

# ABB BALDOR RELIANCE III

---

## Customer information packet

### ZDPM18015C-BV

15HP, 1800RPM, 3PH, 60HZ, 1838C, TEBC, FOOT,

**Specifications**

|                               |                            |
|-------------------------------|----------------------------|
| Enclosure                     | TEAO                       |
| Frame                         | FL1838C                    |
| Frame Material                | Aluminum                   |
| Frequency                     | 60.00 Hz                   |
| Output @ Frequency            | 15.000 HP @ 60 HZ          |
| Phase                         | 3                          |
| Synchronous Speed @ Frequency | 1800 RPM @ 60 HZ           |
| Voltage @ Frequency           | 460.0 V @ 60 HZ            |
| Auxiliary Box                 | NO AUXILLARY BOX           |
| Base Indicator                | Rigid                      |
| Bearing Grease Type           | No Grease                  |
| Current @ Voltage             | 16.000 A @ 460.0 V         |
| Duty Rating                   | CONT                       |
| Feedback Device               | TACHOMETER                 |
| Frame Prefix                  | FL                         |
| Heater Indicator              | No Heater                  |
| High Voltage Full Load Amps   | 16.0 a                     |
| Insulation Class              | H                          |
| Motor Standards               | NEMA                       |
| Mounting Arrangement          | F3                         |
| Overall Length                | 24.46 IN                   |
| Product Family                | General Industrial         |
| Pulley End Bearing Type       | Ball                       |
| Pulley Face Code              | C-Face                     |
| Service Factor                | 1.00                       |
| Shaft Diameter                | 1.625 IN                   |
| Shaft Ground Indicator        | No Shaft Grounding         |
| Shaft Rotation                | Reversible                 |
| Speed                         | 1800 rpm                   |
| Thermal Device - Bearing      | None                       |
| Thermal Device - Winding      | Normally Closed Thermostat |

**Part Detail**

|              |            |
|--------------|------------|
| Revision     | E          |
| Type         | AC         |
| Mech. spec.  |            |
| Base         |            |
| Status       | PRD/A      |
| Elec. spec.  | PM3924A    |
| Layout       | 617229-319 |
| Eff. date    | 12-21-2021 |
| CD Diagram   | 422927-001 |
| Poles        | 04         |
| Leads        |            |
| Proprietary  | False      |
| Created date | 04-09-2015 |



Nameplate

|                           |  |               |
|---------------------------|--|---------------|
| 000692000VY               |  |               |
| MEAS OPEN CIRCUIT VOLTAGE |  |               |
| IS                        |  | VOLTS AT RPM. |

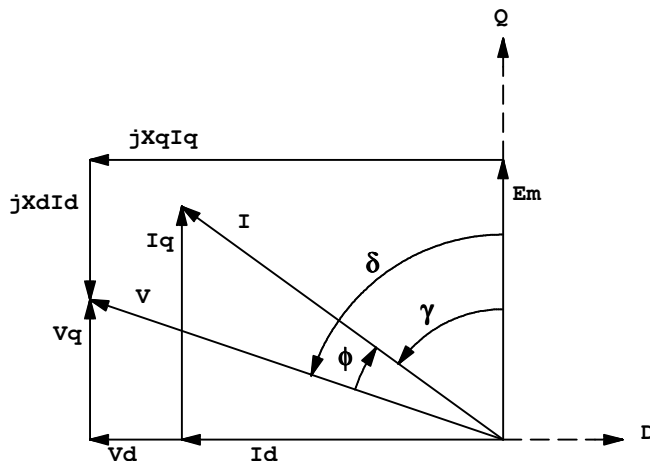
| 000613006MY |               |                |      |             |              |       |         |           |     |
|-------------|---------------|----------------|------|-------------|--------------|-------|---------|-----------|-----|
|             | DUTY          | HP             | RPM  | AMPS        | VOLTS        | HZ    |         |           |     |
|             | CONT          | 15             | 1800 |             | 16.0         | 460   |         | 60        |     |
|             | CONT          | 15             | 3000 |             | 15.4         | 460   |         | 100       |     |
|             |               |                |      |             |              |       |         |           |     |
|             |               |                |      |             |              |       |         |           |     |
| CAT.NO.     | ZDPM18015C-BV |                |      | SPEC. NO.   | P18M0502     |       |         |           |     |
| SER.NO      |               |                |      | FR          | FL 1838C     | INSUL | H       |           |     |
| PH.         | 3             | MAX SAFE SPEED |      |             | 7200         | AMB.  | 40      | MIN. AMB. | -25 |
| DESIGN NO.  | PM3924A       |                |      | TYPE        |              | ENCL. | TEAO-BC |           |     |
| S.F.        | 1.0           |                |      | D.E. BRG.   | 45BC02JPP30A |       |         |           |     |
| ENCL MOD    |               |                |      | O.D.E. BRG. | 35BC02JPP30A |       |         |           |     |
|             |               |                |      |             |              |       |         |           |     |

|                  |                   |                                           |                           |
|------------------|-------------------|-------------------------------------------|---------------------------|
| S.O. 0           | VOLTS 460         | TYPE IPM                                  | STATOR RES. @ 25 °C .7214 |
| FRAME FL1838     | AMPS 15.6         | ENCLOSURE TEBC                            | OHMS (BETWEEN LINES)      |
| HP 15            | DUTY CONT         | MAX SAFE RPM 7200                         |                           |
| BASE SPEED 1800  | S.F. 1.0          | WK <sup>2</sup> (Lb-Ft <sup>2</sup> ) .63 |                           |
| PHASE/HERTZ 3/60 | AMB °C/INSUL 40/H | MAX INSTANTANEOUS OVERLOAD AMPS 46.8      |                           |

### VARIABLE SPEED PERFORMANCE

| HP           | AMPS<br>(rms) | RPM  | GAMMA* | POWER<br>FACT. | EFF. | VOLTS<br>(L-L)<br>(rms) | Em (L-N)<br>(rms) | Lq<br>(mH) | Ld<br>(mH) |
|--------------|---------------|------|--------|----------------|------|-------------------------|-------------------|------------|------------|
| OpenCkt**    | N/A           | 1800 | 5.0    | N/A            | N/A  | N/A                     | 185               | N/A        | N/A        |
| OpenCkt, hot | N/A           | 1800 | 5.0    | N/A            | N/A  | N/A                     | 173               | N/A        | N/A        |
| 3.00         | 3.9           | 1800 | 29.4   | 98.1           | 91.4 | 373                     | 173               | 109        | 15.6       |
| 6.80         | 7.8           | 1800 | 38.4   | 97.3           | 93.4 | 416                     | 173               | 81.0       | 15.3       |
| 10.8         | 11.7          | 1800 | 42.9   | 96.4           | 94.4 | 437                     | 173               | 65.0       | 14.9       |
| 15.0         | 15.6          | 1800 | 47.4   | 95.7           | 94.6 | 458                     | 173               | 59.0       | 14.5       |
|              |               |      |        |                |      |                         |                   |            |            |

**Remarks:** TYPICAL DATA  
 CONSTANT TORQUE 0-1800 RPM, CONSTANT POWER 1800-3000 RPM  
 200% OVERLOAD BELOW BASE SPEED TAPERED TO 100% AT 3000 RPM



\*Gamma is the current angle relative to counter emf, defined to be positive when current leads counter emf.

Equivalently, Gamma is positive when Id is negative.

\*\*Data at 25°C - all other data at rated temperature

**BALDOR**

|         |         |
|---------|---------|
| DR. BY  | CD      |
| CK. BY  | RM      |
| APP. BY | RM      |
| DATE    | 4/23/10 |

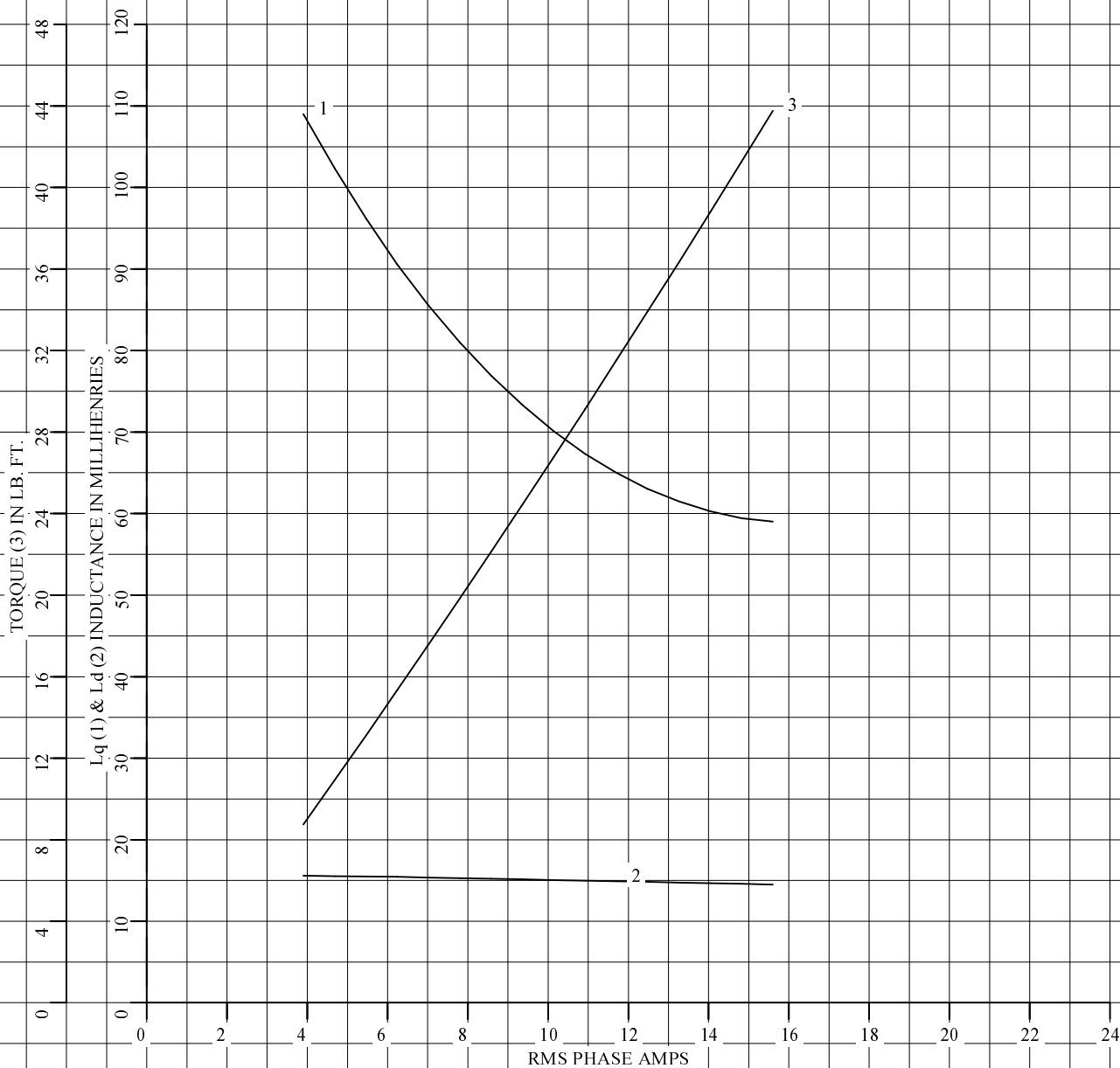
**IPM MOTOR  
 PERFORMANCE PM3924A  
 DATA**

ISSUE DATE 4/23/10

|                  |                   |                                           |                           |
|------------------|-------------------|-------------------------------------------|---------------------------|
| S.O. 0           | VOLTS 460         | TYPE IPM                                  | STATOR RES. @ 25 °C .7214 |
| FRAME FL1838     | AMPS 15.6         | ENCLOSURE TEBC                            | OHMS (BETWEEN LINES)      |
| HP 15            | DUTY CONT         | MAX SAFE RPM 7200                         |                           |
| BASE SPEED 1800  | S.F. 1.0          | WK <sup>2</sup> (Lb-Ft <sup>2</sup> ) .63 |                           |
| PHASE/HERTZ 3/60 | AMB °C/INSUL 40/H | MAX INSTANTANEOUS OVERLOAD AMPS 46.8      |                           |

### Lq, Ld, & Torque vs. RMS Phase Amps

CONSTANT TORQUE 0-1800 RPM, CONSTANT POWER 1800-3000 RPM  
200% OVERLOAD BELOW BASE SPEED TAPERED TO 100% AT 3000 RPM



REMARKS: TYPICAL DATA

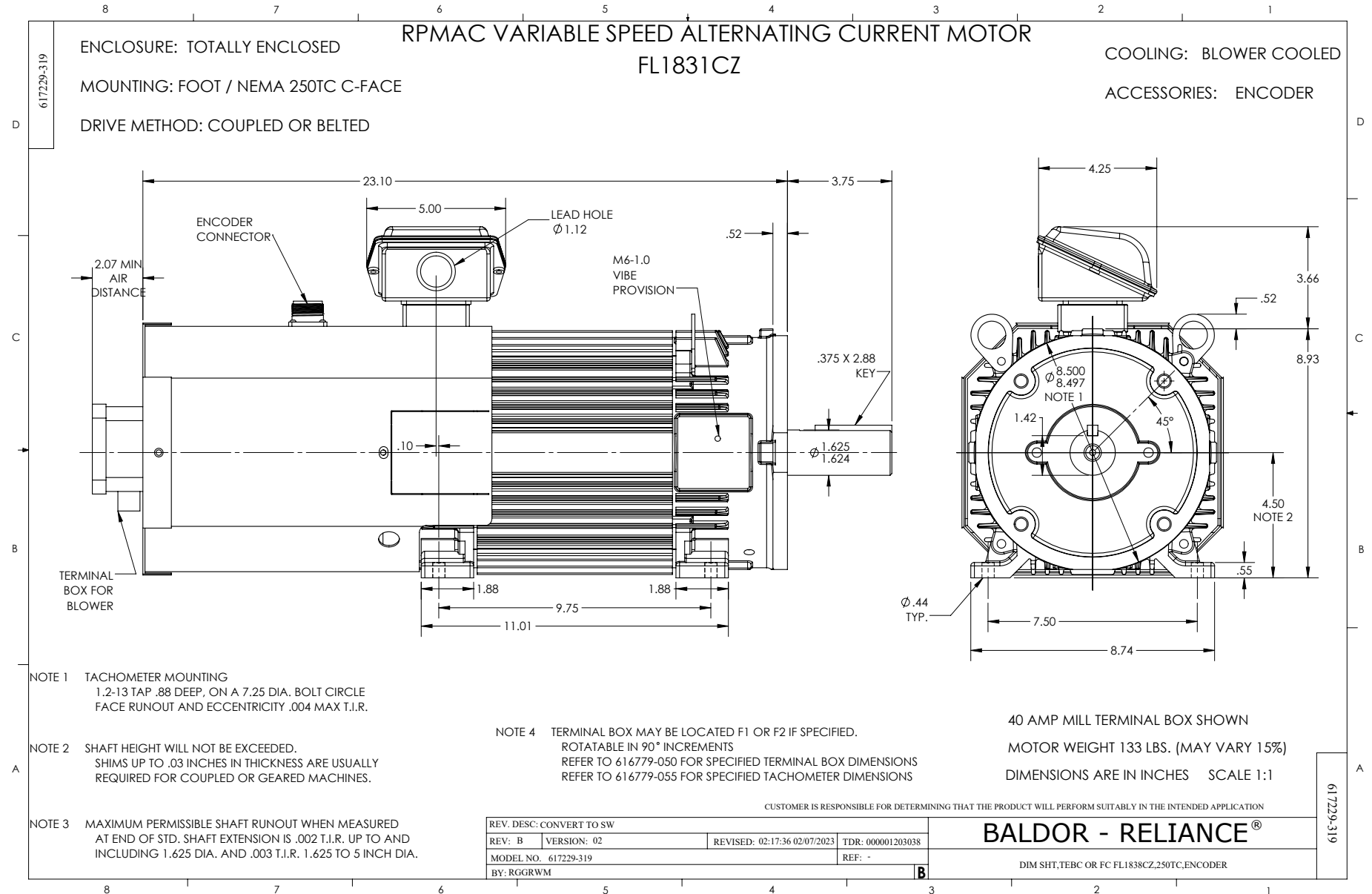
**BALDOR**

|         |         |
|---------|---------|
| DR. BY  | CD      |
| CK. BY  | RM      |
| APP. BY | RM      |
| DATE    | 4/23/10 |

**IPM MOTOR  
PERFORMANCE  
DATA**

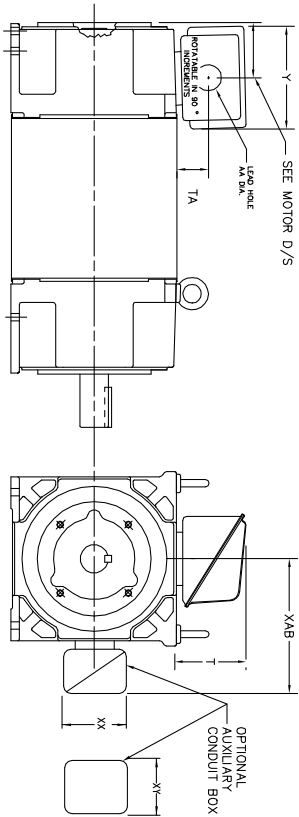
**PM3924A**

ISSUE DATE 4/23/10



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 | 2.38 | 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            | 208  | 706320004C | 6.75 | 2.58 | 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 | 075460052B | 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 | 075460052B | 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" MIN. CONDUIT.  
(2) 1/2" MIN. PIPE TAP.  
(3) CUSTOMER TO PROVIDE HOLE PER CONDUIT.  
(4) 2" DIA. DIA. OR 1" DIA. DIA. DIA.

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.

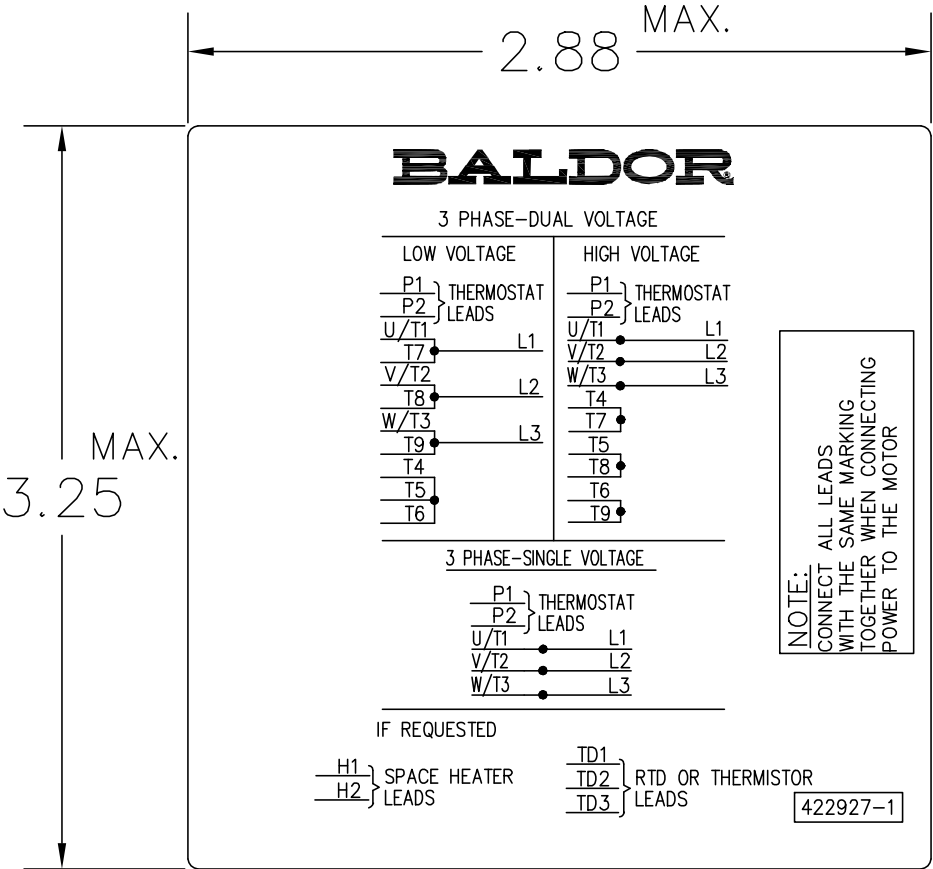
|                                     |                              |
|-------------------------------------|------------------------------|
| REV. DESC: ADD 706310-637 & 639 BOX | TDR: 000001180260            |
| REV. LTR: F                         | VERSION: 06                  |
| FILE: \RGG\00003\692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

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