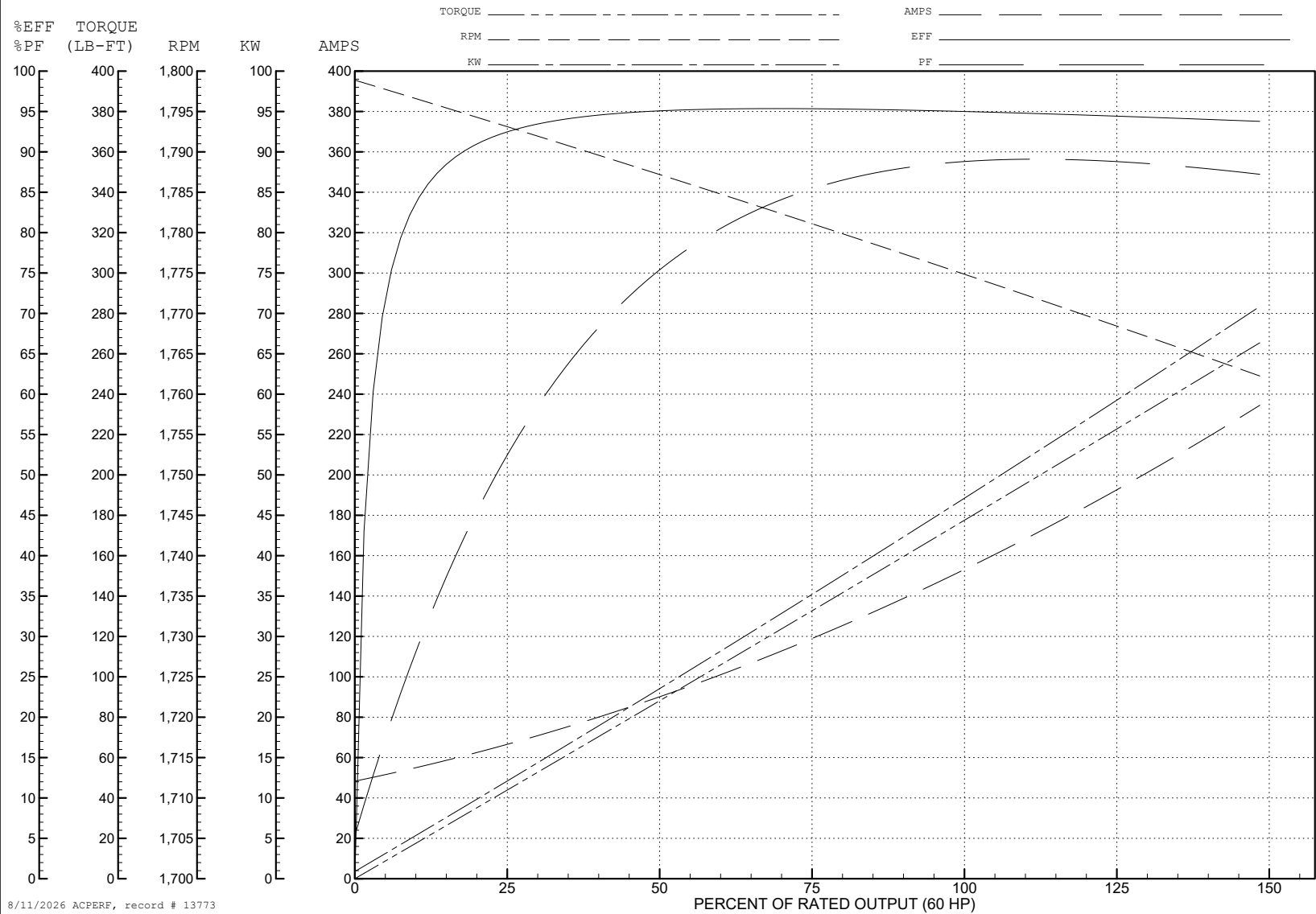
ABB Motors and Mechanical Inc.

WINDING # 42GW588

Typical performance - not guaranteed values.

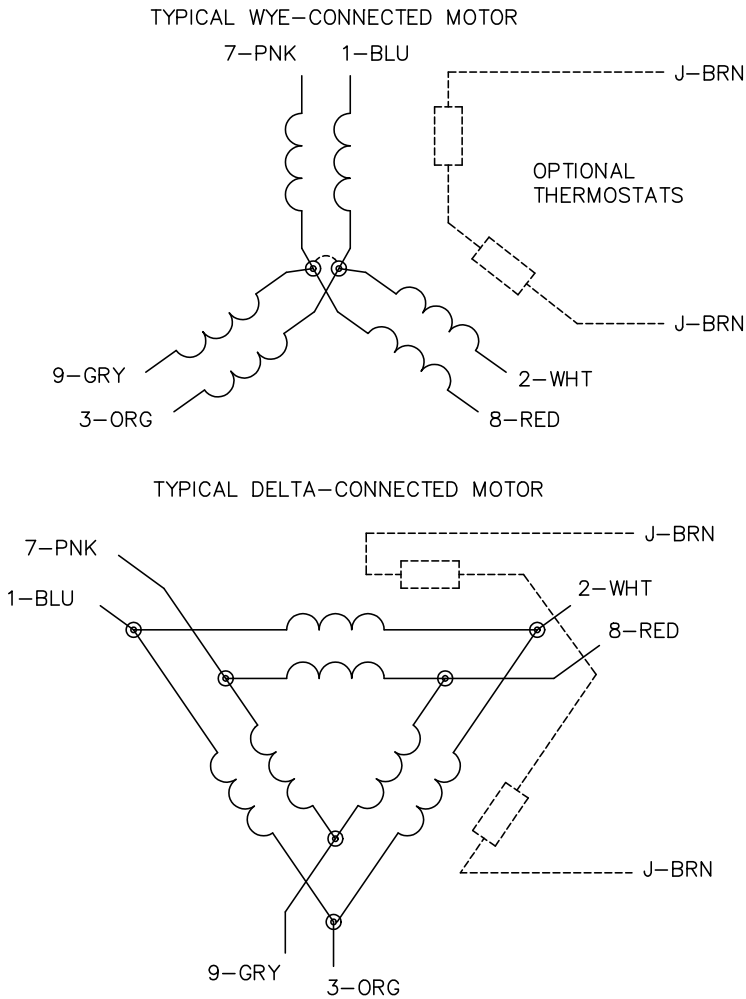
60 HP 3 PH 60 HZ 1775 RPM 200 V 4278M

TORQUES (LB-FT): PO=624 PU=245 LR=314 LRA=1080

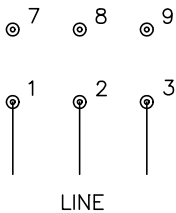




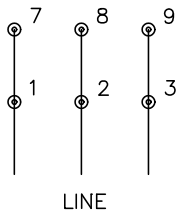
CD0695



START CONNECTION



RUN CONNECTION



NOTES:

1. MOTOR MAY BE 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 ALWAYS BE NUMBERED AS SHOWN.

REV. DESC: REVISE TO SHOW OPTIONAL COLORS

REV. LTR: C

BY: JLP

REVISED: 01/21/99 3:19

TDR: 0171435

S69000

FILE: AAA00005151

MDL: -

MTL: -

**BALDOR ELECTRIC Co.**

3PH, SV, 6 LEADS, PART WINDING START

CD0695