

# ABB BALDOR RELIANCE III

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## Customer information packet

### IDDRPM509006

900HP, 1150, 460V, RL5024, DPFV, F1

**Specifications**

|                                      |                         |
|--------------------------------------|-------------------------|
| <b>Enclosure</b>                     | DPFV                    |
| <b>Frame</b>                         | RL5024Z                 |
| <b>Frame Material</b>                | Exposed Laminations     |
| <b>Frequency</b>                     | 389.00 Hz               |
| <b>Output @ Frequency</b>            | 900.000 HP @ 389 HZ     |
| <b>Phase</b>                         | 3                       |
| <b>Synchronous Speed @ Frequency</b> | 1200 RPM @ 389 HZ       |
| <b>Voltage @ Frequency</b>           | 460.0 V @ 389 HZ        |
| <b>Agency Approvals</b>              | CCSA US                 |
| <b>Auxiliary Box</b>                 | NO AUXILLARY BOX        |
| <b>Base Indicator</b>                | Rigid                   |
| <b>Bearing Grease Type</b>           | Polyrex EM (-20F +300F) |
| <b>Current @ Voltage</b>             | 1031.000 A @ 460.0 V    |
| <b>Duty Rating</b>                   | CONT                    |
| <b>Feedback Device</b>               | ENCODER                 |
| <b>Frame Prefix</b>                  | RL                      |
| <b>Heater Indicator</b>              | No Heater               |
| <b>High Voltage Full Load Amps</b>   | 1031.0 a                |
| <b>Insulation Class</b>              | H                       |
| <b>IP Rating</b>                     | NONE                    |
| <b>Motor Standards</b>               | NEMA                    |
| <b>Mounting Arrangement</b>          | F1                      |
| <b>Overall Length</b>                | 65.51 IN                |
| <b>Product Family</b>                | General Industrial      |
| <b>Pulley End Bearing Type</b>       | Ball                    |
| <b>Pulley Face Code</b>              | Standard                |
| <b>Service Factor</b>                | 1.00                    |
| <b>Shaft Diameter</b>                | 4.500 IN                |
| <b>Shaft Ground Indicator</b>        | Shaft Grounding         |
| <b>Shaft Rotation</b>                | Reversible              |
| <b>Speed</b>                         | 1150 rpm                |
| <b>Starting Method</b>               | Full Voltage            |

**Part Detail**

|                     |            |
|---------------------|------------|
| <b>Revision</b>     | C          |
| <b>Type</b>         | AC         |
| <b>Mech. spec.</b>  |            |
| <b>Base</b>         |            |
| <b>Status</b>       | PRD/A      |
| <b>Elec. spec.</b>  | L9079A     |
| <b>Layout</b>       | 622012-011 |
| <b>Eff. date</b>    | 08-24-2023 |
| <b>CD Diagram</b>   | 422927-001 |
| <b>Poles</b>        | 04         |
| <b>Leads</b>        |            |
| <b>Proprietary</b>  | False      |
| <b>Created date</b> | 11-11-2021 |

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

**Nameplate**

| 000613006MY |              |                |             |         |               |       |        |           |     |
|-------------|--------------|----------------|-------------|---------|---------------|-------|--------|-----------|-----|
|             | DUTY         | HP             | RPM         | AMPS    | VOLTS         | HZ    |        |           |     |
|             | CONT         | 900            | 1150        |         | 1031          | 460   |        | 38.9      |     |
|             | CONT         | 900            | 1725        |         | 1036          | 460   |        | 58.5      |     |
|             |              |                |             |         |               |       |        |           |     |
| CAT.NO.     | IDDRPM509006 |                | SPEC. NO.   |         | R50-A000-0009 |       |        |           |     |
| SER.NO      |              |                | FR          | RL5024Z | INSUL         | H     |        |           |     |
| PH.         | 3            | MAX SAFE SPEED |             |         | 3000          | AMB.  | 40     | MIN. AMB. | -25 |
| DESIGN NO.  | L9079A       |                | TYPE        |         |               | ENCL. | DPG-FV |           |     |
| S.F.        | 1.00         |                | D.E. BRG.   |         | 120BC02J30X   |       |        |           |     |
| ENCL MOD    |              |                | O.D.E. BRG. |         | 6224/C3J20AA  |       |        |           |     |
|             | IP23         |                |             |         |               |       |        |           |     |
|             |              |                |             |         |               |       |        |           |     |

|            |        |                |      |                                       |           |    |        |    |       |
|------------|--------|----------------|------|---------------------------------------|-----------|----|--------|----|-------|
| FRAME      | RL5024 | AMPS           | 1030 | MAX SAFE SPEED                        | 3000      |    |        |    |       |
| HP         | 900    | DUTY           | CONT | IM (AMPS)                             | 294       | R1 | .00297 | X1 | .0307 |
| BASE SPEED | 1150   | S.F.           | 1.0  | P.F. @NL / FL                         | .023/.873 | R2 | .00270 | X2 | .0379 |
| PHASE/HZ   | 3/38.9 | AMB.°C / INSUL | 40/H | WK <sup>2</sup> (Lb-Ft <sup>2</sup> ) | 182       |    |        | XM | .921  |

**RATED FULL LOAD DATA**

|            | RPM  | HP  | TORQUE<br>LB-FT | FUND<br>VOLTS | FREQ-HZ | AMPS |
|------------|------|-----|-----------------|---------------|---------|------|
| BASE SPEED | 1150 | 901 | 4110            | 460           | 38.9    | 1029 |
| MAX SPEED  | 1728 | 900 | 2735            | 460           | 58.5    | 1034 |
| MIN SPEED  | 0    | 0   | 4110            | 8.56          | .556    | 1029 |

**LOAD PERFORMANCE AT BASE SPEED**

|           | RPM  | HP   | TORQUE<br>LB-FT | FUND<br>VOLTS | FREQ-HZ | AMPS |
|-----------|------|------|-----------------|---------------|---------|------|
| NO LOAD   | 1167 | 0    | 0               | 460           | 38.9    | 294  |
| 1/4       | 1163 | 226  | 1019            | 460           | 38.9    | 379  |
| 1/2       | 1159 | 450  | 2038            | 460           | 38.9    | 561  |
| 3/4       | 1155 | 675  | 3068            | 460           | 38.9    | 783  |
| FULL LOAD | 1150 | 900  | 4110            | 460           | 38.9    | 1029 |
| 0/L       | 1134 | 1519 | 7029            | 460           | 38.9    | 1812 |

**REMARKS:**  
TYPICAL DATA  
TYPICAL DATA



**DRAWN BY: C. ETIENNE**  
**CHECKED BY: C. ETIENNE**  
**APPROVED BY: J. MARTIN**  
**DATE: 9/23/21**

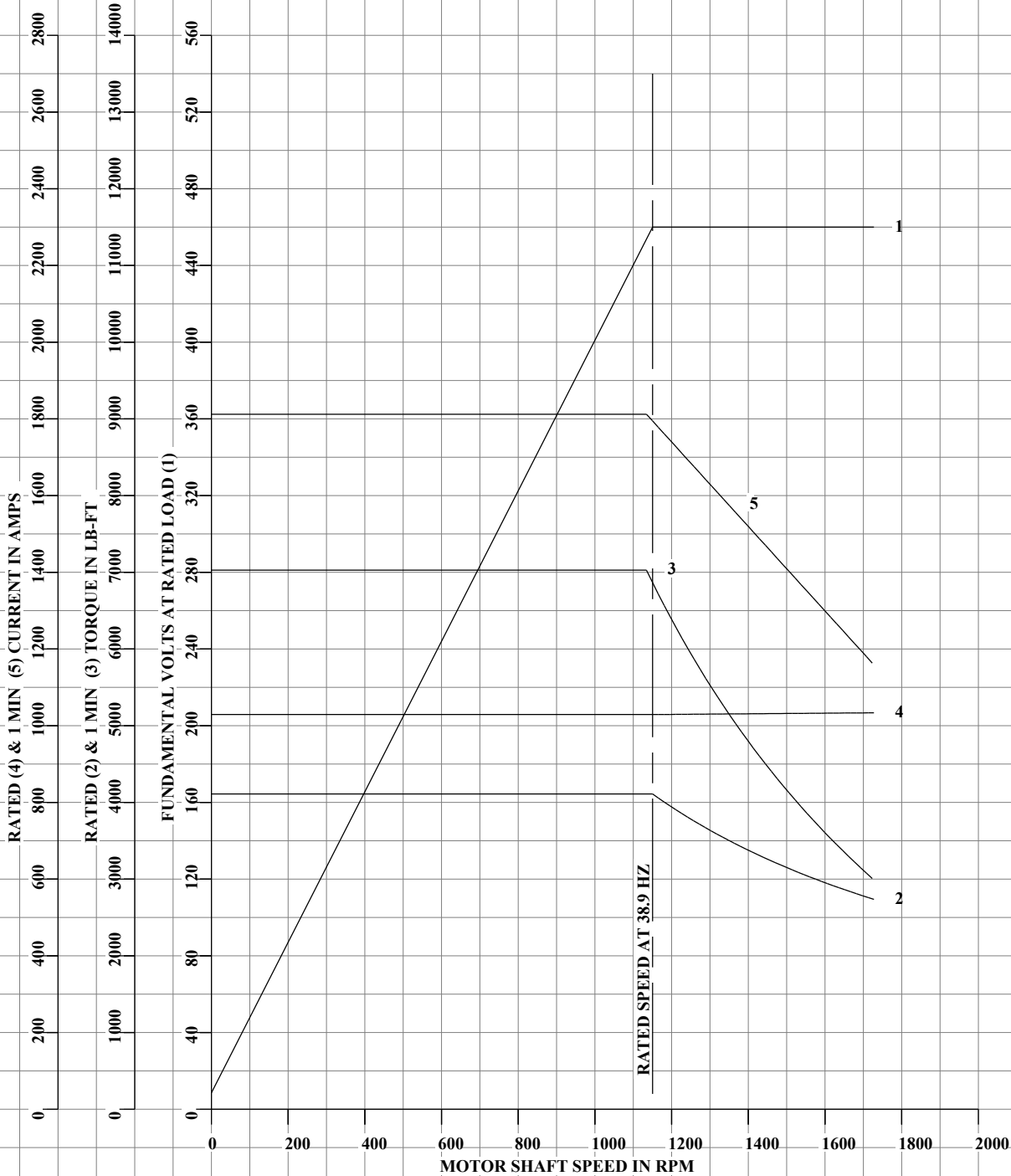
**AC MOTOR  
PERFORMANCE  
DATA**

**L9079A**

**ISSUE DATE 9/23/21**

| FRAME      | RL5024 | VOLTS          | 460  | ENCLOSURE                             | DP-1V     | WYE CONN               | EQ     | CKT OHMS PER PHASE |
|------------|--------|----------------|------|---------------------------------------|-----------|------------------------|--------|--------------------|
| HP         | 900    | AMPS           | 1030 | MAX SAFE SPEED                        | 3000      | (AT BASE RATING, 25°C) |        |                    |
| BASE SPEED | 1150   | DUTY           | CONT | IM (AMPS)                             | 294       | R1                     | .00297 | X1 .0307           |
| PHASE/HZ   | 3/38.9 | S.F.           | 1.0  | P.F. @NL / FL                         | .023/.873 | R2                     | .00270 | X2 .0379           |
|            |        | AMB.°C / INSUL | 40/H | WK <sup>2</sup> (Lb-Ft <sup>2</sup> ) | 182       |                        |        | XM .921            |

**TYPICAL DATA  
VARIABLE SPEED AC MOTOR CURVES**



TYPICAL DATA, DATA VALID FOR NAMEPLATE SPEED RANGE ONLY



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APPROVED BY: J. MARTIN  
DATE: 9/23/21

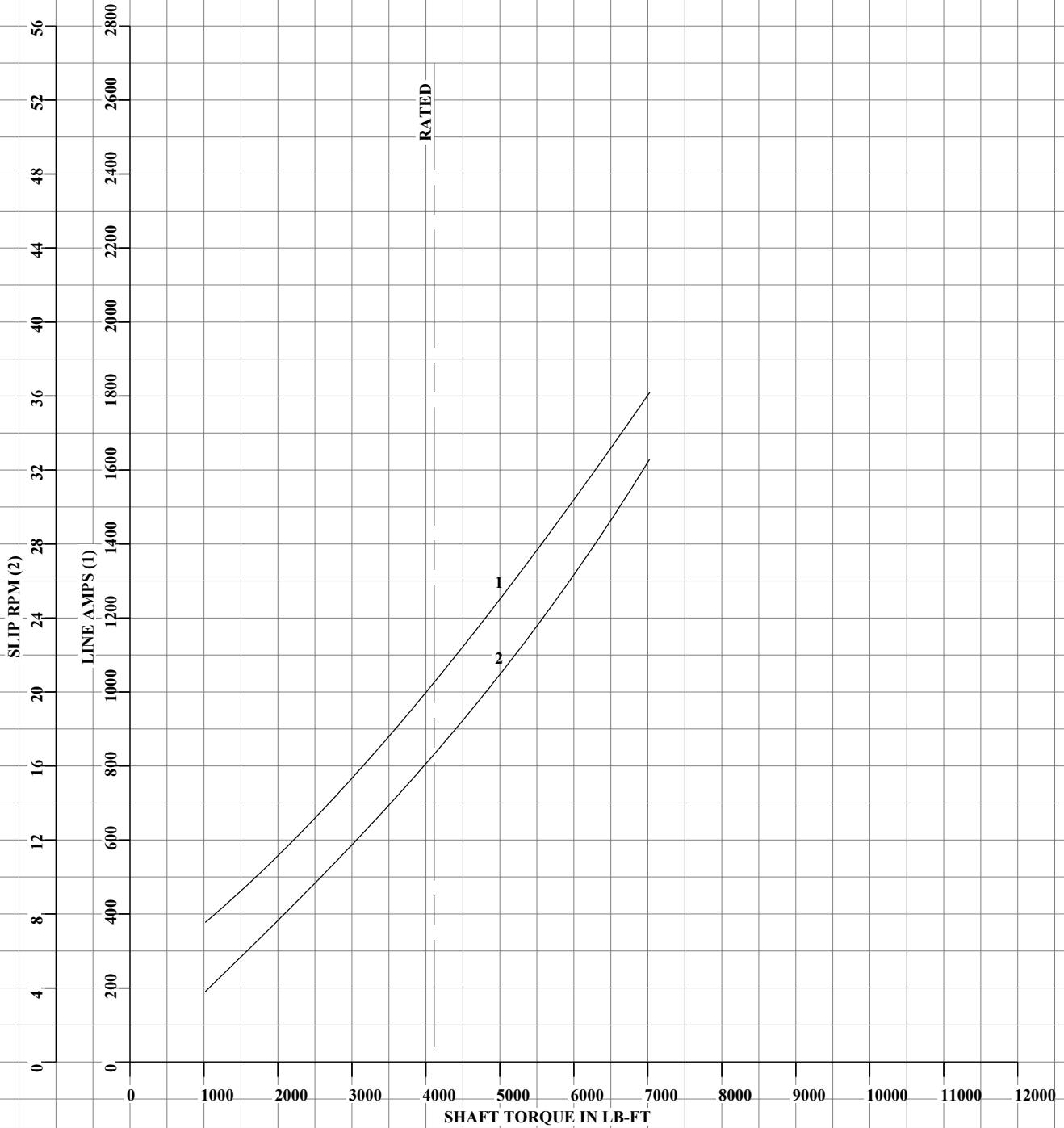
**AC MOTOR  
PERFORMANCE  
DATA**

**L9079A**

ISSUE DATE: 9/23/21

| FRAME      | RL5024 | VOLTS          | 460  | ENCLOSURE                             | DP-IV     | WYE CONN EQ CKT OHMS PER PHASE<br>(AT BASE RATING, 25°C) |        |          |
|------------|--------|----------------|------|---------------------------------------|-----------|----------------------------------------------------------|--------|----------|
| HP         | 900    | AMPS           | 1030 | MAX SAFE SPEED                        | 3000      | R1                                                       | .00297 | X1 .0307 |
| BASE SPEED | 1150   | DUTY           | CONT | IM (AMPS)                             | 294       | R2                                                       | .00270 | X2 .0379 |
| PHASE/HZ   | 3/38.9 | S.F.           | 1.0  | P.F. @NL / FL                         | .023/.873 |                                                          |        | XM .921  |
|            |        | AMB.°C / INSUL | 40/H | WK <sup>2</sup> (Lb-Ft <sup>2</sup> ) | 182       |                                                          |        |          |

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



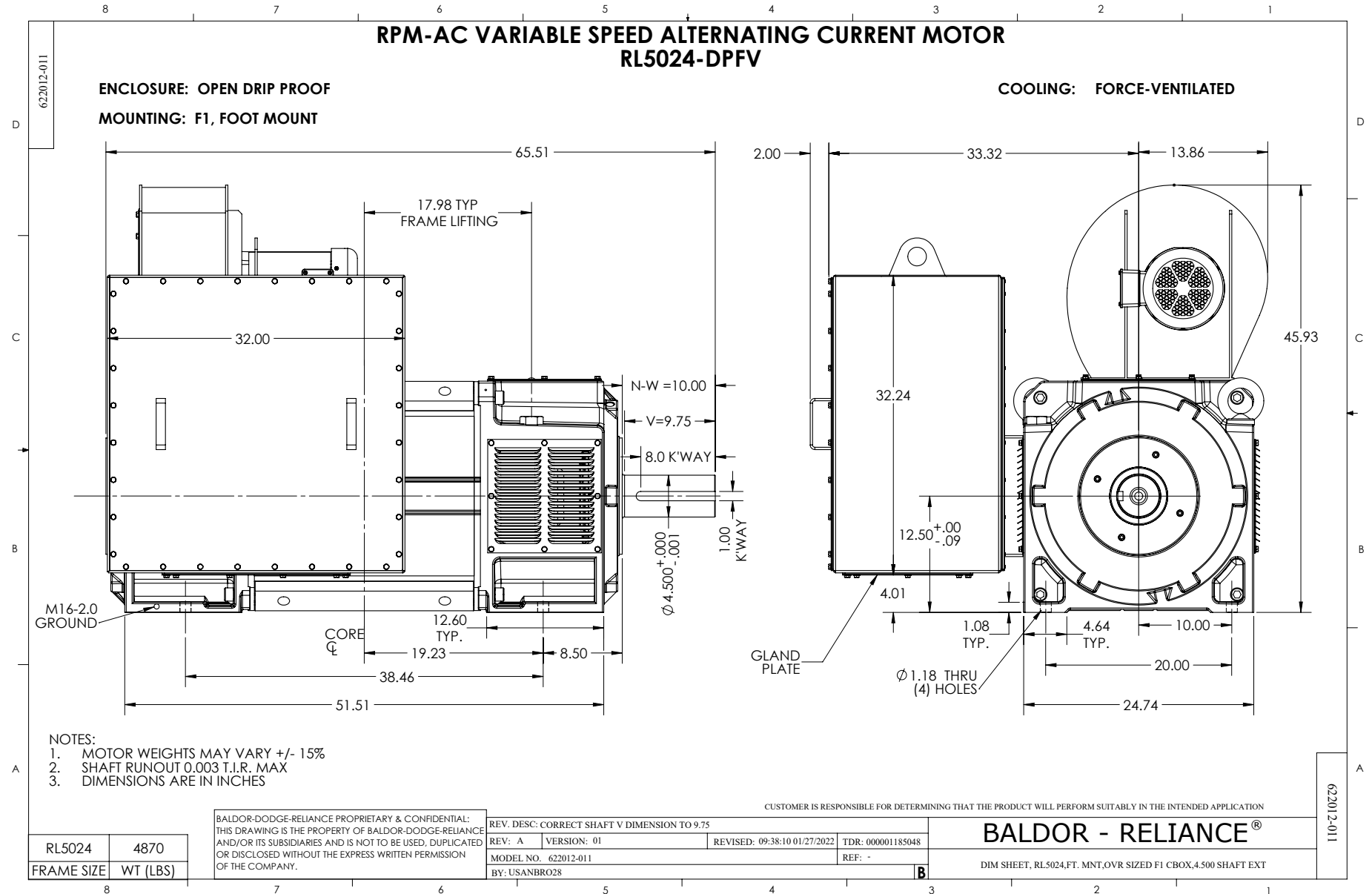
TYPICAL DATA, DATA VALID FOR NAMEPLATE SPEED RANGE ONLY



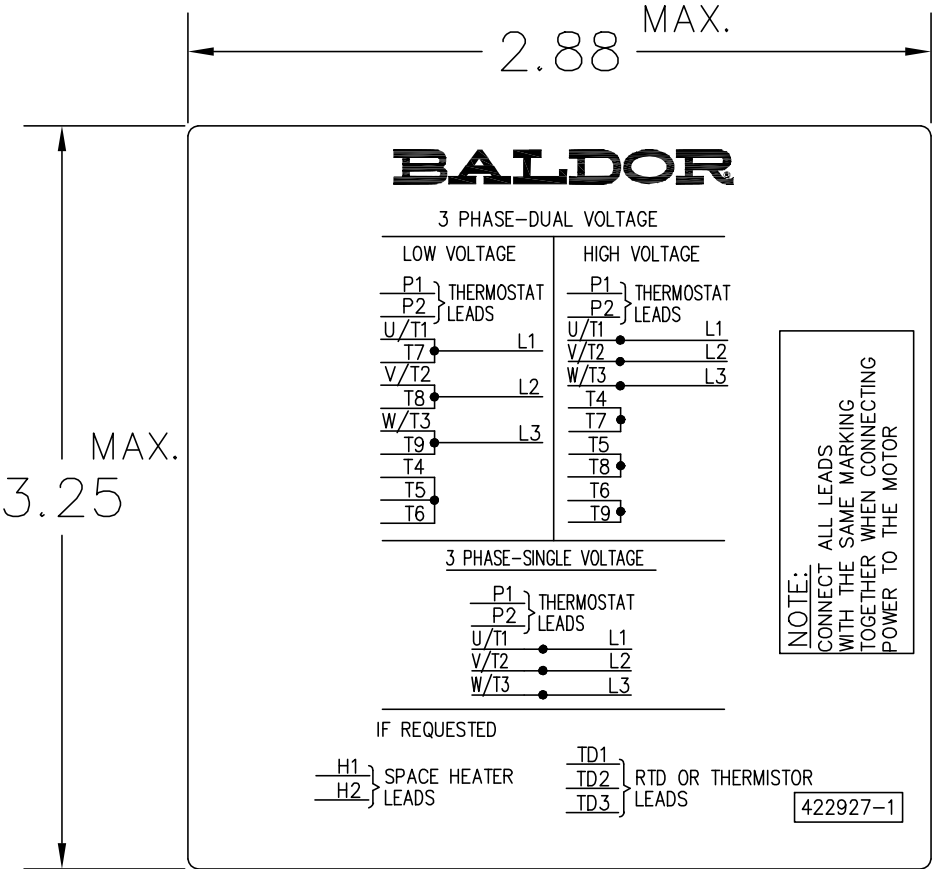
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 CHECKED BY: C. ETIENNE  
 APPROVED BY: J. MARTIN  
 DATE: 9/23/21

**AC MOTOR  
PERFORMANCE  
DATA**

**L9079A**  
 ISSUE DATE: 9/23/21



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