

# ABB BALDOR RELIANCE III

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## Customer information packet

### IDDRPM5015004

1500HP, 1750, 460V, RL5030, DPFV, F1

**Specifications**

|                               |                         |
|-------------------------------|-------------------------|
| Enclosure                     | DPFV                    |
| Frame                         | RL5030Z                 |
| Frame Material                | Exposed Laminations     |
| Frequency                     | 60.00 Hz                |
| Output @ Frequency            | 1500.000 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             | 1686.000 A @ 460.0 V    |
| Duty Rating                   | CONT                    |
| Feedback Device               | NO FEEDBACK             |
| Frame Prefix                  | RL                      |
| Heater Indicator              | No Heater               |
| High Voltage Full Load Amps   | 1686.0 a                |
| Insulation Class              | H                       |
| IP Rating                     | NONE                    |
| Motor Standards               | NEMA                    |
| Mounting Arrangement          | F1                      |
| Overall Length                | 71.42 IN                |
| Product Family                | General Industrial      |
| Pulley End Bearing Type       | Ball                    |
| Pulley Face Code              | Standard                |
| Service Factor                | 1.00                    |
| Shaft Diameter                | 4.500 IN                |
| Shaft Ground Indicator        | Shaft Grounding         |
| Shaft Rotation                | Reversible              |
| Speed                         | 1785 rpm                |
| Starting Method               | Full Voltage            |

**Part Detail**

|              |            |
|--------------|------------|
| Revision     | C          |
| Type         | AC         |
| Mech. spec.  |            |
| Base         |            |
| Status       | PRD/A      |
| Elec. spec.  | L9084A     |
| Layout       | 622006-011 |
| Eff. date    | 08-24-2023 |
| CD Diagram   | 422927-001 |
| Poles        | 04         |
| Leads        |            |
| Proprietary  | False      |
| Created date | 11-15-2021 |

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

Nameplate

| 000613006MY |               |                |             |         |               |       |        |           |     |
|-------------|---------------|----------------|-------------|---------|---------------|-------|--------|-----------|-----|
|             | DUTY          | HP             | RPM         | AMPS    | VOLTS         | HZ    |        |           |     |
|             | CONT          | 1500           | 1785        |         | 1686          | 460   |        | 60        |     |
|             | CONT          | 1500           | 2600        |         | 1670          | 460   |        | 87.4      |     |
|             |               |                |             |         |               |       |        |           |     |
|             |               |                |             |         |               |       |        |           |     |
|             |               |                |             |         |               |       |        |           |     |
| CAT.NO.     | IDDRPM5015004 |                | SPEC. NO.   |         | R50-A000-0010 |       |        |           |     |
| SER.NO      |               |                | FR          | RL5030Z | INSUL         | H     |        |           |     |
| PH.         | 3             | MAX SAFE SPEED |             |         | 3000          | AMB.  | 40     | MIN. AMB. | -25 |
| DESIGN NO.  | L9084A        |                | TYPE        |         |               | ENCL. | DPG-FV |           |     |
| S.F.        | 1.00          |                | D.E. BRG.   |         | 120BC02J30X   |       |        |           |     |
| ENCL MOD    |               |                | O.D.E. BRG. |         | 6224/C3J20AA  |       |        |           |     |
|             | IP23          |                |             |         |               |       |        |           |     |
|             |               |                |             |         |               |       |        |           |     |

|            |        |                |      |                                       |           |    |        |    |       |
|------------|--------|----------------|------|---------------------------------------|-----------|----|--------|----|-------|
| FRAME      | RL5030 | AMPS           | 1686 | MAX SAFE SPEED                        | 3000      |    |        |    |       |
| HP         | 1500   | DUTY           | CONT | IM (AMPS)                             | 503       | R1 | .00099 | X1 | .0161 |
| BASE SPEED | 1786   | S.F.           | 1.0  | P.F. @NL / FL                         | .022/.874 | R2 | .00094 | X2 | .0221 |
| PHASE/HZ   | 3/60   | AMB.°C / INSUL | 40/H | WK <sup>2</sup> (Lb-Ft <sup>2</sup> ) | 225       |    |        | XM | .536  |

**RATED FULL LOAD DATA**

|            | RPM  | HP   | TORQUE<br>LB-FT | FUND<br>VOLTS | FREQ-HZ | AMPS |
|------------|------|------|-----------------|---------------|---------|------|
| BASE SPEED | 1786 | 1501 | 4413            | 460           | 60      | 1686 |
| MAX SPEED  | 2600 | 1501 | 3030            | 460           | 87.4    | 1670 |
| MIN SPEED  | 0    | 0    | 4413            | 4.63          | .478    | 1686 |

**LOAD PERFORMANCE AT BASE SPEED**

|           | RPM  | HP   | TORQUE<br>LB-FT | FUND<br>VOLTS | FREQ-HZ | AMPS |
|-----------|------|------|-----------------|---------------|---------|------|
| NO LOAD   | 1800 | 0    | 0               | 460           | 60      | 503  |
| 1/4       | 1797 | 375  | 1097            | 460           | 60      | 640  |
| 1/2       | 1793 | 751  | 2200            | 460           | 60      | 934  |
| 3/4       | 1790 | 1125 | 3301            | 460           | 60      | 1291 |
| FULL LOAD | 1786 | 1500 | 4413            | 460           | 60      | 1686 |
| 0/L       | 1767 | 2941 | 8738            | 460           | 60      | 3423 |

REMARKS:  
TYPICAL DATA  
TYPICAL DATA



DRAWN BY: C. ETIENNE  
CHECKED BY: C. ETIENNE  
APPROVED BY: J. MARTIN  
DATE: 10/4/21

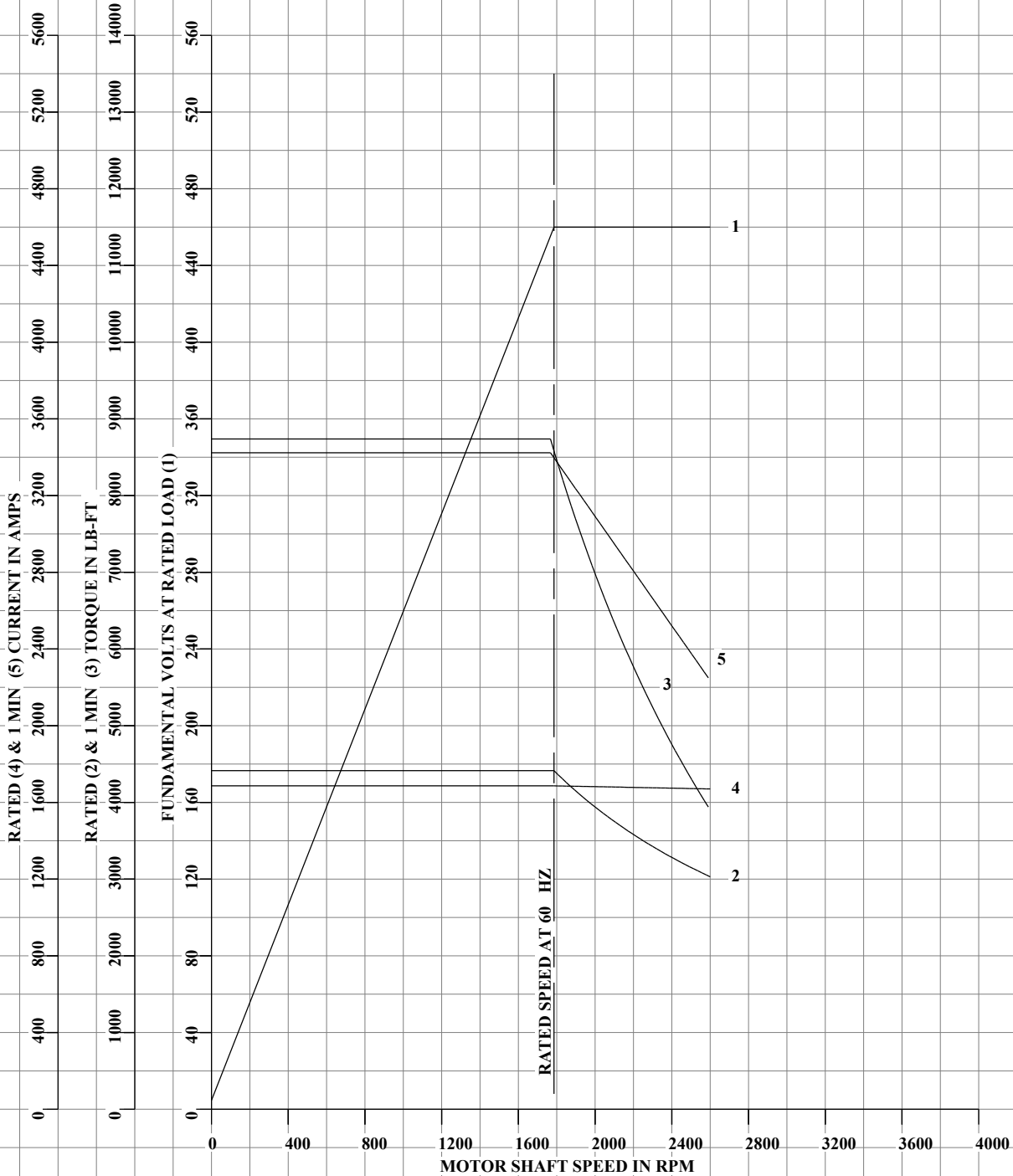
AC MOTOR  
PERFORMANCE  
DATA

**L9084A**

ISSUE DATE 10/4/21

| FRAME      | RL5030 | VOLTS          | 460  | ENCLOSURE                             | DPFV      | WYE CONN EQ CKT OHMS PER PHASE<br>(AT BASE RATING, 25°C) |        |          |
|------------|--------|----------------|------|---------------------------------------|-----------|----------------------------------------------------------|--------|----------|
| HP         | 1500   | AMPS           | 1686 | MAX SAFE SPEED                        | 3000      | R1                                                       | .00099 | X1 .0161 |
| BASE SPEED | 1786   | DUTY           | CONT | IM (AMPS)                             | 503       | R2                                                       | .00094 | X2 .0221 |
| PHASE/HZ   | 3/60   | S.F.           | 1.0  | P.F. @NL / FL                         | .022/.874 |                                                          |        | XM .536  |
|            |        | AMB.°C / INSUL | 40/H | WK <sup>2</sup> (Lb-Ft <sup>2</sup> ) | 225       |                                                          |        |          |

**TYPICAL DATA  
VARIABLE SPEED AC MOTOR CURVES**



TYPICAL DATA, DATA VALID FOR NAMEPLATE SPEED RANGE ONLY



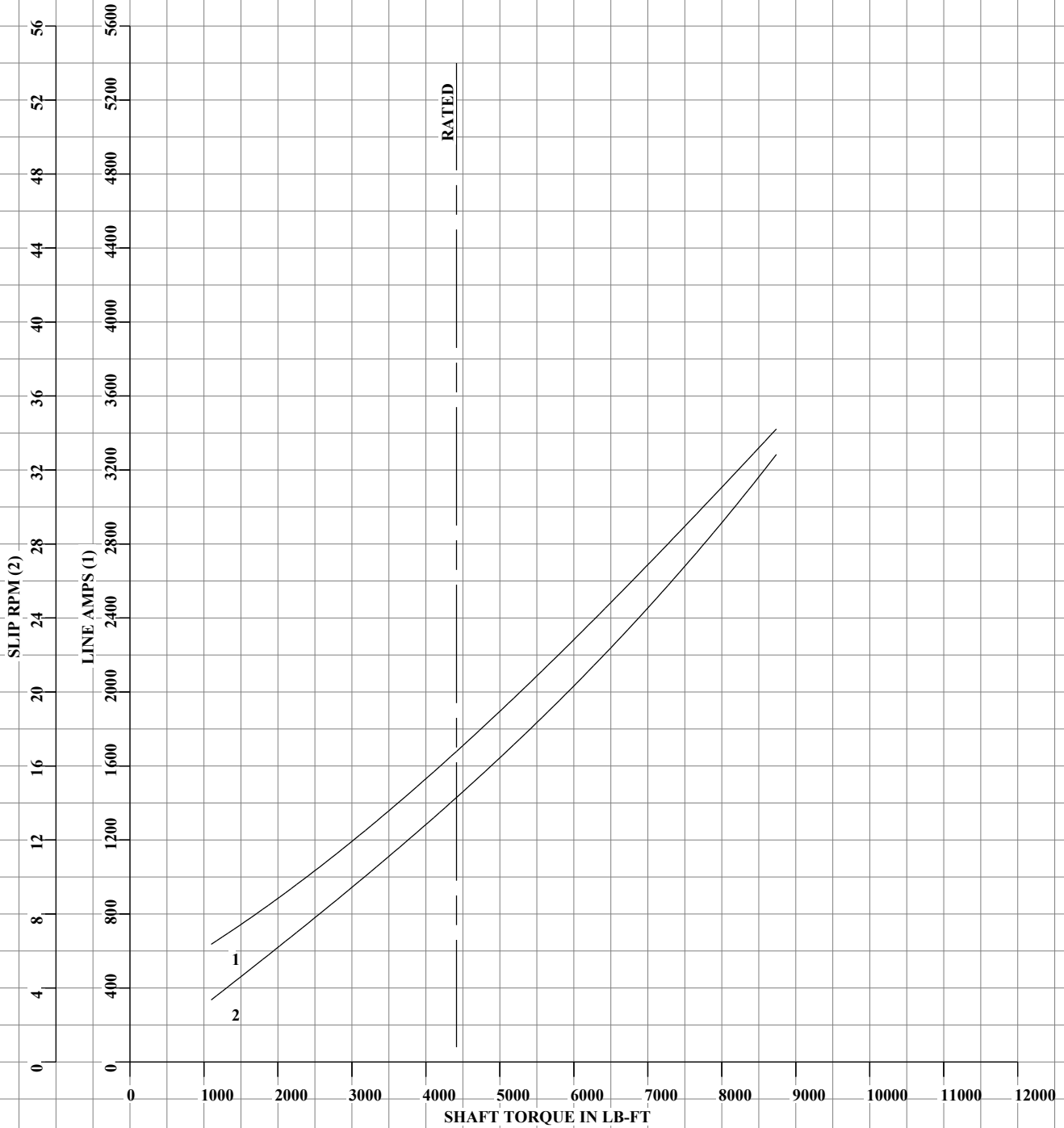
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 CHECKED BY: C. ETIENNE  
 APPROVED BY: J. MARTIN  
 DATE: 10/4/21

**AC MOTOR  
PERFORMANCE  
DATA**

**L9084A**  
 ISSUE DATE: 10/4/21

| FRAME      | RL5030 | VOLTS          | 460  | ENCLOSURE                             | DPFV      | WYE CONN EQ CKT OHMS PER PHASE<br>(AT BASE RATING, 25°C) |        |          |
|------------|--------|----------------|------|---------------------------------------|-----------|----------------------------------------------------------|--------|----------|
| HP         | 1500   | AMPS           | 1686 | MAX SAFE SPEED                        | 3000      | R1                                                       | .00099 | X1 .0161 |
| BASE SPEED | 1786   | DUTY           | CONT | IM (AMPS)                             | 503       | R2                                                       | .00094 | X2 .0221 |
| PHASE/HZ   | 3/60   | S.F.           | 1.0  | P.F. @NL / FL                         | .022/.874 |                                                          |        | XM .536  |
|            |        | AMB.°C / INSUL | 40/H | WK <sup>2</sup> (Lb-Ft <sup>2</sup> ) | 225       |                                                          |        |          |

**TYPICAL DATA  
LOAD PERFORMANCE (CONSTANT V/HZ RANGE)**



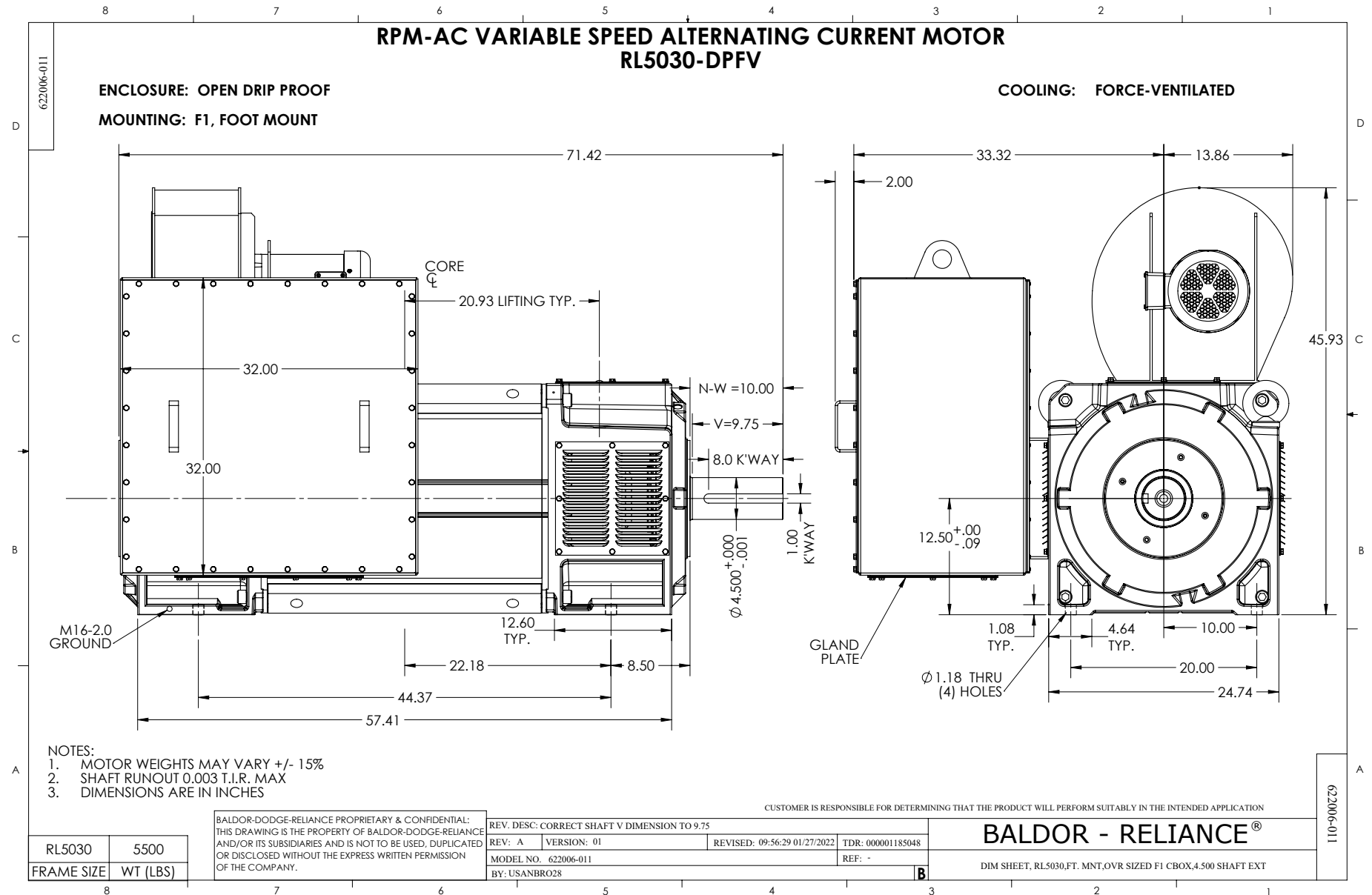
TYPICAL DATA, DATA VALID FOR NAMEPLATE SPEED RANGE ONLY



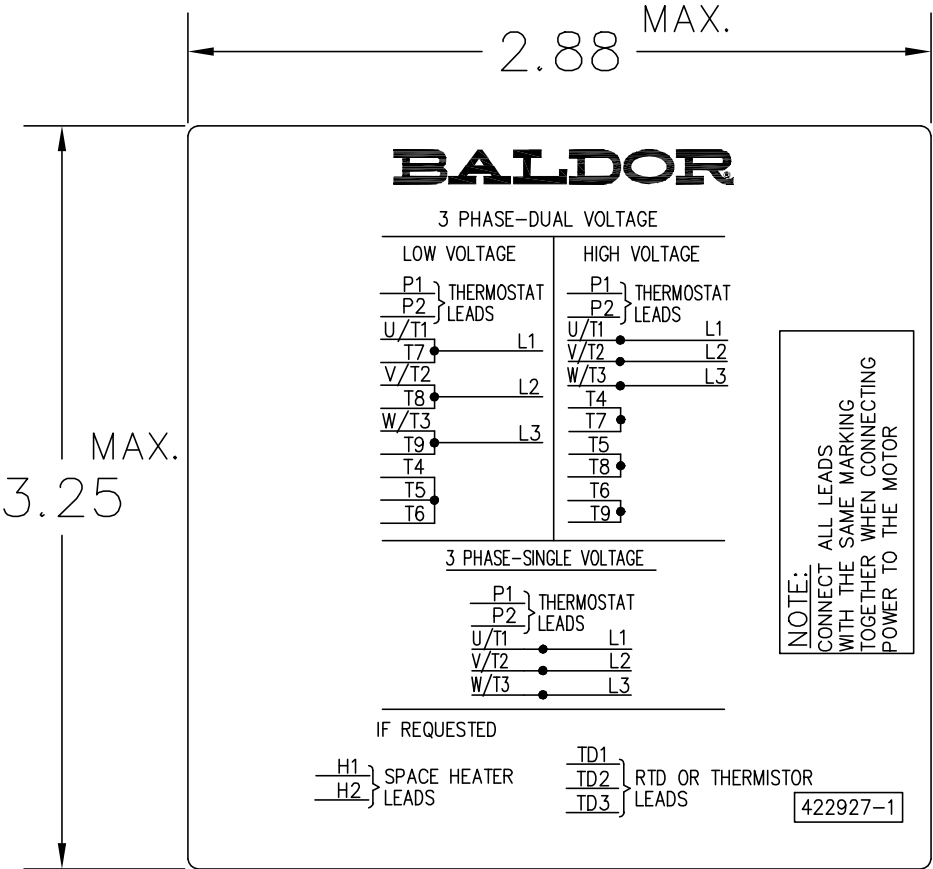
DRAWN BY: C. ETIENNE  
 CHECKED BY: C. ETIENNE  
 APPROVED BY: J. MARTIN  
 DATE: 10/4/21

**AC MOTOR  
PERFORMANCE  
DATA**

**L9084A**  
 ISSUE DATE: 10/4/21



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