

# ABB BALDOR RELIANCE III

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## Customer information packet

### ECS101M0H7EC4

7.5HP, 1800RPM, 3PH, 60HZ, 184TC, 3648B, TEFC

Class - None

Division - Not Applicable

**Specifications**

|                                |                                         |
|--------------------------------|-----------------------------------------|
| Enclosure                      | TEFC                                    |
| Frame                          | 184TC                                   |
| 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             | 7.500 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               | UL<br>WEEE                              |
| 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    | 6                                       |
| Current @ Voltage              | 17.500 A @ 230.0 V<br>8.800 A @ 460.0 V |
| Drip Cover                     | No Drip Cover                           |
| Duty Rating                    | CONT                                    |
| Efficiency @ 100% Load         | 94.0 %                                  |
| Electrically Isolated Bearing  | Not Electrically Isolated               |
| Feedback Device                | NO FEEDBACK                             |
| Heater Indicator               | No Heater                               |
| High Voltage Full Load Amps    | 8.8 a                                   |
| Insulation Class               | F                                       |
| Inverter Code                  | Inverter Duty                           |

**Part Detail**

|              |            |
|--------------|------------|
| Revision     | L          |
| Type         | AC         |
| Mech. spec.  |            |
| Base         |            |
| Status       | PRD/A      |
| Elec. spec.  | 36WGA0021  |
| Layout       | 36LYT291   |
| Eff. date    | 02-12-2026 |
| CD Diagram   | CD0005A25  |
| Poles        | 04         |
| Leads        | 9#12       |
| Proprietary  | False      |
| Created date | 09-28-2020 |

|                                   |                       |
|-----------------------------------|-----------------------|
| <b>IP Rating</b>                  | NONE                  |
| <b>Lifting Lugs</b>               | Standard Lifting Lugs |
| <b>Locked Bearing Indicator</b>   | Locked Bearing        |
| <b>Motor Lead Termination</b>     | Flying Leads          |
| <b>Motor Standards</b>            | NEMA                  |
| <b>Motor Type</b>                 | 3648B                 |
| <b>Mounting Arrangement</b>       | F1                    |
| <b>Number of Poles</b>            | 4                     |
| <b>Overall Length</b>             | 18.04 IN              |
| <b>Power Factor</b>               | 94                    |
| <b>Product Family</b>             | General Purpose       |
| <b>Pulley Face Code</b>           | C-Face                |
| <b>Rodent Screen</b>              | None                  |
| <b>Service Factor</b>             | 1.50                  |
| <b>Shaft Diameter</b>             | 1.125 IN              |
| <b>Shaft Ground Indicator</b>     | Shaft Grounding       |
| <b>Shaft Rotation</b>             | Reversible            |
| <b>Speed</b>                      | 1800 rpm              |
| <b>Speed Code</b>                 | Single Speed          |
| <b>Starting Method</b>            | Direct on line        |
| <b>Thermal Device - Bearing</b>   | None                  |
| <b>Thermal Device - Winding</b>   | None                  |
| <b>Vibration Sensor Indicator</b> | No Vibration Sensor   |
| <b>Winding Thermal 1</b>          | None                  |
| <b>Winding Thermal 2</b>          | None                  |

|          |      |          |          |            |        |       |                  |
|----------|------|----------|----------|------------|--------|-------|------------------|
| Volts    | 460  | Max RPM  | 4000     | Conn Diag. | CD0006 | Leads | 3                |
| Amps     | 9.0  | Max Amps |          | Cs Diagram | CS1126 | BEMF  | 212              |
| HP       | 7.5  | VFD#     | ECI4A9P5 |            |        | LD    | 25               |
| RPM      | 1800 | S.F.     | 1.00     |            |        | LQ    | 91.6             |
| Phase/Hz | 3/60 | Rating   | 40C AMB  |            |        | Rs    | 1.3196 Meas. L-L |

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

|    | RPM  | % Speed | LB-FT | % Torque | HP  | Efficiency | Loss<br>(% FL) | Watts Loss<br>(W) |
|----|------|---------|-------|----------|-----|------------|----------------|-------------------|
| P1 | 1620 | 90%     | 21.9  | 100%     | 6.8 | 92.4       | 7.39%          | 418               |
| P2 | 901  | 50%     | 21.9  | 100%     | 3.8 | 90.5       | 5.23%          | 296               |
| P3 | 451  | 25%     | 22.0  | 100%     | 1.9 | 85.2       | 4.31%          | 244               |
| P4 | 1623 | 90%     | 10.9  | 50%      | 3.4 | 92.9       | 3.43%          | 194               |
| P5 | 902  | 50%     | 10.9  | 50%      | 1.9 | 90.9       | 2.48%          | 140               |
| P6 | 902  | 50%     | 5.5   | 25%      | 0.9 | 89.3       | 1.49%          | 84                |
| P7 | 451  | 25%     | 5.5   | 25%      | 0.5 | 85.1       | 1.08%          | 61                |

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

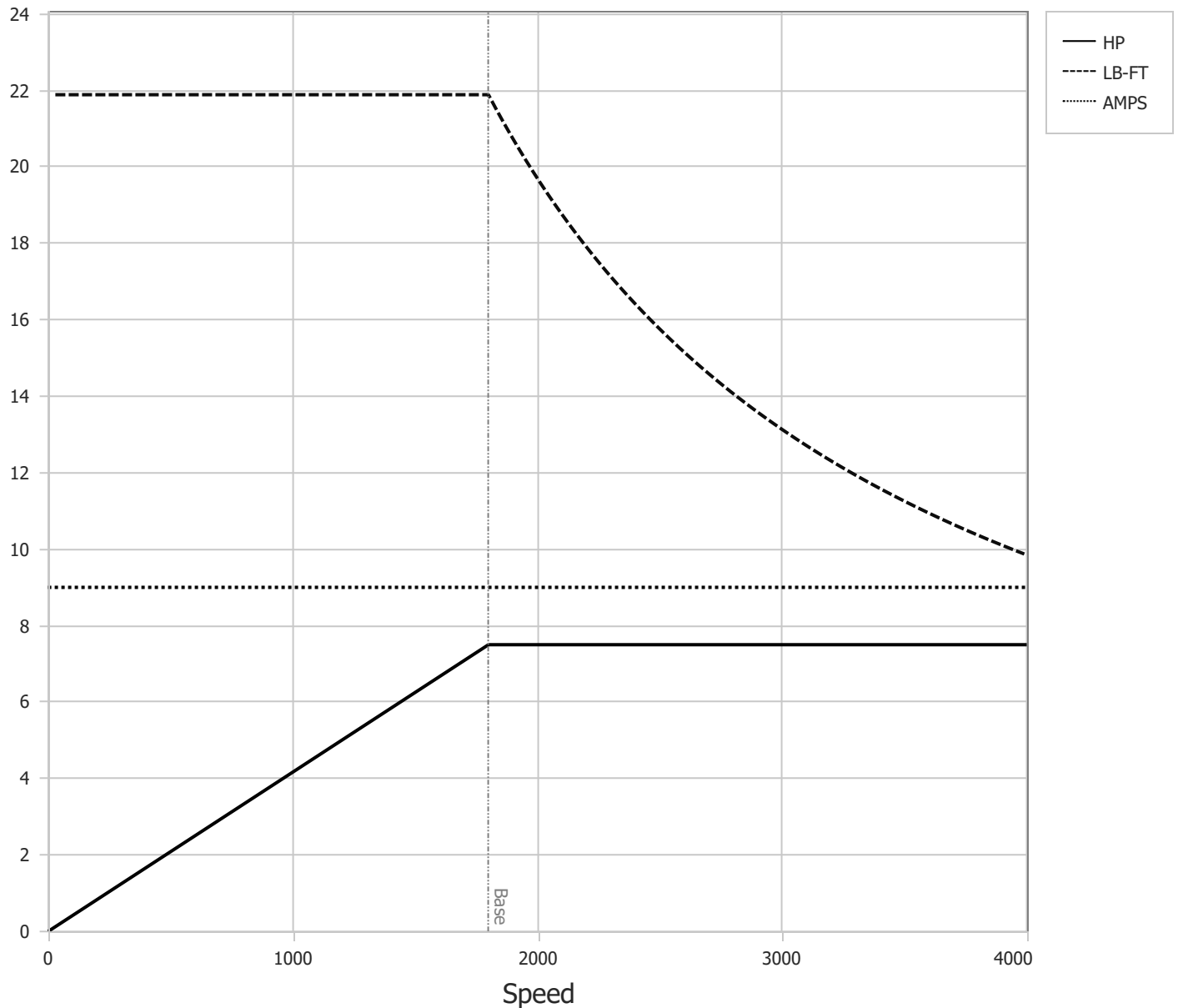
|    | RPM  | % Speed | LB-FT | % Torque | HP  | System<br>Efficiency | Loss<br>(% FL) | Watts Loss<br>(W) |
|----|------|---------|-------|----------|-----|----------------------|----------------|-------------------|
| P1 | 1802 | 100%    | 21.9  | 100%     | 7.5 | 91.5                 | 9.22%          | 522               |
| P2 | 901  | 50%     | 21.9  | 100%     | 3.8 | 87.1                 | 7.36%          | 416               |
| P3 | 300  | 17%     | 21.9  | 100%     | 1.3 | 73.5                 | 5.95%          | 337               |
| P4 | 1803 | 100%    | 10.9  | 50%      | 3.8 | 91.1                 | 4.85%          | 275               |
| P5 | 902  | 50%     | 10.9  | 50%      | 1.9 | 87.1                 | 3.65%          | 207               |
| P6 | 300  | 17%     | 10.9  | 50%      | 0.6 | 74.3                 | 2.85%          | 161               |
| P7 | 902  | 50%     | 5.5   | 25%      | 0.9 | 84.6                 | 2.25%          | 128               |
| P8 | 300  | 17%     | 5.5   | 25%      | 0.3 | 70.8                 | 1.70%          | 96                |

Points not taken in certified order.

|                          |         |            |                                            |                                                  |
|--------------------------|---------|------------|--------------------------------------------|--------------------------------------------------|
| <b>BALDOR • RELIANCE</b> | DR By:  | R & D      | <b>AC MOTOR<br/>PERFORMANCE<br/>CURVES</b> | <b>36WGL111</b><br>36T258L111G1<br>Test - 111285 |
|                          | CK By:  | USTOSAN    |                                            |                                                  |
|                          | APP By: | USJAROB1   |                                            |                                                  |
|                          | Date:   | 09/12/2024 |                                            |                                                  |

|          |      |          |          |            |        |       |                 |
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| RPM      | 1800 | S.F.     | 1.00     |            |        | LQ    | 91.6            |
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Constant Duty Operating Range



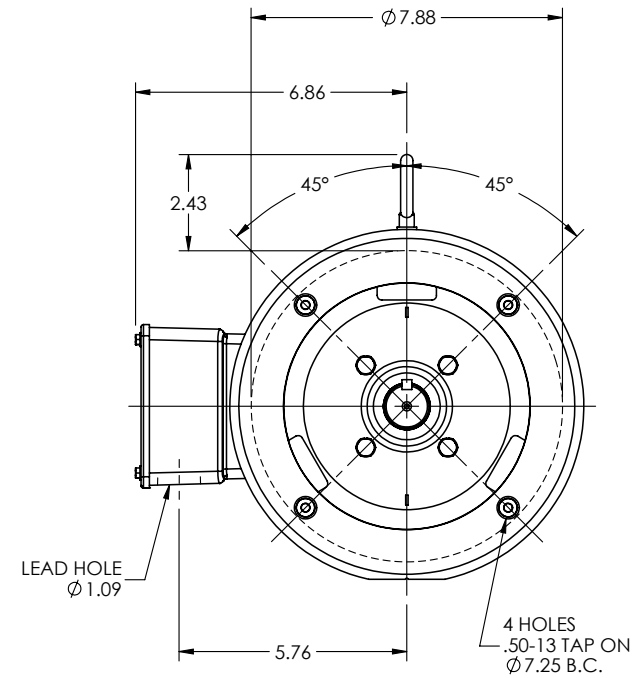
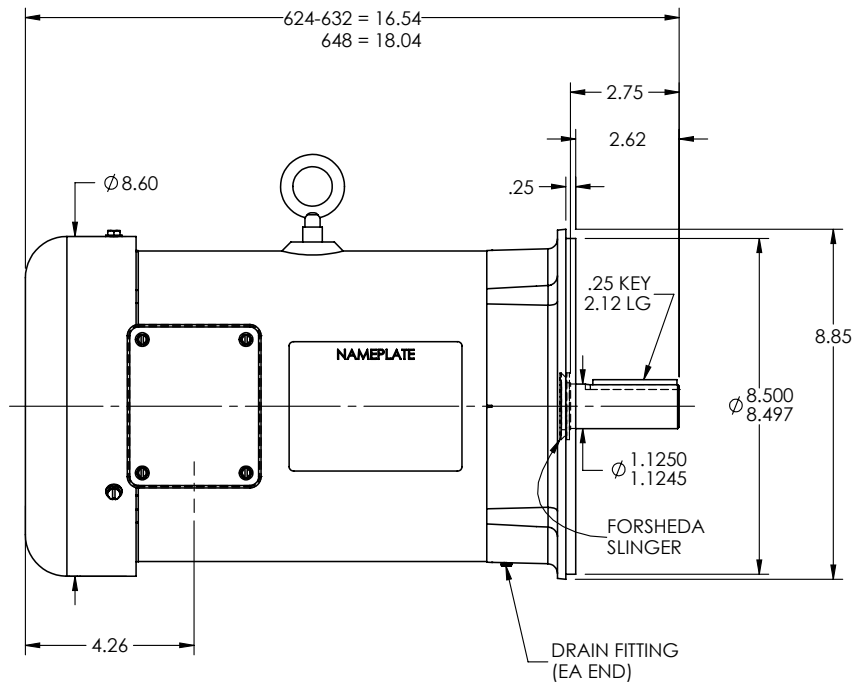
**BALDOR • RELIANCE**

DR By: R & D  
 CK By: USTOSAN  
 APP By: USJAROB1  
 Date: 09/12/2024

**AC MOTOR  
PERFORMANCE  
CURVES**

**36WGL111**  
 36T258L111G1  
 Test - 111285

36LYT291



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

REV. DESC: UPDATE DRAWING GRAPHICS

REV: A VERSION: 01 REVISED: 10:42:36 03/21/2022 TDR: 000001187699



MODEL NO. 36LYT291

BY: ENJEFD0

Material: -

REF: -

**BALDOR**

VER 182-4TC TEFC B EYEBOLT INT SH GND ECS

36LYT291

