

# ABB BALDOR RELIANCE III

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## Customer information packet

### ECS101A3K2P2EC4

2.2KW, 1500RPM, 3PH, 50HZ, D112C, 3624B, TEFC

Class - None

Division - Not Applicable

**Specifications**

|                                |                                |
|--------------------------------|--------------------------------|
| Enclosure                      | TEFC                           |
| Frame                          | D112C                          |
| Frame Material                 | Steel                          |
| Frequency                      | 50.00 Hz                       |
| Haz Area Class and Group       | None                           |
| Haz Area Division              | Not Applicable                 |
| Motor Letter Type              | Brushless Wound Field PM Rotor |
| Output @ Frequency             | 2.200 KW @ 50 HZ               |
| Phase                          | 3                              |
| Synchronous Speed @ Frequency  | 1500 RPM @ 50 HZ               |
| Voltage @ Frequency            | 380.0 V @ 50 HZ                |
| Agency Approvals               | WEEE<br>UKCA<br>CULUS<br>CE    |
| 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                           |
| Constant Torque Speed Range    | 5                              |
| Current @ Voltage              | 4.400 A @ 380.0 V              |
| Design Code                    | B                              |
| Drip Cover                     | No Drip Cover                  |
| Duty Rating                    | CONT                           |
| Efficiency @ 100% Load         | 91.4 %                         |
| Electrically Isolated Bearing  | Not Electrically Isolated      |
| Feedback Device                | NO FEEDBACK                    |
| Frame Prefix                   | D                              |
| Heater Indicator               | No Heater                      |
| High Voltage Full Load Amps    | 4.4 a                          |

**Part Detail**

|              |                     |
|--------------|---------------------|
| Revision     | D                   |
| Type         | AC                  |
| Mech. spec.  |                     |
| Base         |                     |
| Status       | PRD/A               |
| Elec. spec.  | 36WGA0025           |
| Layout       | 36LYT526            |
| Eff. date    | 11-15-2024          |
| CD Diagram   | CD0006B03           |
| Poles        | 04                  |
| Leads        | 3#16 15" LONG LEADS |
| Proprietary  | False               |
| Created date | 01-11-2023          |

|                                   |                              |
|-----------------------------------|------------------------------|
| <b>Insulation Class</b>           | <b>F</b>                     |
| <b>Inverter Code</b>              | <b>Inverter Duty</b>         |
| <b>Lifting Lugs</b>               | <b>Standard Lifting Lugs</b> |
| <b>Locked Bearing Indicator</b>   | <b>Locked Bearing</b>        |
| <b>Motor Lead Termination</b>     | <b>Flying Leads</b>          |
| <b>Motor Standards</b>            | <b>IEC</b>                   |
| <b>Motor Type</b>                 | <b>3624B</b>                 |
| <b>Mounting Arrangement</b>       | <b>B14</b>                   |
| <b>Number of Poles</b>            | <b>4</b>                     |
| <b>Overall Length</b>             | <b>21.59 IN</b>              |
| <b>Power Factor</b>               | <b>96</b>                    |
| <b>Product Family</b>             | <b>General Purpose</b>       |
| <b>Pulley Face Code</b>           | <b>C-Face</b>                |
| <b>Rodent Screen</b>              | <b>None</b>                  |
| <b>Service Factor</b>             | <b>1.00</b>                  |
| <b>Shaft Diameter</b>             | <b>1.103 IN</b>              |
| <b>Shaft Ground Indicator</b>     | <b>Shaft Grounding</b>       |
| <b>Shaft Rotation</b>             | <b>Reversible</b>            |
| <b>Speed</b>                      | <b>1500 rpm</b>              |
| <b>Speed Code</b>                 | <b>Single Speed</b>          |
| <b>Starting Method</b>            | <b>INVERTER SPECIAL</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**

| NP3978A00 |           |              |   |    |     |
|-----------|-----------|--------------|---|----|-----|
| PART NO.  | ECIN4A5P8 |              |   |    |     |
| U1        | 400       | PH           | 3 | HZ | 50  |
| I1        | 5.2       | W/EXT. CHOKE |   |    | 4.3 |
| SERIAL #  |           |              |   |    |     |

**NP3968B01A01**

|             |                 |            |    |           |      |       |    |          |  |      |
|-------------|-----------------|------------|----|-----------|------|-------|----|----------|--|------|
| CAT.NO.     | ECS101A3K2P2EC4 |            |    |           |      |       |    |          |  |      |
| SPEC.       | 36-0000-3649    |            |    |           |      | YR    |    |          |  |      |
| FRAME       | D112C           |            | IP |           | 55   | WT.   |    | 84       |  |      |
| KW          | 2.2             | HZ         |    | 50        | PH   |       | 3  | DUTY-IPM |  | CONT |
| INS CL      | F               | CLASS RISE |    |           |      | AMB-C |    | 40       |  |      |
| EFF. CL     | IE5             | EFF        |    | 91.4      | COS0 |       | 96 |          |  |      |
| VOLTS       | 380             |            |    | FLA       |      | 4.4   |    |          |  |      |
| 1/MIN       | 1500            |            |    | 1/MIN MAX |      |       |    | 3000     |  |      |
| BEMF (V)    | 212             |            |    | RS (OHMS) |      |       |    | 3.88     |  |      |
| LD (MH)     | 57.7            |            |    | LQ (MH)   |      |       |    | 217.7    |  |      |
| VPWM        | CP =            |            | 50 | TO        |      | 100   |    |          |  |      |
| CT          | 5               | TO         |    | 50        | VT   |       | 1  | TO       |  | 100  |
| MATCHED INV | ECIN4A5P8       |            |    |           |      |       |    |          |  |      |
| DE          | 6206            |            |    | ODE       |      | 6205  |    |          |  |      |
| SERIAL #    |                 |            |    |           |      |       |    |          |  |      |

|          |      |          |              |            |           |       |                  |
|----------|------|----------|--------------|------------|-----------|-------|------------------|
| Volts    | 380  | Max RPM  | 3000         | Conn Diag. | CD0006B03 | Leads | 3                |
| Amps     | 4.4  | Max Amps |              | Cs Diagram | CS1126    | BEMF  | 172              |
| KW       | 2.2  | VFD#     | ECIN4A5P8    |            |           | LD    | 51               |
| RPM      | 1500 | S.F.     | 1.00         |            |           | LQ    | 177              |
| Phase/Hz | 3/50 | Rating   | 40C AMB CONT |            |           | Rs    | 3.8250 Meas. L-L |

### 60034-2-3 Motor Performance at Standardized Operating Points

|    | RPM  | % Speed | LB-FT | % Torque | KW  | Efficiency | Loss<br>(% FL) | Watts Loss<br>(W) |
|----|------|---------|-------|----------|-----|------------|----------------|-------------------|
| P1 | 1348 | 90%     | 10.3  | 100%     | 2.7 | 90.2       | 9.85%          | 217               |
| P2 | 750  | 50%     | 10.3  | 100%     | 1.5 | 87.3       | 7.27%          | 160               |
| P3 | 366  | 25%     | 10.3  | 100%     | 0.7 | 79.7       | 6.21%          | 137               |
| P4 | 1350 | 90%     | 5.2   | 50%      | 1.3 | 92.2       | 3.83%          | 84                |
| P5 | 750  | 50%     | 5.2   | 50%      | 0.7 | 89.6       | 2.91%          | 64                |
| P6 | 750  | 50%     | 2.6   | 25%      | 0.4 | 89.4       | 1.48%          | 33                |
| P7 | 366  | 25%     | 2.6   | 25%      | 0.2 | 84.8       | 1.09%          | 24                |

### 61800-9-2 PDS Performance at Reference Operating Points

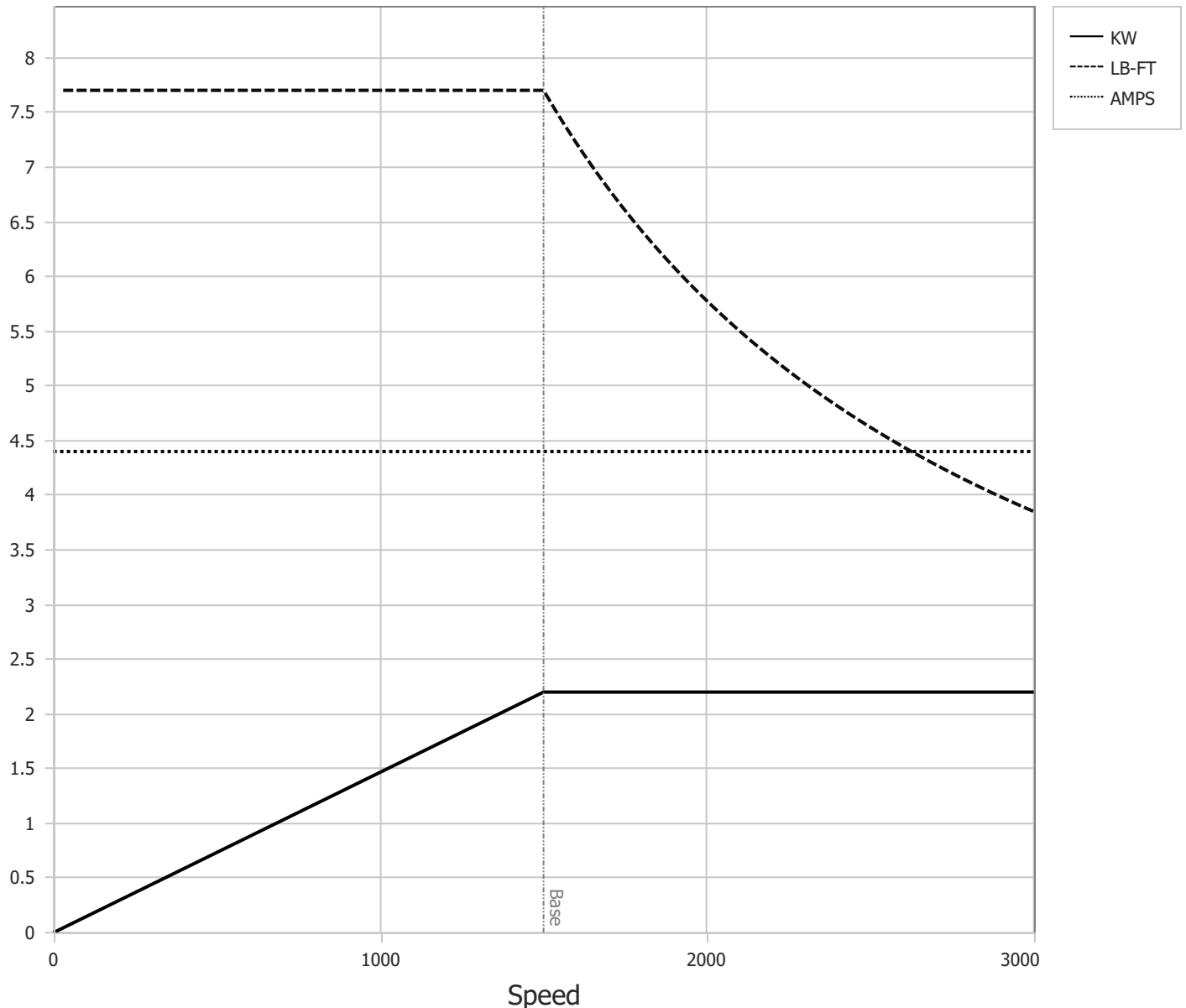
|    | RPM  | % Speed | LB-FT | % Torque | KW  | System<br>Efficiency | Loss<br>(% FL) | Watts Loss<br>(W) |
|----|------|---------|-------|----------|-----|----------------------|----------------|-------------------|
| P1 | 1498 | 100%    | 10.3  | 100%     | 2.9 | 89.8                 | 11.29%         | 248               |
| P2 | 750  | 50%     | 10.3  | 100%     | 1.5 | 84.1                 | 9.44%          | 208               |
| P3 | 246  | 17%     | 10.3  | 100%     | 0.5 | 67.2                 | 8.00%          | 176               |
| P4 | 1500 | 100%    | 5.2   | 50%      | 1.5 | 90.2                 | 5.41%          | 119               |
| P5 | 750  | 50%     | 5.2   | 50%      | 0.7 | 85.5                 | 4.24%          | 93                |
| P6 | 246  | 17%     | 5.2   | 50%      | 0.2 | 69.9                 | 3.53%          | 78                |
| P7 | 750  | 50%     | 2.6   | 25%      | 0.4 | 83.9                 | 2.40%          | 53                |
| P8 | 246  | 17%     | 2.6   | 25%      | 0.1 | 68.2                 | 1.91%          | 42                |

Points not taken in certified order.

|                                                                                    |         |                   |                                            |                                                   |
|------------------------------------------------------------------------------------|---------|-------------------|--------------------------------------------|---------------------------------------------------|
|  | DR By:  | <u>R &amp; D</u>  | <b>AC MOTOR<br/>PERFORMANCE<br/>CURVES</b> | <b>36WGA0025</b><br>36-0000-3655<br>Test - 111775 |
|                                                                                    | CK By:  | <u>USBIBAK</u>    |                                            |                                                   |
|                                                                                    | APP By: | <u>USJAROB1</u>   |                                            |                                                   |
|                                                                                    | Date:   | <u>01/07/2025</u> |                                            |                                                   |

|          |      |          |              |            |           |       |                 |
|----------|------|----------|--------------|------------|-----------|-------|-----------------|
| Volts    | 380  | Max RPM  | 3000         | Conn Diag. | CD0006B03 | Leads | 3               |
| Amps     | 4.4  | Max Amps |              | Cs Diagram | CS1126    | BEMF  | 172             |
| KW       | 2.2  | VFD #    | ECIN4A5P8    |            |           | LD    | 51              |
| RPM      | 1500 | S.F.     | 1.00         |            |           | LQ    | 177             |
| Phase/Hz | 3/50 | Rating   | 40C AMB CONT |            |           | Rs    | 3.8250 Meas L-L |

### Constant Duty Operating Range


**BALDOR • RELIANCE**

 DR By: R & D

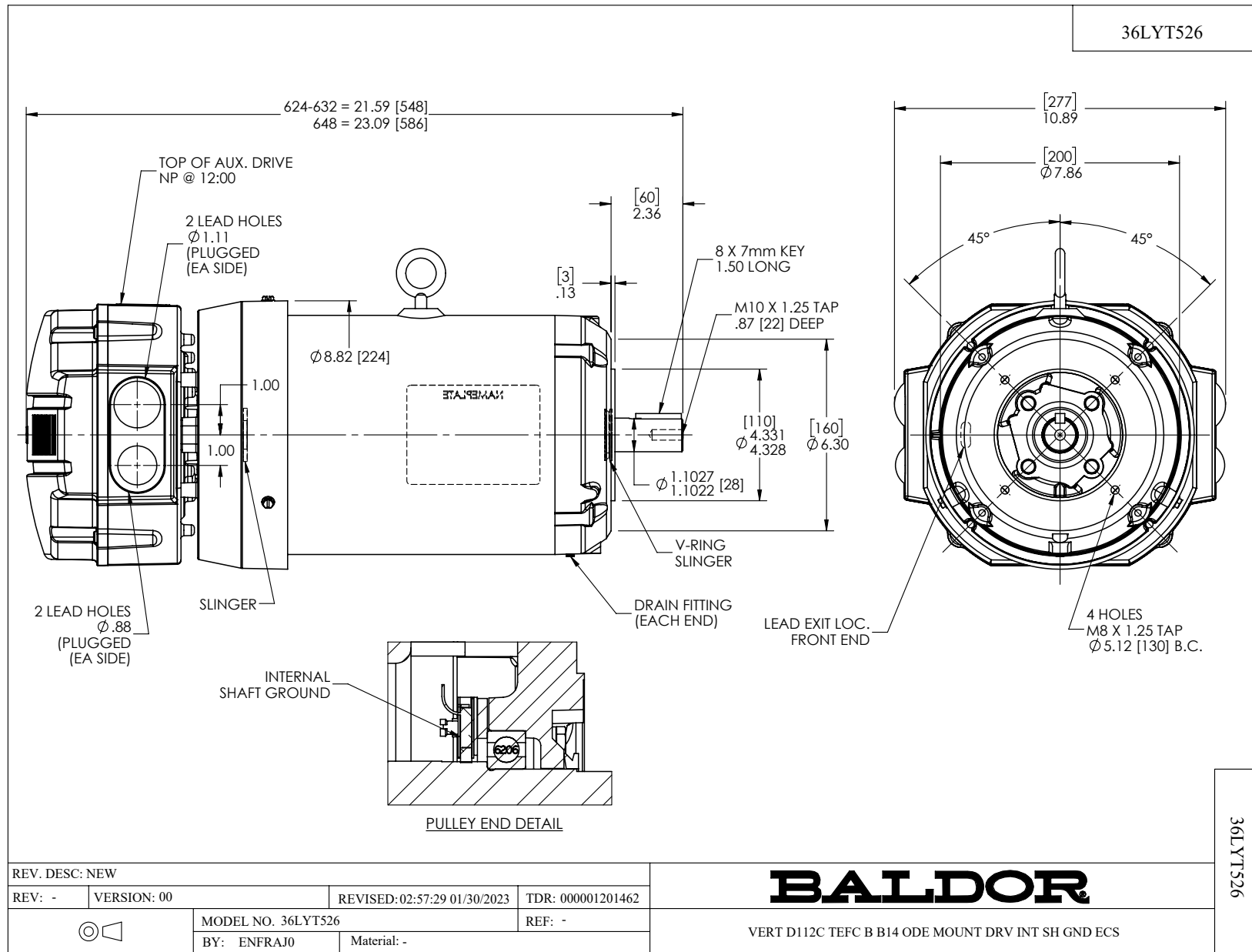
 CK By: USBIBAK

 APP By: USJAROB1

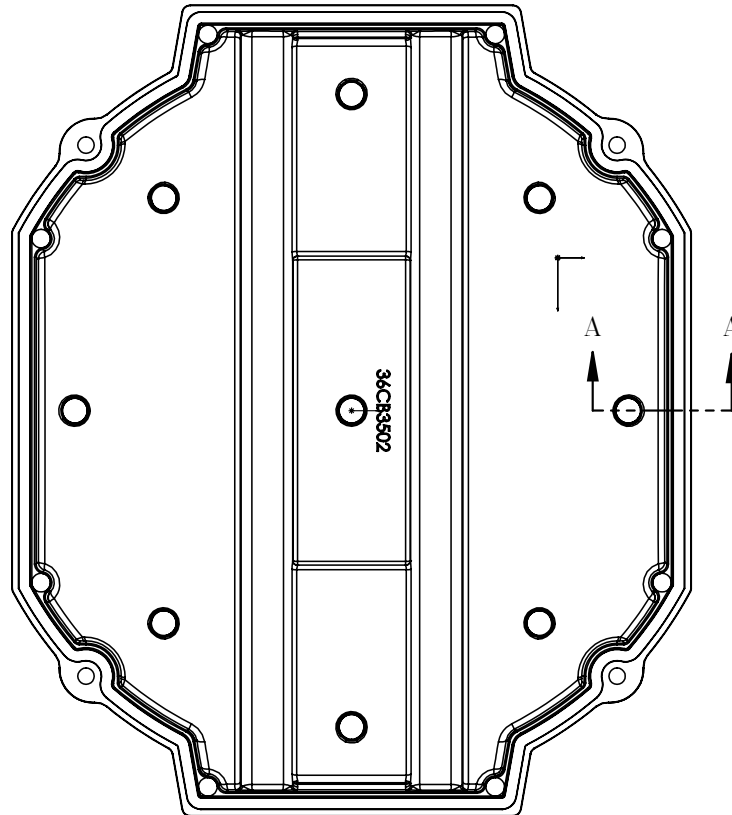
 Date: 01/07/2025
**AC MOTOR  
PERFORMANCE  
CURVES**
**36WGA0025**

36-0000-3655

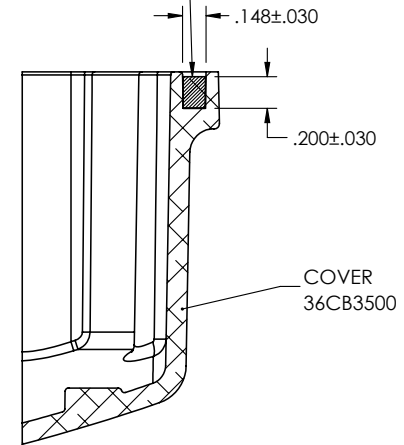
Test - 111775



36CB3502A00



MATERIAL: RAMPF, RAKU-PUR 32-3280-51L



SECTION A-A

36CB3502A00

REV. DESC: NEW

|        |             |                              |                   |
|--------|-------------|------------------------------|-------------------|
| REV: - | VERSION: 00 | REVISED: 09:16:43 01/15/2020 | TDR: 000001129989 |
|--------|-------------|------------------------------|-------------------|



MODEL NO. 36CB3502A00

REF: -

BY: ENMARS0

Material: -

**BALDOR - RELIANCE®**

36 FRAME ODE ECM ALUMINUM COVER WITH FOAM SEAL

