

# ABB BALDOR RELIANCE III

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## Customer information packet

### IDNM3770T

7.5HP, 1760RPM, 3PH, 60HZ, 213TC, 0748M, TENV

Class - None

Division - Not Applicable

**Specifications**

|                                |                                         |
|--------------------------------|-----------------------------------------|
| Enclosure                      | TENV                                    |
| Frame                          | 213TC                                   |
| Frame Material                 | Iron                                    |
| Frequency                      | 60.00 Hz                                |
| Haz Area Class and Group       | None                                    |
| Haz Area Division              | Not Applicable                          |
| Motor Letter Type              | Three Phase                             |
| Output @ Frequency             | 7.500 HP @ 60 HZ                        |
| Phase                          | 3                                       |
| Synchronous Speed @ Frequency  | 1800 RPM @ 60 HZ                        |
| Voltage @ Frequency            | 230.0 V @ 60 HZ<br>460.0 V @ 60 HZ      |
| Agency Approvals               | UR<br>CSA                               |
| 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              | 17.800 A @ 230.0 V<br>8.900 A @ 460.0 V |
| Design Code                    | B                                       |
| Drip Cover                     | No Drip Cover                           |
| Duty Rating                    | CONT                                    |
| Efficiency @ 100% Load         | 92.4 %                                  |
| Electrically Isolated Bearing  | Not Electrically Isolated               |
| Feedback Device                | NO FEEDBACK                             |
| Front Face Code                | Encoder/Feedback Device                 |
| Front Shaft Indicator          | None                                    |
| Heater Indicator               | No Heater                               |
| High Voltage Full Load Amps    | 8.9 a                                   |

**Part Detail**

|              |            |
|--------------|------------|
| Revision     | K          |
| Type         | AC         |
| Mech. spec.  | 07J135     |
| Base         |            |
| Status       | PRD/A      |
| Elec. spec.  | 07WGX647   |
| Layout       | 07LYJ135   |
| Eff. date    | 10-01-2026 |
| CD Diagram   | CD0005     |
| Poles        | 04         |
| Leads        | 9#14       |
| Proprietary  | False      |
| Created date | 11-14-2014 |

|                               |                            |
|-------------------------------|----------------------------|
| Insulation Class              | F                          |
| Inverter Code                 | Inverter Duty              |
| KVA Code                      | H                          |
| Lifting Lugs                  | Standard Lifting Lugs      |
| Locked Bearing Indicator      | Locked Bearing             |
| Max Speed                     | 6000 rpm                   |
| Motor Lead Exit               | Ko Box                     |
| Motor Lead Quantity/Wire Size | 9 @ 14 AWG                 |
| Motor Lead Termination        | Flying Leads               |
| Motor Standards               | NEMA                       |
| Motor Type                    | 0748M                      |
| Mounting Arrangement          | F1                         |
| Number of Poles               | 4                          |
| Overall Length                | 20.40 IN                   |
| Power Factor                  | 82                         |
| Product Family                | General Purpose            |
| Pulley End Bearing Type       | Ball                       |
| Pulley Face Code              | C-Face                     |
| Pulley Shaft Indicator        | Standard                   |
| Rodent Screen                 | None                       |
| Service Factor                | 1.00                       |
| Shaft Diameter                | 1.375 IN                   |
| Shaft Extension Location      | Pulley End                 |
| Shaft Ground Indicator        | No Shaft Grounding         |
| Shaft Rotation                | Reversible                 |
| Shaft Slinger Indicator       | No Slinger                 |
| Speed                         | 1760 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**

| NP4009L        |                      |  |            |           |        |      |          |  |      |
|----------------|----------------------|--|------------|-----------|--------|------|----------|--|------|
| CAT.NO.        | IDNM3770T            |  |            |           |        |      |          |  |      |
| SPEC.          | 07J135X647G1         |  |            |           |        |      |          |  |      |
| FRAME          | 213TC                |  | H.P.       |           | 7.5 TE |      |          |  |      |
| VOLTS          | 230/460 1000:1 CT/VT |  |            |           |        |      |          |  |      |
| MAG. CUR.      | 7.2/3.6              |  |            | F.L. AMPS |        |      | 17.8/8.9 |  |      |
| R.P.M.         | 1760                 |  | R.P.M. MAX |           |        | 6000 |          |  |      |
| HZ.            | 60                   |  | PH.        |           | 3      |      | CLASS    |  | F    |
| SER.F.         | 1.00                 |  | DES.       |           | B      |      | SL HZ    |  | 1.33 |
| NEMA NOM. EFF. | 92.4                 |  | WK2        |           | 1.18   |      |          |  |      |
| BLOWER         | V                    |  | PH         |           |        |      | HZ       |  | AMPS |
| RATING         | 40C AMB-CONT         |  |            |           |        |      |          |  |      |
| DE             | 6307                 |  | ODE        |           | 6206   |      |          |  |      |
| CC             | 010A                 |  | SN         |           |        |      |          |  |      |
|                | 1.5:1 CHP PWM        |  |            |           |        |      |          |  |      |

|            |          |                                       |       |    |       |                                                   |
|------------|----------|---------------------------------------|-------|----|-------|---------------------------------------------------|
| NP VOLTS   | 230/460  |                                       |       |    |       | WYE CONN EQ CKT OHMS PER PHASE (BASE RATING, 20C) |
| NP AMPS    | 17.8/8.9 | Base Volt                             | 460   | R1 | 0.712 | X1 2.680                                          |
| HP         | 7.5      | NL AMPS                               | 3.53  | R2 | 0.463 | X2 2.170                                          |
| BASE SPEED | 1762     | Slip (HZ)                             | 1.27  |    |       | XM 70.300                                         |
| PHASE/HZ   | 3/60     | WK <sup>2</sup> (lb-ft <sup>2</sup> ) | 1.180 |    |       |                                                   |

### Rated Full Load Data

|              | RPM   | HP    | Torque | Volts | Freq-Hz | Amps |
|--------------|-------|-------|--------|-------|---------|------|
| Base Speed   | 1762  | 7.5   | 22.4   | 460   | 60      | 9.1  |
| Max Speed    | 2642  | 7.5   | 14.9   | 460   | 90      | 8.8  |
| CT Min Speed | 1.762 | 0.008 | 22.4   | 0.46  | 0.06    | 9.1  |

### Load Performance at Base Speed

|           | RPM  | HP   | Torque | Volts | Freq-Hz | Amps |
|-----------|------|------|--------|-------|---------|------|
| No Load   | 1799 | 0.0  | 0.0    | 460   | 60      | 3.5  |
| 1/4       | 1790 | 1.8  | 5.4    | 460   | 60      | 4.1  |
| 1/2       | 1781 | 3.8  | 11.1   | 460   | 60      | 5.4  |
| 3/4       | 1771 | 5.6  | 16.7   | 460   | 60      | 7.1  |
| Full Load | 1762 | 7.5  | 22.4   | 460   | 60      | 9.1  |
| O/L       | 1727 | 15.0 | 45.6   | 460   | 60      | 18.3 |

### Blower Data

| Volts | Ph/Hz | FL Amps | LR Amps | Frame | CFM |
|-------|-------|---------|---------|-------|-----|
|       |       |         |         |       |     |

Remarks: Calculated Data

**BALDOR • RELIANCE**

DR BY USBRRAN1  
CK BY CD  
APP BY USBRRAN1  
DATE 11/1/2024
**A-C MOTOR  
PERFORMANCE  
CURVES**
**07WGX647**

Record: 98905

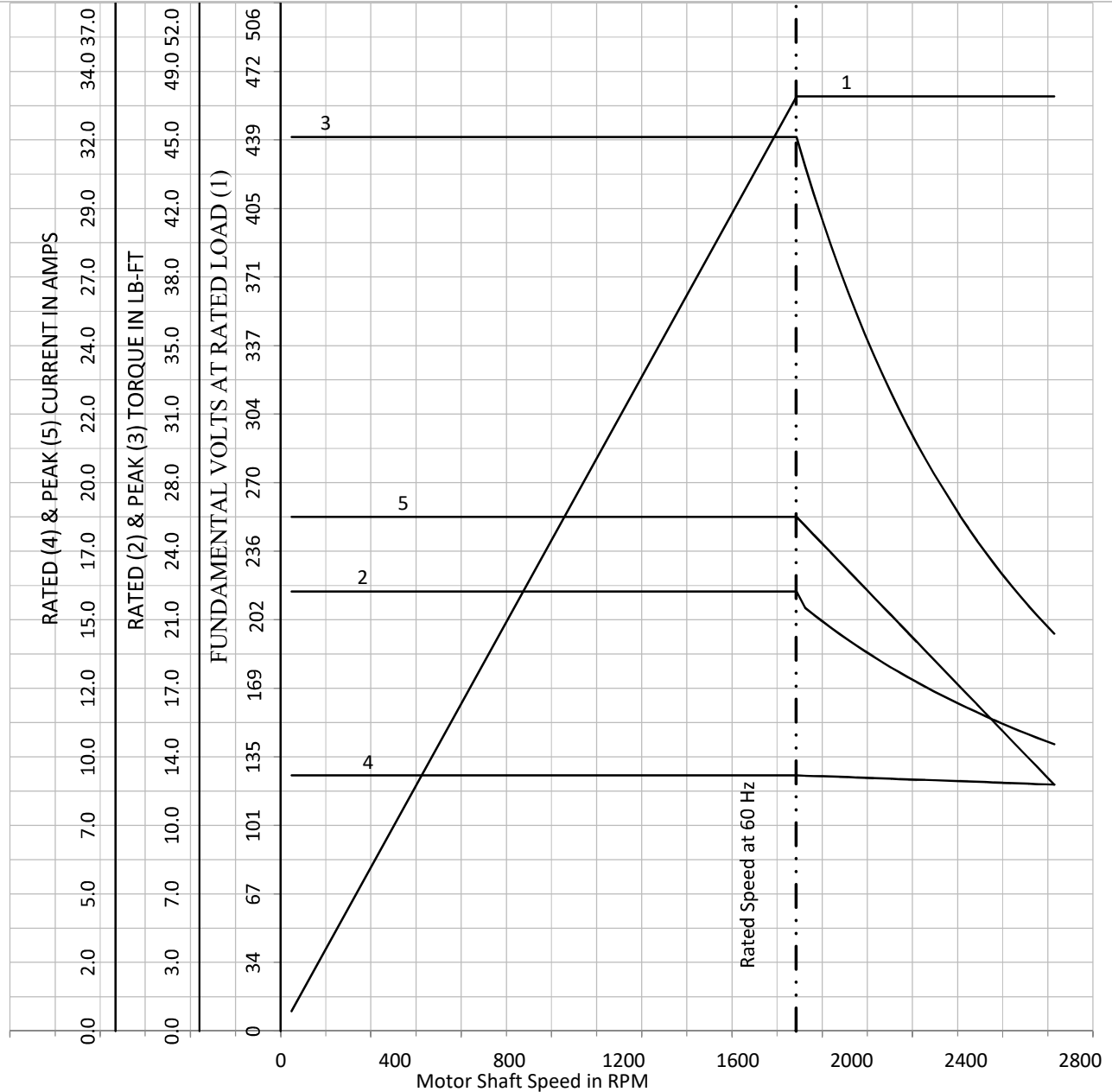
NP VOLTS 230/460  
 NP AMPS 17.8/8.9  
 HP 7.5  
 BASE SPEED 1762  
 PHASE/HZ 3/60

Base Volt 460  
 NL AMPS 3.53  
 Slip (HZ) 1.27  
 WK<sup>2</sup> (lb-ft<sup>2</sup>) 1.180

WYE CONN EQ CKT OHMS PER PHASE (BASE RATING, 20C)

|    |       |    |        |
|----|-------|----|--------|
| R1 | 0.712 | X1 | 2.680  |
| R2 | 0.463 | X2 | 2.170  |
|    |       | XM | 70.300 |

Variable Speed AC Motor Curves



Calculated Data

Data Valid For Nameplate Speed Range only

**BALDOR • RELIANCE**

DR BY USBRRAN1  
 CK BY CD  
 APP BY USBRRAN1  
 DATE 11/1/2024

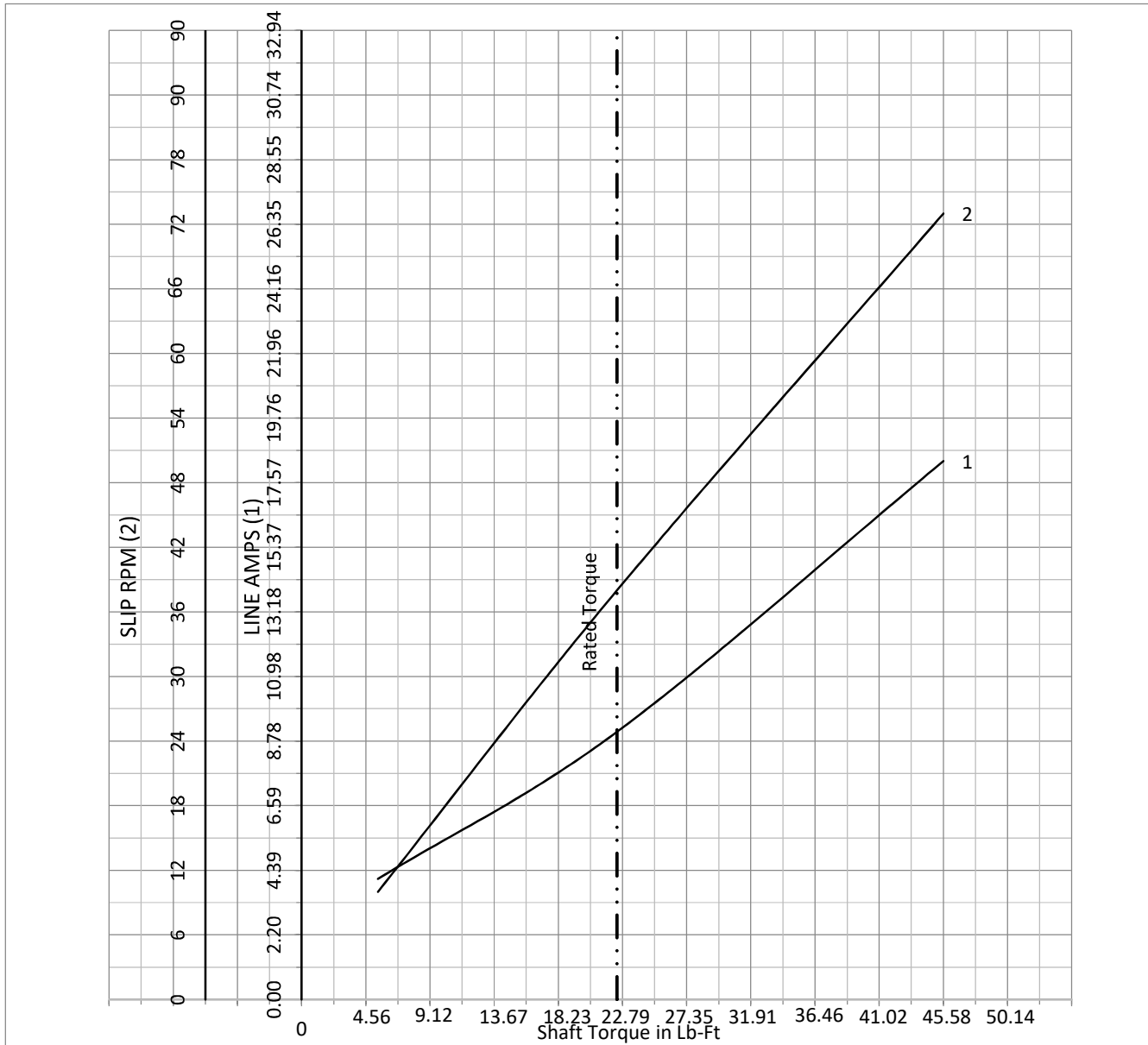
**A-C MOTOR  
PERFORMANCE  
CURVES**

**07WGX647**

Record: 98905

|            |          |              |       |                                                   |       |    |        |
|------------|----------|--------------|-------|---------------------------------------------------|-------|----|--------|
| NP VOLTS   | 230/460  | 0            | 0     | WYE CONN EQ CKT OHMS PER PHASE (BASE RATING, 20C) |       |    |        |
| NP AMPS    | 17.8/8.9 | Base Volt    | 460   | R1                                                | 0.712 | X1 | 2.680  |
| HP         | 7.5      | NL AMPS      | 3.53  | R2                                                | 0.463 | X2 | 2.170  |
| BASE SPEED | 1762     | Slip (HZ)    | 1.27  |                                                   |       | XM | 70.300 |
| PHASE/HZ   | 3/60     | WK2 (lb-ft2) | 1.180 |                                                   |       |    |        |

Vector PWM Inverter Duty  
Variable Speed AC Motor Curves



Calculated Data

Data Valid For Nameplate Speed Range only

**BALDOR • RELIANCE**

DR BY USBRRAN1

CK BY CD

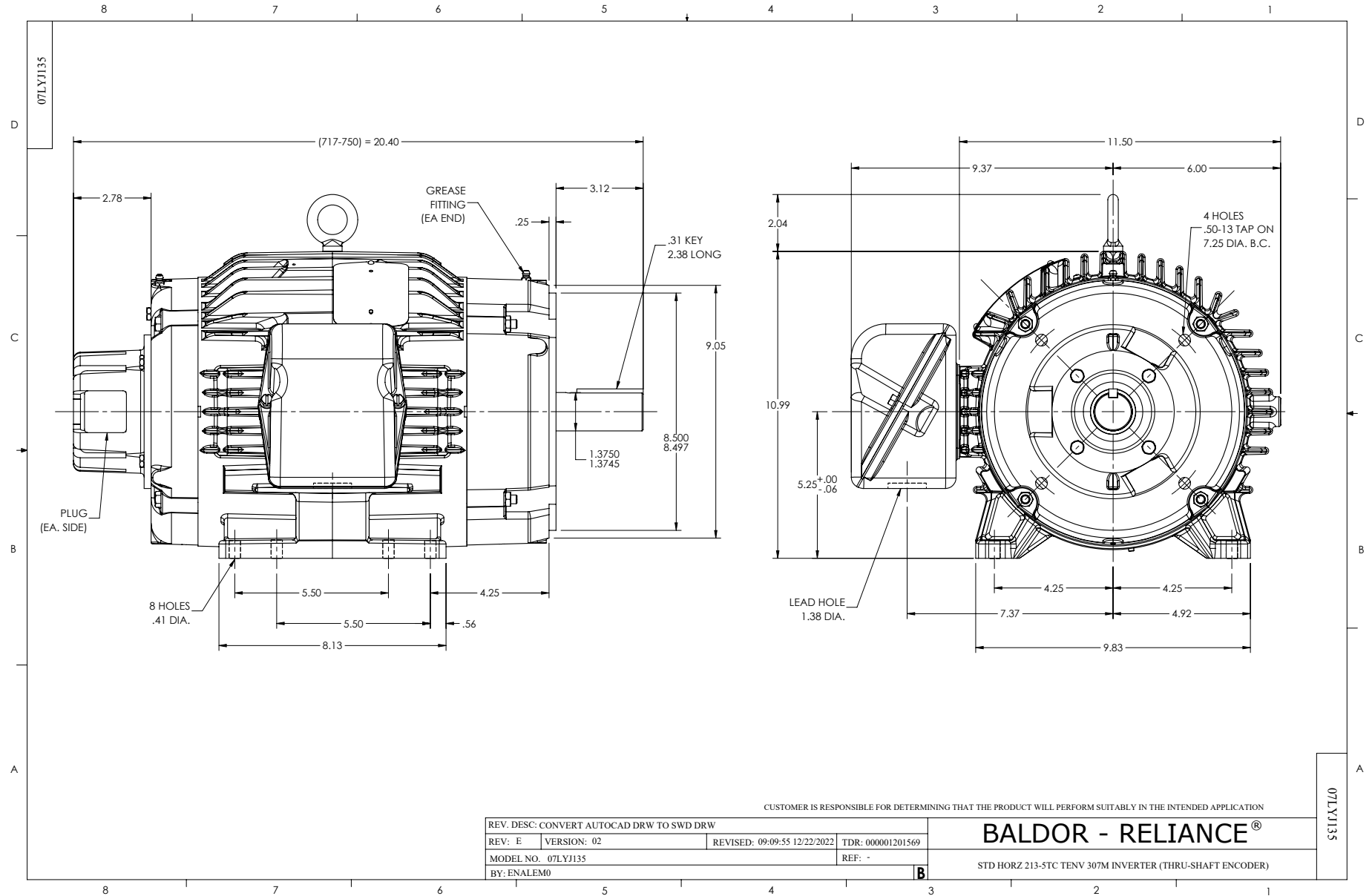
APP BY USBRRAN1

DATE 11/1/2024

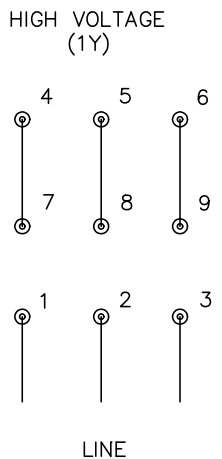
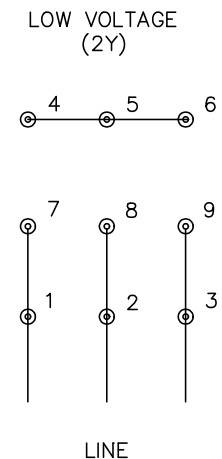
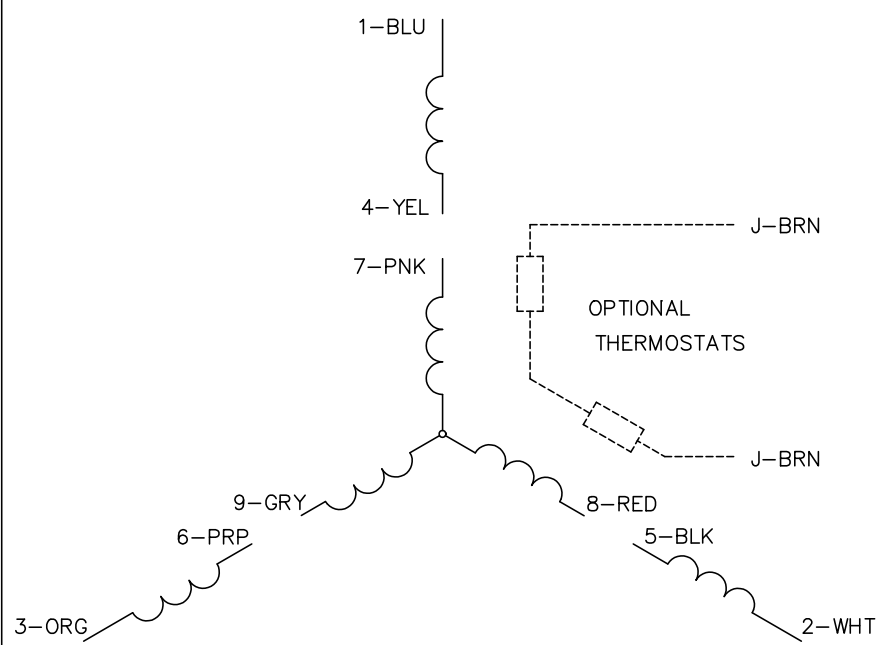
**A-C MOTOR  
PERFORMANCE  
CURVES**

**07WGX647**

Record: 98905



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.

|                                           |         |                         |              |
|-------------------------------------------|---------|-------------------------|--------------|
| REV. DESC: REVISE TO SHOW OPTIONAL COLORS |         |                         |              |
| REV. LTR: E                               | BY: JLP | REVISED: 01/19/99 10:15 | TDR: 0171435 |
| 900000                                    |         | FILE: AAA00005140       | MDL: -       |
|                                           |         | MTL: -                  |              |

**BALDOR ELECTRIC Co.**

3PH, DV, 9 LEADS

CD0005