



---

# Customer information packet

## ECS100A8H1DC4

1HP, 1800RPM, 3PH, 60HZ, 143TC, 3516B, TEFC, F1

Class - None

Division - Not Applicable

## Specifications

|                                |                                |
|--------------------------------|--------------------------------|
| Enclosure                      | TEFC                           |
| Frame                          | 143TC                          |
| Frame Material                 | Steel                          |
| Frequency                      | 60.00 Hz                       |
| Haz Area Class and Group       | None                           |
| Haz Area Division              | Not Applicable                 |
| Motor Letter Type              | Brushless Wound Field PM Rotor |
| Output @ Frequency             | 1.000 HP @ 60 HZ               |
| Phase                          | 3                              |
| Synchronous Speed @ Frequency  | 1800 RPM @ 60 HZ               |
| Voltage @ Frequency            | 230.0 V @ 60 HZ                |
| Agency Approvals               | BLUETOOTH<br>CULUS<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              | 2.500 A @ 230.0 V              |
| Design Code                    | -                              |
| Drip Cover                     | No Drip Cover                  |
| Duty Rating                    | CONT                           |
| Efficiency @ 100% Load         | 91.0 %                         |
| Electrically Isolated Bearing  | Not Electrically Isolated      |
| Feedback Device                | NO FEEDBACK                    |
| Heater Indicator               | No Heater                      |
| High Voltage Full Load Amps    | 2.5 a                          |
| Insulation Class               | F                              |
| Inverter Code                  | 03                             |

## Part detail

|              |                       |
|--------------|-----------------------|
| Revision     | C                     |
| Type         | AC                    |
| Mech. spec.  | 35E5253               |
| Base         |                       |
| Status       | PRD/A                 |
| Elec. spec.  | 35WGG932              |
| Layout       | 35LYE5253             |
| Eff. date    | 10-31-2024            |
| CD Diagram   | CD0006B03             |
| Poles        | 04                    |
| Leads        | 3#14 13" LONG LEADS Y |
| Proprietary  | False                 |
| Created date | 05-10-2024            |

|                               |                     |
|-------------------------------|---------------------|
| KVA Code                      | -                   |
| Lifting Lugs                  | No Lifting Lugs     |
| Locked Bearing Indicator      | Locked Bearing      |
| Motor Lead Quantity/Wire Size | 3 @ 14 AWG          |
| Motor Lead Termination        | Flying Leads        |
| Motor Standards               | NEMA                |
| Motor Type                    | 3516B               |
| Mounting Arrangement          | F1                  |
| Number of Poles               | 4                   |
| Overall Length                | 16.72 IN            |
| Power Factor                  | 98                  |
| Product Family                | General Purpose     |
| Pulley Face Code              | C-Face              |
| Rodent Screen                 | None                |
| Service Factor                | 1.00                |
| Shaft Diameter                | 0.875 IN            |
| Shaft Ground Indicator        | Shaft Grounding     |
| Shaft Rotation                | Reversible          |
| Speed                         | 1800 rpm            |
| Speed Code                    | Single Speed        |
| Starting Method               | Direct on line      |
| Thermal Device - Bearing      | None                |
| Thermal Device - Winding      | None                |
| Vibration Sensor Indicator    | No Vibration Sensor |
| Winding Thermal 1             | None                |
| Winding Thermal 2             | None                |

## Nameplate

| NP3968A01A01 |               |    |         |           |         |      |    |    |     |  |
|--------------|---------------|----|---------|-----------|---------|------|----|----|-----|--|
| CAT.NO.      | ECS100A8H1DC4 |    |         |           |         |      |    |    |     |  |
| SPEC.        | 35E5253G932G1 |    |         |           |         |      |    |    |     |  |
| FRAME        | 143TC         |    |         | ENCL.     |         | TEFC |    | IP | 54  |  |
| HP           | 1             | 40 | C AMB   |           |         | CONT |    |    |     |  |
| NOM. EFF.    | 91            | PF | 98      | SF        |         | 1    |    |    |     |  |
| VOLTS        | 230           |    |         | FLA       |         | 2.5  |    |    |     |  |
| RPM          | 1800          |    | RPM-MAX |           |         | 4000 |    |    |     |  |
| HZ           | 60            |    | PH.     | 3         | CLASS   |      | F  |    |     |  |
| BEMF (V)     | 135           |    |         | RS (OHMS) |         |      |    |    | 4.9 |  |
| LD (MH)      | 30.8          |    |         |           | LQ (MH) |      |    |    | 135 |  |
| VPWM         | CHP           | 60 | TO      |           | 133     |      |    |    |     |  |
| CT           | 6             | TO | 60      | VT        |         | 6    | TO | 60 |     |  |
| MATCHED INV  | ECI8A7P0      |    |         |           |         |      |    |    |     |  |
| DE           | 6205          |    |         | ODE       |         | 6203 |    |    |     |  |
| SERIAL #     |               |    |         |           |         |      |    |    |     |  |

| NP3978A01 |          |              |   |    |     |
|-----------|----------|--------------|---|----|-----|
| PART NO.  | ECI8A7P0 |              |   |    |     |
| U1        | 240      | PH           | 1 | HZ | 60  |
| I1        | 6.6      | W/EXT. CHOKE |   |    | 5.8 |
| SERIAL #  |          |              |   |    |     |

|          |      |          |              |            |           |       |                  |
|----------|------|----------|--------------|------------|-----------|-------|------------------|
| Volts    | 230  | Max RPM  | 4000         | Conn Diag. | CD0006B03 | Leads | 3                |
| Amps     | 2.5  | Max Amps |              | Cs Diagram | CS1127    | BEMF  | 135              |
| HP       | 1    | VFD#     | ECIN8A7P0    |            |           | LD    | 29.3             |
| RPM      | 1800 | S.F.     | 1.00         |            |           | LQ    | 136              |
| Phase/Hz | 3/60 | Rating   | 40C AMB-CONT |            |           | Rs    | 4.8724 Meas. L-L |

60034-2-3 Motor Performance at Standardized Operating Points

|    | RPM  | % Speed | LB-FT | % Torque | HP  | Efficiency | Loss (% FL) | Watts Loss (W) |
|----|------|---------|-------|----------|-----|------------|-------------|----------------|
| P1 | 1624 | 90%     | 2.9   | 100%     | 0.9 | 89.1       | 10.93%      | 82             |
| P2 | 903  | 50%     | 2.9   | 100%     | 0.5 | 84.5       | 9.11%       | 69             |
| P3 | 451  | 25%     | 2.9   | 100%     | 0.3 | 78.1       | 6.96%       | 52             |
| P4 | 1625 | 90%     | 1.5   | 50%      | 0.5 | 88.9       | 5.64%       | 43             |
| P5 | 903  | 50%     | 1.5   | 50%      | 0.3 | 87.1       | 3.70%       | 28             |
| P6 | 903  | 50%     | 0.7   | 25%      | 0.1 | 86.4       | 1.97%       | 15             |
| P7 | 451  | 25%     | 0.7   | 25%      | 0.1 | 83.5       | 1.24%       | 9              |

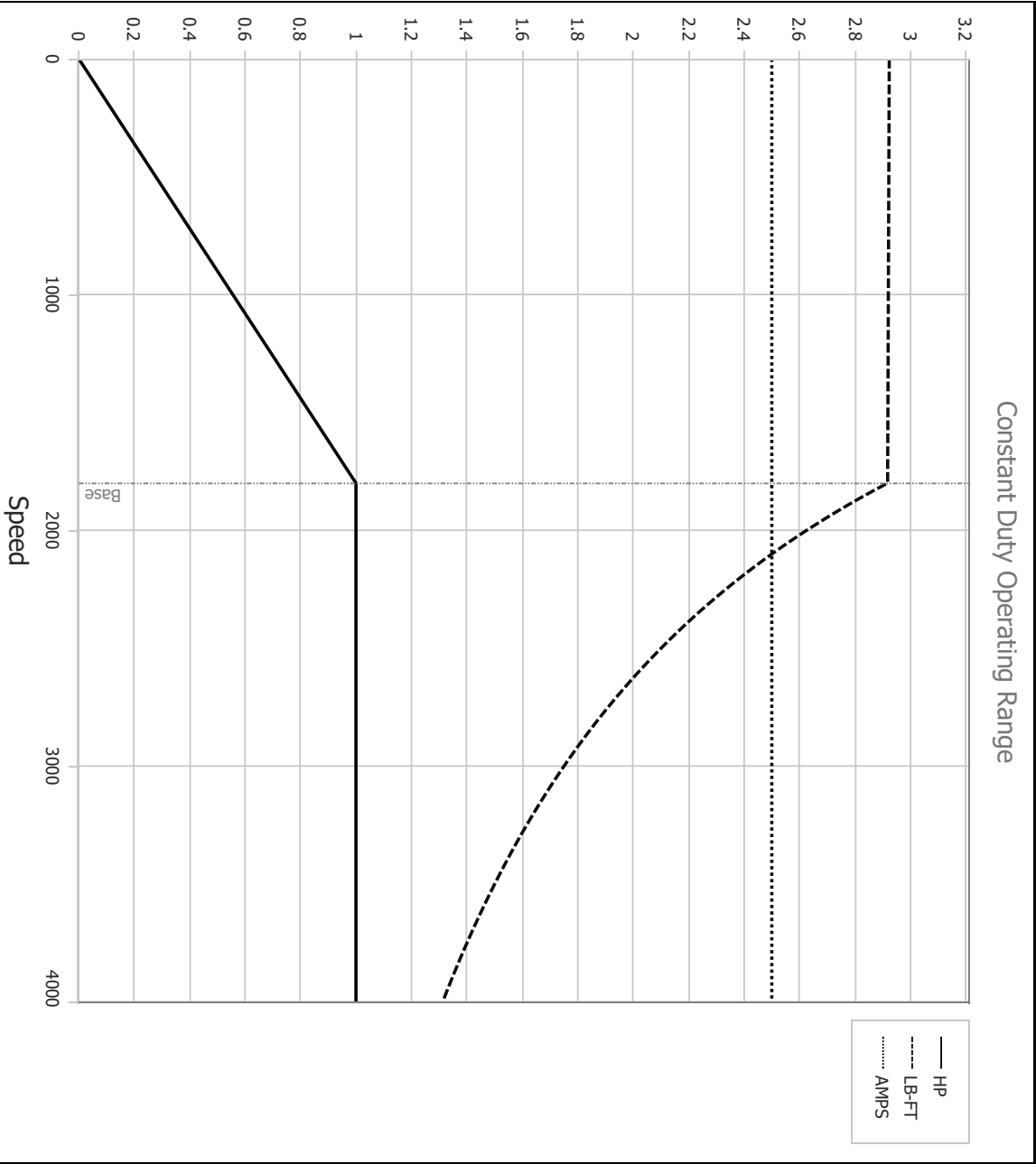
61800-9-2 PDS Performance at Reference Operating Points

|    | RPM  | % Speed | LB-FT | % Torque | HP  | System Efficiency | Loss (% FL) | Watts Loss (W) |
|----|------|---------|-------|----------|-----|-------------------|-------------|----------------|
| P1 | 1809 | 100%    | 2.9   | 100%     | 1.0 | 87.0              | 14.82%      | 112            |
| P2 | 903  | 50%     | 2.9   | 100%     | 0.5 | 80.4              | 12.09%      | 91             |
| P3 | 300  | 17%     | 2.9   | 100%     | 0.2 | 64.7              | 8.99%       | 68             |
| P4 | 1807 | 100%    | 1.5   | 50%      | 0.5 | 85.6              | 8.38%       | 63             |
| P5 | 903  | 50%     | 1.5   | 50%      | 0.3 | 82.0              | 5.49%       | 41             |
| P6 | 300  | 17%     | 1.5   | 50%      | 0.1 | 66.8              | 4.12%       | 31             |
| P7 | 903  | 50%     | 0.7   | 25%      | 0.1 | 79.4              | 3.24%       | 24             |
| P8 | 300  | 17%     | 0.7   | 25%      | 0.0 | 64.8              | 2.25%       | 17             |

Points not taken in certified order.

|                          |                                                                                                        |                                    |                                                  |
|--------------------------|--------------------------------------------------------------------------------------------------------|------------------------------------|--------------------------------------------------|
| <b>BALDOR • RELIANCE</b> | DR By: <u>R &amp; D</u><br>CK By: <u>USBIBAK</u><br>APP By: <u>USWEQUA1</u><br>Date: <u>12/20/2024</u> | <b>AC MOTOR PERFORMANCE CURVES</b> | <b>35WGG932</b><br>35-0000-1609<br>Test - 111747 |
|--------------------------|--------------------------------------------------------------------------------------------------------|------------------------------------|--------------------------------------------------|

|          |      |          |              |            |           |       |                 |
|----------|------|----------|--------------|------------|-----------|-------|-----------------|
| Volts    | 230  | Max RPM  | 4000         | Conn Diag. | CD0006B03 | Leads | 3               |
| Amps     | 2.5  | Max Amps |              | Cs Diagram | CS1127    | BEMF  | 135             |
| HP       | 1    | VFD #    | ECIN8A7P0    |            |           | LD    | 29.3            |
| RPM      | 1800 | S.F.     | 1.00         |            |           | LQ    | 136             |
| Phase/Hz | 3/60 | Rating   | 40C AMB-CONT |            |           | Rs    | 4.8724 Meas L-L |



|                          |                                                                                                        |                                            |                                                  |
|--------------------------|--------------------------------------------------------------------------------------------------------|--------------------------------------------|--------------------------------------------------|
| <b>BALDOR • RELIANCE</b> | DR By: <u>R &amp; D</u><br>CK By: <u>USBIBAK</u><br>APP By: <u>USWEQUA1</u><br>Date: <u>12/20/2024</u> | <b>AC MOTOR<br/>PERFORMANCE<br/>CURVES</b> | <b>35WGG932</b><br>35-0000-1609<br>Test - 111747 |
|--------------------------|--------------------------------------------------------------------------------------------------------|--------------------------------------------|--------------------------------------------------|

