

ABB BALDOR RELIANCE III

Customer information packet

ECS101T8K1P5DC4

1.5KW, 1500RPM, 3PH, 50HZ, D90C, 3524B, TEFC, B

Class - None

Division - Not Applicable

Specifications

| | |
|---------------------------------------|--------------------------------|
| Enclosure | TEFC |
| Frame | D90C |
| 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 CULUS UKCA 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 | 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 | C |
| Type | AC |
| Mech. spec. | 35EE438 |
| Base | |
| Status | PRD/A |
| Elec. spec. | 35WGG964 |
| Layout | 35LYEE438 |
| Eff. date | 11-22-2024 |
| CD Diagram | CD0006B03 |
| Poles | 04 |
| Leads | 3#16 13" LONG LEADS Y |
| Proprietary | False |
| Created date | 04-17-2024 |

| | |
|--------------------------------------|---------------------|
| Insulation Class | F |
| Inverter Code | 03 |
| 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 | IEC |
| Motor Type | 3524B |
| Mounting Arrangement | B14 |
| Number of Poles | 4 |
| Overall Length | 12.84 IN |
| Power Factor | 93 |
| Product Family | General Purpose |
| Pulley Face Code | C-Face |
| Rodent Screen | None |
| Service Factor | 1.00 |
| Shaft Diameter | 0.945 IN |
| Shaft Ground Indicator | Shaft Grounding |
| Shaft Rotation | Reversible |
| Speed | 1500 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

| NP3968B01A01 | | | | | | | | | |
|---------------------|-----------------|-------------------|------------|------------------|------------|-----------------|------|--|--|
| CAT.NO. | ECS101T8K1P5DC4 | | | | | | | | |
| SPEC. | 35EE438G964 | | | YR | | | | | |
| FRAME | D90C | | IP | 55 | WT. | 45 | | | |
| KW | 1.5 | HZ | 50 | PH | 3 | DUTY-IPM | CONT | | |
| INS CL | F | CLASS RISE | | | | AMB-C | 40 | | |
| EFF. CL | IE5 | EFF | 90.6 | COSφ | 93 | | | | |
| VOLTS | 230 | | FLA | 3.4 | | | | | |
| 1/MIN | 1500 | | | 1/MIN MAX | 3000 | | | | |
| BEMF (V) | 123 | | | RS (OHMS) | 2.94 | | | | |
| LD (MH) | 22.1 | | | LQ (MH) | 97.1 | | | | |
| VPWM | CP = | 50 | | TO | 133 | | | | |
| CT | 5 | TO | 50 | VT | 5 | TO | 50 | | |
| MATCHED INV | ECIN8A7P0 | | | | | | | | |
| DE | 6206 | | ODE | 6203 | | | | | |
| SERIAL # | | | | | | | | | |

NP3978A00

| | | | | | |
|-----------------|-----------|---------------------|---|-----------|-----|
| PART NO. | ECIN8A7P0 | | | | |
| U1 | 240 | PH | 1 | HZ | 50 |
| I1 | 5.3 | W/EXT. CHOKE | | | 5.1 |
| SERIAL # | | | | | |

| | | | | | | | |
|----------|------|----------|--------------|------------|-----------|-------|------------------|
| 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 (% FL) | Watts Loss (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

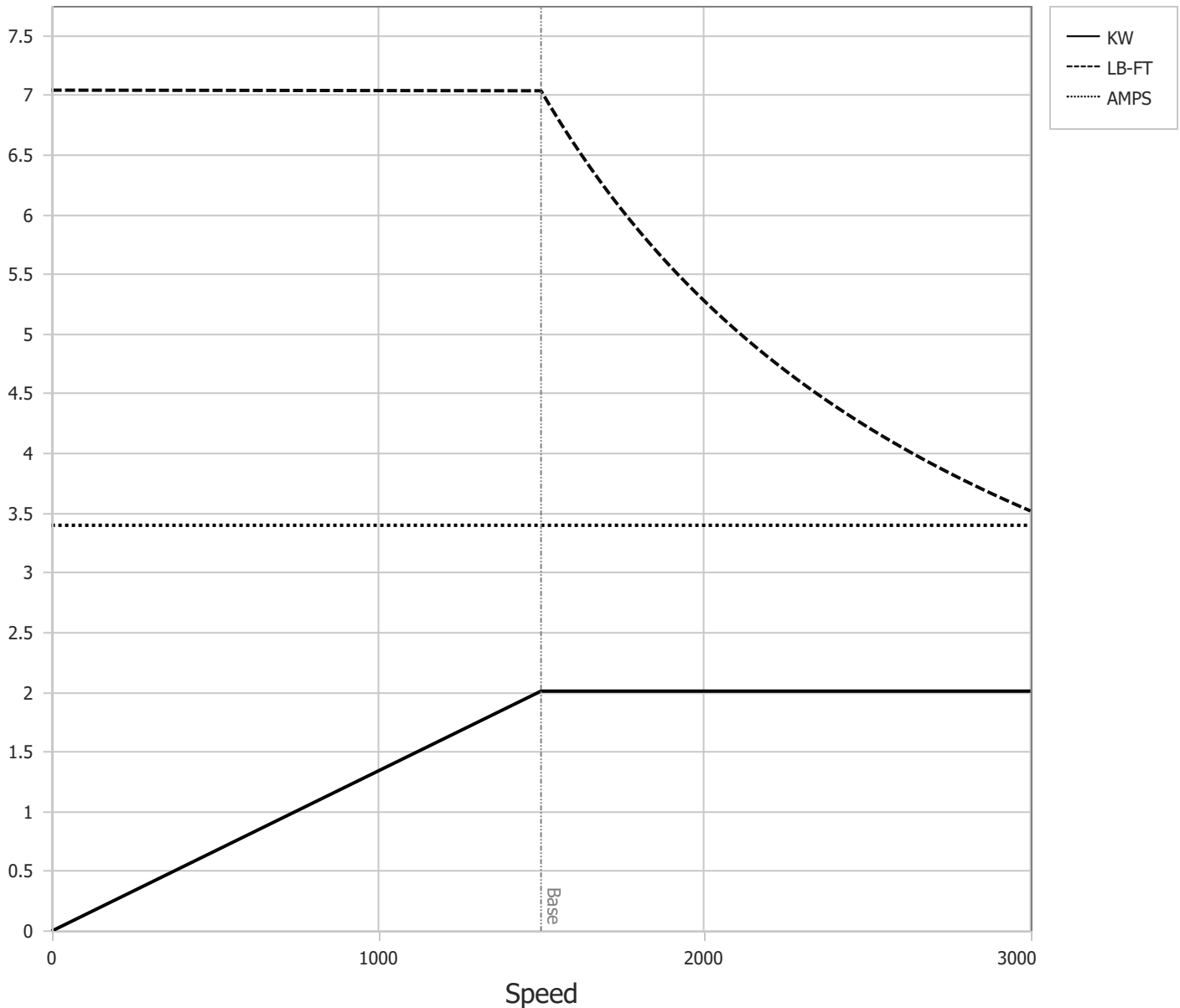
| | RPM | % Speed | LB-FT | % Torque | KW | System Efficiency | Loss (% FL) | Watts Loss (W) |
|----|------|---------|-------|----------|-----|-------------------|-------------|----------------|
| P1 | 1508 | 100% | 7.0 | 100% | 2.0 | 86.2 | 15.88% | 241 |
| P2 | 751 | 50% | 7.0 | 100% | 1.0 | 80.8 | 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.

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

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

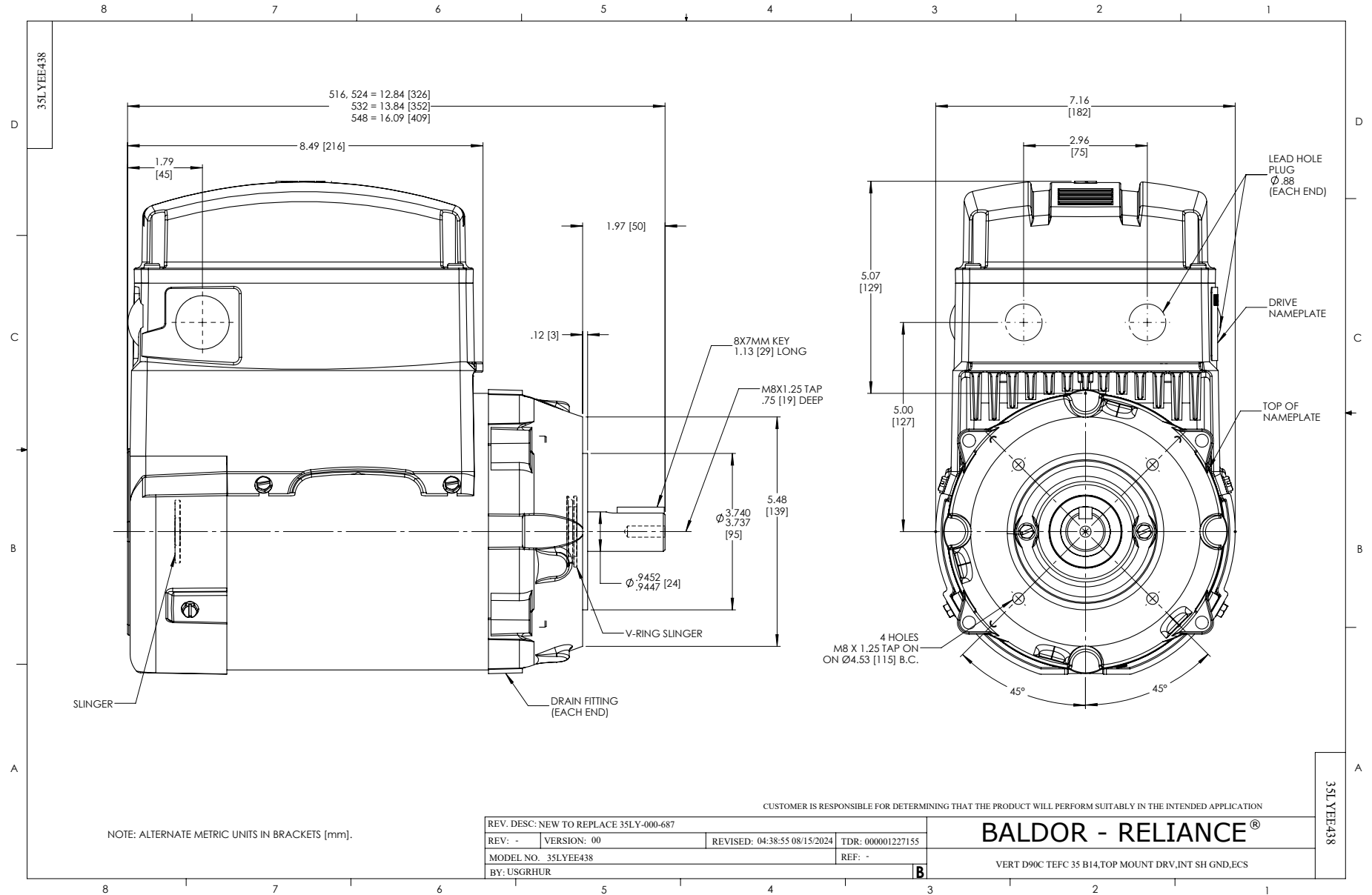
Constant Duty Operating Range



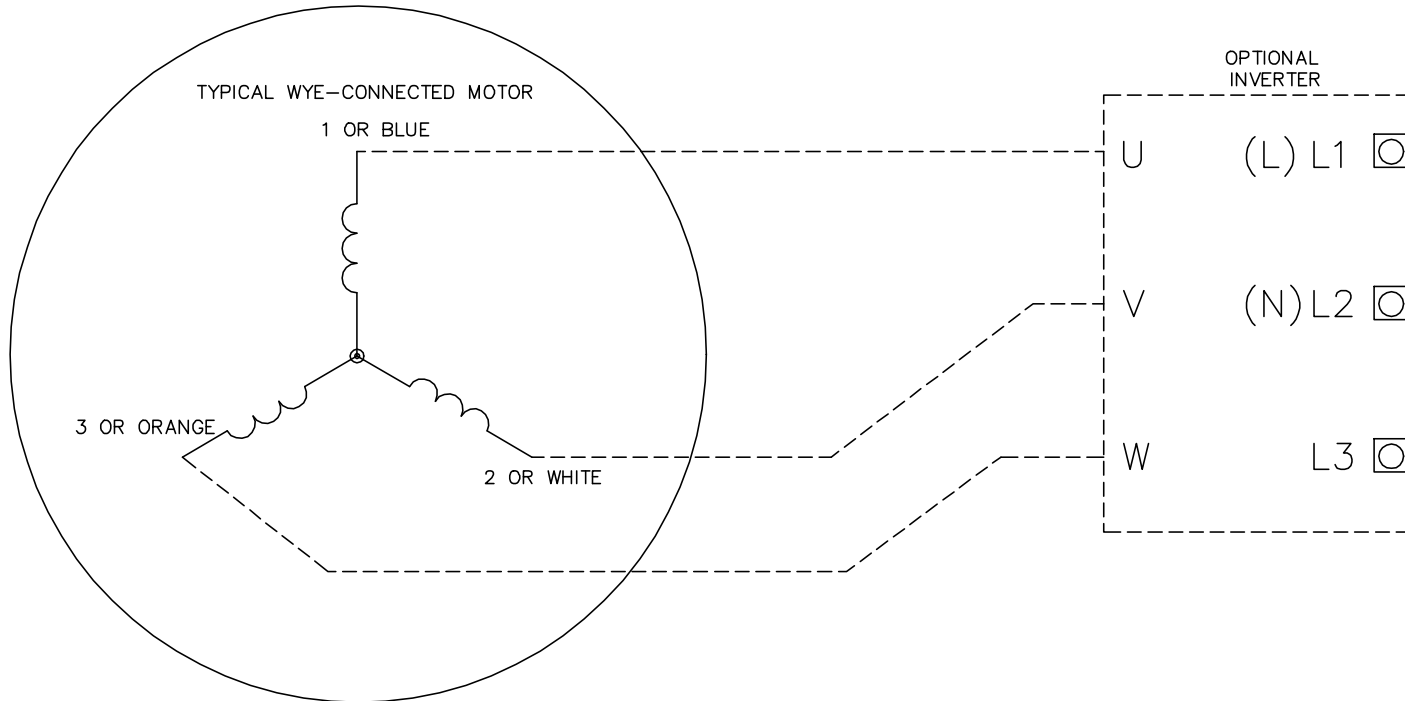
DR By: R & D
 CK By: USGAHIL
 APP By:
 Date: 04/09/2025

**AC MOTOR
PERFORMANCE
CURVES**

35WGG964
 35EE436G964
 Test - 112228



CD0006B03



NOTES:

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

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

CD0006B03