

# ABB BALDOR RELIANCE III

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## Customer information packet

### IDFRPM28754

75HP, 1750, 460V, FL2898, TEFC, F3

**Specifications**

|                               |                         |
|-------------------------------|-------------------------|
| Enclosure                     | TEFC                    |
| Frame                         | FL2898Z                 |
| Frame Material                | Exposed Laminations     |
| Frequency                     | 60.00 Hz                |
| Output @ Frequency            | 75.000 HP @ 60 HZ       |
| Phase                         | 3                       |
| Synchronous Speed @ Frequency | 1800 RPM @ 60 HZ        |
| Voltage @ Frequency           | 460.0 V @ 60 HZ         |
| Agency Approvals              | CCSA US                 |
| Auxiliary Box                 | NO AUXILLARY BOX        |
| Base Indicator                | Rigid                   |
| Bearing Grease Type           | Polyrex EM (-20F +300F) |
| Current @ Voltage             | 94.000 A @ 460.0 V      |
| Duty Rating                   | CONT                    |
| Feedback Device               | NO FEEDBACK             |
| Frame Prefix                  | FL                      |
| Heater Indicator              | No Heater               |
| High Voltage Full Load Amps   | 94.0 a                  |
| Insulation Class              | H                       |
| IP Rating                     | NONE                    |
| Motor Standards               | NEMA                    |
| Mounting Arrangement          | F3                      |
| Overall Length                | 38.59 IN                |
| Product Family                | General Industrial      |
| Pulley End Bearing Type       | Ball                    |
| Pulley Face Code              | Standard                |
| Service Factor                | 1.00                    |
| Shaft Diameter                | 2.624 IN                |
| Shaft Ground Indicator        | Shaft Grounding         |
| Shaft Rotation                | Reversible              |
| Speed                         | 1785 rpm                |
| Starting Method               | Full Voltage            |

**Part Detail**

|              |            |
|--------------|------------|
| Revision     | B          |
| Type         | AC         |
| Mech. spec.  |            |
| Base         |            |
| Status       | PRD/A      |
| Elec. spec.  | L4051A     |
| Layout       | 617248-073 |
| Eff. date    | 03-24-2022 |
| CD Diagram   | 422927-001 |
| Poles        | 04         |
| Leads        |            |
| Proprietary  | False      |
| Created date | 11-01-2021 |

|                          |                            |
|--------------------------|----------------------------|
| Thermal Device - Bearing | None                       |
| Thermal Device - Winding | Normally Closed Thermostat |

**Nameplate**

| 000613006MY |             |                |             |           |               |       |      |           |     |
|-------------|-------------|----------------|-------------|-----------|---------------|-------|------|-----------|-----|
|             | DUTY        | HP             | RPM         | AMPS      | VOLTS         | HZ    |      |           |     |
|             | CONT        | 75             | 1785        |           | 94            | 460   |      | 60        |     |
|             | CONT        | 75             | 3565        |           | 89            | 460   |      | 120       |     |
|             |             |                |             |           |               |       |      |           |     |
| CAT.NO.     | IDFRPM28754 |                |             | SPEC. NO. | F28-A000-0373 |       |      |           |     |
| SER.NO      |             |                |             | FR        | FL2898Z       | INSUL | H    |           |     |
| PH.         | 3           | MAX SAFE SPEED |             |           | 5000          | AMB.  | 40   | MIN. AMB. | -25 |
| DESIGN NO.  | L4051A      |                | TYPE        |           |               | ENCL. | TEFC |           |     |
| S.F.        | 1.00        |                | D.E. BRG.   |           | 75BC02J30X    |       |      |           |     |
| ENCL MOD    |             |                | O.D.E. BRG. |           | 55BC02J30X    |       |      |           |     |
|             | IP44        |                |             |           |               |       |      |           |     |
|             |             |                |             |           |               |       |      |           |     |

|             |        |              |      |                                       |           |                         |       |    |      |      |           |
|-------------|--------|--------------|------|---------------------------------------|-----------|-------------------------|-------|----|------|------|-----------|
| REL S.O.    | -      | VOLTS        | 460  | ENCLOSURE                             | TEFC      | WYE                     | CONN  | EQ | CKT  | OHMS | PER PHASE |
| FRAME       | FL2898 | AMPS         | 94   | MAX SAFE RPM                          | 4800      | (AT BASE RATING, 25 °C) |       |    |      |      |           |
| HP          | 75     | DUTY         | CONT | IM (AMPS)                             | 45        | R1                      | .0315 | X1 | .226 |      |           |
| BASE SPEED  | 1785   | S.F.         | 1.0  | P.F.@NL/FL                            | .040/.804 | R2                      | .0209 | X2 | .337 |      |           |
| PHASE/HERTZ | 3/60   | AMB °C/INSUL | 40/H | WK <sup>2</sup> (Lb-Ft <sup>2</sup> ) | 11.1      |                         |       | XM | 5.89 |      |           |

### RATED FULL LOAD DATA

|            | RPM  | HP   | TORQUE<br>LB-FT | FUND<br>VOLTS | FREQ-HZ | AMPS |
|------------|------|------|-----------------|---------------|---------|------|
| BASE SPEED | 1784 | 75.0 | 221             | 460           | 60      | 93.7 |
| MAX SPEED  | 3563 | 75.1 | 111             | 460           | 120     | 91.5 |
| MIN SPEED  | 0    | 0    | 221             | 8.53          | .539    | 93.7 |

### LOAD PERFORMANCE AT BASE SPEED

|           | RPM  | HP   | TORQUE<br>LB-FT | FUND<br>VOLTS | FREQ-HZ | AMPS |
|-----------|------|------|-----------------|---------------|---------|------|
| NO LOAD   | 1800 | 0    | 0               | 460           | 60      | 43.7 |
| 1/4       | 1796 | 18.8 | 55              | 460           | 60      | 49.4 |
| 1/2       | 1792 | 37.5 | 110             | 460           | 60      | 60.9 |
| 3/4       | 1788 | 56.2 | 165             | 460           | 60      | 76.2 |
| FULL LOAD | 1784 | 75.0 | 221             | 460           | 60      | 93.7 |
| O/L       | 1765 | 148  | 442             | 460           | 60      | 174  |

### BLOWER DATA

| VOLTS | PH/HZ | FL AMPS | LR AMPS | FRAME | CFM |
|-------|-------|---------|---------|-------|-----|
|       |       |         |         |       |     |

REMARKS: TYPICAL DATA

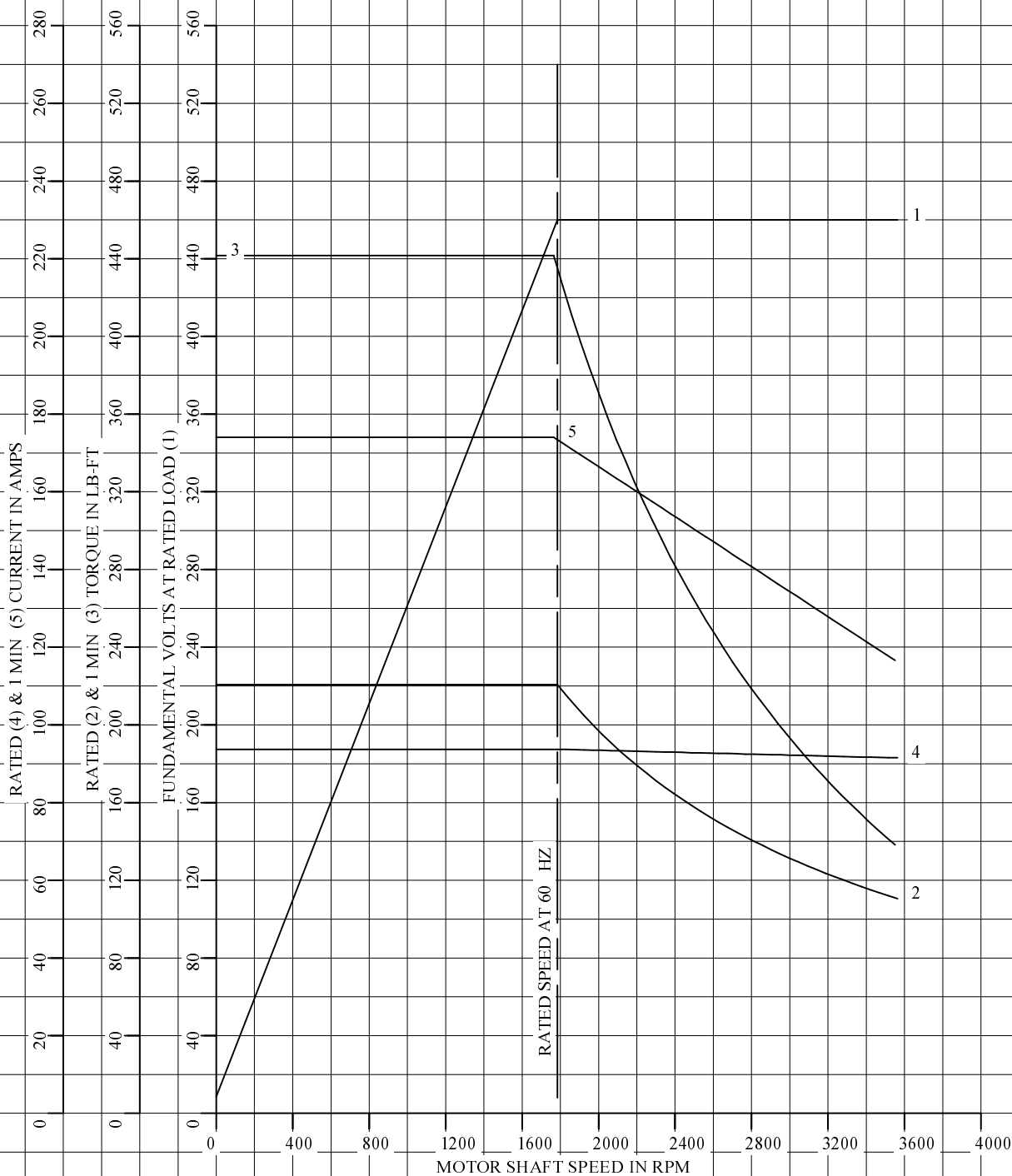


|         |          |
|---------|----------|
| DR. BY  | R. SMITH |
| CK. BY  | R. SMITH |
| APP. BY | S. EVON  |
| DATE    | 6-27-08  |

**A-C MOTOR  
PERFORMANCE  
DATA** **L4051A**  
ISSUE DATE 6-27-08

|             |        |              |      |                                       |           |                                |         |
|-------------|--------|--------------|------|---------------------------------------|-----------|--------------------------------|---------|
| REL S.O.    | -      | VOLTS        | 460  | ENCLOSURE                             | TEFC      | WYE CONN EQ CKT OHMS PER PHASE |         |
| FRAME       | FL2898 | AMPS         | 94   | MAX SAFE RPM                          | 4800      | (AT BASE RATING, 25 °C)        |         |
| HP          | 75     | DUTY         | CONT | IM (AMPS)                             | 45        | R1 .0315                       | X1 .226 |
| BASE SPEED  | 1785   | S.F.         | 1.0  | P.F. @NL/FL                           | .040/.804 | R2 .0209                       | X2 .337 |
| PHASE/HERTZ | 3/60   | AMB °C/INSUL | 40/H | WK <sup>2</sup> (Lb-Ft <sup>2</sup> ) | 11.1      | XM 5.89                        |         |

VARIABLE SPEED AC MOTOR CURVES



REMARKS: TYPICAL DATA  
DATA VALID FOR NAMEPLATE SPEED RANGE ONLY



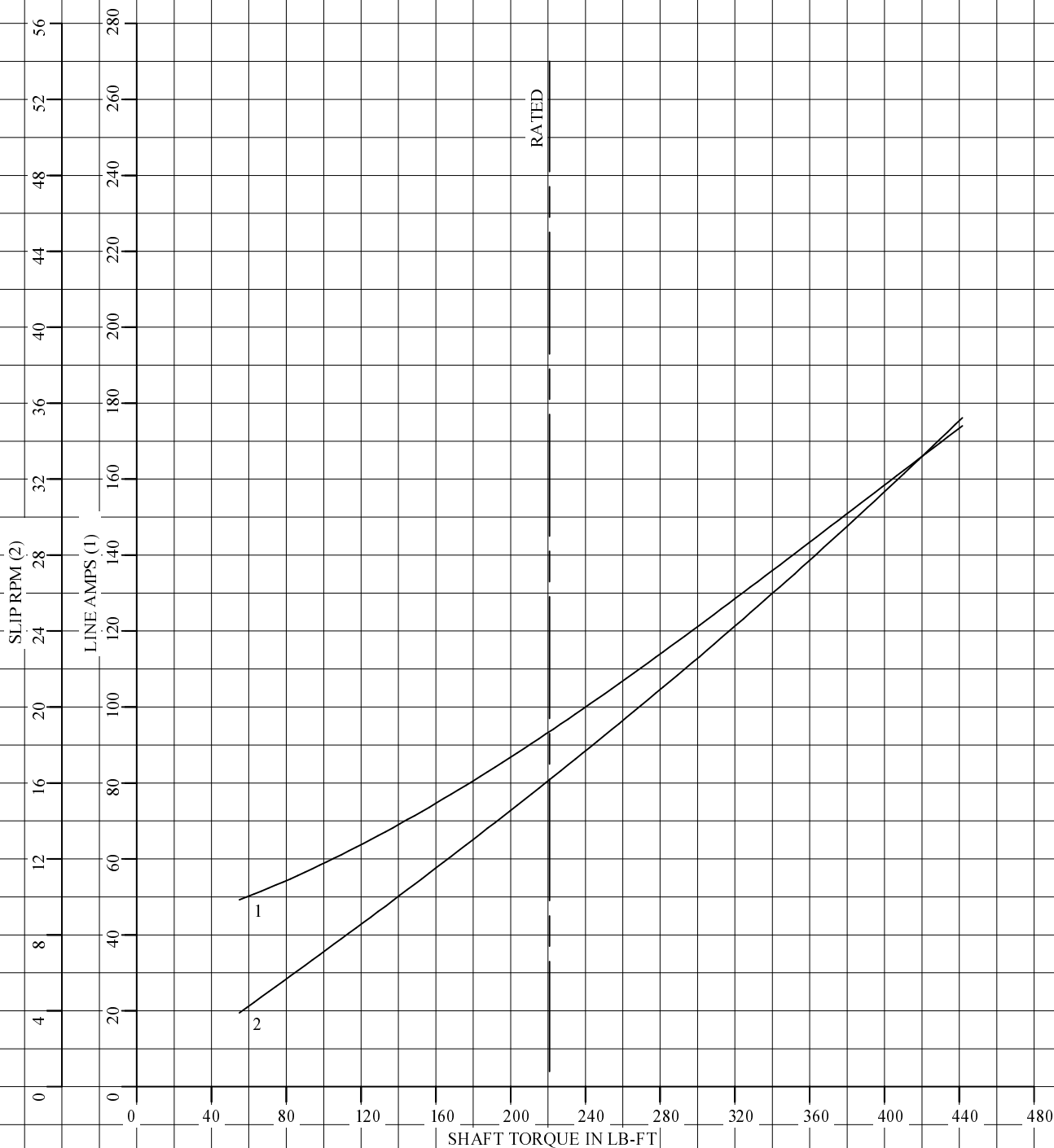
DR. BY R. SMITH  
CK. BY R. SMITH  
APP. BY S. EVON  
DATE 6-27-08

**A-C MOTOR  
PERFORMANCE  
CURVES**

L4051A  
SH 1 OF 2  
ISSUE DATE 6-27-08

|             |        |              |      |                                       |           |                                |         |
|-------------|--------|--------------|------|---------------------------------------|-----------|--------------------------------|---------|
| REL S.O.    | -      | VOLTS        | 460  | ENCLOSURE                             | TEFC      | WYE CONN EQ CKT OHMS PER PHASE |         |
| FRAME       | FL2898 | AMPS         | 94   | MAX SAFE RPM                          | 4800      | (AT BASE RATING, 25 °C)        |         |
| HP          | 75     | DUTY         | CONT | IM (AMPS)                             | 45        | R1 .0315                       | X1 .226 |
| BASE SPEED  | 1785   | S.F.         | 1.0  | P.F.@NL/FL                            | .040/.804 | R2 .0209                       | X2 .337 |
| PHASE/HERTZ | 3/60   | AMB °C/INSUL | 40/H | WK <sup>2</sup> (Lb-Ft <sup>2</sup> ) | 11.1      | XM 5.89                        |         |

LOAD PERFORMANCE (CONSTANT V/HZ RANGE)



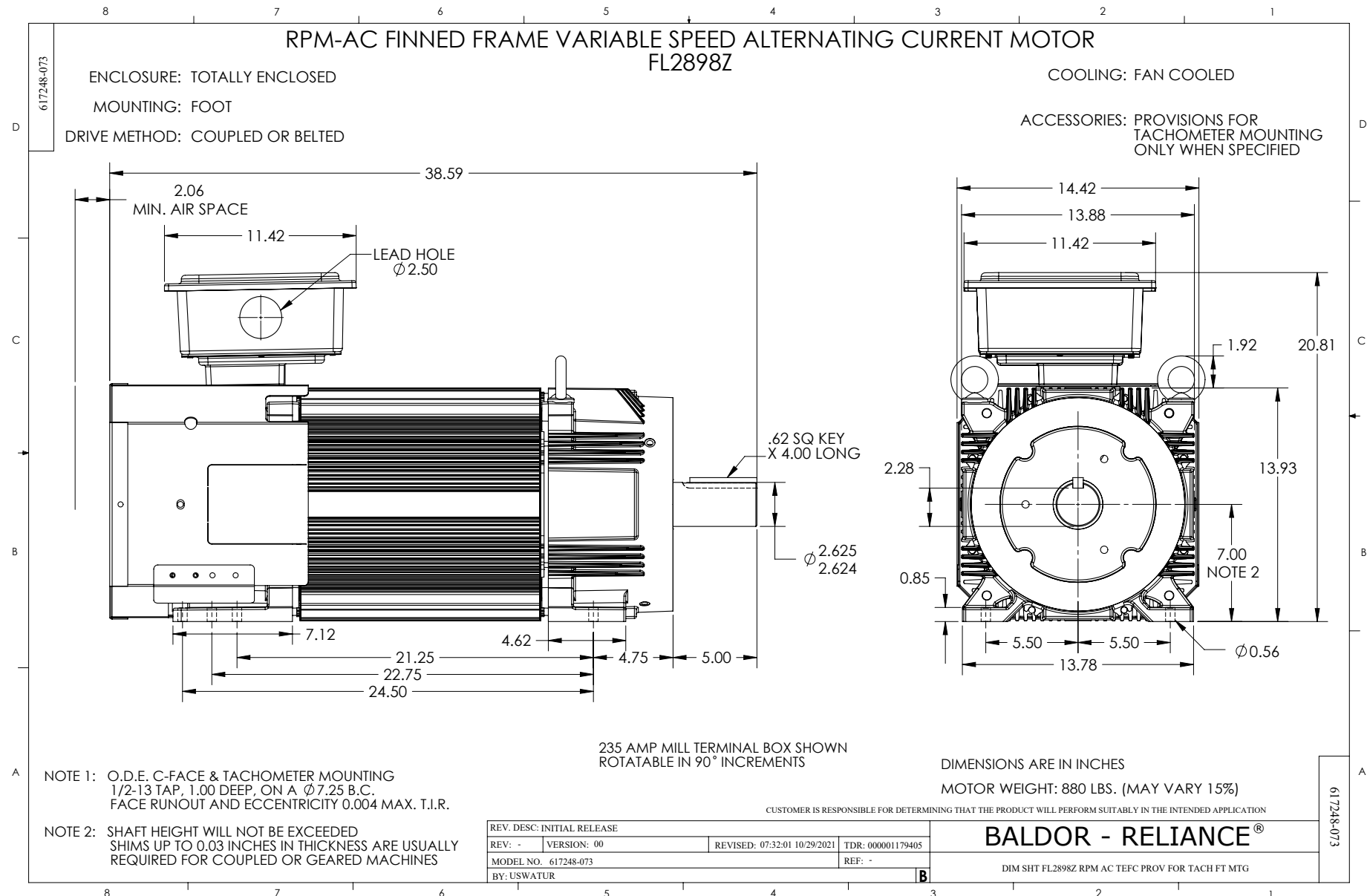
REMARKS: TYPICAL DATA  
DATA VALID FOR NAMEPLATE SPEED RANGE ONLY



DR. BY R. SMITH  
CK. BY R. SMITH  
APP. BY S. EVON  
DATE 6-27-08

**A-C MOTOR  
PERFORMANCE  
CURVES**

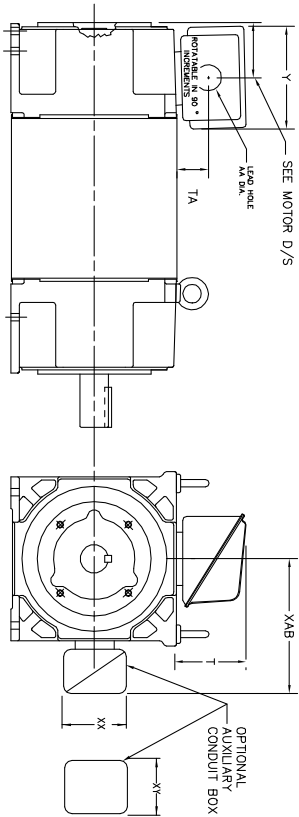
L4051A  
SH 2 OF 2  
ISSUE DATE 6-27-08





INDUSTRIAL ALTERNATING CURRENT MOTORS  
RPM AC

STEEL, CAST IRON, MILL AND TERMINAL BOARD CONDUIT BOX DIMENSIONS  
NEMA FRAMES RL210 thru RL280 and IEC FRAMES RDL132 thru RDL180  
NEMA FRAMES FL180 thru FL280 and IEC FRAMES FDL112 thru FDL180



| FRAME         | TYPE      | TERMINAL STRIP | AMPS | C/BOX      | Y    | TA   | T    | AA        |
|---------------|-----------|----------------|------|------------|------|------|------|-----------|
| FL180         | STEEL     | N              | 40   | 706320003A | 5.00 | 1.62 | 3.00 | 1.12      |
| FL180         | STEEL     | Y/N            | 75   | 706320003A | 6.12 | 2.36 | 4.38 | 1.75/2.00 |
| FL180         | STEEL     | N              | 208  | 706320007A | 6.62 | 2.00 | 7.00 | 2.50/2.00 |
| FL180         | CAST IRON | Y/N            | 100  | 706320004B | 6.75 | 2.50 | 4.38 | 1.0/1.75  |
| FL180 & FDL11 | MILL      | Y              | 100  | 706310056A | 7.75 | 2.30 | 4.40 | PG29/PG16 |

|               |           |     |     |            |       |      |      |           |
|---------------|-----------|-----|-----|------------|-------|------|------|-----------|
| FL210 & RL210 | STEEL     | N   | 61  | 075452000B | 6.34  | 2.00 | 4.12 | 1.75      |
| FL210 & RL210 | STEEL     | N   | 121 | 075452001A | 7.69  | 2.38 | 5.25 | 1.94      |
| FL210 & RL210 | STEEL     | N   | 306 | 706320016A | 9.00  | 4.12 | 8.44 | 4.59      |
| FL210 & RL210 | CAST IRON | N   | 110 | 075460062B | 7.25  | 2.50 | 5.25 | 1.5 TAP   |
| FL210 & RL210 | MILL      | Y   | 100 | 706310229A | 7.75  | 2.30 | 4.40 | PG29/PG16 |
| FL210 & RL210 | MILL      | Y   | 160 | 706310056A | 9.00  | 3.06 | 5.40 | PG36/PG16 |
| FL210 & RL210 | MILL      | Y/N | 235 | 706310056B | 11.42 | 4.00 | 6.72 | 2.50      |

|               |           |     |     |            |       |      |       |           |
|---------------|-----------|-----|-----|------------|-------|------|-------|-----------|
| FL250 & RL250 | STEEL     | N   | 61  | 075452000B | 6.34  | 2.00 | 4.12  | 1.75      |
| FL250 & RL250 | STEEL     | N   | 121 | 075452001A | 7.69  | 2.38 | 5.25  | 1.94      |
| FL250 & RL250 | STEEL     | N   | 306 | 706320016A | 9.00  | 4.12 | 8.44  | 4.59      |
| FL250 & RL250 | CAST IRON | N   | 110 | 075460062B | 7.25  | 2.50 | 5.25  | 1.5 TAP   |
| FL250 & RL250 | CAST IRON | N   | 210 | 706320013A | 10.50 | 4.88 | 9.00  | 4.0 TAP   |
| FL250 & RL250 | MILL      | Y   | 100 | 706310229A | 7.75  | 2.30 | 4.40  | PG29/PG16 |
| FL250 & RL250 | MILL      | Y   | 160 | 706310056B | 9.00  | 3.06 | 5.40  | PG36/PG16 |
| FL250 & RL250 | MILL      | Y/N | 235 | 706310057A | 11.42 | 4.00 | 6.72  | 2.50      |
| FL250 & RL250 | MILL      | Y   | 235 | 706310063B | 14.39 | 7.43 | 12.15 | BLANK     |

|               |           |     |     |            |       |      |       |           |
|---------------|-----------|-----|-----|------------|-------|------|-------|-----------|
| FL280 & RL280 | STEEL     | N   | 160 | 706320029A | 7.25  | 3.50 | 7.06  | 2.50      |
| FL280 & RL280 | STEEL     | N   | 306 | 706320016A | 9.00  | 4.12 | 8.44  | 4.59      |
| FL280 & RL280 | STEEL     | N   | 500 | 702658001C | 14.62 | 7.56 | 12.70 | 5.00      |
| FL280 & RL280 | CAST IRON | N   | 140 | 706320012B | 9.25  | 4.81 | 8.56  | 3.0 TAP   |
| FL280 & RL280 | CAST IRON | N   | 210 | 706320013A | 10.50 | 4.88 | 9.00  | 4.0 TAP   |
| FL280 & RL280 | CAST IRON | N   | 510 | 706320014D | 15.00 | 7.56 | 12.81 | 5.0 TAP   |
| FL280 & RL280 | MILL      | Y   | 100 | 706310056A | 7.75  | 2.30 | 4.40  | PG29/PG16 |
| FL280 & RL280 | MILL      | Y   | 160 | 706310056B | 9.00  | 3.06 | 5.40  | PG36/PG16 |
| FL280 & RL280 | MILL      | Y/N | 235 | 706310057A | 11.42 | 4.00 | 6.72  | 2.50      |
| FL280 & RL280 | MILL      | Y   | 400 | 706310063B | 14.39 | 7.43 | 12.15 | BLANK     |

| FRAME SIZE        | XAB  | XX   | XY   | PART NUMBER | FRAME SIZE        | XAB   | XX   | XY   | PART NUMBER |
|-------------------|------|------|------|-------------|-------------------|-------|------|------|-------------|
| FL210/RL210/FL112 | 7.38 | 4.25 | 4.25 | 602007-26-A | FL210/RL210/FL112 | 10.88 | 8.00 | 8.00 | 706310-3-B  |
| FL250/RL250/FL160 | 8.44 | 4.25 | 4.25 | 602007-26-A | FL250/RL250/FL160 | 11.88 | 8.00 | 8.00 | 706310-3-B  |
| FL280/RL280/FL180 | 9.12 | 4.25 | 4.25 | 602007-26-A | FL280/RL280/FL180 | 12.62 | 8.00 | 8.00 | 706310-3-B  |

(1) 1"AW CONDUIT.  
(2) 1"AW PIPE TAP.  
(3) CUSTOMER TO PROVIDE HOLE PER CONDUIT.  
(4) 2" DIA. SA OR 1" DIA. DN -46.

TERMINAL BOX CAN BE ROTATED FOR LEAD OUTLET AT TOP, SIDES OR BOTTOM.  
TERMINAL BOX LOCATED ON OPPOSITE SIDE WHEN F-2, V-1, V-4, V-5, V-7,  
OR C-1 MOUNTING IS SPECIFIED. BOX LOCATED ON TOP WHEN SPECIFIED.

CUSTOMER IS RESPONSIBLE FOR DETERMINING THAT BALDOR'S PRODUCT WILL PERFORM SUITABLY IN THE INTENDED APPLICATION.

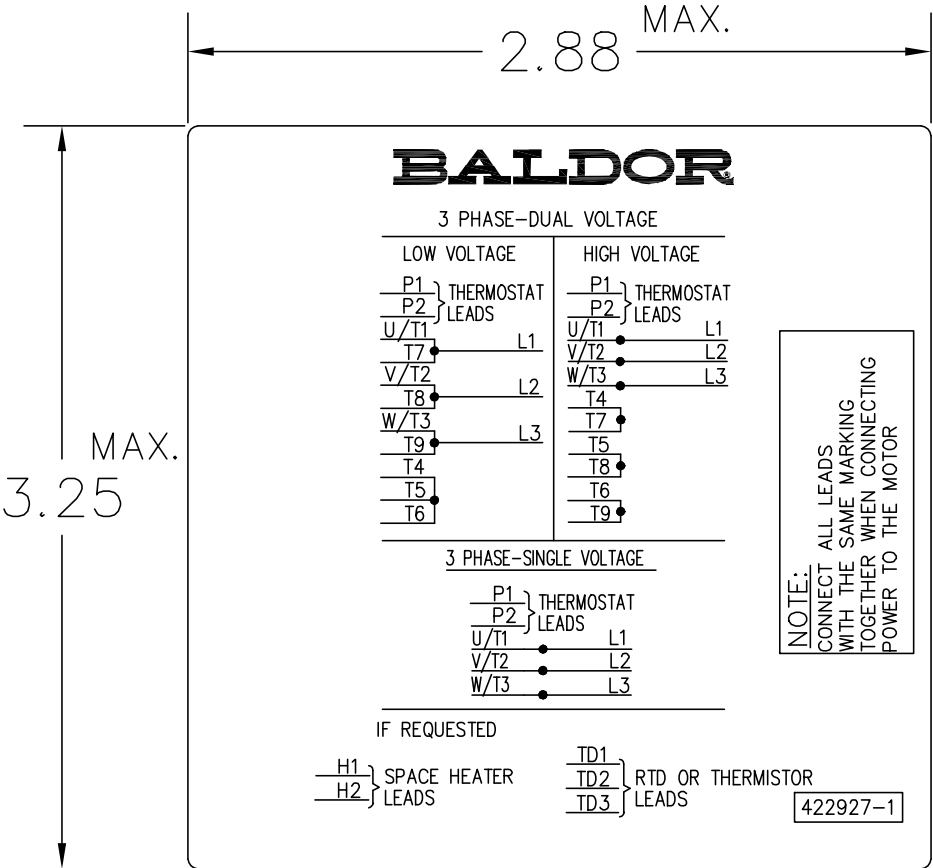
|                                     |                              |                   |
|-------------------------------------|------------------------------|-------------------|
| REV. DESC: ADD 706310-637 & 639 BOX | VERSION: 06                  | TDR: 000001180260 |
| REV. LTR: F                         | REVISED: 11:08:56 10/26/2021 | BY: RCGRWM        |
| FILE: \\RGG\00003\692               |                              |                   |
| MTL: -                              |                              |                   |

BALDOR - RELIANCE®

DIM SHT NEMA RL210-RL280 FL180-FL280 IEC RDL132-RDL180

SH 1 of 1

422927-001



NOTE:  
DATA TO BE SIZED  
SO THAT IT FITS INTO  
MATERIAL DECAL  
DIMENSIONS. MAKE  
LETTERS & NUMBERS  
AS LARGE AS POSSIBLE.

MATERIAL: CERAMATIC DGF-P4  
PERMA GRIP ADHESIVE  
  
ALL LETTERS, NUMBERS  
AND LINES TO BE BLACK  
ON WHITE BACKGROUND.

422927-001

|                                                       |                              |                   |
|-------------------------------------------------------|------------------------------|-------------------|
| REV. DESC: CHANGE BACKGROUND COLOR FROM GOLD TO WHITE |                              |                   |
| REV. LTR: B                                           | VERSION: 02                  | TDR: 000000788708 |
| FILE: \RGG\00000\203                                  | REVISED: 08:09:29 03/04/2013 |                   |
| MTL: -                                                | BY: RGGWT                    |                   |

**BALDOR**  
EXTERNAL CONNECTION LABEL  
SH 1 of 1