ABB BALDOR RELIANCE

# Customer information packet

## DRX21744T-5

7.5HP, 1770RPM, 3PH, 60HZ, 213T, XPFC, F1
Class - CLI GP C,D
Division - Division I

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## Specifications

| | |
|---|---|
| **Enclosure** | XPFC |
| **Frame** | 213T |
| **Frame Material** | Iron |
| **Frequency** | 60.00 Hz |
| **Haz Area Class and Group** | CLI GP C,D |
| **Haz Area Division** | Division I |
| **Motor Letter Type** | Three Phase |
| **Output @ Frequency** | 7.500 HP @ 60 HZ |
| **Phase** | 3 |
| **Synchronous Speed @ Frequency** | 1800 RPM @ 60 HZ |
| **Voltage @ Frequency** | 575.0 V @ 60 HZ |
| **Agency Approvals** | CSA EEV |
| | UL |
| **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 |
| **Constant Torque Speed Range** | 6 |
| **Current @ Voltage** | 7.500 A @ 575.0 V |
| **Design Code** | A |
| **Drip Cover** | No Drip Cover |
| **Duty Rating** | CONT |
| **Efficiency @ 100% Load** | 91.7 % |
| **Electrically Isolated Bearing** | Not Electrically Isolated |
| **Feedback Device** | NO FEEDBACK |
| **Haz Area Temp Code** | T3C |
| **Heater Indicator** | No Heater |
| **High Voltage Full Load Amps** | 7.5 a |
| **Insulation Class** | F |
| **Inverter Code** | Inverter Duty |

## Part Detail

| | |
|---|---|
| **Revision** | C |
| **Type** | AC |
| **Mech. spec.** | |
| **Base** | |
| **Status** | PRD/A |
| **Elec. spec.** | 07WGX817 |
| **Layout** | 07LYJ231 |
| **Eff. date** | 02-14-2024 |
| **CD Diagram** | CD0006 |
| **Poles** | 04 |
| **Leads** | 3#14 |
| **Proprietary** | False |
| **Created date** | 07-18-2019 |

| | |
|---|---|
| **IP Rating** | NONE |
| **KVA Code** | J |
| **Lifting Lugs** | Standard Lifting Lugs |
| **Locked Bearing Indicator** | Locked Bearing |
| **Max Speed** | 2700 rpm |
| **Motor Lead Termination** | Flying Leads |
| **Motor Standards** | NEMA |
| **Motor Type** | 0738M |
| **Mounting Arrangement** | F1 |
| **Number of Poles** | 4 |
| **Overall Length** | 20.03 IN |
| **Power Factor** | 81 |
| **Product Family** | General Purpose |
| **Pulley Face Code** | Standard |
| **Rodent Screen** | None |
| **RoHS Status** | ROHS NON-COMPLIANT |
| **Service Factor** | 1.00 |
| **Shaft Diameter** | 1.375 IN |
| **Shaft Ground Indicator** | No Shaft Grounding |
| **Shaft Rotation** | Reversible |
| **Speed** | 1770 rpm |
| **Speed Code** | Single Speed |
| **Starting Method** | Direct on line |
| **Thermal Device - Bearing** | None |
| **Thermal Device - Winding** | Normally Closed Thermostat |
| **Vibration Sensor Indicator** | No Vibration Sensor |
| **Winding Thermal 1** | None |
| **Winding Thermal 2** | None |

**Nameplate**

| NP1401XPSLEV | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **NO.** | | | | | **CC** | 010A | | | | | | |
| **S/N** | | | | | **TEMP CODE** | T3C | | | | | | |
| **SPEC.** | 07-0000-0198 | | | | **INV.TYPE** | PWM | | | | | | |
| **CAT.NO.** | DRX21744T-5 | | | | **C HP FR** | 60 | **C HP TO** | 90 | | | | |
| **HP** | 7.5 | | | | **CT HZ FROM** | 6 | | | **CT HZ TO** | 60 | | |
| **VOLTS** | 575 | | | | **VT HZ FROM** | 6 | | | **VT HZ TO** | 60 | | |
| **AMPS** | 7.5 | | | **MAG CUR** | 3.7 | | | | | | | |
| **RPM** | 1770 | | | **MX RPM** | 2700 | | | | | | | |
| **HZ** | 60 | **PH** | 3 | **CL** | F | **NOM.EFF.** | 91.7 | | | | | |
| **SER.F.** | 1.00 | **DES** | A | **SL HZ** | 1 | **WK2** | 0.934 | | | | | |
| **FRAME** | 213T | **RATING** | 40C AMB-CONT | | | | | | | | | |
| | 55C AMB @ 1.0 SF | | | | | | | | | | | |
| | 1.15 SF SINEWAVE | | | | NEMA MG-1 PT 5,IP55 | | | | | | | |

**AC Induction Motor Performance Data**
Record # 77546
Typical performance - not guaranteed values

| **Winding:** 07WGX817-R033 | **Type:** 0738M | **Enclosure:** XPFC |
|---|---|---|

| **Nameplate Data** | | | | **575 V, 60 Hz: Single Voltage Motor** | |
|---|---|---|---|---|---|
| **Rated Output (HP)** | | | 7.5 | **Full Load Torque** | 22.1 LB-FT |
| **Volts** | | | 575 | **Start Configuration** | direct on line |
| **Full Load Amps** | | | 7.5 | **Breakdown Torque** | 73 LB-FT |
| **R.P.M.** | | | 1770 | **Pull-up Torque** | 33.7 LB-FT |
| **Hz** | 60 | **Phase** | 3 | **Locked-rotor Torque** | 44.4 LB-FT |
| **NEMA Design Code** | A | **KVA Code** | J | **Starting Current** | 58.7 A |
| **Service Factor (S.F.)** | | | 1 | **No-load Current** | 3.66 A |
| **NEMA Nom. Eff.** | 91.7 | **Power Factor** | 81 | **Line-line Res. @ 25ºC** | 2.23 Ω |
| **Rating - Duty** | | | 40C AMB-CONT | **Temp. Rise @ Rated Load** | 42°C |
| | | | | **Locked-rotor Power Factor** | 37.9 |
| | | | | **Rotor inertia** | 0.934 LB-FT2 |

**Load Characteristics 575 V, 60 Hz, 7.5 HP**

| **% of Rated Load** | **25** | **50** | **75** | **100** | **125** | **150** |
|---|---|---|---|---|---|---|
| **Power Factor** | 40 | 62 | 73 | 79 | 82 | 84 |
| **Efficiency** | 86.8 | 91.4 | 92.1 | 91.7 | 90.8 | 89.7 |
| **Speed** | 1793 | 1786 | 1779 | 1771 | 1761 | 1751 |
| **Line amperes** | 4.07 | 4.98 | 6.23 | 7.7 | 9.4 | 11.2 |

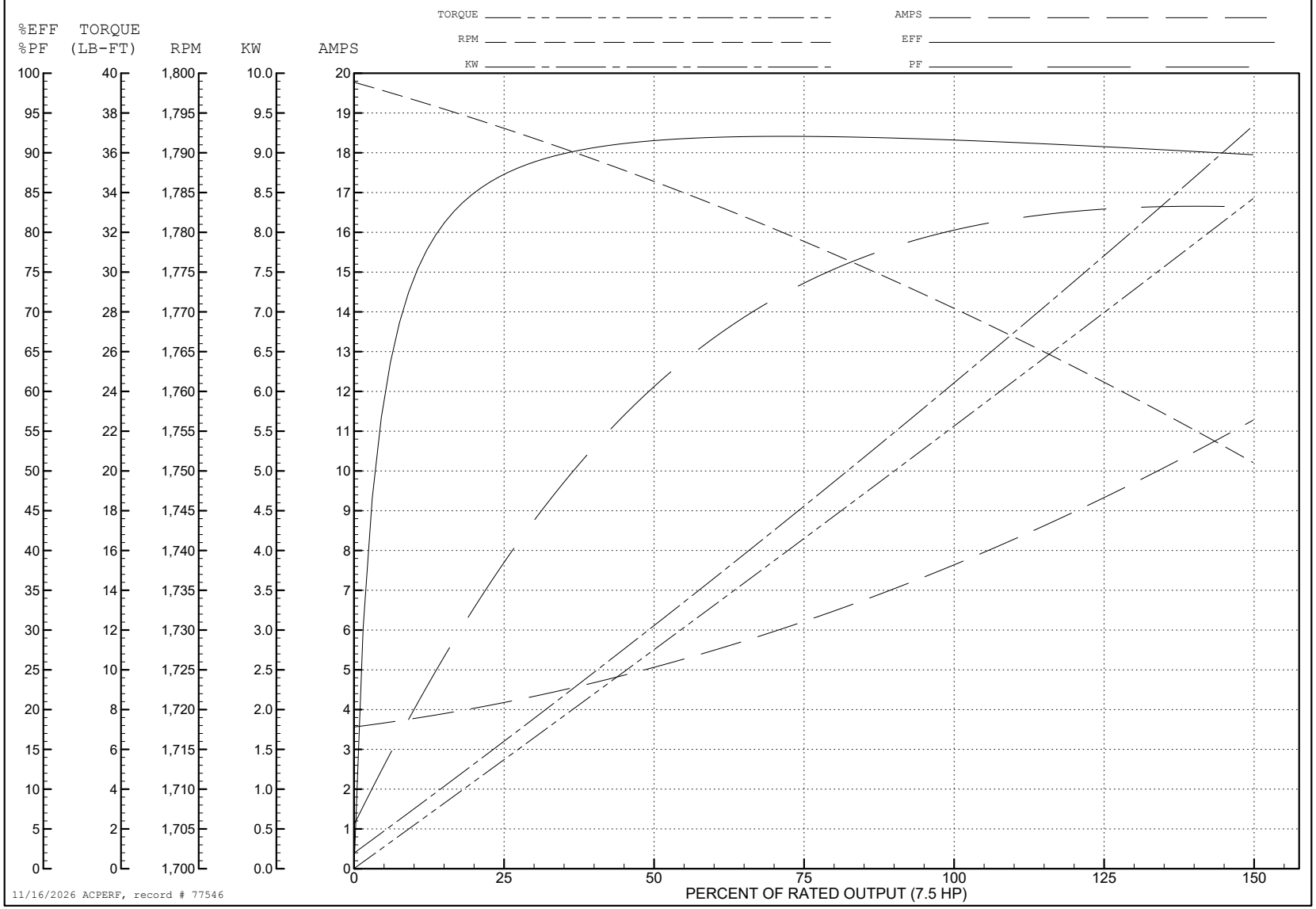
ABB Motors and Mechanical Inc.

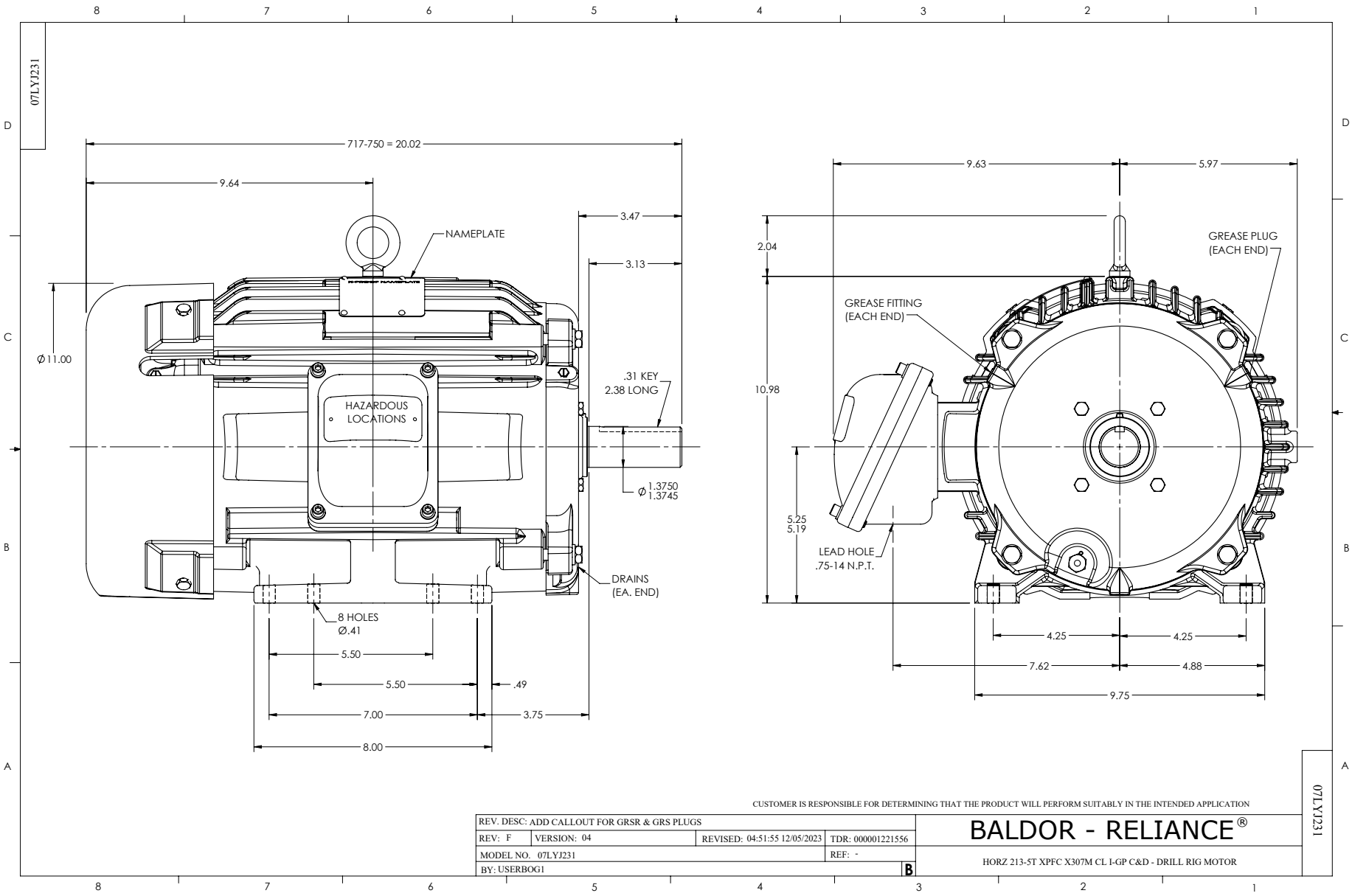
WINDING # 07WGX817

7.5 HP 3 PH 60 HZ 1770 RPM 575 V 0738M

Typical performance - not guaranteed values.

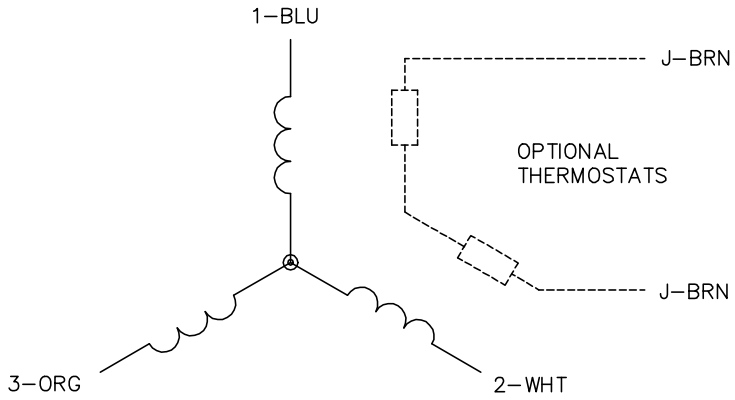
TORQUES(LB-FT): PO=73 PU=33.7 LR=44.4 LRA=58.7

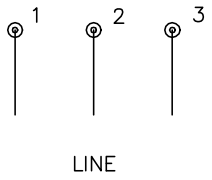



07LYJ231
717-750 = 20.02
9.64
3.47
3.13
NAMEPLATE
Ø11.00
HAZARDOUS LOCATIONS
.31 KEY
2.38 LONG
Ø 1.3750
1.3745
DRAINS
(EA. END)
8 HOLES
Ø.41
5.50
5.50
.49
7.00
3.75
8.00
9.63
5.97
2.04
GREASE PLUG
(EACH END)
GREASE FITTING
(EACH END)
10.98
5.25
5.19
LEAD HOLE
.75-14 N.P.T.
4.25
4.25
7.62
4.88
9.75
CUSTOMER IS RESPONSIBLE FOR DETERMINING THAT THE PRODUCT WILL PERFORM SUITABLY IN THE INTENDED APPLICATION
REV. DESC: ADD CALLOUT FOR GRSR & GRS PLUGS
REV: F
VERSION: 04
REVISED: 04:51:55 12/05/2023
TDR: 000001221556
MODEL NO. 07LYJ231
REF: -
BY: USERBOG1
B
BALDOR - RELIANCE®
HORZ 213-5T XPFC X307M CL I-GP C&D - DRILL RIG MOTOR
07LYJ231

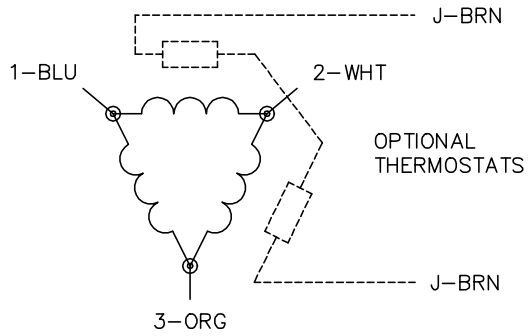
CD0006

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 | | | BALDOR - RELIANCE® |
| REV. LTR: E | VERSION: 01 | TDR: 000001099922 | |
| FILE: \AAA\00005\141 | REVISED: 10:24:49 02/19/2019 | BY: ENBRIR0 | 3PH, SV, 3 LEADS, WYE OR DELTA CONNECTED |
| MTL: – | | | SH 1 of 1 |