ABB BALDOR RELIANCE

# Customer information packet

## ECS100T4H1DC4

1HP, 1800RPM, 3PH, 60HZ, 145TC, 3516B, TEFC, F1
Class - None
Division - Not Applicable

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## 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** | 1.000 HP @ 60 HZ |
| **Phase** | 3 |
| **Synchronous Speed @ Frequency** | 1800 RPM @ 60 HZ |
| **Voltage @ Frequency** | 460.0 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** | 1.050 A @ 460.0 V |
| **Design Code** | - |
| **Drip Cover** | No Drip Cover |
| **Duty Rating** | CONT |
| **Efficiency @ 100% Load** | 90.3 % |
| **Electrically Isolated Bearing** | Not Electrically Isolated |
| **Feedback Device** | NO FEEDBACK |
| **Heater Indicator** | No Heater |
| **High Voltage Full Load Amps** | 1.1 a |
| **Insulation Class** | F |
| **Inverter Code** | 03 |

## Part Detail

| | |
|---|---|
| **Revision** | E |
| **Type** | AC |
| **Mech. spec.** | 35E5353 |
| **Base** | |
| **Status** | PRD/A |
| **Elec. spec.** | 35WGG965 |
| **Layout** | 35LYE5353 |
| **Eff. date** | 09-24-2025 |
| **CD Diagram** | CD0006B03 |
| **Poles** | 04 |
| **Leads** | 3#14 13" LONG LEADS Y |
| **Proprietary** | False |
| **Created date** | 05-08-2024 |

| | |
|---|---|
| **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** | 12.38 IN |
| **Power Factor** | 97 |
| **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.** | ECS100T4H1DC4 | | | | | | | | |
| **SPEC.** | 35E5353G965 | | | | | | | | |
| **FRAME** | 145TC | | | **ENCL.** | TEFC | | **IP** | 54 | |
| **HP** | 1 | | 40 | **C AMB** | | CONT | | | |
| **NOM. EFF.** | 89.5 | **PF** | 97 | | **SF** | 1 | | | |
| **VOLTS** | 460 | | | **FLA** | 1.2 | | | | |
| **RPM** | 1800 | | | **RPM-MAX** | | 3600 | | | |
| **HZ** | 60 | | **PH.** | 3 | **CLASS** | F | | | |
| **BEMF (V)** | 269 | | | | **RS (OHMS)** | 19.7 | | | |
| **LD (MH)** | 117 | | | | **LQ (MH)** | 500 | | | |
| **VPWM** | **CHP** | 60 | **TO** | 120 | | | | | |
| **CT** | 6 | **TO** | 60 | **VT** | 6 | **TO** | 60 | | |
| **MATCHED INV** | ECI4A2P2 | | | | | | | | |
| **DE** | 6205 | | | **ODE** | 6203 | | | | |
| **SERIAL #** | | | | | | | | | |

| NP3978A01 | | | | | | |
|---|---|---|---|---|---|---|
| **PART NO.** | ECI4A2P2 | | | | | |
| **U1** | 480 | **PH** | 3 | **HZ** | 60 | |
| **I1** | 1.8 | **W/EXT. CHOKE** | | | | 1.7 |
| **SERIAL #** | | | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Volts | 460 | Max RPM | 3600 | Conn Diag. | CD0006B03 | Leads | 3 |
| Amps | 1.05 | Max Amps | | Cs Diagram | CS1126 | BEMF | 269 |
| HP | 1 | VFD# | ECIN4A2P2 | | | LD | 117 |
| RPM | 1800 | S.F. | 1.00 | | | LQ | 500 |
| Phase/Hz | 3/60 | Rating | 50C AMB-CONT | | | Rs | 19.8095 Meas. L-L |

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

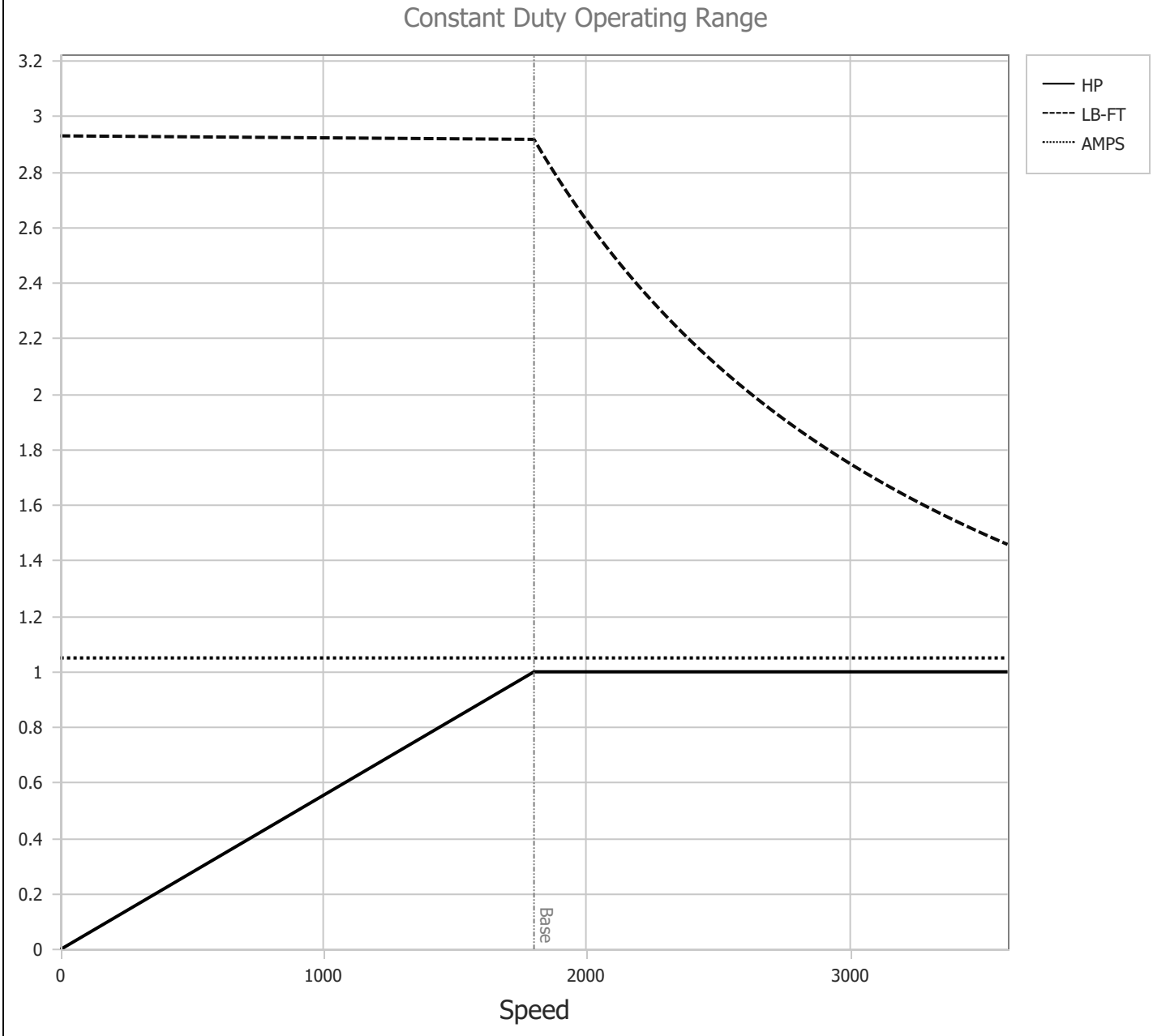
| | RPM | % Speed | LB-FT | % Torque | HP | Efficiency | Loss (% FL) | Watts Loss (W) |
|---|---|---|---|---|---|---|---|---|
| P1 | 1618 | 90% | 2.9 | 100% | 0.9 | 88.2 | 11.94% | 90 |
| P2 | 900 | 50% | 2.9 | 100% | 0.5 | 86.0 | 8.08% | 61 |
| P3 | 450 | 25% | 2.9 | 100% | 0.3 | 79.2 | 6.50% | 49 |
| P4 | 1621 | 90% | 1.5 | 50% | 0.5 | 87.1 | 6.62% | 50 |
| P5 | 900 | 50% | 1.5 | 50% | 0.2 | 87.4 | 3.55% | 27 |
| P6 | 900 | 50% | 0.7 | 25% | 0.1 | 86.0 | 2.02% | 15 |
| P7 | 450 | 25% | 0.7 | 25% | 0.1 | 83.8 | 1.21% | 9 |

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

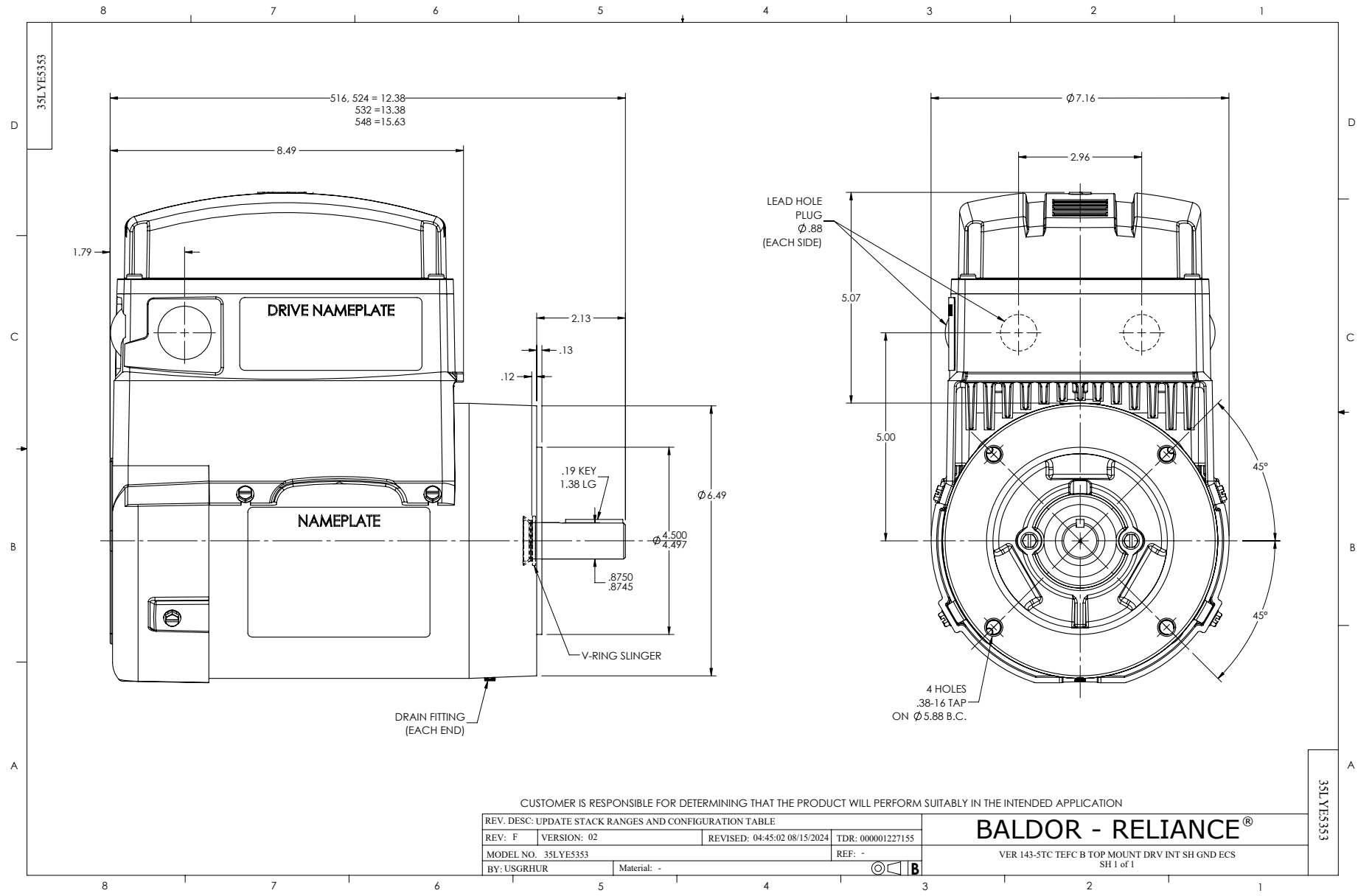
| | RPM | % Speed | LB-FT | % Torque | HP | System Efficiency | Loss (% FL) | Watts Loss (W) |
|---|---|---|---|---|---|---|---|---|
| P1 | 1799 | 100% | 2.9 | 100% | 1.0 | 87.0 | 14.73% | 111 |
| P2 | 900 | 50% | 2.9 | 100% | 0.5 | 81.0 | 11.61% | 88 |
| P3 | 300 | 17% | 2.9 | 100% | 0.2 | 63.2 | 9.59% | 72 |
| P4 | 1802 | 100% | 1.5 | 50% | 0.5 | 83.5 | 9.78% | 74 |
| P5 | 900 | 50% | 1.5 | 50% | 0.2 | 79.4 | 6.41% | 48 |
| P6 | 300 | 17% | 1.5 | 50% | 0.1 | 61.5 | 5.17% | 39 |
| P7 | 900 | 50% | 0.7 | 25% | 0.1 | 73.2 | 4.53% | 34 |
| P8 | 300 | 17% | 0.7 | 25% | 0.0 | 53.7 | 3.56% | 27 |

*Points not taken in certified order.*

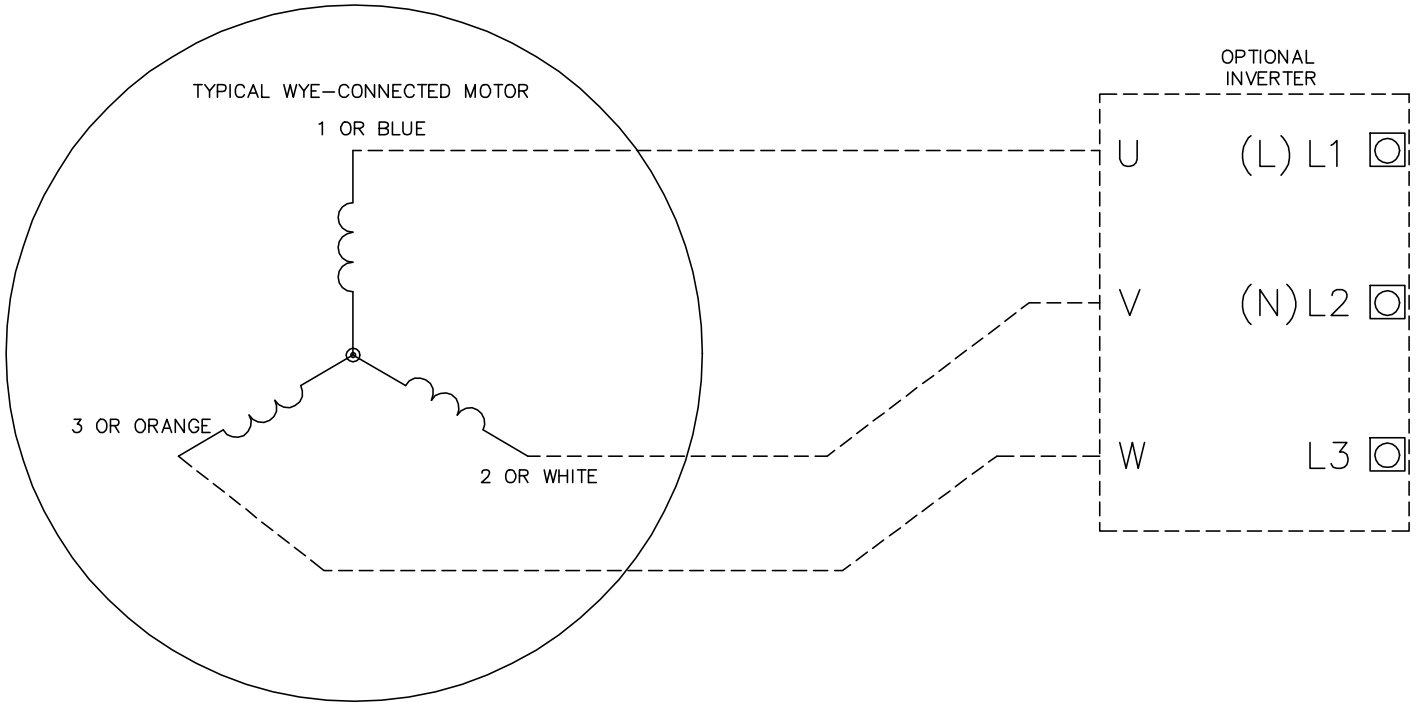
| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Volts | 460 | Max RPM | 3600 | Conn Diag. | CD0006B03 | Leads | 3 |
| Amps | 1.05 | Max Amps | | Cs Diagram | CS1126 | BEMF | 269 |
| HP | 1 | VFD # | ECIN4A2P2 | | | LD | 117 |
| RPM | 1800 | S.F. | 1.00 | | | LQ | 500 |
| Phase/Hz | 3/60 | Rating | 50C AMB-CONT | | | Rs | 19.8095 Meas L-L |




| | | | |
|---|---|---|---|
| BALDOR • RELIANCE | DR By: R & D<br>CK By: USTOSAN<br>APP By: USWEQUA1<br>Date: 11/14/2024 | **AC MOTOR PERFORMANCE CURVES** | **35WGG965**<br>35-0000-1623<br>*Test - 111577* |


35LYE5353
516, 524 = 12.38
532 =13.38
548 =15.63
8.49
1.79
DRIVE NAMEPLATE
NAMEPLATE
2.13
.13
.12
.19 KEY
1.38 LG
Ø6.49
Ø4.500
4.497
.8750
.8745
V-RING SLINGER
DRAIN FITTING
(EACH END)
Ø7.16
2.96
LEAD HOLE
PLUG
Ø.88
(EACH SIDE)
5.07
5.00
45°
45°
4 HOLES
.38-16 TAP
ON Ø5.88 B.C.
CUSTOMER IS RESPONSIBLE FOR DETERMINING THAT THE PRODUCT WILL PERFORM SUITABLY IN THE INTENDED APPLICATION
REV. DESC: UPDATE STACK RANGES AND CONFIGURATION TABLE
REV: F
VERSION: 02
REVISED: 04:45:02 08/15/2024
TDR: 000001227155
MODEL NO. 35LYE5353
REF: -
BY: USGRHUR
Material: -
B
BALDOR - RELIANCE®
VER 143-5TC TEFC B TOP MOUNT DRV INT SH GND ECS
SH 1 of 1
35LYE5353

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