

# ABB BALDOR RELIANCE III

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## Customer information packet

ECS101T8K1P5DF4

1.5KW, 1500RPM, 3PH, 50HZ, D90S, 3524B, TEFC, B

Class - None

Division - Not Applicable

**Specifications**

|                                |                                |
|--------------------------------|--------------------------------|
| Enclosure                      | TEFC                           |
| Frame                          | D90S                           |
| 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             | 1.500 KW @ 50 HZ               |
| Phase                          | 3                              |
| Synchronous Speed @ Frequency  | 1500 RPM @ 50 HZ               |
| Voltage @ Frequency            | 230.0 V @ 50 HZ                |
| Agency Approvals               | CE<br>CULUS<br>UKCA<br>WEEE    |
| Ambient Temperature            | 40 °C                          |
| Auxiliary Box                  | NO AUXILLARY BOX               |
| Auxiliary Box Lead Termination | None                           |
| Base Indicator                 | Rigid                          |
| Bearing Grease Type            | Polyrex EM (-20F +300F)        |
| Blower                         | None                           |
| Constant Torque Speed Range    | 5                              |
| Current @ Voltage              | 3.400 A @ 230.0 V              |
| Design Code                    | -                              |
| Drip Cover                     | No Drip Cover                  |
| Duty Rating                    | CONT                           |
| Efficiency @ 100% Load         | 90.6 %                         |
| Electrically Isolated Bearing  | Not Electrically Isolated      |
| Feedback Device                | NO FEEDBACK                    |
| Frame Prefix                   | D                              |
| Heater Indicator               | No Heater                      |
| High Voltage Full Load Amps    | 3.4 a                          |

**Part Detail**

|              |                       |
|--------------|-----------------------|
| Revision     | E                     |
| Type         | AC                    |
| Mech. spec.  | 35EE436               |
| Base         |                       |
| Status       | PRD/A                 |
| Elec. spec.  | 35WGG964              |
| Layout       | 35LYEE436             |
| Eff. date    | 06-16-2025            |
| CD Diagram   | CD0006B03             |
| Poles        | 04                    |
| Leads        | 3#16 13" LONG LEADS Y |
| Proprietary  | False                 |
| Created date | 04-16-2024            |

|                                      |                            |
|--------------------------------------|----------------------------|
| <b>Insulation Class</b>              | <b>F</b>                   |
| <b>Inverter Code</b>                 | <b>03</b>                  |
| <b>KVA Code</b>                      | <b>-</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>3 @ 16 AWG</b>          |
| <b>Motor Lead Termination</b>        | <b>Flying Leads</b>        |
| <b>Motor Standards</b>               | <b>IEC</b>                 |
| <b>Motor Type</b>                    | <b>3524B</b>               |
| <b>Mounting Arrangement</b>          | <b>B3</b>                  |
| <b>Number of Poles</b>               | <b>4</b>                   |
| <b>Overall Length</b>                | <b>12.04 IN</b>            |
| <b>Power Factor</b>                  | <b>93</b>                  |
| <b>Product Family</b>                | <b>General Purpose</b>     |
| <b>Pulley Face Code</b>              | <b>Standard</b>            |
| <b>Rodent Screen</b>                 | <b>None</b>                |
| <b>Service Factor</b>                | <b>1.00</b>                |
| <b>Shaft Diameter</b>                | <b>0.945 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>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>                |

|          |      |          |              |            |           |       |                  |
|----------|------|----------|--------------|------------|-----------|-------|------------------|
| Volts    | 230  | Max RPM  | 3000         | Conn Diag. | CD0006B03 | Leads | 3                |
| Amps     | 3.4  | Max Amps |              | Cs Diagram | CS1127    | BEMF  | 123              |
| KW       | 1.5  | VFD#     | ECIN8A7P0    |            |           | LD    | 22.1             |
| RPM      | 1500 | S.F.     | 1.00         |            |           | LQ    | 97.1             |
| Phase/Hz | 3/50 | Rating   | 40C AMB-CONT |            |           | Rs    | 2.9307 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 | 1360 | 90%     | 7.0   | 100%     | 1.8 | 89.6       | 10.41%         | 158               |
| P2 | 751  | 50%     | 7.0   | 100%     | 1.0 | 84.8       | 8.88%          | 135               |
| P3 | 366  | 25%     | 7.0   | 100%     | 0.5 | 76.0       | 7.63%          | 116               |
| P4 | 1353 | 90%     | 3.5   | 50%      | 0.9 | 90.7       | 4.57%          | 69                |
| P5 | 751  | 50%     | 3.5   | 50%      | 0.5 | 88.1       | 3.36%          | 51                |
| P6 | 751  | 50%     | 1.8   | 25%      | 0.3 | 87.9       | 1.70%          | 26                |
| P7 | 366  | 25%     | 1.8   | 25%      | 0.1 | 82.9       | 1.24%          | 19                |

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

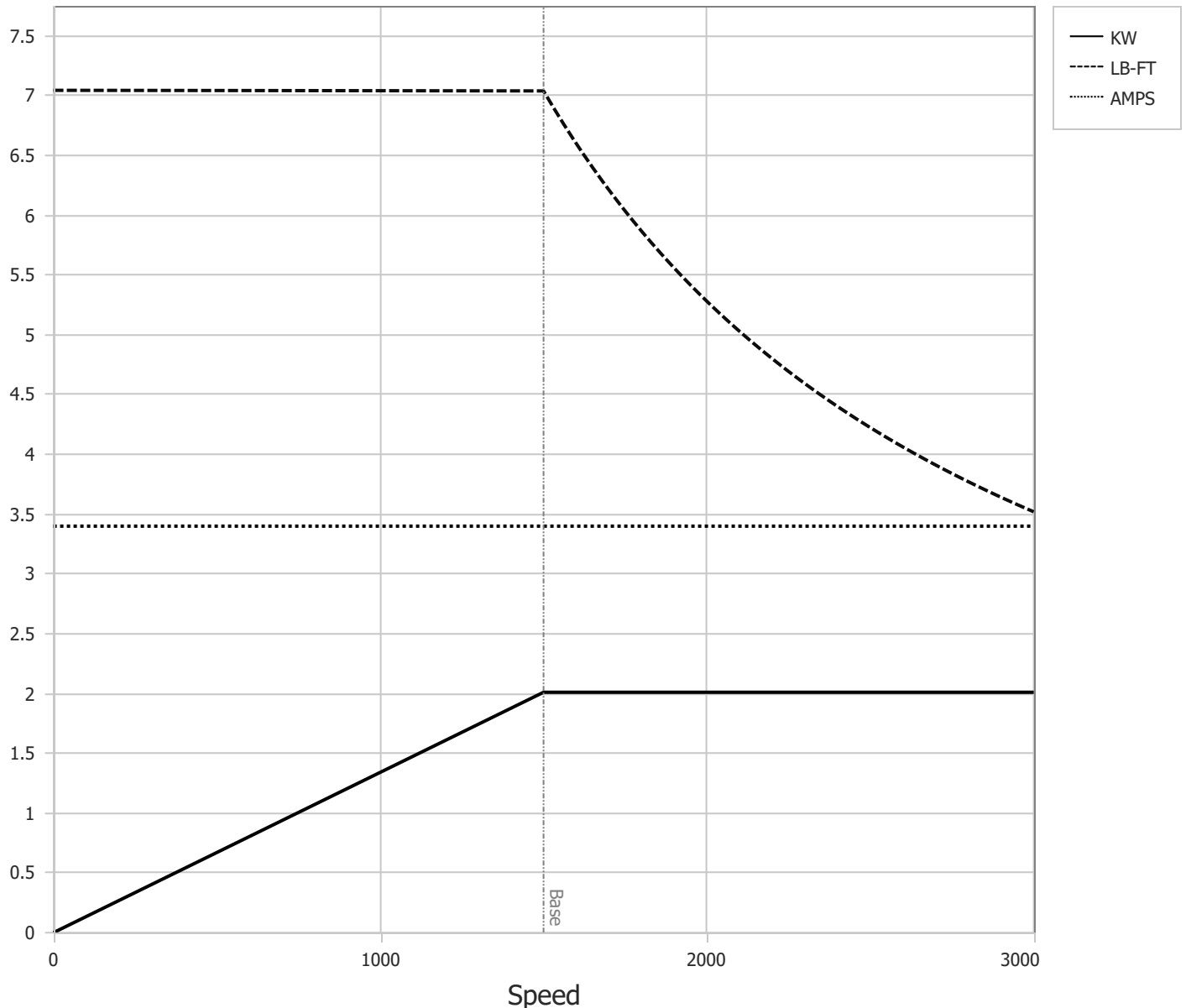
|    | RPM  | % Speed | LB-FT | % Torque | KW  | System<br>Efficiency | Loss<br>(% FL) | Watts Loss<br>(W) |
|----|------|---------|-------|----------|-----|----------------------|----------------|-------------------|
| P1 | 1508 | 100%    | 7.0   | 100%     | 2.0 | 86.2                 | 15.88%         | 241               |
| P2 | 751  | 50%     | 7.0   | 100%     | 1.0 | 80.8                 | 11.75%         | 178               |
| P3 | 246  | 17%     | 7.0   | 100%     | 0.3 | 62.3                 | 9.83%          | 149               |
| P4 | 1488 | 100%    | 3.5   | 50%      | 1.0 | 87.9                 | 6.72%          | 102               |
| P5 | 751  | 50%     | 3.5   | 50%      | 0.5 | 83.4                 | 4.91%          | 74                |
| P6 | 246  | 17%     | 3.5   | 50%      | 0.2 | 66.6                 | 4.07%          | 62                |
| P7 | 751  | 50%     | 1.8   | 25%      | 0.3 | 82.0                 | 2.71%          | 41                |
| P8 | 246  | 17%     | 1.8   | 25%      | 0.1 | 66.5                 | 2.04%          | 31                |

Points not taken in certified order.

|                                                                                    |         |                   |                                            |                                                 |
|------------------------------------------------------------------------------------|---------|-------------------|--------------------------------------------|-------------------------------------------------|
|  | DR By:  | <u>R &amp; D</u>  | <b>AC MOTOR<br/>PERFORMANCE<br/>CURVES</b> | <b>35WGG964</b><br>35EE436G964<br>Test - 112228 |
|                                                                                    | CK By:  | <u>USGAHIL</u>    |                                            |                                                 |
|                                                                                    | APP By: |                   |                                            |                                                 |
|                                                                                    | Date:   | <u>04/09/2025</u> |                                            |                                                 |

|          |      |          |              |            |           |       |                 |
|----------|------|----------|--------------|------------|-----------|-------|-----------------|
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| Amps     | 3.4  | Max Amps |              | Cs Diagram | CS1127    | BEMF  | 123             |
| KW       | 1.5  | VFD #    | ECIN8A7P0    |            |           | LD    | 22.1            |
| RPM      | 1500 | S.F.     | 1.00         |            |           | LQ    | 97.1            |
| Phase/Hz | 3/50 | Rating   | 40C AMB-CONT |            |           | Rs    | 2.9307 Meas L-L |

Constant Duty Operating Range


**BALDOR • RELIANCE**

DR By: R & D  
 CK By: USGAHIL  
 APP By:  
 Date: 04/09/2025

**AC MOTOR  
PERFORMANCE  
CURVES**

**35WGG964**  
 35EE436G964  
 Test - 112228

