ABB BALDOR RELIANCE

# Customer information packet

## EHM2543T-8

50HP, 1775RPM, 3PH, 60HZ, 326T, 4256M, OPSB, F1

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## Specifications

| | |
|---|---|
| **Enclosure** | OPSB |
| **Frame** | 326T |
| **Frame Material** | Steel |
| **Frequency** | 60.00 Hz |
| **Motor Letter Type** | Three Phase |
| **Output @ Frequency** | 50.000 HP @ 60 HZ |
| **Phase** | 3 |
| **Synchronous Speed @ Frequency** | 1800 RPM @ 60 HZ |
| **Voltage @ Frequency** | 200.0 V @ 60 HZ |
| **Agency Approvals** | CSA |
| | UR |
| **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 |
| **Current @ Voltage** | 132.000 A @ 200.0 V |
| **Design Code** | B |
| **Drip Cover** | No Drip Cover |
| **Duty Rating** | CONT |
| **Efficiency @ 100% Load** | 94.5 % |
| **Feedback Device** | NO FEEDBACK |
| **Front Face Code** | Standard |
| **Front Shaft Indicator** | None |
| **Heater Indicator** | No Heater |
| **High Voltage Full Load Amps** | 132.0 a |
| **Insulation Class** | F |
| **Inverter Code** | Inverter Ready |
| **KVA Code** | G |
| **Lifting Lugs** | Standard Lifting Lugs |
| **Locked Bearing Indicator** | No Locked Bearing |

## Part Detail

| | |
|---|---|
| **Revision** | V |
| **Type** | AC |
| **Mech. spec.** | 42H068 |
| **Base** | |
| **Status** | PRD/A |
| **Elec. spec.** | 42WGW707 |
| **Layout** | 42LYH068 |
| **Eff. date** | 07-10-2024 |
| **CD Diagram** | CD0006 |
| **Poles** | 04 |
| **Leads** | 3#2 |
| **Proprietary** | False |
| **Created date** | 10-07-2010 |

| | |
|---|---|
| **Motor Lead Exit** | Ko Box |
| **Motor Lead Quantity/Wire Size** | 3 @ 2 AWG |
| **Motor Lead Termination** | Flying Leads |
| **Motor Standards** | NEMA |
| **Motor Type** | 4256M |
| **Mounting Arrangement** | F1 |
| **Number of Poles** | 4 |
| **Overall Length** | 27.69 IN |
| **Power Factor** | 87 |
| **Product Family** | General Purpose |
| **Pulley End Bearing Type** | Ball |
| **Pulley Face Code** | Standard |
| **Pulley Shaft Indicator** | Standard |
| **Rodent Screen** | None |
| **Service Factor** | 1.15 |
| **Shaft Diameter** | 2.125 IN |
| **Shaft Extension Location** | Pulley End |
| **Shaft Ground Indicator** | Mounting Provisions Only |
| **Shaft Rotation** | Reversible |
| **Shaft Slinger Indicator** | No Slinger |
| **Speed** | 1775 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**

| NP2094E06B03 | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **CAT.NO.** | EHM2543T-8 | | | | | | | | |
| **SPEC.** | 42H068W707G1 | | | | | | | | |
| **HP** | 50 | | | | | | | | |
| **VOLTS** | 200 | | | | | | | | |
| **AMPS** | 132 | | | | | | | | |
| **RPM** | 1775 | | | | | | | | |
| **FRAME** | 326T | **HZ** | 60 | **PH** | 3 | | | | |
| **SER.F.** | 1.15 | **CODE** | G | **DES** | B | **CL** | F | | |
| **NEMA-NOM-EFF** | 94.5 | **PF** | 87 | | | | | | |
| **RATING** | 40C AMB-CONT | | | | | | | | |
| **CC** | 010A | **USABLE AT 208V** | | N/A | | | | | |
| **DE** | 6312 | **ODE** | 6311 | | | | | | |
| **AUTO** | | **MANUAL** | | **NONE** | | | | | |
| **ENCL** | OPSB | **SN** | | | | | | | |
| **BLANK** | | | | | | | | | |

**Parts List**

| Part number | Description | Quantity |
|---|---|---|
| SA204667 | SA 42H068W707G1 | 1.000 ea |
| RA191911 | RA 42H068W707G1 | 1.000 ea |
| HA6360 | LIFTING LUG FOR 42 FRAME MOTORS. | 2.000 ea |
| 42CB4000A01 | CONDUIT BOX 40, STAMPED | 1.000 ea |
| 51XF2520A08 | SCREW,1/4-20X1/2 TAPTITE-II OR ROLOC 91 | 2.000 ea |
| HW1001A25 | LOCKWASHER 1/4, ZINC PLT .493 OD, .255 I | 2.000 ea |
| WD1000B16 | T&B CX70TN OR L70P TERMINAL LUG | 1.000 ea |
| 418199008A | N/P GRD I/D | 1.000 ea |
| 42EP3200A01 | FR ENDPLATE, MACH | 1.000 ea |
| HW5100A13 | W4627-047 WVY WSHER | 1.000 ea |
| 42EP3200B13 | PUEP, MACH FOR 1/2 SH GND MTG | 1.000 ea |
| 84XN0632J08 | #6-32 X .50 SOCK HD, BK OX | 2.000 ea |
| XY5013A12 | NUT,1/2-13,HEX,STEEL,ZINCPLATED | 8.000 ea |
| 42CB4500A01 | CONDUIT BOX LID 42, STAMPED, W/ PRIMER | 1.000 ea |
| 51XF2520A08 | SCREW, HEX SER SLT HD, ZN 1/4-20 X .50 L | 2.000 ea |
| HW2501H33 | KEY, 1/2 SQ X 3.875 | 1.000 ea |
| 84XN0540J08 | 5-40 X 1/2" SHCS, BLACK OXIDE | 3.000 ea |
| MN416A01 | TAG-INSTAL-MAINT no wire (2500 bx)11/25 | 1.000 ea |
| HW4500A20 | 1/8NPT SL PIPE PLUG | 2.000 ea |
| MJ1000A02 | GREASE, POLYREX EM EXXON | 0.030 lb |
| HW4500A20 | 1/8NPT SL PIPE PLUG | 2.000 ea |
| MG1050G01 | CELEROL MEDIUM CHARCOAL METALLIC GRAY | 0.080 ga |
| HA3151A03 | THRUBOLT STUD 1/2-13 X 20.5 | 4.000 ea |
| 42AD2001A01 | BAFFLE PLATE 42 OPEN, SLOTTED BAND MTRS | 1.000 ea |
| 42AD2001A01 | BAFFLE PLATE 42 OPEN, SLOTTED BAND MTRS | 1.000 ea |
| LC0006 | CONNECTION LABEL | 1.000 ea |
| NP2094E06B03 | NP LABEL W/BARCODE (PREM EFF HVAC MTR) | 1.000 ea |
| 40PA1000 | PACKAGING GROUP | 1.000 ea |

**AC Induction Motor Performance Data**
Record # 35578
Typical performance - not guaranteed values

| **Winding:** 42WGW707-R001 | **Type:** 4256M | **Enclosure:** OPSB |
|---|---|---|

| **Nameplate Data** | | | | **200 V, 60 Hz: Single Voltage Motor** | |
|---|---|---|---|---|---|
| **Rated Output (HP)** | | | 50 | **Full Load Torque** | 148 LB-FT |
| **Volts** | | | 200 | **Start Configuration** | direct on line |
| **Full Load Amps** | | | 132 | **Breakdown Torque** | 425 LB-FT |
| **R.P.M.** | | | 1775 | **Pull-up Torque** | 225 LB-FT |
| **Hz** | 60 | **Phase** | 3 | **Locked-rotor Torque** | 284 LB-FT |
| **NEMA Design Code** | B | **KVA Code** | G | **Starting Current** | 881 A |
| **Service Factor (S.F.)** | | | 1.15 | **No-load Current** | 48 A |
| **NEMA Nom. Eff.** | 94.5 | **Power Factor** | 87 | **Line-line Res. @ 25ºC** | 0.0234 Ω |
| **Rating - Duty** | | | 40C AMB-CONT | **Temp. Rise @ Rated Load** | 36°C |
| **S.F. Amps** | | | | **Temp. Rise @ S.F. Load** | 43°C |
| | | | | **Locked-rotor Power Factor** | 27 |
| | | | | **Rotor inertia** | 7.46 LB-FT2 |

**Load Characteristics 200 V, 60 Hz, 50 HP**

| **% of Rated Load** | **25** | **50** | **75** | **100** | **125** | **150** | **S.F.** |
|---|---|---|---|---|---|---|---|
| **Power Factor** | 47 | 69 | 79 | 87 | 86 | 86 | 86 |
| **Efficiency** | 89.8 | 93.4 | 94.2 | 94.5 | 94.2 | 93.8 | 94.3 |
| **Speed** | 1795 | 1790 | 1785 | 1780 | 1774 | 1768 | 1776 |
| **Line amperes** | 65 | 84 | 109 | 132 | 167 | 200 | 153 |

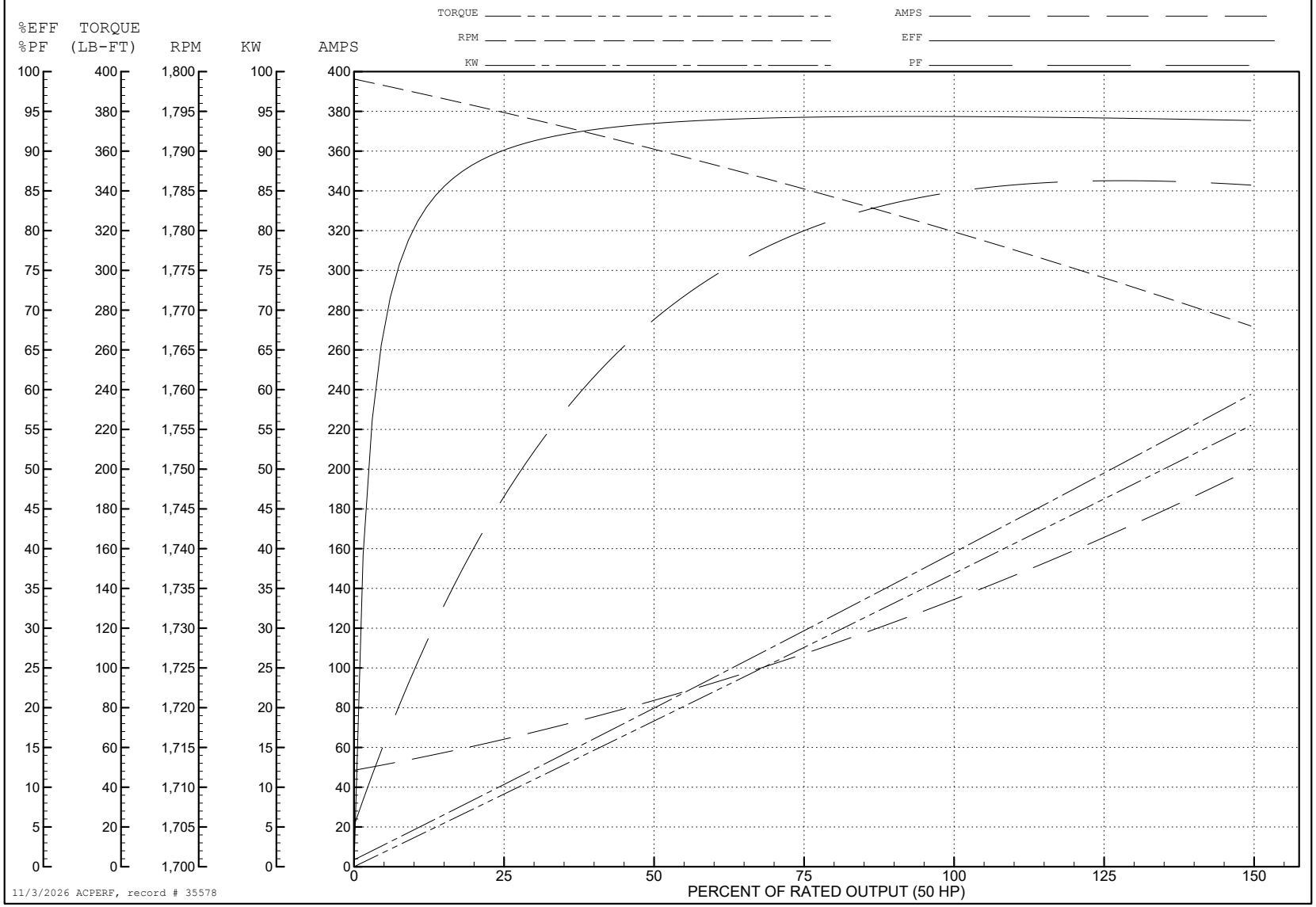
ABB Motors and Mechanical Inc.

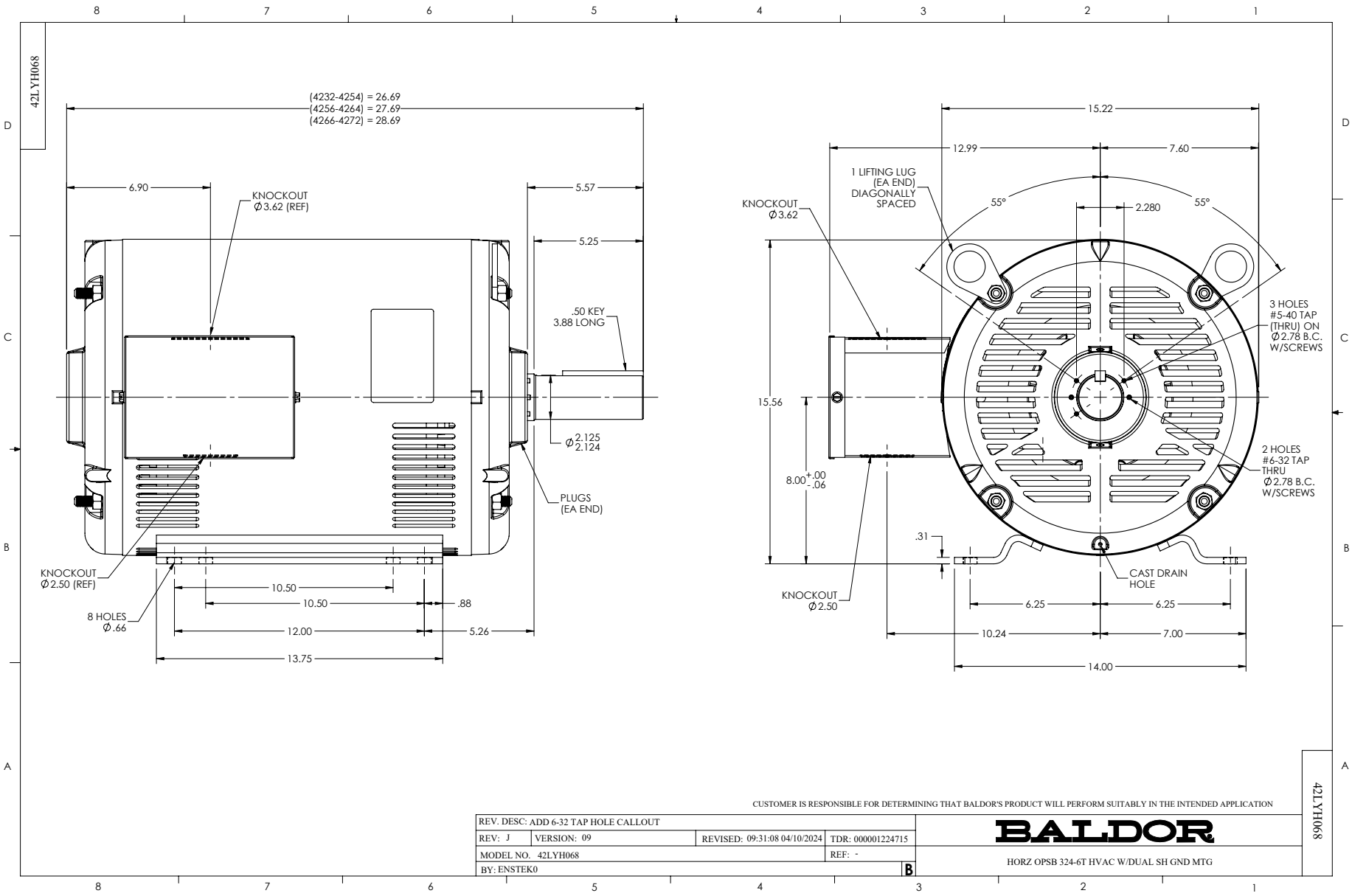
WINDING # 42WGW707

Typical performance - not guaranteed values.

50 HP 3 PH 60 HZ 1775 RPM 200 V 4256M

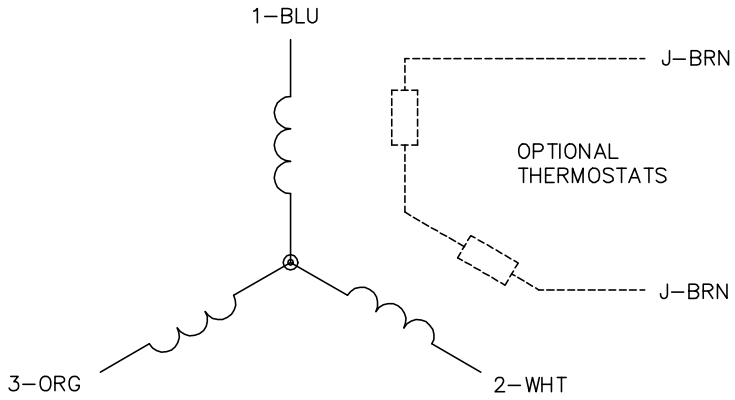
TORQUES(LB-FT): PO=425 PU=225 LR=284 LRA=881

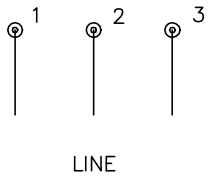



42LYH068
(4232-4254) = 26.69
(4256-4264) = 27.69
(4266-4272) = 28.69
6.90
KNOCKOUT
Ø3.62 (REF)
5.57
5.25
.50 KEY
3.88 LONG
Ø2.125
2.124
PLUGS
(EA END)
KNOCKOUT
Ø2.50 (REF)
8 HOLES
Ø.66
10.50
10.50
.88
12.00
5.26
13.75
15.22
12.99
7.60
1 LIFTING LUG
(EA END)
DIAGONALLY
SPACED
KNOCKOUT
Ø3.62
55°
55°
2.280
3 HOLES
#5-40 TAP
(THRU) ON
Ø2.78 B.C.
W/SCREWS
15.56
8.00 +.00 -.06
2 HOLES
#6-32 TAP
THRU
Ø2.78 B.C.
W/SCREWS
.31
CAST DRAIN
HOLE
KNOCKOUT
Ø2.50
6.25
6.25
10.24
7.00
14.00
CUSTOMER IS RESPONSIBLE FOR DETERMINING THAT BALDOR'S PRODUCT WILL PERFORM SUITABLY IN THE INTENDED APPLICATION
REV. DESC: ADD 6-32 TAP HOLE CALLOUT
REV: J
VERSION: 09
REVISED: 09:31:08 04/10/2024
TDR: 000001224715
MODEL NO. 42LYH068
REF: -
BY: ENSTEK0
B
BALDOR
HORZ OPSB 324-6T HVAC W/DUAL SH GND MTG
42LYH068

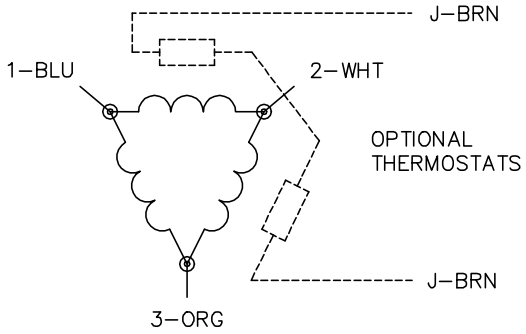
CD0006

TYPICAL WYE–CONNECTED MOTOR




TYPICAL DELTA–CONNECTED MOTOR




NOTES:

1. THREE LEAD MOTOR MAY BE EITHER WYE CONNECTED OR DELTA CONNECTED.
2. INTERCHANGE ANY TWO LINE LEADS TO REVERSE ROTATION.
3. OPTIONAL THERMOSTATS ARE PROVIDED WHEN SPECIFIED.
4. ACTUAL NUMBER OF INTERNAL PARALLEL CIRCUITS MAY VARY.
5. LEAD COLORS ARE OPTIONAL. LEADS MUST BE NUMBERED AS SHOWN.

CD0006

| | | |
|---|---|---|
| REV. DESC: ADD CLASS CONN00000007 | | |
| REV. LTR: E | VERSION: 01 | TDR: 000001099922 |
| FILE: \AAA\00005\141 | REVISED: 10:24:49 02/19/2019 | BY: ENBRIR0 |
| MTL: – | | |

BALDOR - RELIANCE®

3PH, SV, 3 LEADS, WYE OR DELTA CONNECTED

SH 1 of 1