



Customer information packet

ECS100A8H2DB4

2HP, 1800RPM, 3PH, 60HZ, 145TC, 3524B, TEFC, F1

Class - None

Division - Not Applicable

Specifications

| | |
|--------------------------------|--------------------------------|
| Enclosure | TEFC |
| Frame | 145TC |
| 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 | 2.000 HP @ 60 HZ |
| Phase | 3 |
| Synchronous Speed @ Frequency | 1800 RPM @ 60 HZ |
| Voltage @ Frequency | 230.0 V @ 60 HZ |
| Agency Approvals | BLUETOOTH CULUS 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 | 6 |
| Current @ Voltage | 4.800 A @ 230.0 V |
| Design Code | - |
| Drip Cover | No Drip Cover |
| Duty Rating | CONT |
| Efficiency @ 100% Load | 91.3 % |
| Electrically Isolated Bearing | Not Electrically Isolated |
| Feedback Device | NO FEEDBACK |
| Heater Indicator | No Heater |
| High Voltage Full Load Amps | 4.8 a |
| Insulation Class | F |
| Inverter Code | 03 |

Part detail

| | |
|--------------|-----------------------|
| Revision | C |
| Type | AC |
| Mech. spec. | 35E5351 |
| Base | |
| Status | PRD/A |
| Elec. spec. | 35WGG964 |
| Layout | 35LYE5351 |
| Eff. date | 10-31-2024 |
| CD Diagram | CD0006B03 |
| Poles | 04 |
| Leads | 3#16 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 @ 16 AWG |
| Motor Lead Termination | Flying Leads |
| Motor Standards | NEMA |
| Motor Type | 3524B |
| Mounting Arrangement | F1 |
| Number of Poles | 4 |
| Overall Length | 17.71 IN |
| Power Factor | 93 |
| 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. | ECS100A8H2DB4 | | | | | | | | |
| SPEC. | 35E5351G964G1 | | | | | | | | |
| FRAME | 145TC | | ENCL. | TEFC | IP | 54 | | | |
| HP | 2 | 40 | C AMB | | CONT | | | | |
| NOM. EFF. | 91.3 | PF | 93 | SF | 1 | | | | |
| VOLTS | 230 | | FLA | 4.8 | | | | | |
| RPM | 1800 | | RPM-MAX | 4000 | | | | | |
| HZ | 60 | PH. | 3 | CLASS | F | | | | |
| BEMF (V) | 148 | | RS (OHMS) | 2.94 | | | | | |
| LD (MH) | 22.1 | | LQ (MH) | 97.1 | | | | | |
| 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 | 12.5 | W/EXT. CHOKE | | | 10.2 |
| SERIAL # | | | | | |

| | | | | | | | |
|----------|------|----------|----------------|------------|-----------|-------|------------------|
| Volts | 230 | Max RPM | 4000 | Conn Diag. | CD0006B03 | Leads | 3 |
| Amps | 4.8 | Max Amps | | Cs Diagram | CS1127 | BEMF | 95 |
| HP | 2 | VFD# | OPC-2-120070-1 | | | LD | 15.2 |
| RPM | 1800 | S.F. | 1.00 | | | LQ | 63.5 |
| Phase/Hz | 3/60 | Rating | 40C AMB-CONT | | | Rs | 9.5595 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 | 1619 | 90% | 5.8 | 100% | 1.8 | 84.2 | 16.73% | 252 |
| P2 | 906 | 50% | 4.2 | 100% | 0.7 | 62.7 | 21.27% | 321 |
| P3 | 440 | 25% | 2.8 | 100% | 0.2 | 36.4 | 20.56% | 310 |
| P4 | 1627 | 90% | 2.9 | 50% | 0.9 | 83.8 | 8.66% | 131 |
| P5 | 902 | 50% | 2.9 | 50% | 0.5 | 69.3 | 10.98% | 166 |
| P6 | 901 | 50% | 1.5 | 25% | 0.3 | 76.0 | 3.93% | 59 |
| P7 | 455 | 25% | 1.5 | 25% | 0.1 | 61.2 | 3.96% | 60 |

61800-9-2 PDS Performance at Reference Operating Points

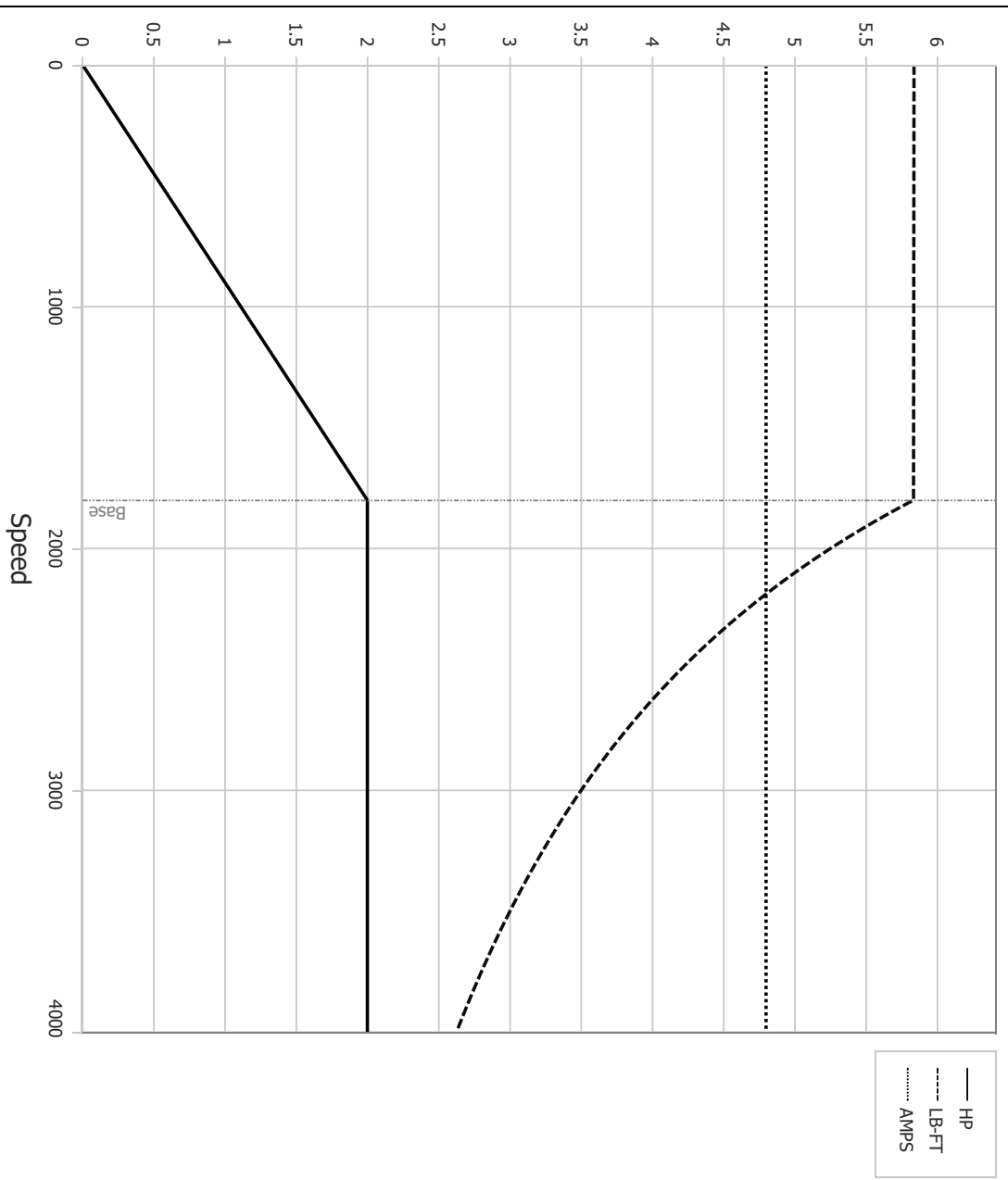
| | RPM | % Speed | LB-FT | % Torque | HP | System Efficiency | Loss (% FL) | Watts Loss (W) |
|----|------|---------|-------|----------|-----|-------------------|-------------|----------------|
| P1 | 1784 | 100% | 5.8 | 100% | 2.0 | 81.2 | 22.62% | 341 |
| P2 | 906 | 50% | 4.2 | 100% | 0.7 | 58.0 | 25.91% | 391 |
| P3 | 298 | 17% | 2.2 | 100% | 0.1 | 26.7 | 16.78% | 253 |
| P4 | 1790 | 100% | 2.9 | 50% | 1.0 | 79.0 | 13.05% | 197 |
| P5 | 902 | 50% | 2.9 | 50% | 0.5 | 63.9 | 14.02% | 212 |
| P6 | 299 | 17% | 2.2 | 50% | 0.1 | 26.7 | 16.62% | 251 |
| P7 | 901 | 50% | 1.5 | 25% | 0.3 | 68.7 | 5.66% | 85 |
| P8 | 311 | 17% | 1.5 | 25% | 0.1 | 40.6 | 6.26% | 94 |

Points not taken in certified order.

| | | | | |
|---|---------|-------------------|------------------------------------|---|
|  | DR By: | <u>R & D</u> | AC MOTOR PERFORMANCE CURVES | 35WGA0050 35-0000-1619 Test - 111860 |
| | CK By: | <u>USTOSAN</u> | | |
| | App By: | <u>USJAROB1</u> | | |
| Date: | | <u>01/29/2025</u> | | |

| | | | | | | | |
|----------|------|----------|----------------|------------|-----------|-------|-----------------|
| Volts | 230 | Max RPM | 4000 | Conn Diag. | CD0006B03 | Leads | 3 |
| Amps | 4.8 | Max Amps | | Cs Diagram | CS1127 | BEMF | 95 |
| HP | 2 | VFD # | OPC-2-120070-1 | | | LD | 15.2 |
| RPM | 1800 | S.F. | 1.00 | | | LQ | 63.5 |
| Phase/Hz | 3/60 | Rating | 40C AMB-CONT | | | Rs | 9.5595 Meas L-L |

Constant Duty Operating Range



| | | | |
|---------------------------------|--|---|---|
| <p>BALDOR • RELIANCE</p> | DR By: <u>R & D</u> | <p>AC MOTOR PERFORMANCE CURVES</p> | <p>35WGA0050 35-0000-1619 Test - 1171860</p> |
| | CK By: <u>USTOSAN</u> | | |
| | APP By: <u>USJAROB1</u> Date: <u>01/29/2025</u> | | |

CD0006B03



NOTES:

1. INTERCHANGE ANY TWO LINE LEADS TO REVERSE ROTATION.
2. ACTUAL NUMBER OF INTERNAL PARALLEL CIRCUITS MAY VARY.

CD0006B03

| | | |
|--|------------------------------|-------------------|
| REV. DESC: CHANGE LEAD COLORS TO BLUE WHITE ORANGE | | |
| REV. LTR: A | VERSION: 01 | TDR: 000001158598 |
| FILE: \AAA\00252\917 | REVISED: 11:01:03 01/19/2021 | BY: ENMARSO |
| MTL: - | © □ | |

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3PH, SV, 3 LEADS, WYE CONNECTED, ECS

SH 1 of 1