

# ABB BALDOR RELIANCE III

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## Customer information packet

### IDVSNM2333T

15HP, 1775RPM, 3PH, 60HZ, 256TC, TENV, FOOT,

Class - None

Division - Not Applicable

**Specifications**

|                                       |                                          |
|---------------------------------------|------------------------------------------|
| <b>Enclosure</b>                      | TENV                                     |
| <b>Frame</b>                          | 256TC                                    |
| <b>Frame Material</b>                 | Iron                                     |
| <b>Frequency</b>                      | 60.00 Hz                                 |
| <b>Haz Area Class and Group</b>       | None                                     |
| <b>Haz Area Division</b>              | Not Applicable                           |
| <b>Motor Letter Type</b>              | Three Phase                              |
| <b>Output @ Frequency</b>             | 15.000 HP @ 60 HZ                        |
| <b>Phase</b>                          | 3                                        |
| <b>Synchronous Speed @ Frequency</b>  | 1800 RPM @ 60 HZ                         |
| <b>Voltage @ Frequency</b>            | 230.0 V @ 60 HZ<br>460.0 V @ 60 HZ       |
| <b>Agency Approvals</b>               | UR<br>CSA                                |
| <b>Ambient Temperature</b>            | 40 °C                                    |
| <b>Auxiliary Box</b>                  | NO AUXILLARY BOX                         |
| <b>Auxiliary Box Lead Termination</b> | None                                     |
| <b>Base Indicator</b>                 | Rigid                                    |
| <b>Bearing Grease Type</b>            | Polyrex EM (-20F +300F)                  |
| <b>Blower</b>                         | None                                     |
| <b>Current @ Voltage</b>              | 18.500 A @ 460.0 V<br>37.000 A @ 230.0 V |
| <b>Design Code</b>                    | A                                        |
| <b>Drip Cover</b>                     | No Drip Cover                            |
| <b>Duty Rating</b>                    | CONT                                     |
| <b>Efficiency @ 100% Load</b>         | 92.4 %                                   |
| <b>Electrically Isolated Bearing</b>  | Not Electrically Isolated                |
| <b>Feedback Device</b>                | NO FEEDBACK                              |
| <b>Front Face Code</b>                | Encoder/Feedback Device                  |
| <b>Front Shaft Indicator</b>          | None                                     |
| <b>Heater Indicator</b>               | No Heater                                |
| <b>High Voltage Full Load Amps</b>    | 18.5 a                                   |

**Part Detail**

|                     |            |
|---------------------|------------|
| <b>Revision</b>     | Z          |
| <b>Type</b>         | AC         |
| <b>Mech. spec.</b>  | 09F278     |
| <b>Base</b>         |            |
| <b>Status</b>       | PRD/A      |
| <b>Elec. spec.</b>  | 09WGX946   |
| <b>Layout</b>       | 09LYF278   |
| <b>Eff. date</b>    | 11-14-2023 |
| <b>CD Diagram</b>   | CD0005     |
| <b>Poles</b>        | 04         |
| <b>Leads</b>        | 9#12       |
| <b>Proprietary</b>  | False      |
| <b>Created date</b> | 02-14-2012 |

|                               |                            |
|-------------------------------|----------------------------|
| Insulation Class              | F                          |
| Inverter Code                 | Inverter Duty              |
| KVA Code                      | K                          |
| Lifting Lugs                  | Standard Lifting Lugs      |
| Locked Bearing Indicator      | Locked Bearing             |
| Max Speed                     | 2700 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                | 24.11 IN                   |
| Power Factor                  | 80                         |
| Product Family                | General Purpose            |
| Pulley End Bearing Type       | Ball                       |
| Pulley Face Code              | C-Face                     |
| Pulley Shaft Indicator        | Standard                   |
| Rodent Screen                 | None                       |
| RoHS Status                   | ROHS NON-COMPLIANT         |
| 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                         | 1765 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

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Nameplate

| NP3302L      |               |    |         |       |       |         |      |  |  |
|--------------|---------------|----|---------|-------|-------|---------|------|--|--|
| CAT NO       | IDVSNM2333T   |    |         |       |       |         |      |  |  |
| SPEC.        | 09F278X946G2  |    |         |       |       |         |      |  |  |
| FRAME        | 256TC         |    |         | HP    | 15 TE |         |      |  |  |
| VOLTS        | 230/460       |    |         |       |       |         |      |  |  |
| MAG CUR      | 17.8/8.9      |    |         |       | FLA   | 37/18.5 |      |  |  |
| RPM          | 1765          |    | RPM MAX |       |       | 2700    |      |  |  |
| HZ           | 60            | PH | 3       | CLASS |       |         | F    |  |  |
| SER.F.       | 1.00          |    |         | SL HZ |       |         | 0.97 |  |  |
| NEMA-NOM-EFF | 92.4          |    | WK2     |       | 2.1   |         |      |  |  |
| RATING       | 40C AMB-CONT  |    |         |       |       |         |      |  |  |
| DE BRG       | 6309          |    | ODE BRG |       |       | 6208    |      |  |  |
| CC           | 010A          | SN |         |       |       |         |      |  |  |
|              | 1.5:1 CHP PWM |    |         |       |       |         |      |  |  |

|            |             |                          |      |                                       |      |                                     |        |    |         |
|------------|-------------|--------------------------|------|---------------------------------------|------|-------------------------------------|--------|----|---------|
| REL S.O.   | IDVSNM2333T | VOLTS                    | 460  | ENCLOSURE                             | TENV | WYE CONN EQ CKT OHMS PER PHASE      |        |    |         |
| FRAME      | 254TC       | AMPS                     | 18.5 | MAX SAFE RPM                          | 5400 | (AT BASE RATING, 25 <sup>0</sup> C) |        |    |         |
| HP         | 15          | DUTY                     | CONT | In (AMPS)                             | 8.9  | R1                                  | 0.2200 | X1 | 0.9040  |
| BASE SPEED | 1765        | S.F.                     | 1.00 | P.F. @NL/FL                           | 5/81 | R2                                  | 0.1840 | X2 | 1.0940  |
| PHASE/HZ   | 3/60        | AMB <sup>0</sup> C/INSUL | 40/F | WK <sup>2</sup> (lb-ft <sup>2</sup> ) | 2.1  |                                     |        | XM | 26.4200 |

### Rated Full Load Data

|            | RPM  | HP   | Torque | Volts | Freq-Hz | Amps |
|------------|------|------|--------|-------|---------|------|
| Base Speed | 1771 | 15.2 | 45.0   | 460   | 60      | 18.4 |
| Max Speed  | 2669 | 15.0 | 29.6   | 460   | 90      | 17.1 |
| Min Speed  | 0    | 0.0  | 44.4   | 18.03 | 0.97    | 18.4 |

### Load Performance at Base Speed

|           | RPM  | HP   | Torque | Volts | Freq-Hz | Amps |
|-----------|------|------|--------|-------|---------|------|
| No Load   | 1799 | 0.0  | 0.0    | 460   | 60      | 8.9  |
| 1/4       | 1793 | 3.8  | 11.3   | 460   | 60      | 9.9  |
| 1/2       | 1787 | 7.7  | 22.5   | 460   | 60      | 12.0 |
| 3/4       | 1780 | 11.4 | 33.8   | 460   | 60      | 15.0 |
| Full Load | 1771 | 15.2 | 45.0   | 460   | 60      | 18.4 |
| O/L       | 1719 | 44.9 | 137.0  | 460   | 60      | 56.6 |

### Blower Data

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

Remarks: Calculated Data  
Vector PWM Inverter Duty



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CK BY E Rowan  
APP BY E Rowan  
DATE 8/20/2012

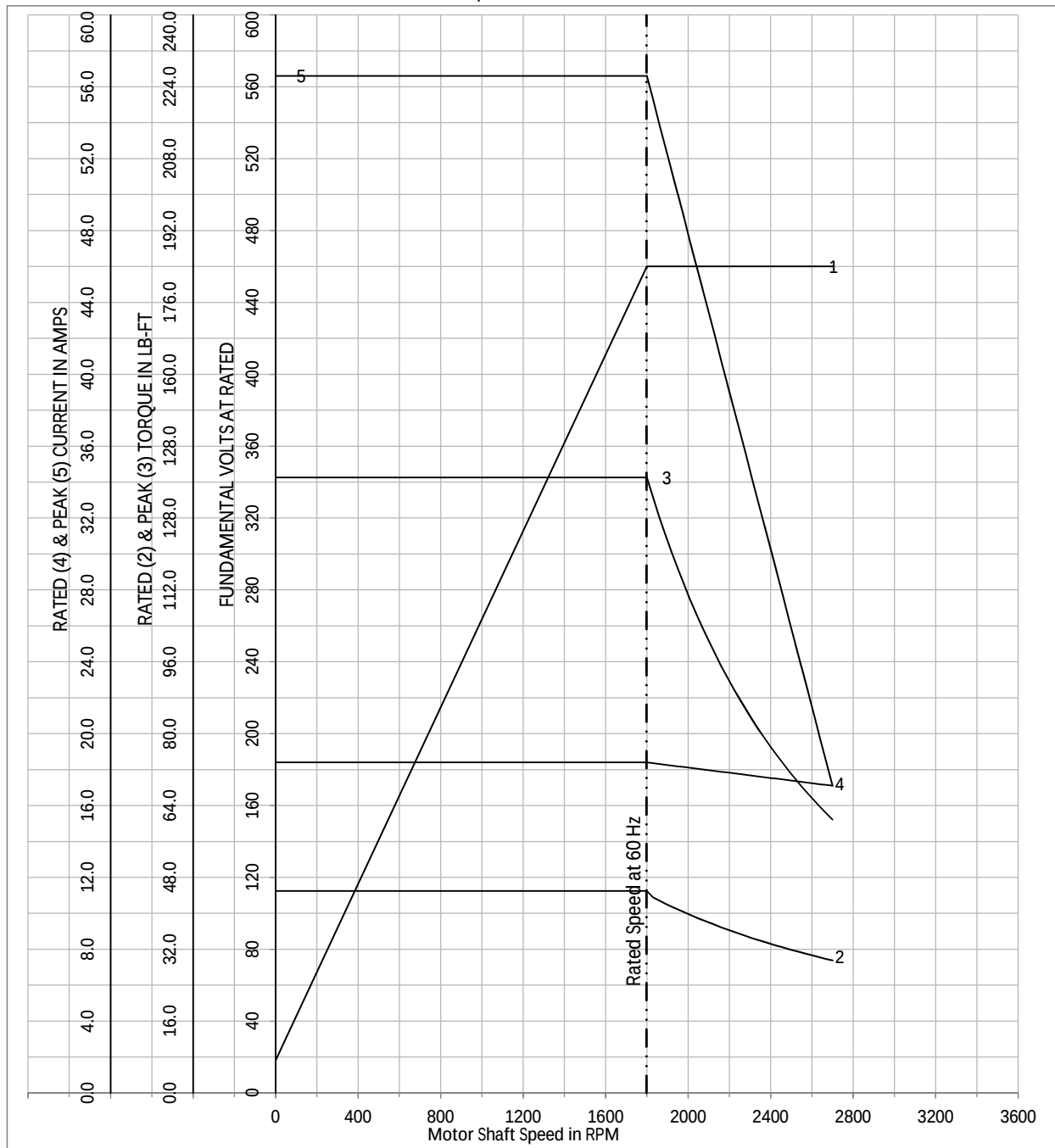
A-C MOTOR  
PERFORMANCE CURVES

**09F278X946G2**

ISSUE DATE 8/20/2012

|            |             |             |      |                                       |      |                                |        |    |         |
|------------|-------------|-------------|------|---------------------------------------|------|--------------------------------|--------|----|---------|
| REL S.O.   | IDVSNM2333T | VOLTS       | 460  | ENCLOSURE                             | TENV | WYE CONN EQ CKT OHMS PER PHASE |        |    |         |
| FRAME      | 254TC       | AMPS        | 18.5 | MAX SAFE RPM                          | 5400 | (AT BASE RATING, 25°C)         |        |    |         |
| HP         | 15          | DUTY        | CONT | In (AMPS)                             | 8.9  | R1                             | 0.2200 | X1 | 0.9040  |
| BASE SPEED | 1765        | S.F.        | 1.00 | P.F. @NL/FL                           | 5/81 | R2                             | 0.1840 | X2 | 1.0940  |
| PHASE/HZ   | 3/60        | AMB°C/INSUL | 40/F | WK <sup>2</sup> (lb-ft <sup>2</sup> ) | 2.1  |                                |        | XM | 26.4200 |

Vector PWM Inverter Duty  
Variable Speed AC Motor Curves



Calculated Data

Data Valid For Nameplate Speed Range only

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CK BY E Rowan  
APP BY E Rowan  
DATE 8/20/2012

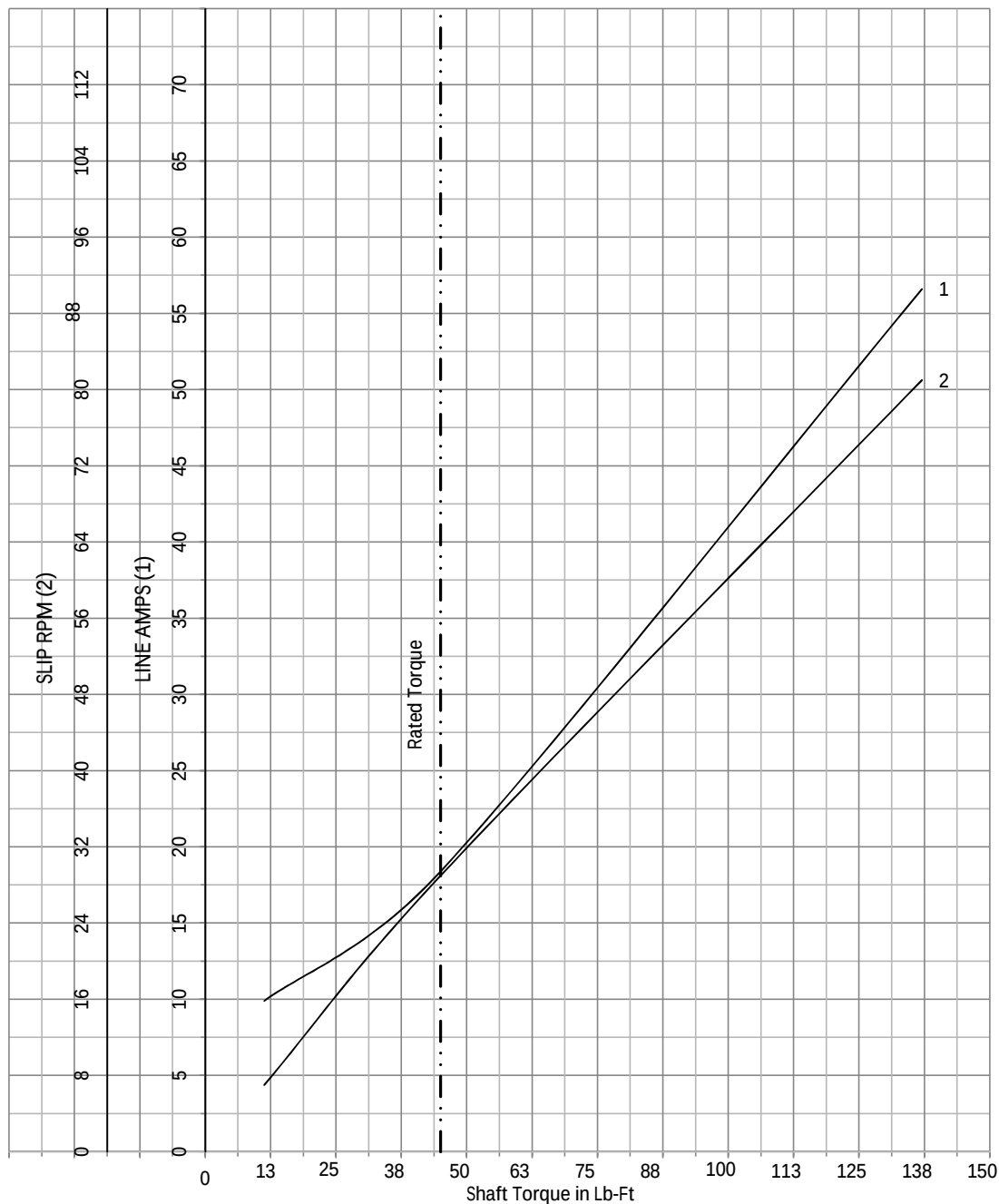
A-C MOTOR PERFORMANCE  
CURVES

09F278X946G2

SH 1 of 2  
ISSUE DATE 8/20/2012

|            |             |             |      |                                       |      |                                |        |    |         |
|------------|-------------|-------------|------|---------------------------------------|------|--------------------------------|--------|----|---------|
| REL S.O.   | IDVSNM2333T | VOLTS       | 460  | ENCLOSURE                             | TENV | WYE CONN EQ CKT OHMS PER PHASE |        |    |         |
| FRAME      | 254TC       | AMPS        | 18.5 | MAX SAFE RPM                          | 5400 | (AT BASE RATING, 25°C)         |        |    |         |
| HP         | 15          | DUTY        | CONT | In (AMPS)                             | 8.9  | R1                             | 0.2200 | X1 | 0.9040  |
| BASE SPEED | 1765        | S.F.        | 1.00 | P.F. @NL/FL                           | 5/81 | R2                             | 0.1840 | X2 | 1.0940  |
| PHASE/HZ   | 3/60        | AMB°C/INSUL | 40/F | WK <sup>2</sup> (Lb-Ft <sup>2</sup> ) | 2.1  |                                |        | XM | 26.4200 |

Vector PWM Inverter Duty  
Variable Speed AC Motor Curves



Calculated Data

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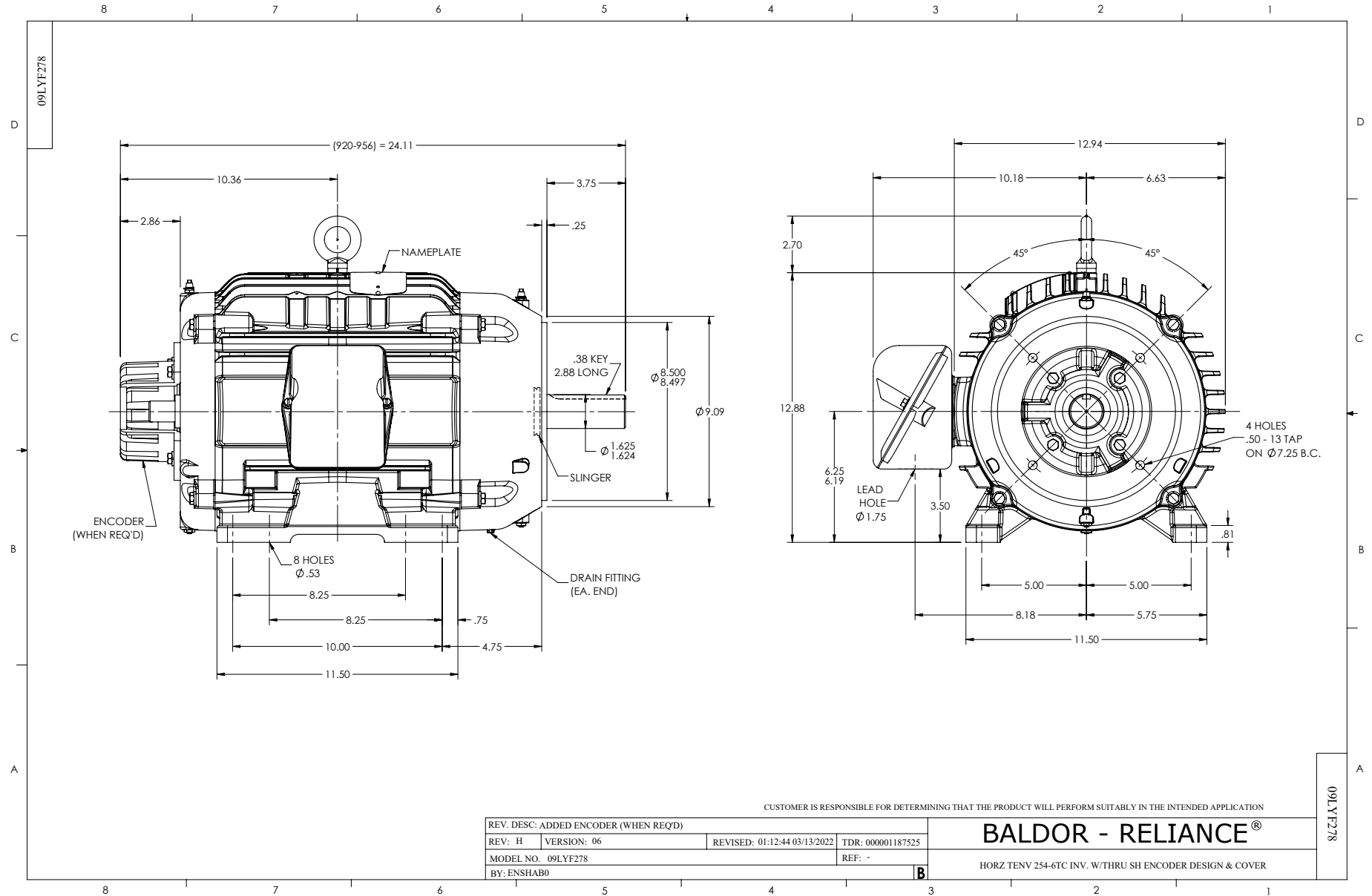
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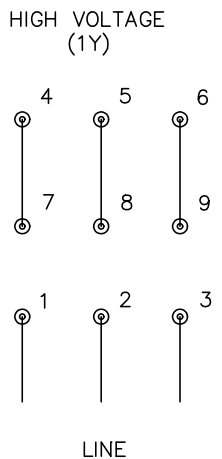
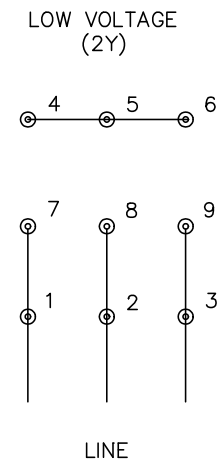
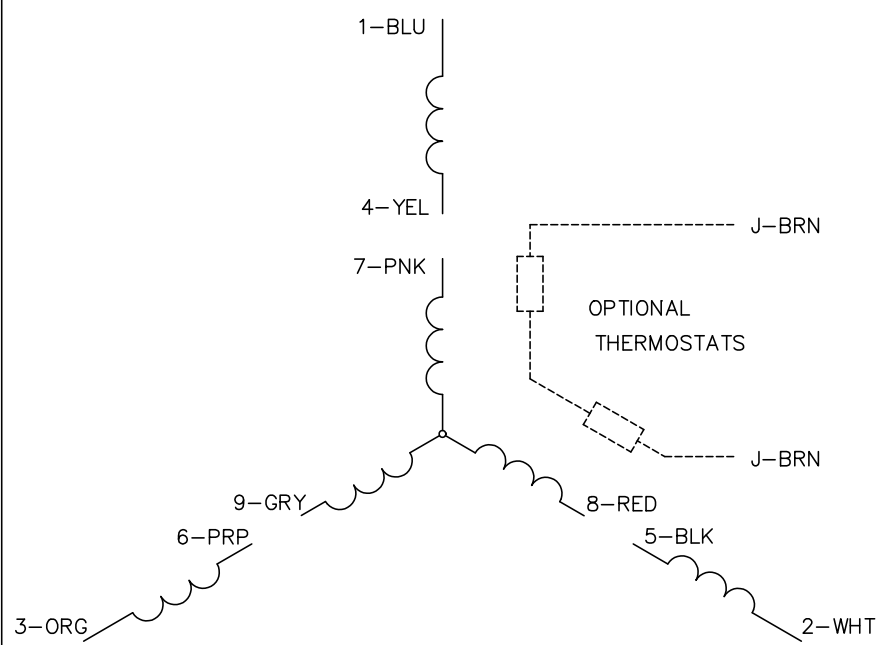
A-C MOTOR PERFORMANCE  
CURVES

09F278X946G2

SH 1 of 2  
ISSUE DATE 8/20/2012



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