ABB BALDOR RELIANCE

# Customer information packet

## ECS100A4H3EC4

3HP, 1800RPM, 3PH, 60HZ, 182TC, 3624B, TEFC, F1
Class - None
Division - Not Applicable

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## Specifications

| | |
|---|---|
| **Enclosure** | TEFC |
| **Frame** | 182TC |
| **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** | 3.000 HP @ 60 HZ |
| **Phase** | 3 |
| **Synchronous Speed @ Frequency** | 1800 RPM @ 60 HZ |
| **Voltage @ Frequency** | 460.0 V @ 60 HZ |
| **Agency Approvals** | UL |
| | 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** | 3.700 A @ 460.0 V |
| **Drip Cover** | No Drip Cover |
| **Duty Rating** | CONT |
| **Efficiency @ 100% Load** | 92.8 % |
| **Electrically Isolated Bearing** | Not Electrically Isolated |
| **Feedback Device** | NO FEEDBACK |
| **Heater Indicator** | No Heater |
| **High Voltage Full Load Amps** | 3.7 a |
| **Insulation Class** | F |
| **Inverter Code** | Inverter Duty |
| **IP Rating** | NONE |
| **Lifting Lugs** | Standard Lifting Lugs |

## Part Detail

| | |
|---|---|
| **Revision** | H |
| **Type** | AC |
| **Mech. spec.** | |
| **Base** | |
| **Status** | PRD/A |
| **Elec. spec.** | 36WGA0025 |
| **Layout** | 36LYT290 |
| **Eff. date** | 01-16-2026 |
| **CD Diagram** | CD0006B03 |
| **Poles** | 04 |
| **Leads** | 3#16 15" LONG LEADS |
| **Proprietary** | False |
| **Created date** | 09-28-2020 |

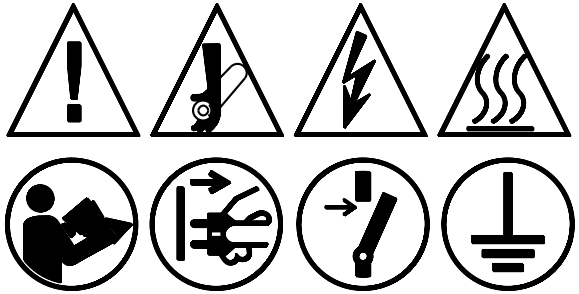
| | |
|---|---|
| **Locked Bearing Indicator** | Locked Bearing |
| **Motor Lead Termination** | Flying Leads |
| **Motor Standards** | NEMA |
| **Motor Type** | 3624B |
| **Mounting Arrangement** | F1 |
| **Number of Poles** | 4 |
| **Overall Length** | 22.25 IN |
| **Power Factor** | 97 |
| **Product Family** | General Purpose |
| **Pulley Face Code** | C-Face |
| **Rodent Screen** | None |
| **Service Factor** | 1.00 |
| **Shaft Diameter** | 1.125 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. | ECS100A4H3EC4 | | | | | | |
| SPEC. | 36-0001714 | | | | YR | *** | |
| FRAME | 182TC | | ENCL. | TEFC | IP | 54 | |
| HP | 3 | RATING | 40C AMB-CONT | | | | |
| NOM. EFF. | 92.8 | PF | 97 | SF | 1.0 | | |
| VOLTS | 460 | | FLA | 3.7 | | | |
| RPM | 1800 | RPM MAX | 4000 | | | | |
| HZ | 60 | PH. | 3 | CLASS | F | | |
| BEMF (V) | 212 | Rs (Ω) | 3.88 | | | | |
| Ld (mH) | 57.7 | Lq (mH) | 217.7 | | | | |
| INV TYP | VPWM | CHP | 60 TO 133 HZ | | | | |
| | CT | 6 TO 60 HZ | VT | 1 TO 133 HZ | | | |
| MATCHED INV | EC14A4P1 | | | | | | |
| BEARING | DE | 6206 | ODE | 6205 | | | |
| SERIAL# | *** | | | | | | |

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

ELECTRONICALLY PROTECTED MOTOR
FOR INDUSTRIAL USE

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

BALDOR • RELIANCE

# EC-Titanium™

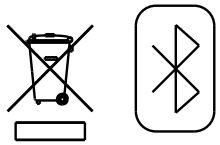
| | | | | | |
|---|---|---|---|---|---|
| PART NO. | EC14A4P1 | | | | |
| U1 | 480 | PH | 3 | HZ | 60 |
| I1 MAX | 4.7 | W/EXT. CHOKE | | | 3.8 |
| SERIAL # | *** | | | | |



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.



| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Volts | 460 | Max RPM | 3000 | Conn Diag. | CD0006B03 | Leads | 3 |
| Amps | 3.7 | Max Amps | | Cs Diagram | CS1126 | BEMF | 172 |
| HP | 3 | VFD# | ECI4A4P1 | | | LD | 51 |
| RPM | 1800 | S.F. | 1.00 | | | LQ | 177 |
| Phase/Hz | 3/60 | Rating | 40C AMB CONT | | | Rs | 3.8460 Meas. L-L |

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

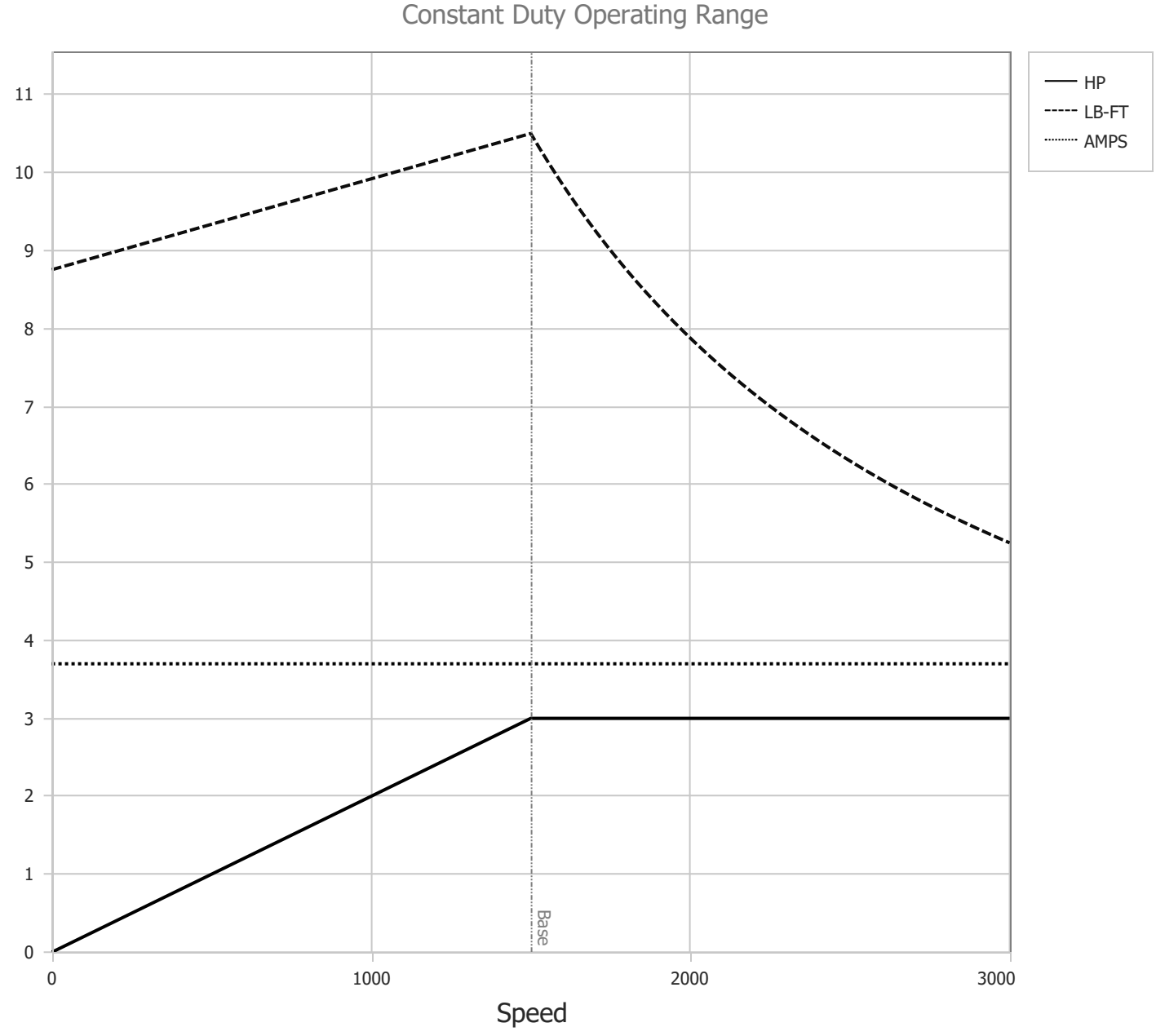
| | RPM | % Speed | LB-FT | % Torque | HP | Efficiency | Loss (% FL) | Watts Loss (W) |
|---|---|---|---|---|---|---|---|---|
| P1 | 1627 | 90% | 8.8 | 100% | 2.7 | 91.3 | 8.59% | 194 |
| P2 | 904 | 50% | 8.8 | 100% | 1.5 | 89.3 | 6.00% | 136 |
| P3 | 452 | 25% | 8.8 | 100% | 0.8 | 83.4 | 4.94% | 112 |
| P4 | 1628 | 90% | 4.4 | 50% | 1.4 | 91.8 | 3.99% | 90 |
| P5 | 904 | 50% | 4.4 | 50% | 0.8 | 89.9 | 2.80% | 63 |
| P6 | 904 | 50% | 2.2 | 25% | 0.4 | 87.9 | 1.70% | 39 |
| P7 | 452 | 25% | 2.2 | 25% | 0.2 | 83.7 | 1.21% | 27 |

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

| | RPM | % Speed | LB-FT | % Torque | HP | System Efficiency | Loss (% FL) | Watts Loss (W) |
|---|---|---|---|---|---|---|---|---|
| P1 | 1804 | 100% | 8.8 | 100% | 3.0 | 89.8 | 11.23% | 254 |
| P2 | 904 | 50% | 8.8 | 100% | 1.5 | 84.8 | 8.87% | 201 |
| P3 | 301 | 17% | 8.8 | 100% | 0.5 | 69.2 | 7.37% | 167 |
| P4 | 1809 | 100% | 4.4 | 50% | 1.5 | 88.5 | 6.44% | 146 |
| P5 | 904 | 50% | 4.4 | 50% | 0.8 | 84.1 | 4.70% | 106 |
| P6 | 301 | 17% | 4.4 | 50% | 0.3 | 68.2 | 3.86% | 87 |
| P7 | 904 | 50% | 2.2 | 25% | 0.4 | 80.2 | 3.06% | 69 |
| P8 | 301 | 17% | 2.2 | 25% | 0.1 | 62.6 | 2.46% | 56 |

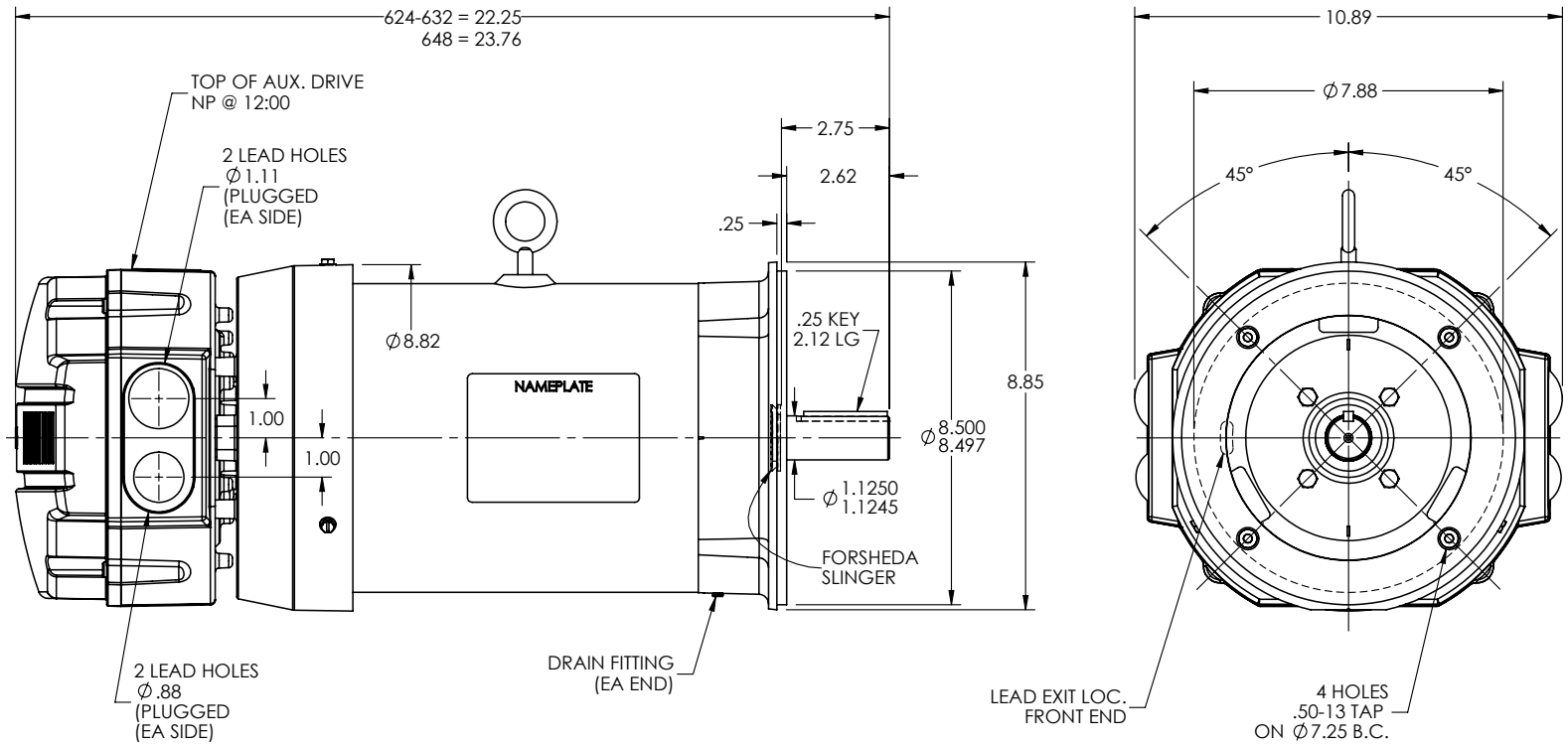
*Points not taken in certified order.*

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Volts | 460 | Max RPM | 3000 | Conn Diag. | CD0006B03 | Leads | 3 |
| Amps | 3.7 | Max Amps | | Cs Diagram | CS1126 | BEMF | 172 |
| HP | 3 | VFD # | ECI4A4P1 | | | LD | 51 |
| RPM | 1800 | S.F. | 1.00 | | | LQ | 177 |
| Phase/Hz | 3/60 | Rating | 40C AMB CONT | | | Rs | 3.8460 Meas L-L |




| | | | |
|---|---|---|---|
| BALDOR • RELIANCE | DR By: R & D<br>CK By: USBIBAK<br>APP By: USJAROB1<br>Date: 01/09/2025 | **AC MOTOR PERFORMANCE CURVES** | **36WGA0025**<br>36-0000-3655<br>*Test - 111781* |

36LYT290



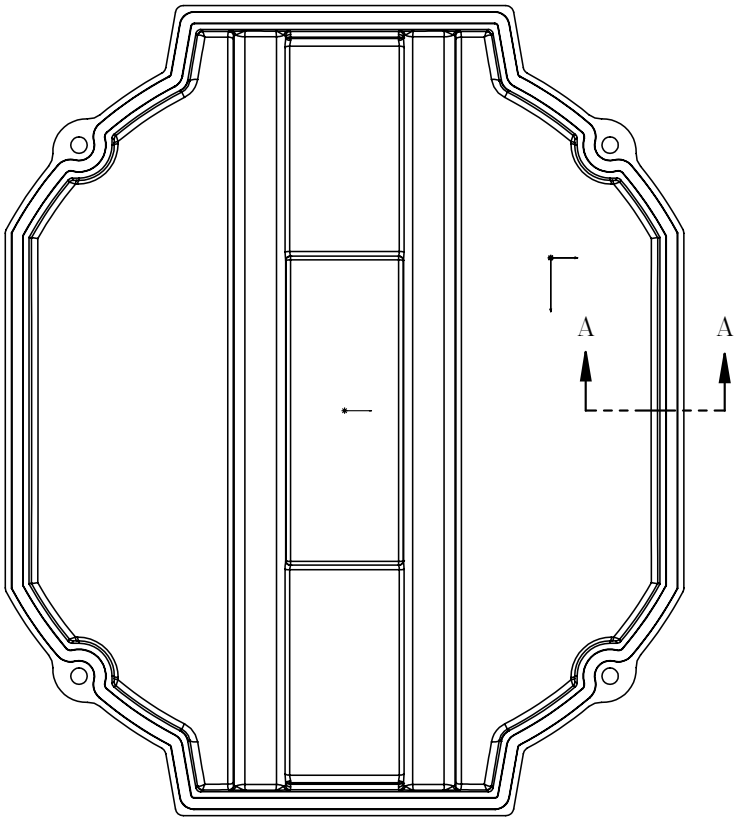

| | | | |
|---|---|---|---|
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| REV: A | VERSION: 01 | REVISED: 09:38:39 03/21/2022 | TDR: 000001187699 |
| | MODEL NO. 36LYT290 | | REF: - |
| | BY: ENJEFD0 | Material: - | |

BALDOR

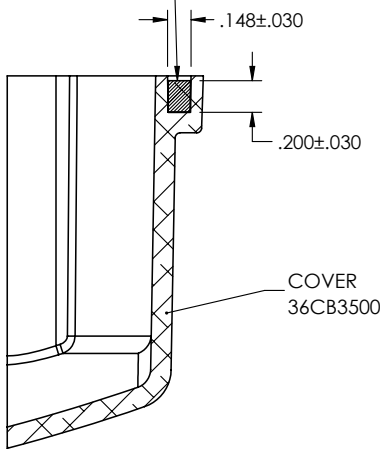
VER 182-4TC TEFC B ODE MOUNT DRV INT SH GND ECS

36LYT290

36CB3500A00




MATERIAL: RAMPF, RAKU-PUR 32-3280-51L



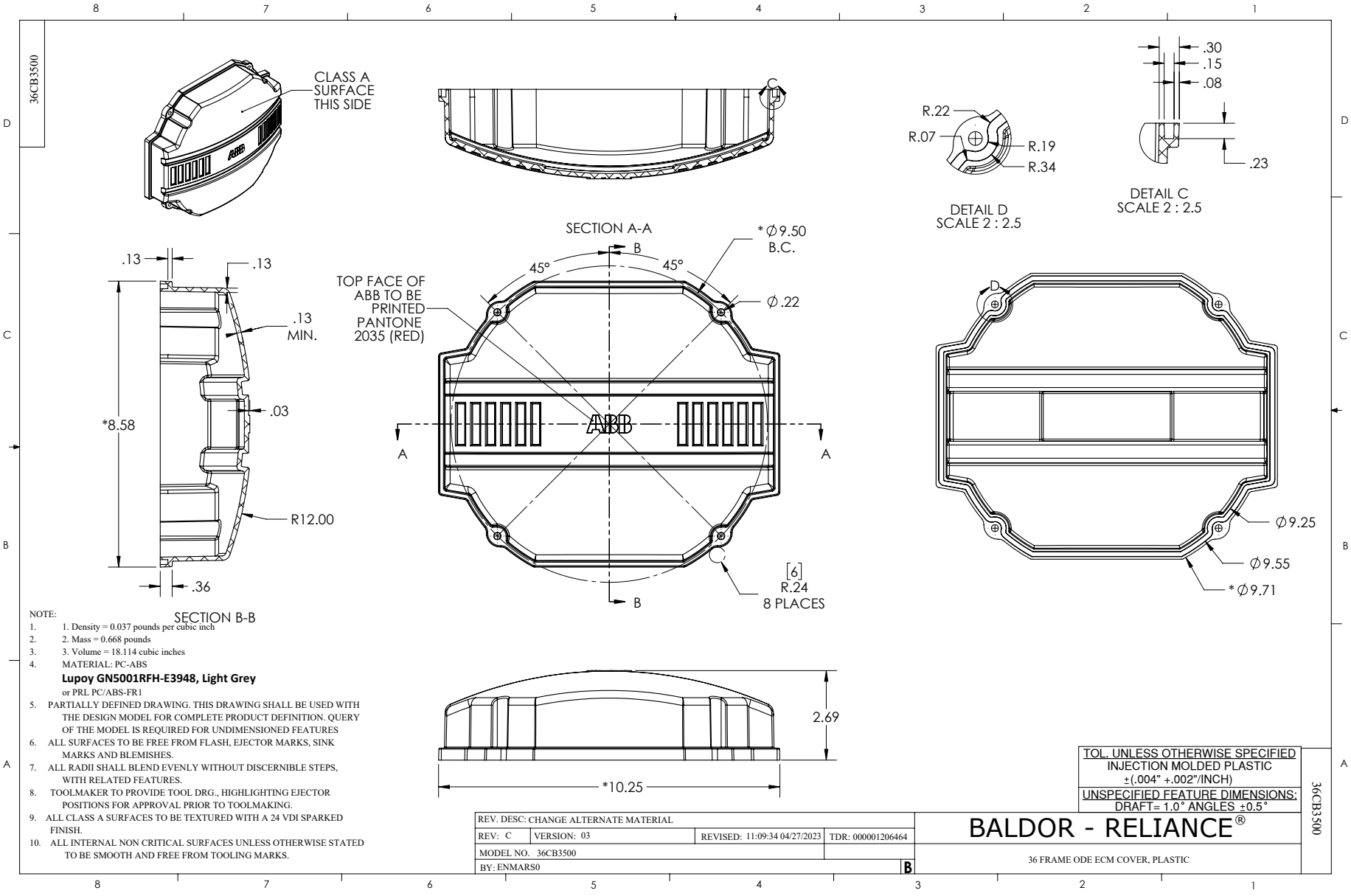

SECTION A–A

36CB3500A00

| | | | |
|---|---|---|---|
| REV. DESC: UPDATE MATERIAL | | | |
| REV: A | VERSION: 01 | REVISED: 10:45:08 03/29/2019 | TDR: 000001101646 |
| | MODEL NO. 36CB3500A00 | | REF: - |
| | BY: ENMARS0 | Material: - | |

BALDOR - RELIANCE®

36 FRAME ODE ECM COVER WITH FOAM SEAL




NOTE:
1. 1. Density = 0.037 pounds per cubic inch
2. 2. Mass = 0.668 pounds
3. 3. Volume = 18.114 cubic inches
4. MATERIAL: PC-ABS
   **Lupoy GN5001RFH-E3948, Light Grey**
   or PRL PC/ABS-FR1
5. PARTIALLY DEFINED DRAWING. THIS DRAWING SHALL BE USED WITH THE DESIGN MODEL FOR COMPLETE PRODUCT DEFINITION. QUERY OF THE MODEL IS REQUIRED FOR UNDIMENSIONED FEATURES
6. ALL SURFACES TO BE FREE FROM FLASH, EJECTOR MARKS, SINK MARKS AND BLEMISHES.
7. ALL RADII SHALL BLEND EVENLY WITHOUT DISCERNIBLE STEPS, WITH RELATED FEATURES.
8. TOOLMAKER TO PROVIDE TOOL DRG., HIGHLIGHTING EJECTOR POSITIONS FOR APPROVAL PRIOR TO TOOLMAKING.
9. ALL CLASS A SURFACES TO BE TEXTURED WITH A 24 VDI SPARKED FINISH.
10. ALL INTERNAL NON CRITICAL SURFACES UNLESS OTHERWISE STATED TO BE SMOOTH AND FREE FROM TOOLING MARKS.

| | | | |
|---|---|---|---|
| REV. DESC: CHANGE ALTERNATE MATERIAL | | | |
| REV: C | VERSION: 03 | REVISED: 11:09:34 04/27/2023 | TDR: 000001206464 |
| MODEL NO. 36CB3500 | | | |
| BY: ENMARS0 | | | B |

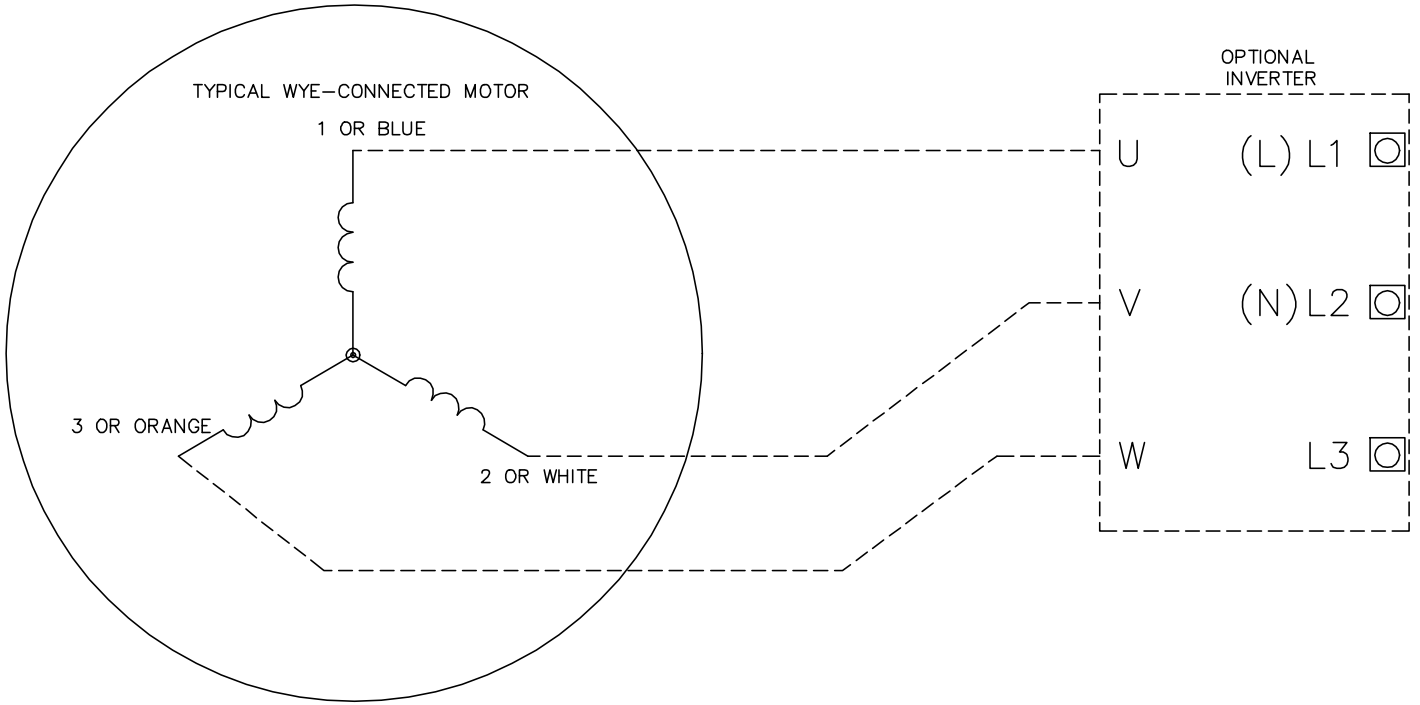
TOL. UNLESS OTHERWISE SPECIFIED
INJECTION MOLDED PLASTIC
±(.004" +.002"/INCH)
UNSPECIFIED FEATURE DIMENSIONS:
DRAFT= 1.0° ANGLES ±0.5°

BALDOR - RELIANCE®

36 FRAME ODE ECM COVER, PLASTIC

36CB3500

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