# Customer information packet

ECS100A8H2DF4

2HP, 1800RPM, 3PH, 60HZ, 145T, 3524B, TEFC, F1
Class - None
Division - Not Applicable

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## Specifications

| | |
|---|---|
| **Enclosure** | TEFC |
| **Frame** | 145T |
| **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 |
| | WEEE |
| | CULUS |
| **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** | J |
| **Type** | AC |
| **Mech. spec.** | 35E5247 |
| **Base** | |
| **Status** | PRD/A |
| **Elec. spec.** | 35WGG964 |
| **Layout** | 35LYE5247 |
| **Eff. date** | 07-27-2026 |
| **CD Diagram** | CD0006B03 |
| **Poles** | 04 |
| **Leads** | 3#16 |
| **Proprietary** | False |
| **Created date** | 07-25-2024 |

| | |
|---|---|
| **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** | 16.71 IN |
| **Power Factor** | 93 |
| **Product Family** | General Purpose |
| **Pulley Face Code** | Standard |
| **Rodent Screen** | None |
| **RoHS Status** | Y |
| **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 |

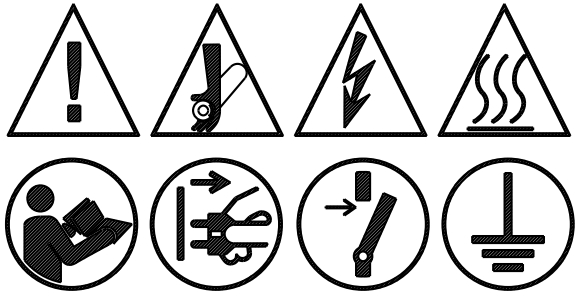
# BALDOR·RELIANCE

## EC-Titanium™

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| CAT. NO. | ECS100A8H2DF4 | | | | | | |
| SPEC. | 35E5247G964G3 | | | | YR | *** | |
| FRAME | 145T | | ENCL. | TEFC | IP | 54 | |
| HP | 2 | RATING | 40C AMB-CONT | | | | |
| NOM. EFF. | 91.3 | PF | 93 | SF | 1.00 | | |
| VOLTS | 230 | | FLA | 4.4 | | | |
| RPM | 1800 | RPM MAX | 4000 | | | | |
| HZ | 60 | PH. | 3 | CLASS | F | | |
| BEMF (V) | 148 | | Rs (Ω) | 2.94 | | | |
| Ld (mH) | 22.1 | | Lq (mH) | 97.1 | | | |
| INV TYP | VPWM | CHP | 60 TO 133 HZ | | | | |
| | CT | 6 TO 60 HZ | VT | 6 TO 60 HZ | | | |
| MATCHED INV | EC18A7P0 | | | | | | |
| BEARING | DE | 6205 | ODE | 6205 | | | |
| SERIAL# | *** | | | | | | |

ELECTRONICALLY PROTECTED MOTOR
FOR INDUSTRIAL USE

FERRITE ASSISTED
SYNCHRONOUS RELUCTANCE MOTOR
FOR INVERTER USE ONLY



PERMANENT MAGNET MOTOR. WHEN SHAFT IS ROTATED, VOLTAGE WILL BE GENERATED AT THE MOTOR TERMINALS.
MOTEUR Á AIMANT PERMANENT. LORSQUE L'ARBRE TOURNE, UNE TENSION SERA GÉNÉRÉE AUX BORNES DU MOTEUR.

BALDOR-RELIANCE
SHAFT GROUNDING BRUSH INSTALLED

c UL us LISTED
E46145

ABB MOTORS AND MECHANICAL INC.
5711 R.S. BOREHAM JR. ST., FORT SMITH, AR. MFG IN U.S.A.

BALDOR • RELIANCE

EC-Titanium™

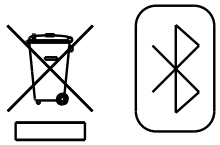
| | | | | | |
|---|---|---|---|---|---|
| PART NO. | EC18A7P0 | | | | |
| U1 | 240 | PH | 1 | HZ | 60 |
| I1 MAX | 12.5 | W/EXT. CHOKE | | | 10.2 |
| SERIAL # | *** | | | | |



POWER DOWN FOR
5 MINUTES BEFORE
REMOVING COVER

METTRE HORS TENSION
PENDANT 5 MINUTES
AVANT DE RETIRER LE
COUVERCLE

ABB MOTORS AND MECHANICAL
INC. FORT SMITH, AR.
MFG. IN U.S.A.



**Parts List**

| Part number | Description | Quantity |
|---|---|---|
| SA428580 | SA 35E5247G964G3 | 1.000 ea |
| RA420746 | RA 35E5247G964G3 | 1.000 ea |
| ECI8A7P0SP | 200-240V 1PH IN/230V 3PH OUT, 2.0HP, 7.0 | 1.000 ea |
| 35EP3123C00 | MASTER DE,205 BRG,.998 SH,#26 DRN,LCK BR | 1.000 ea |
| HA4067A01 | PUSH IN DRAIN FITTING (BLACK) | 1.000 ea |
| 51XN1032A18 | 10-32 X 1 1/8 HX WS SL SR (ESKAY) | 2.000 ea |
| XY1032A02 | 10-32 HEX NUT DIRECTIONAL SERRATION | 4.000 ea |
| 34FN3002A01SP | EXTERNAL FAN, PLASTIC, .637/.639 HUB W/ | 1.000 ea |
| 35FH3005 | 35 FRAME ODE ECM FAN HOUSING | 1.000 ea |
| 15XN1032A08 | SCREW PAN HD 10-32 X 1/2 (PHILLIPS) | 4.000 ea |
| GS0026 | ECM GASKET,35 ODE MOUNT, HEATSINK TO FAN | 1.000 ea |
| 15XN0832A12 | SCREW, 8/32 X 3/4" PAN HDPHIL, MS | 3.000 ea |
| HS0051A00 | 35 FRAME ODE ECM HEATSINK MACHINING | 1.000 ea |
| 11XW1032A10 | 10-32 X .62, TAPTITE II, HEX WSHR SLTD | 4.000 ea |
| GS0026 | ECM GASKET,35 ODE MOUNT, HEATSINK TO FAN | 1.000 ea |
| WD4100A30 | HEYCO #3833 RUBBER PLUG KOS-LT - 1/2 | 4.000 ea |
| 15XN1032A10 | SCREW PAN HD 10-32 X .625 (PHILLIPS) | 4.000 ea |
| MJ5002A02 | NON-CORROSIVE SILICONE, DOW 748, 10.3 OZ | 0.001 ea |
| HW4600B32SP | V-RING SLINGER 1.000 X 1.540 X .24 VITON | 1.000 ea |
| HW2501D13 | KEY, 3/16 SQ X 1.375 | 1.000 ea |
| HA7000A01 | KEY RETAINER 7/8" DIA SHAFT | 1.000 ea |
| MJ1000A02 | GREASE, POLYREX EM EXXON | 0.050 lb |
| 35EP3120B01 | FREP TEFC 203 BRG ECS W/LEAD SLOT @ 6 (C | 1.000 ea |
| HW5100A03 | WAVY WASHER (W1543-017) | 1.000 ea |
| 35CB3504A00 | 35 FRAME ODE ECM PLASTIC COVER WITH FOAM | 1.000 ea |
| HA3100A13 | THRUBOLT 10-32 X 7.750 | 4.000 ea |
| MG1050G01 | CELEROL MEDIUM CHARCOAL METALLIC GRAY | 0.017 ga |
| NP3968 | MYLAR BLANK 4.375W X 3.375L | 1.000 ea |
| NP3978 | MYLAR BLANK 4.375W X 1.75L | 1.000 ea |
| 36PA1001 | PKG GRP, PRINT PK1017A07 | 1.000 ea |
| MN451 | EC Titanium Quick Start 06/22 | 1.000 ea |

| | | |
|---|---|---|
| PE-0000001 | ZRTG PE ASSEMBLY | 1.000 ea |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 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

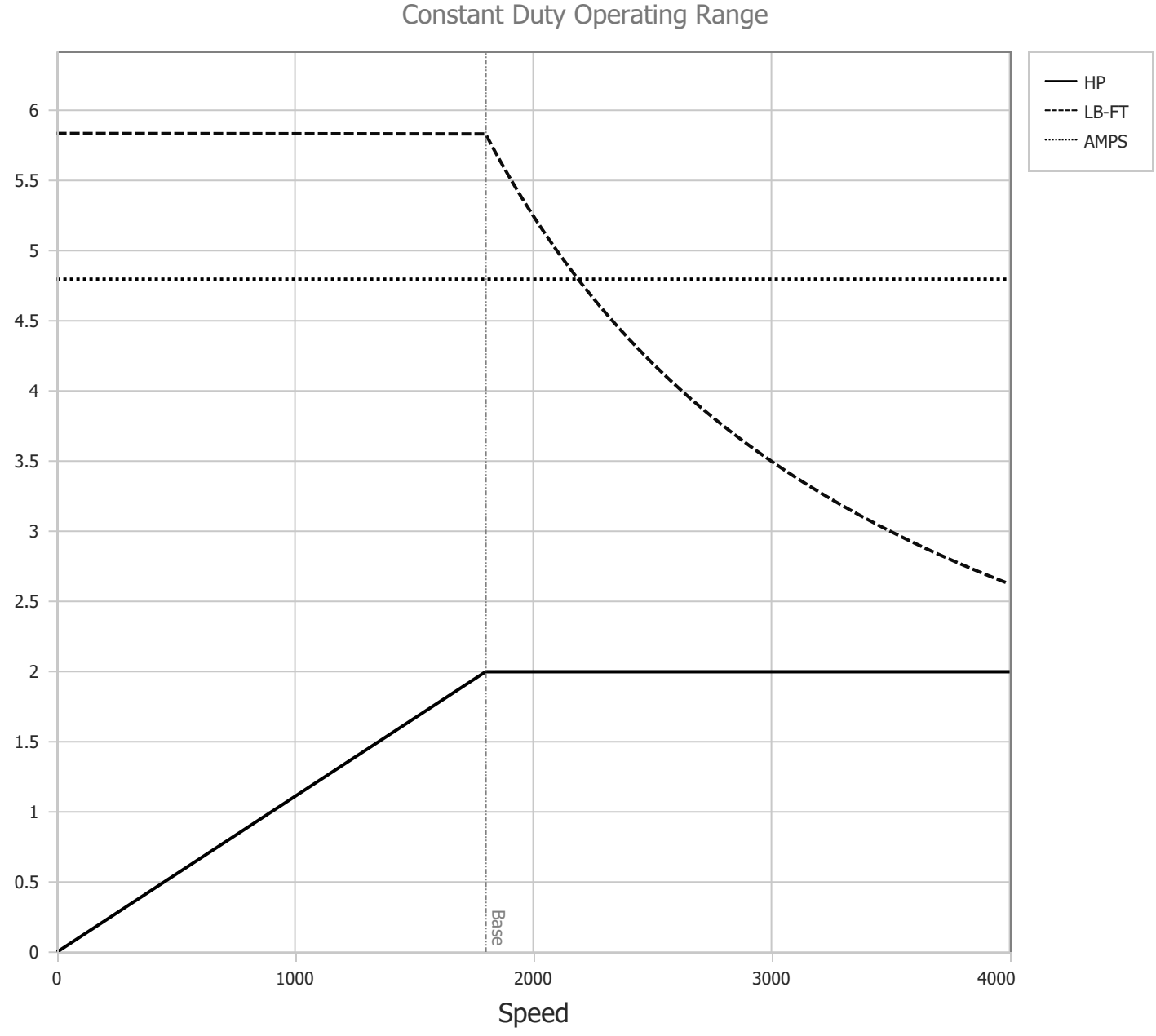
| | RPM | % Speed | LB-FT | % Torque | HP | Efficiency | Loss (% FL) | Watts Loss (W) |
|---|---|---|---|---|---|---|---|---|
| P1 | 1619 | 90% | 5.8 | 100% | 1.8 | 84.2 | 16.73% | 252 |
| P2 | 906 | 50% | 4.2 | 100% | 0.7 | 62.7 | 21.27% | 321 |
| P3 | 440 | 25% | 2.8 | 100% | 0.2 | 36.4 | 20.56% | 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.*

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 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 |

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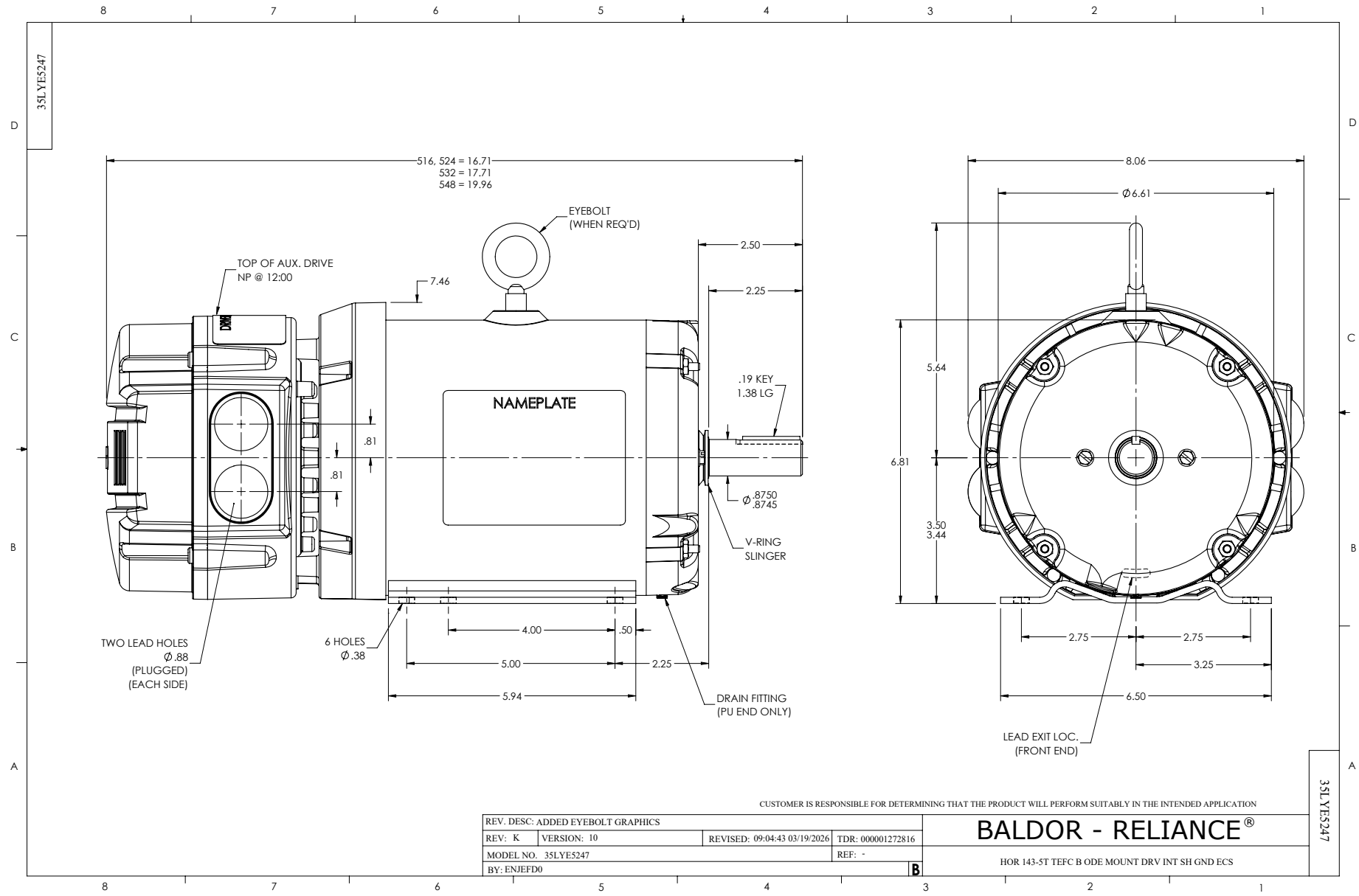
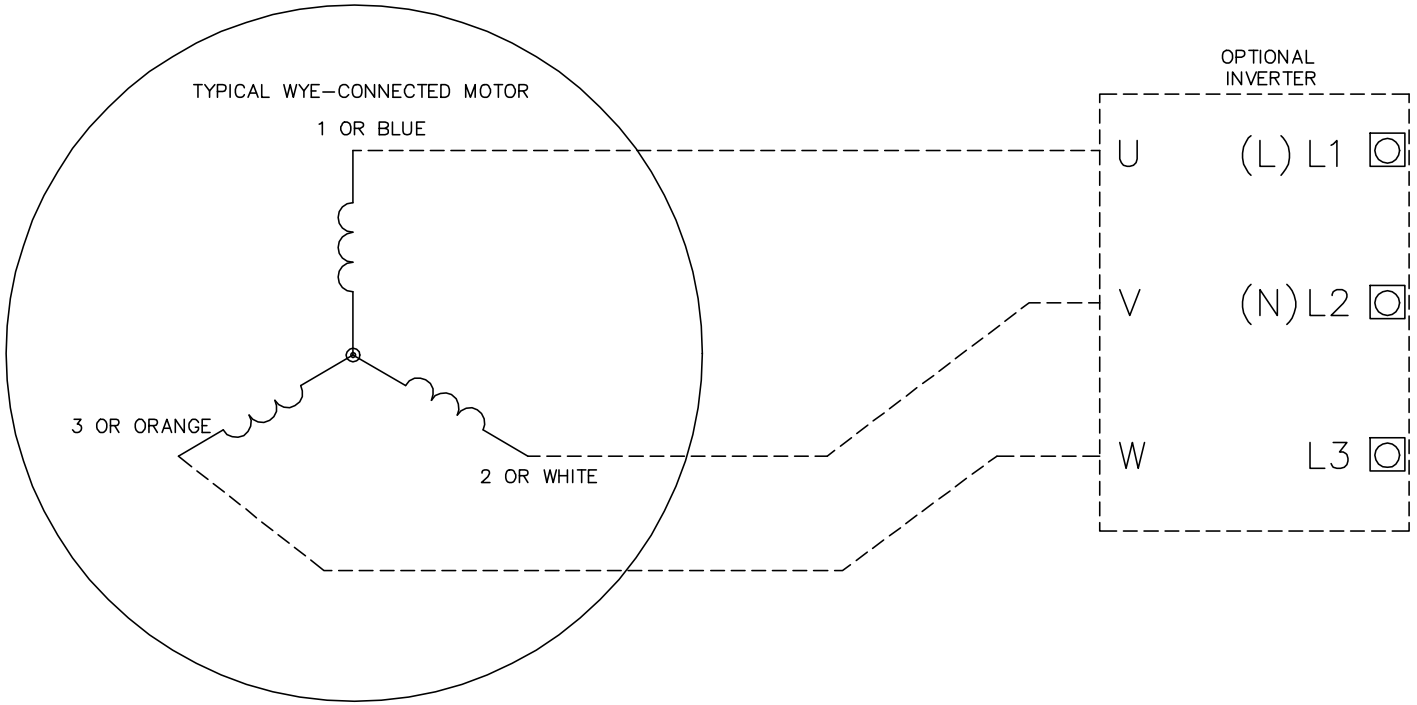
|---|---|---|---|
| BALDOR • RELIANCE | DR By: R & D<br>CK By: USTOSAN<br>APP By: USJAROB1<br>Date: 01/29/2025 | **AC MOTOR PERFORMANCE CURVES** | **35WGA0050**<br>35-0000-1619<br>*Test - 111860* |


35LYE5247
516, 524 = 16.71
532 = 17.71
548 = 19.96
EYEBOLT
(WHEN REQ'D)
TOP OF AUX. DRIVE
NP @ 12:00
7.46
2.50
2.25
.19 KEY
1.38 LG
NAMEPLATE
.81
.81
Ø .8750
.8745
V-RING
SLINGER
TWO LEAD HOLES
Ø .88
(PLUGGED)
(EACH SIDE)
6 HOLES
Ø .38
4.00
.50
5.00
2.25
5.94
DRAIN FITTING
(PU END ONLY)
8.06
Ø 6.61
5.64
6.81
3.50
3.44
2.75
2.75
3.25
6.50
LEAD EXIT LOC.
(FRONT END)
CUSTOMER IS RESPONSIBLE FOR DETERMINING THAT THE PRODUCT WILL PERFORM SUITABLY IN THE INTENDED APPLICATION
REV. DESC: ADDED EYEBOLT GRAPHICS
REV: K
VERSION: 10
REVISED: 09:04:43 03/19/2026
TDR: 000001272816
MODEL NO. 35LYE5247
REF: -
BY: ENJEFD0
B
BALDOR - RELIANCE®
HOR 143-5T TEFC B ODE MOUNT DRV INT SH GND ECS
35LYE5247

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: – | | |

BALDOR - RELIANCE®

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

SH 1 of 1