ABB BALDOR RELIANCE

# Customer information packet

SUM20754-4

7.5HP, 1770RPM, 3PH, 60HZ, 210TY, TENV, V1
Class - None
Division - Not Applicable

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## Specifications

| | |
|---|---|
| **Enclosure** | TENV |
| **Frame** | 210TY |
| **Frame Material** | Iron |
| **Frequency** | 60.00 Hz |
| **Haz Area Class and Group** | None |
| **Haz Area Division** | Not Applicable |
| **Motor Letter Type** | Three Phase |
| **Phase** | 3 |
| **Agency Approvals** | CCSA US |
| **Base Indicator** | Rigid |
| **Bearing Grease Type** | Polyrex EM (-20F +300F) |
| **Cable Length** | NO CABLE |
| **Design Code** | B |
| **Drip Cover** | No Drip Cover |
| **Duty Rating** | CONT |
| **Heater Indicator** | No Heater |
| **Insulation Class** | F |
| **Inverter Code** | Not Inverter |
| **IP Rating** | IP68 |
| **KVA Code** | J |
| **Lifting Lugs** | Standard Lifting Lugs |
| **Motor Standards** | NEMA |
| **Motor Type** | M |
| **Mounting Arrangement** | V1 |
| **Number of Poles** | 4 |
| **Product Family** | Pump - Centrifugal |
| **Pulley End Bearing Type** | Ball |
| **Pulley Face Code** | Standard |
| **Service Factor** | 1.15 |
| **Shaft Diameter** | 1.437 IN |
| **Shaft Rotation** | Reversible |
| **Shaft Slinger Indicator** | No Slinger |

## Part Detail

| | |
|---|---|
| **Revision** | C |
| **Type** | AC |
| **Mech. spec.** | |
| **Base** | |
| **Status** | PRD/A |
| **Elec. spec.** | 86000 |
| **Layout** | 619738-003 |
| **Eff. date** | 12-10-2024 |
| **CD Diagram** | 416820-001 |
| **Poles** | /// |
| **Leads** | |
| **Proprietary** | False |
| **Created date** | 08-18-2021 |

| | |
|---|---|
| **Speed Code** | Single Speed |
| **Starting Method** | Direct on line |
| **Thermal Device - Winding** | Normally Closed Thermostat |

**Nameplate**

| 000692000MB |
|---|
| SUITABLE FOR OPERATION ON PWM |
| INVERTER EQUIPPED WITH IGBT |
| DEVICES AND CAPABLE OF |
| CARRIER |
| FREQUENCY OF 2 KHZ MINIMUM |
| |
| |

**000613007MS**

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **CAT.NO.** | SUM20754-4 | | | **SPEC NO.** | S21-CWS0-0020 | | | | | | | |
| **SER.NO.** | | | | **FRAME SIZE** | 210TY | | | | | | | |
| | **HP** | **RPM** | **VOLTS** | **AMPS** | **HZ** | **S.F.** | | | | | | |
| | 7.5 | 1770 | 230/460 | 18.4/9.2 | 6-60 | 1.00 | | | | | | |
| | 7.5 | 1770 | 230/460 | 18.4/9.2 | 60 | 1.15 | | | | | | |
| **CONSTANT HP RPM** | | **@** | | **HZ** | **CODE** | J | | | | | | |
| **TYPE** | P | **INSUL.CLASS** | F | **TORQUE** | 10:1_VT | | **DESIGN** | B | | | | |
| **D.E. BRG.** | 60BC02JPP30A | | **ENCL** | TENV | **DUTY** | 15MIN | **PH** | 3 | | | | |
| **O.D.E. BRG.** | 30BC02JPG30A | | **MOTOR WEIGHT** | | **AMB** | 40 | | | | | | |
| | FINAL CONN VOLTAGE = 460 *15 | | | | | | | | | | | |
| | MIN IN AIR ;SUB. IN WATER | | | | | | | | | | | |
| | ONLY | | | | | | | | | | | |

**000613007MS**

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **CAT.NO.** | SUM20754-4 | | | **SPEC NO.** | S21-CWS0-0020 | | | | | | | |
| **SER.NO.** | | | | | **FRAME SIZE** | 210TY | | | | | | |
| | **HP** | **RPM** | **VOLTS** | **AMPS** | **HZ** | **S.F.** | | | | | | |
| | 7.5 | 1770 | 230/460 | 18.4/9.2 | 6-60 | 1.00 | | | | | | |
| | 7.5 | 1770 | 230/460 | 18.4/9.2 | 60 | 1.15 | | | | | | |
| **CONSTANT HP RPM** | | **@** | | **HZ** | **CODE** | J | | | | | | |
| **TYPE** | P | **INSUL.CLASS** | F | **TORQUE** | 10:1_VT | | | | **DESIGN** | B | | |
| **D.E. BRG.** | 60BC02JPP30A | | | **ENCL** | TENV | **DUTY** | 15MIN | | **PH** | 3 | | |
| **O.D.E. BRG.** | 30BC02JPG30A | | | **MOTOR WEIGHT** | | | **AMB** | 40 | | | | |
| | FINAL CONN VOLTAGE = 460 *15 | | | | | | | | | | | |
| | MIN IN AIR ;SUB. IN WATER | | | | | | | | | | | |
| | ONLY | | | | | | | | | | | |

**Parts List**

| Part number | Description | Quantity |
|---|---|---|
| SA396569 | SA S21-CWS0-0020 | 1.000 ea |
| RA387389 | RA S21-CWS0-0020 | 1.000 ea |
| 424476003WB | WIRING DIAGRAM MEDIUMA | 1.000 ea |
| 001575000A | WIRING DIAGRAM | 1.000 ea |
| 424476003WB | WIRING DIAGRAM MEDIUMA | 1.000 ea |
| 000901001AA | LABEL WARNING | 1.000 ea |
| 000692000WC | WARNING FLAMMABLE VAPORS MAY BE PRESENT | 2.000 ea |
| 000692000MB | BALDOR RELIANCE MOTOR DATA NAMEPLATE | 1.000 ea |
| 000613007MS | NP, MEDIUM AC,INVERTER DUTY CSA,STD INDU | 1.000 ea |
| 000692000EJ | NAME PLATE | 1.000 ea |
| 000613007MS | NP, MEDIUM AC,INVERTER DUTY CSA,STD INDU | 1.000 ea |
| 000901001AA | LABEL WARNING | 1.000 ea |
| 034692002AE | HCSPP 1/4" 304 S.S. | 1.000 ea |
| 088206510A | BRKT,ODE,210SUB 88206-1WB | 1.000 ea |
| 004824015A | GREASE POLYREX EM | 0.100 lb |
| 032018012DG | HHCS 1/2-13X1-1/2 316S.S | 4.000 ea |
| 421900144FU | 406673000BF | 1.000 ea |
| 004824018AF | SHELL ROTELLA OIL 10W | 4.569 lb |
| 413480001R | RESISTOR ASSEMBLY-BLANKET | 1.000 ea |
| 413412006S | LEAD WIRE ASSY | 1.000 ea |
| 413412004A | SUBM MOISTURE PROBE | 2.000 ea |
| 421900144FU | 406673000BF | 1.000 ea |
| 088208001AA | MTG PLATE EX210Y SUBMERSIBLE 088208001WB | 1.000 ea |
| 032130010DC | HSHCS 1/2-13X1-1/4 304SS | 4.000 ea |
| 421900144FU | 406673000BF | 1.000 ea |
| 088207510A | BRKT,DE,210SUB 88207-1WA | 1.000 ea |
| 032018012DG | HHCS 1/2-13X1-1/2 316S.S | 4.000 ea |
| 032018008BG | HHCS 5/16-18X1 316 SS | 3.000 ea |
| 064262012C | SEAL | 1.000 ea |
| 047174005D | SNAP RING | 1.000 ea |
| 034692003AE | PPLG 3/8" 304 S.S. | 2.000 ea |

| | | |
|---|---|---|
| 047174005C | SNAP RING | 1.000 ea |
| 064262012D | SEAL - Mech Ceramic Seal | 1.000 ea |
| 032080003LB | HWHMS 1/4-20X3/8L PLTED | 6.000 ea |
| 032080003JB | HWHMS 10-24X3/8L PLTED | 4.000 ea |
| 415031017A | NUT W/WASHER 10-24 C.PLT | 4.000 ea |
| 415031017B | NUT W/WASHER1/4-20 C.P | 6.000 ea |
| 032677003BG | 5/16-18 X 3/8 DHFHBHCS | 2.000 ea |
| 047024003B | T/LUG AMP 33218 | 9.000 ea |
| 603767501A | LCSTG LEAD CONDUIT | 1.000 ea |
| 421900092FU | ORING | 1.000 ea |
| 032018010CG | HHCS 3/8-16X1-1/4L 316SS | 4.000 ea |
| 032018006BM | HHCS 5/16-18X3/4 PLTGRN. | 1.000 ea |
| 032018006BM | HHCS 5/16-18X3/4 PLTGRN. | 1.000 ea |
| 034036013AB | LCKW 5/16 EXT.TOOTH LCKW | 1.000 ea |
| 034017013AC | LCKW 5/16" 316 S.S. | 2.000 ea |
| 047024003AH | T/LUG AMP 34112 | 4.000 ea |
| 609181014D | HEAT SHRINK TUBING 3/4 | 10.000 ea |
| 802386003R | PAIGE INTERNAL MOTOR POWER PLUG | 1.000 ea |
| 802386002R | PAIGE INTERNAL MOTOR CONTROL PLUG | 1.000 ea |
| 613425013E | 12" SAFETY CABLE | 2.000 ea |
| 613425013S | FERRULE, SAFETY CABLE | 2.000 ea |
| 004824007K | SPECIAL PAINT | 0.100 ea |
| 033775004EA | DRSCR #6-1/4 304 S.S. | 8.000 ea |
| 034180009FD | KEY 3/8X3/8X1-1/8 303 SS | 1.000 ea |
| B3630-9 | SUBM THERMOSTAT TAG | 1.000 ea |
| B-3664002 | TAG, (NON REGREASABLE) | 1.000 ea |

## AC Induction motor performance data

Record #86000 - Typical performance - not guaranteed values

| | |
|---|---|
| Winding | 07WGA0016 |
| Type | 0738M |
| Enclosure | PART |

| Nameplate data | | | |
|---|---|---|---|
| Rated Output | | | 7.5 |
| Volts | | | 230/460 |
| Full Load Amps | | | 18.4/9.2 |
| R.P.M. | | | 1770 |
| Hz | 60 | Phase | 3 |
| KVA Code | | | J |
| S.F. | | | 1.15 |
| NEMA Nom. Eff. | 91 | Power Factor | 84 |
| Duty | | | 15 MIN |
| S.F. Amps | | | |

460 V, 60 Hz:

| High Voltage Connection | |
|---|---|
| Full Load Torque | 22.3 LB-FT |
| Start Configuration | direct on line |
| Breakdown Torque | 66.73 LB-FT |
| Pull-up Torque | 23.24 LB-FT |
| Locked-rotor Torque | 35.06 LB-FT |
| Starting Current | 69.17 A |
| No-load Current | 3.51 |
| Line-line Res. @ 25°C | 1.5 Ω |
| Temp. Rise @ Rated Load | 52°C |
| Temp. Rise @ S.F. Load | 65°C |
| Locked-rotor Power Factor | 36 |
| Rotor inertia | 0.934 lb-ft² |

Load Characteristics 460 V, 60 Hz, 7.5 HP

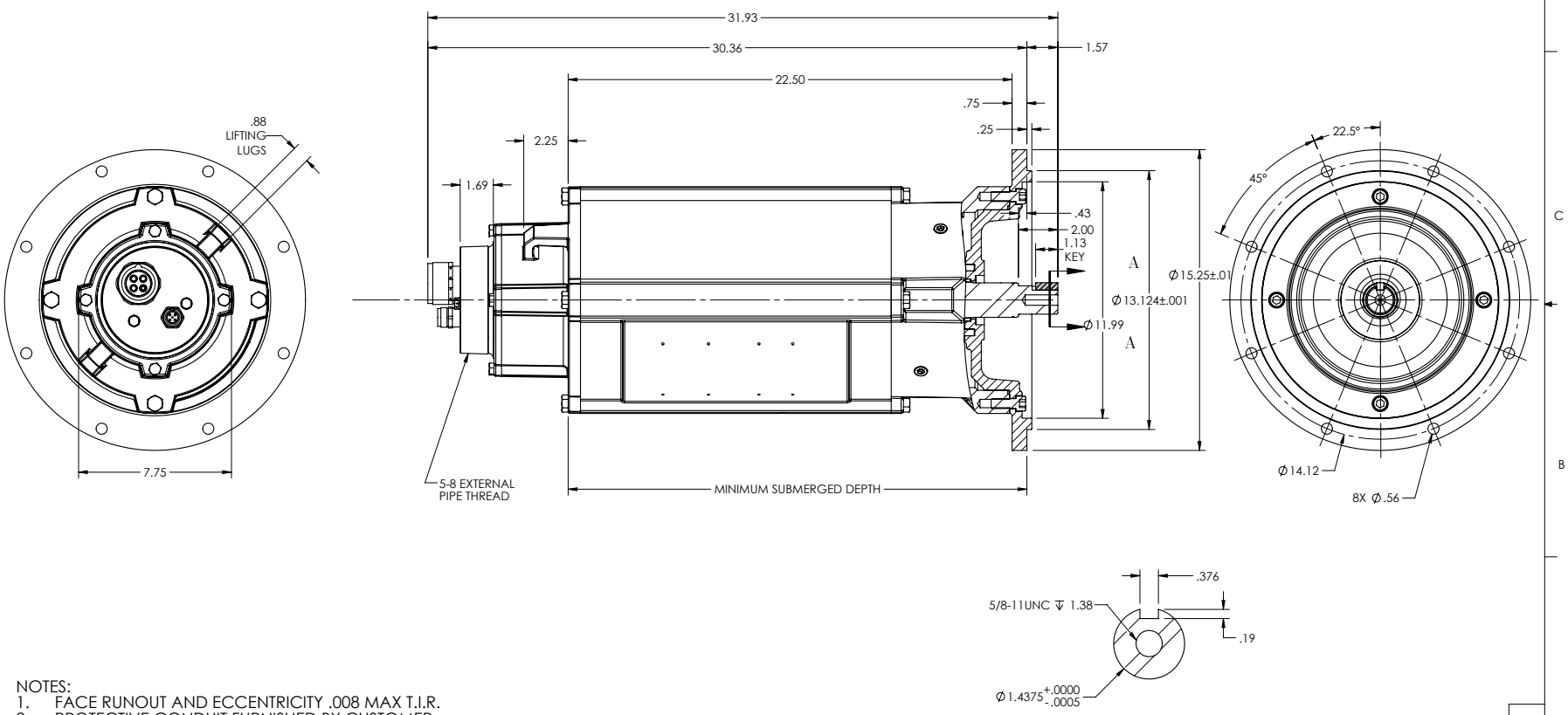
| % of Rated Load | NL | 25 | 50 | 75 | 100 | 125 | 150 | SF |
|---|---|---|---|---|---|---|---|---|
| Power Factor | 7 | 49 | 70 | 79 | 84 | 85 | 85 | 85 |
| Efficiency | 0 | 87 | 90.4 | 91.7 | 91.1 | 90.6 | 89.3 | 90.8 |
| Speed | 1799 | 1793 | 1786 | 1779 | 1770 | 1762 | 1752 | 1765 |
| Line amperes | 3.51 | 4.15 | 5.52 | 7.26 | 9.24 | 11.4 | 13.85 | 10.5 |

# DUTY MASTER ALTERNATING CURRENT MOTORS

SQUIRREL-CAGE INDUCTION
ENCLOSURE: TOTALLY ENCLOSED

SUBMERSIBLE

619738-003




NOTES:
1. FACE RUNOUT AND ECCENTRICITY .008 MAX T.I.R.
2. PROTECTIVE CONDUIT FURNISHED BY CUSTOMER
3. WEIGHT (LBS): 315 +/- 15%
4. PROVIDED WITH CABLE CONNECTORS TO LENGTH OF CABLE AS REQUESTED BY CUSTOMER.

CUSTOMER IS RESPONSIBLE FOR DETERMINING THAT BALDOR'S PRODUCT WILL PERFORM SUITABLY IN THE INTENDED APPLICATION

| | | | |
|---|---|---|---|
| REV. DESC: INITIAL RELEASE | | | |
| REV: - | VERSION: 00 | REVISED: 02:38:57 01/21/2020 | TDR: 000001129112 |
| MODEL NO. 619738-003 | | | REF: - |
| BY: RGGJAO | | | B |

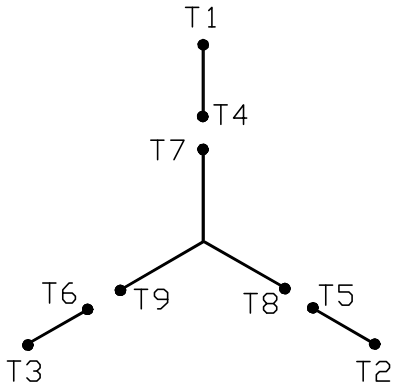
BALDOR

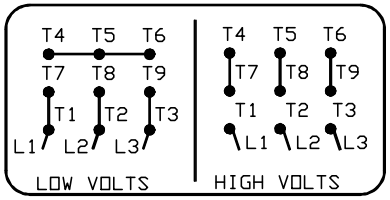
DIM SHT 210TY SUBMERSIBLE WITH CABLE CONNECTORS

619738-003

416820-001

# A-C MOTOR
# CONNECTION DIAGRAM
## STANDARD 9 LEAD Y CONNECTED




(N. P. 1575-A)

416820-001

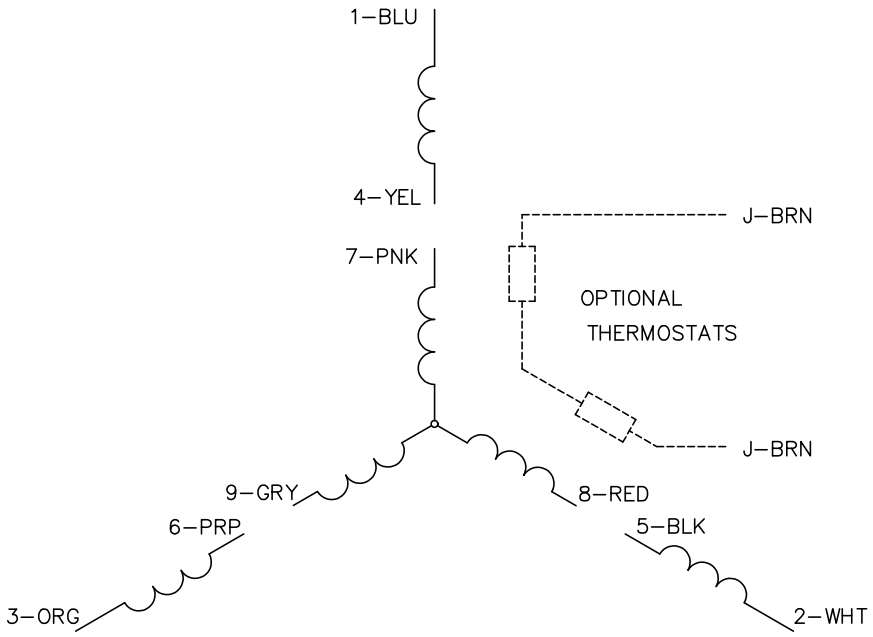
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| REV. LTR: A | VERSION: 01 | TDR: 000001009382 |
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| MTL: – | | |

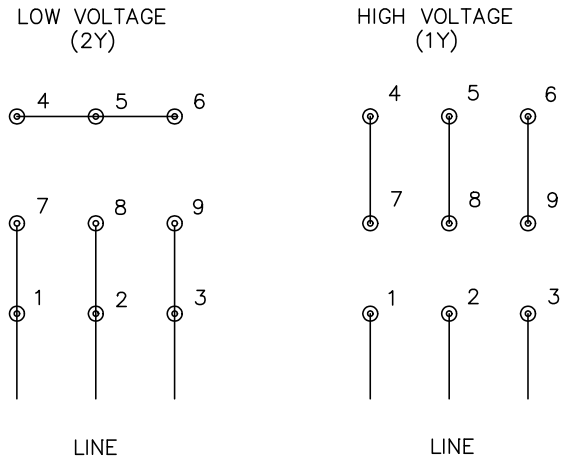
BALDOR

CONN DIAG – STANDARD 9 LEAD, Y CONNECTED

SH 1 of 1

CD0005




NOTES:

1. INTERCHANGE ANY TWO LINE LEADS TO REVERSE ROTATION.
2. OPTIONAL THERMOSTATS ARE PROVIDED WHEN SPECIFIED.
3. ACTUAL NUMBER OF INTERNAL PARALLEL CIRCUITS MAY BE A MULTIPLE OF THOSE SHOWN ABOVE.
4. LEAD COLORS ARE OPTIONAL. LEADS MUST ALWAYS BE NUMBERED AS SHOWN.

CD0005

| | | | |
|---|---|---|---|
| REV. DESC: REVISE TO SHOW OPTIONAL COLORS | | | BALDOR ELECTRIC Co. |
| REV. LTR: E | BY: JLP | REVISED: 01/19/99 10:15 | TDR: 0171435 |
| CD0005 | | FILE: AAA00005140 | MDL: – |
| | | MTL: – | 3PH, DV, 9 LEADS |