

# ABB BALDOR RELIANCE III

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## Customer information packet

### VBM3108

.5HP, 1720RPM, 3PH, 60HZ, 56C, 3416M, OPEN, F1

Class - None

Division - Not Applicable

**Specifications**

|                                |                                                            |
|--------------------------------|------------------------------------------------------------|
| Enclosure                      | OPEN                                                       |
| Frame                          | 56C                                                        |
| Frame Material                 | Steel                                                      |
| Frequency                      | 60.00 Hz                                                   |
| Haz Area Class and Group       | None                                                       |
| Haz Area Division              | Not Applicable                                             |
| Motor Letter Type              | Three Phase                                                |
| Output @ Frequency             | .500 HP @ 60 HZ                                            |
| Phase                          | 3                                                          |
| Synchronous Speed @ Frequency  | 1800 RPM @ 60 HZ                                           |
| Voltage @ Frequency            | 230.0 V @ 60 HZ<br>460.0 V @ 60 HZ                         |
| Agency Approvals               | CSA<br>UR                                                  |
| Ambient Temperature            | 40 °C                                                      |
| Auxiliary Box                  | NO AUXILLARY BOX                                           |
| Auxiliary Box Lead Termination | None                                                       |
| Base Indicator                 | No Mounting                                                |
| Bearing Grease Type            | Polyrex EM (-20F +300F)                                    |
| Blower                         | None                                                       |
| Current @ Voltage              | .800 A @ 460.0 V<br>1.600 A @ 230.0 V<br>1.700 A @ 208.0 V |
| Design Code                    | B                                                          |
| Drip Cover                     | No Drip Cover                                              |
| Duty Rating                    | CONT                                                       |
| Efficiency @ 100% Load         | 75.5 %                                                     |
| Electrically Isolated Bearing  | Not Electrically Isolated                                  |
| Feedback Device                | NO FEEDBACK                                                |
| Front Shaft Indicator          | None                                                       |
| Heater Indicator               | No Heater                                                  |
| High Voltage Full Load Amps    | 0.8 a                                                      |

**Part Detail**

|              |            |
|--------------|------------|
| Revision     | D          |
| Type         | AC         |
| Mech. spec.  | 34-3093    |
| Base         |            |
| Status       | PRD/A      |
| Elec. spec.  | 34WGR706   |
| Layout       | 34LY3093   |
| Eff. date    | 03-25-2026 |
| CD Diagram   | CD0005     |
| Poles        | 04         |
| Leads        | 9#18 Y     |
| Proprietary  | False      |
| Created date | 01-29-2021 |

|                                      |                            |
|--------------------------------------|----------------------------|
| <b>Insulation Class</b>              | <b>F</b>                   |
| <b>Inverter Code</b>                 | <b>Not Inverter</b>        |
| <b>KVA Code</b>                      | <b>J</b>                   |
| <b>Lifting Lugs</b>                  | <b>No Lifting Lugs</b>     |
| <b>Locked Bearing Indicator</b>      | <b>Locked Bearing</b>      |
| <b>Motor Lead Quantity/Wire Size</b> | <b>9 @ 18 AWG</b>          |
| <b>Motor Lead Termination</b>        | <b>Flying Leads</b>        |
| <b>Motor Standards</b>               | <b>NEMA</b>                |
| <b>Motor Type</b>                    | <b>3416M</b>               |
| <b>Mounting Arrangement</b>          | <b>F1</b>                  |
| <b>Number of Poles</b>               | <b>4</b>                   |
| <b>Overall Length</b>                | <b>14.36 IN</b>            |
| <b>Power Factor</b>                  | <b>75</b>                  |
| <b>Product Family</b>                | <b>General Purpose</b>     |
| <b>Pulley End Bearing Type</b>       | <b>Ball</b>                |
| <b>Pulley Face Code</b>              | <b>C-Face</b>              |
| <b>Pulley Shaft Indicator</b>        | <b>Standard</b>            |
| <b>Rodent Screen</b>                 | <b>None</b>                |
| <b>Service Factor</b>                | <b>1.25</b>                |
| <b>Shaft Diameter</b>                | <b>0.625 IN</b>            |
| <b>Shaft Ground Indicator</b>        | <b>No Shaft Grounding</b>  |
| <b>Shaft Rotation</b>                | <b>Reversible</b>          |
| <b>Shaft Slinger Indicator</b>       | <b>No Slinger</b>          |
| <b>Speed</b>                         | <b>1720 rpm</b>            |
| <b>Speed Code</b>                    | <b>Single Speed</b>        |
| <b>Starting Method</b>               | <b>Direct on line</b>      |
| <b>Thermal Device - Bearing</b>      | <b>None</b>                |
| <b>Thermal Device - Winding</b>      | <b>None</b>                |
| <b>Vibration Sensor Indicator</b>    | <b>No Vibration Sensor</b> |
| <b>Winding Thermal 1</b>             | <b>None</b>                |
| <b>Winding Thermal 2</b>             | <b>None</b>                |

Nameplate

| NP1256L      |               |  |      |      |     |   |  |       |   |  |  |
|--------------|---------------|--|------|------|-----|---|--|-------|---|--|--|
| CAT.NO.      | VBM3108       |  |      |      |     |   |  |       |   |  |  |
| SPEC.        | 34-3093R706-B |  |      |      |     |   |  |       |   |  |  |
| HP           | .5            |  |      |      |     |   |  |       |   |  |  |
| VOLTS        | 230/460       |  |      |      |     |   |  |       |   |  |  |
| AMP          | 1.6/.8        |  |      |      |     |   |  |       |   |  |  |
| RPM          | 1720          |  |      |      |     |   |  |       |   |  |  |
| FRAME        | 56C           |  | HZ   | 60   |     |   |  | PH    | 3 |  |  |
| SER.F.       | 1.25          |  | CODE | J    | DES | B |  | CLASS | F |  |  |
| NEMA-NOM-EFF | 75.5          |  | PF   | 75   |     |   |  |       |   |  |  |
| RATING       | 40C AMB-CONT  |  |      |      |     |   |  |       |   |  |  |
| CC           |               |  |      |      |     |   |  |       |   |  |  |
| DE           | 6203          |  | ODE  | 6203 |     |   |  |       |   |  |  |
| ENCL         | OPEN          |  | SN   |      |     |   |  |       |   |  |  |
|              | SFA 1.9/0.95  |  |      |      |     |   |  |       |   |  |  |

**Parts List**

| Part number | Description                              | Quantity |
|-------------|------------------------------------------|----------|
| SA390545    | SA 34-3093R706-B                         | 1.000 ea |
| RA380997    | RA 34-3093R706-B                         | 1.000 ea |
| NS2512A01   | INSULATOR, CONDUIT BOX X                 | 1.000 ea |
| 34CB3002A   | CB CAST W/.88 DIA HOLE                   | 1.000 ea |
| 51XB1016A07 | 10-16 X 7/16 HXWSSLD SERTYB              | 2.000 ea |
| 11XW1032G06 | 10-32 X .38, TAPTITE II, HEX WSHR SLTD U | 1.000 ea |
| 34EP3900A07 | FR ENDPLATE, MACH                        | 1.000 ea |
| HW5100A03   | WAVY WASHER (W1543-017)                  | 1.000 ea |
| 34EP3400A05 | PU ENDPLATE, MACH                        | 1.000 ea |
| 34AD2000    | BAFFLE PLATE, STAMPED                    | 1.000 ea |
| 60XW0632A06 | 6-32 X 3/8 TORX HEAD SCREW TAPTITE II    | 4.000 ea |
| 51XN1032A20 | 10-32 X 1 1/4 HX WS SL SR                | 2.000 ea |
| HW2500A13   | KEY, USA #605, WOODRUFF                  | 1.000 ea |
| 18XN2520A08 | 1/4-20X1/2 FLAT HD SLTD X                | 2.000 ea |
| 34CB4517    | CB LID 4 MTG HOLES .22 DIA STAMPED, FOR  | 1.000 ea |
| 51XW0832A07 | 8-32 X .44, TAPTITE II, HEX WSHR SLTD SE | 4.000 ea |
| HW2501D13   | KEY, 3/16 SQ X 1.375                     | 1.000 ea |
| HA7000A04   | KEY RETAINER 0.625 DIA SHAFTS            | 1.000 ea |
| MG1050G01   | CELEROL MEDIUM CHARCOAL METALLIC GRAY    | 0.014 ga |
| 85XU0407S04 | 4X1/4 U DRIVE PIN STAINLESS              | 2.000 ea |
| LB1185      | LABEL,BRAKE CONNECTION (ON ROLLS)        | 1.000 ea |
| HA3100A12   | THRUBOLT 10-32 X 7.375                   | 4.000 ea |
| LB1624      | COMBINED WARNING LABEL, ISO/ANSI PICTOGR | 1.000 ea |
| LC0005      | CONN.DIA.,TY M,9-LD,DUAL VOLT,REVERSING  | 1.000 ea |
| 48BK6101BP- | 1-048-161-01-BP- BRAKE                   | 1.000 ea |
| MN416A01    | TAG-INSTAL-MAINT no wire (2500 bx)11/25  | 1.000 ea |
| NP1256L     | ALUM UL CC INDUSTRIAL MOTOR A60          | 1.000 ea |
| PK3083      | STYROFOAM PACKING CRADLE                 | 1.000 ea |
| PK3088      | MICROFOAM, 8"X"8 PERF. SHEETS            | 1.000 ea |
| 27PA1001    | PKG GRP, PRINT PK1027A06                 | 1.000 ea |

**AC Induction Motor Performance Data**

Record # 86431

Typical performance - not guaranteed values

| Winding: 34WGR706-R003 |    |          | Type: 3416M                              |                     | Enclosure: TEFC         |            |        |
|------------------------|----|----------|------------------------------------------|---------------------|-------------------------|------------|--------|
| Nameplate Data         |    |          | 460 V, 60 Hz:<br>High Voltage Connection |                     |                         |            |        |
| Rated Output (HP)      |    | 0.5      | Full Load Torque                         |                     | 1.53 LB-FT              |            |        |
| Volts                  |    | 230/460  | Start Configuration                      |                     | direct on line          |            |        |
| Full Load Amps         |    | 1.6/0.8  | Breakdown Torque                         |                     | 5.15 LB-FT              |            |        |
| R.P.M.                 |    | 1720     | Pull-up Torque                           |                     | 2.87 LB-FT              |            |        |
| Hz                     | 60 | Phase    | 3                                        | Locked-rotor Torque |                         | 3.94 LB-FT |        |
| NEMA Design Code       |    | B        | KVA Code                                 | J                   | Starting Current        |            | 5 A    |
| Service Factor (S.F.)  |    | 1.25     | No-load Current                          |                     | 0.577 A                 |            |        |
| NEMA Nom. Eff.         |    | 75.5     | Power Factor                             | 75                  | Line-line Res. @ 25°C   |            | 48.9 Ω |
| Rating - Duty          |    | 40C      | AMB-CONT                                 |                     | Temp. Rise @ Rated Load |            | 50°C   |
| S.F. Amps              |    | 1.9/0.95 | Temp. Rise @ S.F. Load                   |                     | 70°C                    |            |        |
|                        |    |          | Locked-rotor Power Factor                |                     | 70.8                    |            |        |
|                        |    |          | Rotor inertia                            |                     | 0.0381 lb-ft²           |            |        |

**Load Characteristics 460 V, 60 Hz, 0.5 HP**

| % of Rated Load | 25    | 50    | 75    | 100   | 125   | 150  | S.F.  |
|-----------------|-------|-------|-------|-------|-------|------|-------|
| Power Factor    | 34    | 53    | 66    | 75    | 81    | 84   | 81    |
| Efficiency      | 58.6  | 70.6  | 74.6  | 75.5  | 74.8  | 72.9 | 74.8  |
| Speed           | 1779  | 1761  | 1741  | 1718  | 1692  | 1662 | 1692  |
| Line amperes    | 0.583 | 0.631 | 0.712 | 0.824 | 0.962 | 1.14 | 0.962 |

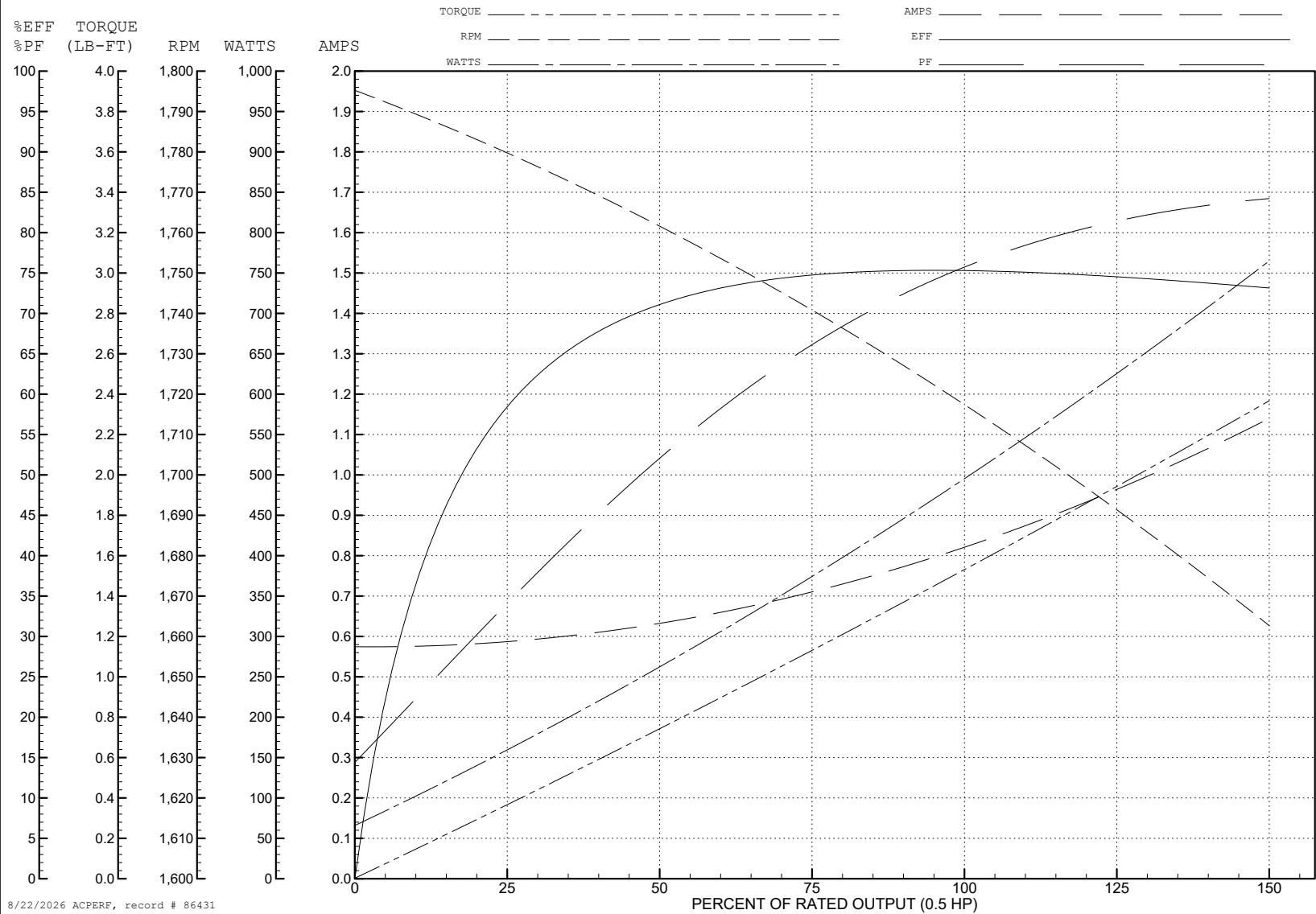
ABB Motors and Mechanical Inc.

WINDING # 34WGR706

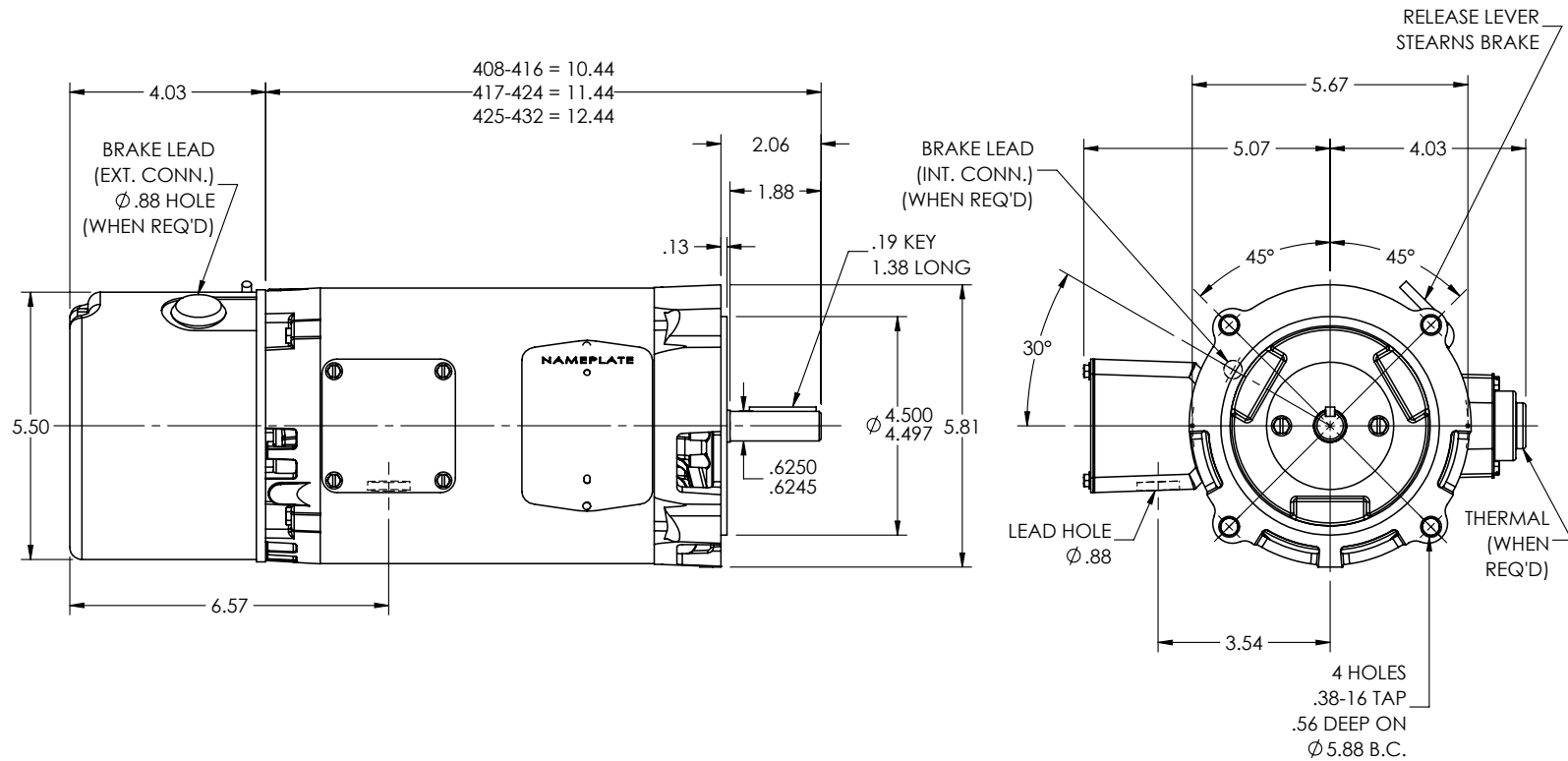
Typical performance - not guaranteed values.

0.5 HP 3 PH 60 HZ 1720 RPM 460 V 3416M

TORQUES (LB-FT): PO=5.15 PU=2.87 LR=3.94 LRA=5



34LY3093



CUSTOMER IS RESPONSIBLE FOR DETERMINING THAT THE PRODUCT WILL PERFORM SUITABLY IN THE INTENDED APPLICATION

REV. DESC: LOAD TO SOLIDWORKS - REV E

REV: F

VERSION: 03

REVISED: 02:53:32 05/18/2023

TDR: 000001201165

**BALDOR - RELIANCE®**

34LY3093

MODEL NO. 34LY3093

REF: -

BY: ENFRAJ0

STD VERT MODEL 34M NEMA 56C OPEN W/STEARNS BRAKE (48 SERIES)

34LY3093

