

# ABB BALDOR RELIANCE III

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## Customer information packet

### IDNM2238T

10HP, 1770RPM, 3PH, 60HZ, 256TC, 0948M, TENV

Class - None

Division - Not Applicable

**Specifications**

|                                |                                          |
|--------------------------------|------------------------------------------|
| Enclosure                      | TENV                                     |
| Frame                          | 256TC                                    |
| 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             | 10.000 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              | 13.000 A @ 460.0 V<br>26.000 A @ 230.0 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                              |
| Front Face Code                | Encoder/Feedback Device                  |
| Front Shaft Indicator          | None                                     |
| Heater Indicator               | No Heater                                |
| High Voltage Full Load Amps    | 13.0 a                                   |

**Part Detail**

|              |            |
|--------------|------------|
| Revision     | AL         |
| Type         | AC         |
| Mech. spec.  | 09F278     |
| Base         |            |
| Status       | PRD/A      |
| Elec. spec.  | 09WGY402   |
| Layout       | 09LYF278   |
| Eff. date    | 08-28-2025 |
| CD Diagram   | CD0005     |
| Poles        | 04         |
| Leads        | 9#12       |
| Proprietary  | False      |
| Created date | 01-01-0001 |

|                               |                            |
|-------------------------------|----------------------------|
| Insulation Class              | H                          |
| Inverter Code                 | Inverter Duty              |
| KVA Code                      | K                          |
| Lifting Lugs                  | Standard Lifting Lugs      |
| Locked Bearing Indicator      | Locked Bearing             |
| Max Speed                     | 5000 rpm                   |
| Motor Lead Exit               | Ko Box                     |
| Motor Lead Quantity/Wire Size | 9 @ 12 AWG                 |
| Motor Lead Termination        | Flying Leads               |
| Motor Standards               | NEMA                       |
| Motor Type                    | 0948M                      |
| Mounting Arrangement          | F1                         |
| Number of Poles               | 4                          |
| Overall Length                | 24.05 IN                   |
| Power Factor                  | 78                         |
| 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                | 1.625 IN                   |
| Shaft Extension Location      | Pulley End                 |
| Shaft Ground Indicator        | No Shaft Grounding         |
| Shaft Rotation                | Reversible                 |
| Shaft Slinger Indicator       | Shaft Slinger              |
| 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**

| NP1163              |                    |           |            |                |              |          |  |  |  |
|---------------------|--------------------|-----------|------------|----------------|--------------|----------|--|--|--|
| <b>CAT NO</b>       | IDNM2238T          |           |            |                |              |          |  |  |  |
| <b>SPEC.</b>        | 09F278Y402G1       |           |            |                |              |          |  |  |  |
| <b>FRAME</b>        | 256TC              |           | <b>HP</b>  | 10             | TE           |          |  |  |  |
| <b>VOLTS</b>        | 230/460            |           |            |                |              |          |  |  |  |
| <b>MAG CUR</b>      | 11.2/5.6           |           |            | <b>FLA</b>     | 26/13        |          |  |  |  |
| <b>RPM</b>          | 1770               |           |            | <b>RPM MAX</b> | 5000         |          |  |  |  |
| <b>HZ</b>           | 60                 |           | <b>PH</b>  | 3              | <b>CLASS</b> | H        |  |  |  |
| <b>SER.F.</b>       | 1.00               |           | <b>DES</b> | A              | <b>SL HZ</b> | 0.9      |  |  |  |
| <b>NEMA-NOM-EFF</b> | 91.7               |           | <b>WK2</b> | 2.1            |              |          |  |  |  |
| <b>BLWR V</b>       |                    | <b>PH</b> |            | <b>HZ</b>      |              | <b>A</b> |  |  |  |
| <b>RATING</b>       | 40C AMB-CONT       |           |            |                |              |          |  |  |  |
| <b>DE BRG</b>       | 6309               |           |            | <b>ODE BRG</b> | 6208         |          |  |  |  |
| <b>CC</b>           | 010A               | <b>SN</b> |            |                |              |          |  |  |  |
|                     | 1000:1CT, 1000:1VT |           |            |                |              |          |  |  |  |

**Parts List**

| Part number  | Description                              | Quantity |
|--------------|------------------------------------------|----------|
| SA077175     | SA 09F278Y402G1                          | 1.000 ea |
| RA070739     | RA 09F278Y402G1                          | 1.000 ea |
| HW1002A63    | WASHER, 5/8 HI-COLLAR SPRLCKWASHER       | 1.000 ea |
| 09CB3003     | CB W/1.75" DIA LD HL - 37, 39, 307 & 309 | 1.000 ea |
| 09GS1000     | GASKET-CONDUIT BOX, 1/16 THICK LEXIDE    | 1.000 ea |
| 51XW2520A12  | .25-20 X .75, TAPTITE II, HEX WSHR SLTD  | 4.000 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 |
| 59XW2520G07  | .25-20X.44,HEX SER WSHR,TAPTITE 2,GREEN  | 1.000 ea |
| 09EP1100A119 | FREP TEBC/TENV W/THRU SHAFT ENCODER DESI | 1.000 ea |
| 10XN3816K28  | 3/8-16 X 1.75 HEX HD CAP SCREW, GRADE 5  | 4.000 ea |
| HA4051A00    | PLASTIC CAP FOR GREASE FITTING           | 1.000 ea |
| MG1050G01    | CELEROL MEDIUM CHARCOAL METALLIC GRAY    | 0.050 ga |
| HW1001A25    | LOCKWASHER 1/4, ZINC PLT .493 OD, .255 I | 1.000 ea |
| HW1001A38    | LOCKWASHER 3/8, ZINC PLT .688 OD, .382 I | 4.000 ea |
| 51XW2520A12  | .25-20 X .75, TAPTITE II, HEX WSHR SLTD  | 1.000 ea |
| HW5100A08    | W3118-035 WVY WSHR (WB)                  | 1.000 ea |
| 10XN2520K28  | 1/4-20 X 1.75" HX HD SCRWGRADE 5, ZINC P | 2.000 ea |
| 10XN2520K36  | 1/4-20 X 2.25" HX HD SCRWGRADE 5, ZINC P | 4.000 ea |
| HW1001A25    | LOCKWASHER 1/4, ZINC PLT .493 OD, .255 I | 4.000 ea |
| 09EP1300A12  | ENDPLATE, MACH                           | 1.000 ea |
| 10XN3816K28  | 3/8-16 X 1.75 HEX HD CAP SCREW, GRADE 5  | 4.000 ea |
| HW4600B44    | V-RING SLINGER 1.500 X 1.810 X .28 VITON | 1.000 ea |
| HA4051A00    | PLASTIC CAP FOR GREASE FITTING           | 1.000 ea |
| HW1001A38    | LOCKWASHER 3/8, ZINC PLT .688 OD, .382 I | 4.000 ea |
| HA6881       | BEI HS35 THRU SHAFT ENCODER PROTECTIVE C | 1.000 ea |
| 10XN3816K12  | 3/8-16 X 3/4 HEX HD CAP GRADE 5          | 3.000 ea |
| HW1001A38    | LOCKWASHER 3/8, ZINC PLT .688 OD, .382 I | 3.000 ea |
| 09CB3501SP   | CONDUIT BOX LID FOR 09CB3001 & 09CB3002  | 1.000 ea |
| 09GS1013SP   | GS FOR 09CB3501, 12CB1500 & 12CB1503 LID | 1.000 ea |
| 51XW2520A12  | .25-20 X .75, TAPTITE II, HEX WSHR SLTD  | 2.000 ea |

|             |                                          |          |
|-------------|------------------------------------------|----------|
| HW2501G25   | KEY, 3/8 SQ X 2.875                      | 1.000 ea |
| HW4500A03   | GREASE FITTING, .125 NPT 1610(ALEMITE) 8 | 1.000 ea |
| HW4500A17   | 317400 ALEMITE GREASE RELIEF             | 1.000 ea |
| HA4054      | SHORT T-DRAIN FITTING, .125" N.P.T.      | 1.000 ea |
| MJ1000A02   | GREASE, POLYREX EM EXXON                 | 0.080 lb |
| HW4500A03   | GREASE FITTING, .125 NPT 1610(ALEMITE) 8 | 1.000 ea |
| HW4500A17   | 317400 ALEMITE GREASE RELIEF             | 1.000 ea |
| HA4054      | SHORT T-DRAIN FITTING, .125" N.P.T.      | 1.000 ea |
| 85XU0407S04 | 4X1/4 U DRIVE PIN STAINLESS              | 2.000 ea |
| LC0005E01   | SPL CONN.DIA./WARN.LABEL(LC0005/LB1119)  | 1.000 ea |
| MN416A01    | TAG-INSTAL-MAINT no wire (2500 bx)11/25  | 1.000 ea |
| LD7020D09   | LEAD SET, 12AWG, 9 LEAD, 20" LONG LEADS  | 1.000 ea |
| LB1624      | COMBINED WARNING LABEL, ISO/ANSI PICTOGR | 1.000 ea |
| NP1163      | ALUM INV UL CSA CC                       | 1.000 ea |
| 40PA1005    | PACKAGING GROUP, 09 STD                  | 1.000 ea |



**AC Induction Motor Performance Data**  
 Record # 1989  
 Typical performance - not guaranteed values

|                          |                    |                        |
|--------------------------|--------------------|------------------------|
| <b>Winding:</b> 09WGY402 | <b>Type:</b> 0948M | <b>Enclosure:</b> TENV |
|--------------------------|--------------------|------------------------|

| Nameplate Data    |              |          |    | General Characteristics at 460 V, 60 Hz:<br>High Volt Connection |            |
|-------------------|--------------|----------|----|------------------------------------------------------------------|------------|
| Rated Output (HP) | 10           |          |    | Full Load Torque                                                 | 29.8 LB-FT |
| Volts             | 230/460      |          |    | Start Configuration                                              | DOL        |
| Full Load Amps    | 26/13        |          |    | Break Down Torque                                                | 133 LB-FT  |
| R.P.M.            | 1770         |          |    | Pull-Up Torque                                                   | 54.7 LB-FT |
| Hz                | 60           | Phase    | 3  | Locked-rotor Torque                                              | 71.1 LB-FT |
| NEMA Design Code  | B            | KVA Code | K  | Starting Current                                                 | 106 Amps   |
| Service Factor    | 1            |          |    | No-load Current                                                  | 5.6 Amps   |
| NEMA Nom. Eff.    | 91.7         | P.F.     | 78 | Line-line Res. @ 25°C.                                           | 0.684 Ohms |
| Rating - Duty     | 40C AMB-CONT |          |    | Temp. Rise @ Rated Load                                          | 66°C       |
| S.F. Amps         |              |          |    | Temp. Rise @ S.F. Load                                           |            |

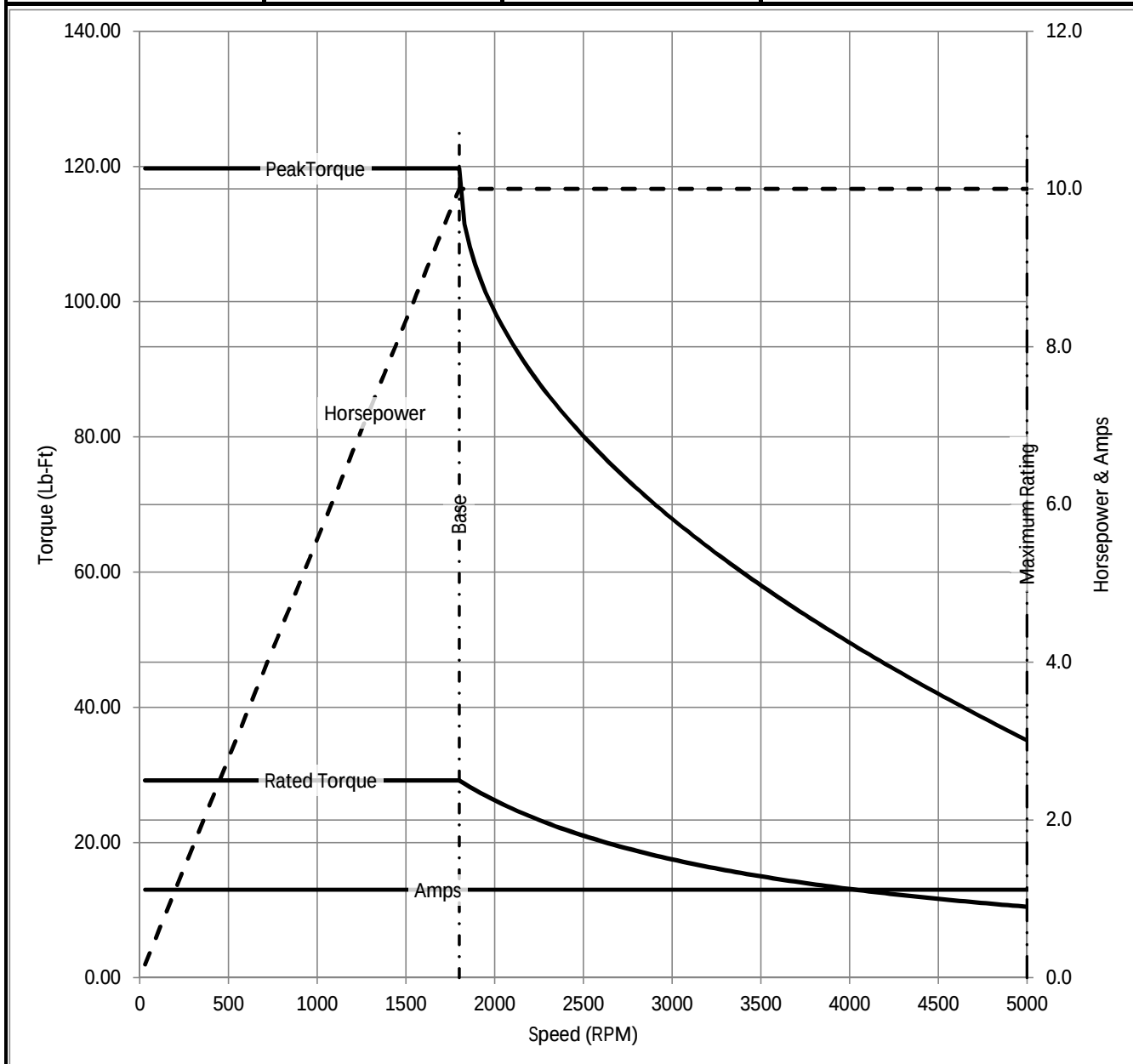
Load Characteristics at 460 Volts, 60 Hz, 10 HP

| % of Rated Load | 25   | 50   | 75   | 100  | 125  | 150  | S.F. |
|-----------------|------|------|------|------|------|------|------|
| Power Factor    | 42   | 61   | 73   | 78   | 81   | 82   |      |
| Efficiency      | 87   | 91.2 | 92.3 | 92.2 | 91.7 | 90.8 |      |
| Speed           | 1793 | 1787 | 1780 | 1773 | 1766 | 1757 |      |
| Line Amperes    | 6.58 | 8.12 | 10.4 | 13   | 15.7 | 18.8 |      |

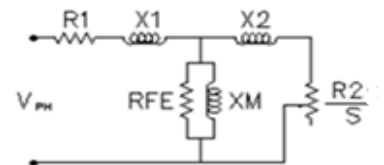
Baldor Electric Company Fort Smith, Arkansas



|            |           |                          |         |                                       |      |                                                   |       |    |        |
|------------|-----------|--------------------------|---------|---------------------------------------|------|---------------------------------------------------|-------|----|--------|
| Catalog    | IDNM2238T | NP VOLTS                 | 230/460 | ENCLOSURE                             | TENV | WYE CONN EQ CKT OHMS PER PHASE (BASE RATING, 20C) |       |    |        |
| FRAME      | 256TC     | NP AMPS                  | 26/13   | Base Volts                            | 460  | R1                                                | 0.332 | X1 | 1.364  |
| HP         | 10 HP     | DUTY                     | Cont    | Base AMPS                             | 13   | R2                                                | 0.268 | X2 | 1.646  |
| BASE SPEED | 1800      | MAX SAFE RPM             | 5000    | Slip Hz                               | 0.90 |                                                   |       | XM | 45.205 |
| PHASE/HZ   | 3/60      | AMB <sup>0</sup> C/INSUL | 40/H    | WK <sup>2</sup> (lb-ft <sup>2</sup> ) | 2.1  |                                                   |       |    |        |



Remarks: Calculated Data


**BALDOR**  
A MEMBER OF THE ABB GROUP

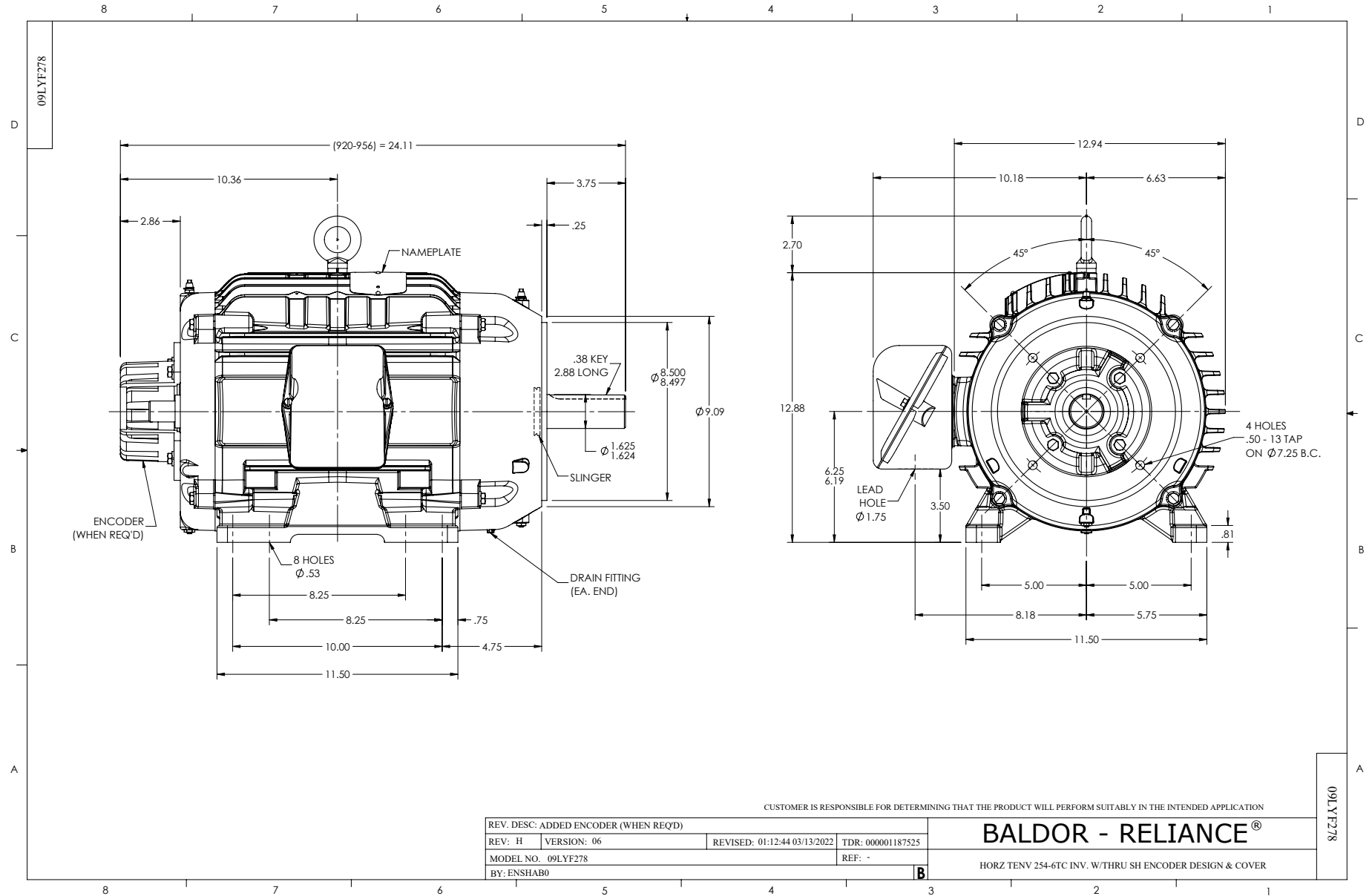
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CK BY  
APP BY ENR  
DATE 2/28/2013

A-C MOTOR  
PERFORMANCE CURVES

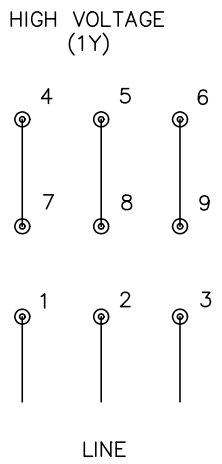
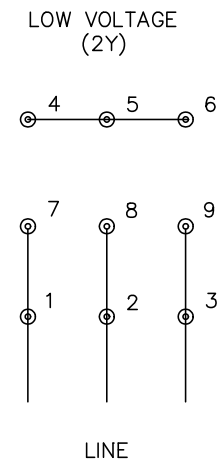
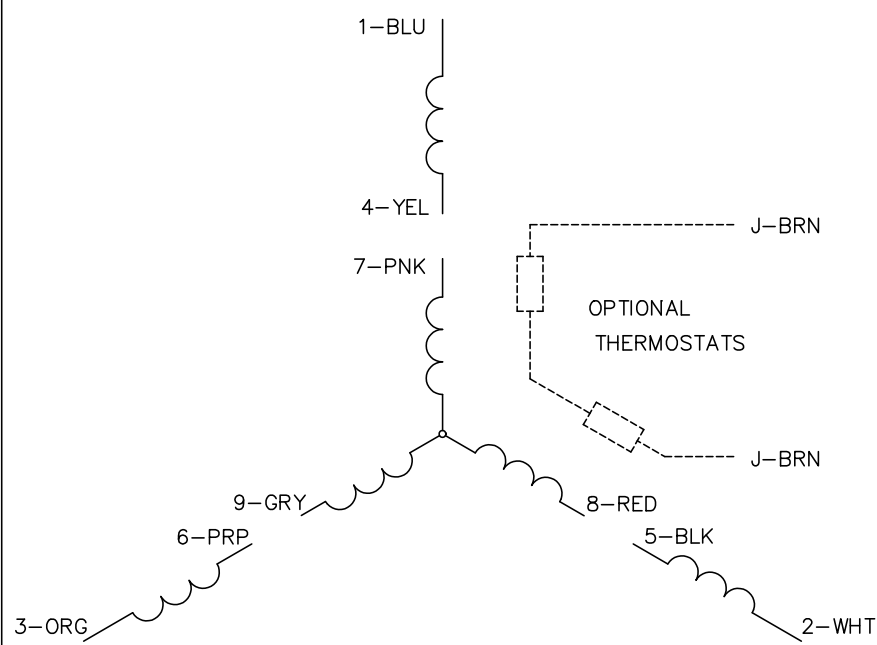
09F278Y402G1

ISSUE DATE 2/28/2013





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