

# **BALDOR® • RELIANCE**

## **Product Information Packet**

### **VEM3709T-5**

**7.5HP,3470RPM,3PH,60HZ,213TC,3646M,TEFC**

| Part Detail |       |                |       |             |          |               |            |
|-------------|-------|----------------|-------|-------------|----------|---------------|------------|
| Revision:   | F     | Status:        | PRD/A | Change #:   |          | Proprietary:  | No         |
| Type:       | AC    | Prod. Type:    | 3646M | Elec. Spec: | 36WGS478 | CD Diagram:   | CD0006     |
| Enclosure:  | TEFC  | Mfg Plant:     |       | Mech. Spec: | 36H302   | Layout:       | 36LYH302   |
| Frame:      | 213TC | Mounting:      | F1    | Poles:      | 02       | Created Date: | 05-06-2010 |
| Base:       | N     | Rotation:      | R     | Insulation: | F        | Eff. Date:    | 08-31-2016 |
| Leads:      | 3#16  |                |       |             |          | Replaced By:  |            |
| Literature: |       | Elec. Diagram: |       |             |          |               |            |

## Nameplate NP3441L

|                                  |              |  |             |    |                       |            |   |           |           |   |  |
|----------------------------------|--------------|--|-------------|----|-----------------------|------------|---|-----------|-----------|---|--|
| <b>CAT.NO.</b>                   | VEM3709T-5   |  |             |    |                       |            |   |           |           |   |  |
| <b>SPEC.</b>                     | 36H302S478G1 |  |             |    |                       |            |   |           |           |   |  |
| <b>HP</b>                        | 7.5          |  |             |    |                       |            |   |           |           |   |  |
| <b>VOLTS</b>                     | 575          |  |             |    |                       |            |   |           |           |   |  |
| <b>AMP</b>                       | 6.8          |  |             |    |                       |            |   |           |           |   |  |
| <b>RPM</b>                       | 3470         |  |             |    |                       |            |   |           |           |   |  |
| <b>FRAME</b>                     | 213TC        |  |             |    | <b>HZ</b>             | 60         |   | <b>PH</b> | 3         |   |  |
| <b>SER.F.</b>                    | 1.15         |  | <b>CODE</b> | L  |                       | <b>DES</b> | A |           | <b>CL</b> | F |  |
| <b>NEMA-NOM-EFF</b>              | 89.5         |  | <b>PF</b>   | 93 |                       |            |   |           |           |   |  |
| <b>RATING</b>                    | 40C AMB-CONT |  |             |    |                       |            |   |           |           |   |  |
| <b>CC</b>                        | 010A         |  |             |    | <b>USABLE AT 208V</b> |            |   |           |           |   |  |
| <b>DE</b>                        | 6307         |  |             |    | <b>ODE</b>            | 6205       |   |           |           |   |  |
| <b>ENCL</b>                      | TEFC         |  | <b>SN</b>   |    |                       |            |   |           |           |   |  |
| <b>VPWM INVERTER READY</b>       |              |  |             |    |                       |            |   |           |           |   |  |
| <b>CT6-60H(10:1)VT3-60H(20:1</b> |              |  |             |    |                       |            |   |           |           |   |  |

| Parts List   |                                          |          |
|--------------|------------------------------------------|----------|
| Part Number  | Description                              | Quantity |
| SA194506     | SA 36H302S478G1                          | 1.000 EA |
| RA182093     | RA 36H302S478G1                          | 1.000 EA |
| 36CB3000SP   | CONDUIT BOX, CAST                        | 1.000 EA |
| 36GS1000     | GASKET-CONDUIT BOX, .06 THICK #SV-330 LE | 1.000 EA |
| 51XB1016A07  | 10-16 X 7/16 HXWSSLD SERTYB              | 2.000 EA |
| 11XW1032G06  | 10-32 X .38, TAPTITE II, HEX WSHR SLTD U | 1.000 EA |
| HW3001B01    | BRASS CUP WASHER, FOR #8 SCREW           | 1.000 EA |
| 36FE3104A04  | FR ENDPLATE, FOR ROUTING                 | 1.000 EA |
| HW4500A01    | 1641B(ALEMITE)400 UNIV, GREASE FITT      | 1.000 EA |
| HW4500A17    | 317400 ALEMITE GREASE RELIEF             | 1.000 EA |
| HW5100A05    | WVY WSHR F/205 & 304 BRGS                | 1.000 EA |
| 36EP3305A03  | SPL PU ENDPLATE 182-184TC-ENCL-FOR 307 B | 1.000 EA |
| HW4500A01    | 1641B(ALEMITE)400 UNIV, GREASE FITT      | 1.000 EA |
| HW4500A17    | 317400 ALEMITE GREASE RELIEF             | 1.000 EA |
| 10XN2520A32  | 1/4 X 2 HEX HEAD CAP SCR, GRADE 2        | 4.000 EA |
| HW1001A25    | LOCKWASHER 1/4, ZINC PLT .493 OD, .255 I | 4.000 EA |
| 51XB1214A16  | 12-14X1.00 HXWSSLD SERTYB                | 1.000 EA |
| 36FH4009A103 | IEC FH GREASER W/PRIMER                  | 1.000 EA |
| 51XW1032A06  | 10-32 X .38, TAPTITE II, HEX WSHR SLTD S | 3.000 EA |
| 35CB4514GX   | CONDUIT BOX LID KIT                      | 1.000 EA |
| 51XW0832A07  | 8-32 X .44, TAPTITE II, HEX WSHR SLTD SE | 4.000 EA |
| HW2501F21    | KEY, 5/16 SQ X 2.375                     | 1.000 EA |
| HA7000A02    | KEY RETAINER RING, 1 1/8 DIA, 1 3/8 DIA  | 1.000 EA |
| 85XU0407S04  | 4X1/4 U DRIVE PIN STAINLESS              | 2.000 EA |

| Parts List (continued) |                                          |          |
|------------------------|------------------------------------------|----------|
| Part Number            | Description                              | Quantity |
| HW3200A01              | 3/8-16X3/4 I-BLT WELDED F/S              | 1.000 EA |
| MJ1000A02              | GREASE, POLYREX EM EXXON (USe 4824-15A)  | 0.050 LB |
| MG1000Y03              | MUNSELL 2.53Y 6.70/ 4.60, GLOSS 20,      | 0.022 GA |
| 36FN3000C01            | EXFN, PLASTIC, 5.25 OD, .912 ID          | 1.000 EA |
| LB1115N                | LABEL,LIFTING DEVICE (ON ROLLS)          | 1.000 EA |
| HA3101A28              | THRUBOLT 1/4-20 X 12.500 OHIO ROD        | 4.000 EA |
| LB1119N                | WARNING LABEL                            | 1.000 EA |
| LC0006                 | CONNECTION LABEL                         | 1.000 EA |
| NP3441L                | ALUM SUPER-E VPWM INVERTER READY UL      | 1.000 EA |
| 36PA1001               | PKG GRP, PRINT    PK1017A06              | 1.000 EA |
| PK3082                 | STYROFOAM CRADLE                         | 1.000 EA |
| MN416A01               | TAG-INSTAL-MAINT no wire (1000/bx) 11/14 | 1.000 EA |

## AC Induction Motor Performance Data

Record # 31190 - Typical performance - not guaranteed values

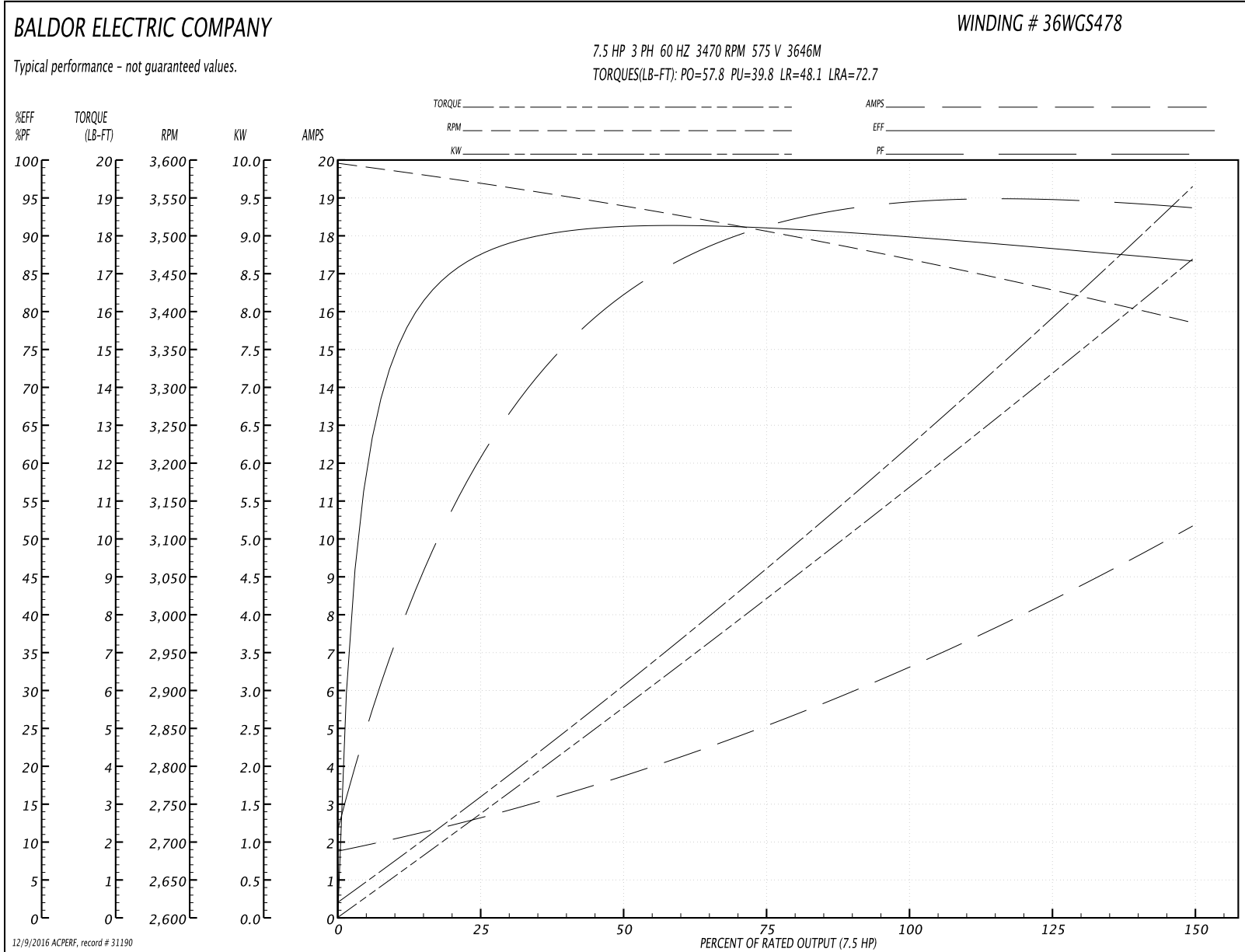
|                               |                    |                        |
|-------------------------------|--------------------|------------------------|
| <b>Winding:</b> 36WGS478-R001 | <b>Type:</b> 3646M | <b>Enclosure:</b> TEFC |
|-------------------------------|--------------------|------------------------|

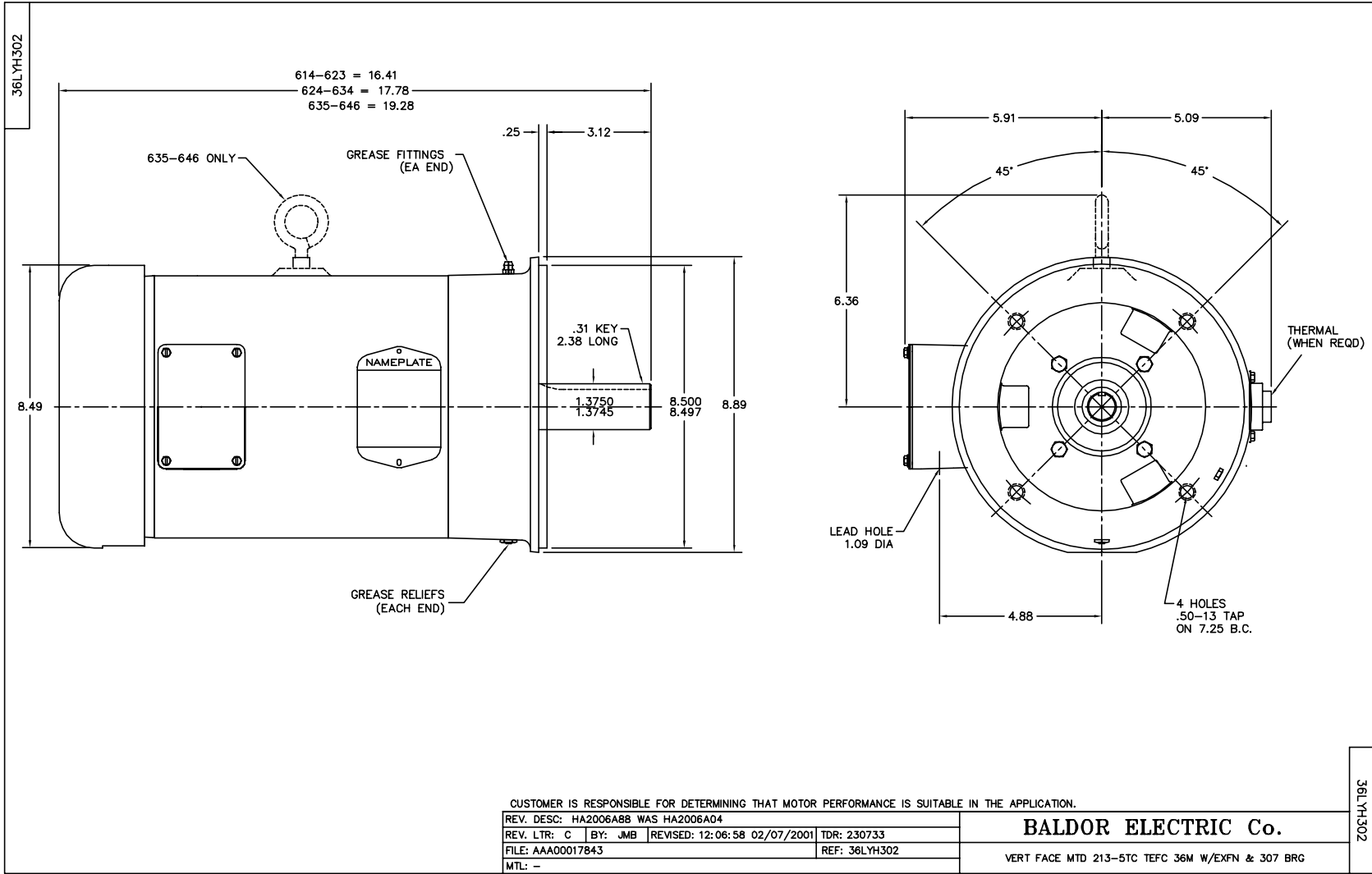
| Nameplate Data        |              |              |    | 575 V, 60 Hz:<br>Single Voltage Motor |                          |
|-----------------------|--------------|--------------|----|---------------------------------------|--------------------------|
| Rated Output (HP)     | 7.5          |              |    | Full Load Torque                      | 11.4 LB-FT               |
| Volts                 | 575          |              |    | Start Configuration                   | direct on line           |
| Full Load Amps        | 6.8          |              |    | Breakdown Torque                      | 57.8 LB-FT               |
| R.P.M.                | 3470         |              |    | Pull-up Torque                        | 39.8 LB-FT               |
| Hz                    | 60           | Phase        | 3  | Locked-rotor Torque                   | 48.1 LB-FT               |
| NEMA Design Code      | A            | KVA Code     | L  | Starting Current                      | 72.7 A                   |
| Service Factor (S.F.) | 1.15         |              |    | No-load Current                       | 1.86 A                   |
| NEMA Nom. Eff.        | 89.5         | Power Factor | 93 | Line-line Res. @ 25°C                 | 2.26 Ω                   |
| Rating - Duty         | 40C AMB-CONT |              |    | Temp. Rise @ Rated Load               | 74°C                     |
| S.F. Amps             |              |              |    | Temp. Rise @ S.F. Load                | 93°C                     |
|                       |              |              |    | Locked-rotor Power Factor             | 45                       |
|                       |              |              |    | Rotor inertia                         | 0.205 LB-FT <sup>2</sup> |

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

| % of Rated Load | 25   | 50   | 75   | 100  | 125  | 150  | S.F. |
|-----------------|------|------|------|------|------|------|------|
| Power Factor    | 64   | 85   | 90   | 93   | 94   | 94   | 94   |
| Efficiency      | 86.9 | 90.6 | 91   | 90   | 88.7 | 86.5 | 89.2 |
| Speed           | 3571 | 3539 | 3505 | 3468 | 3429 | 3385 | 3445 |
| Line amperes    | 2.51 | 3.67 | 5.14 | 6.74 | 8.41 | 10.3 | 7.74 |

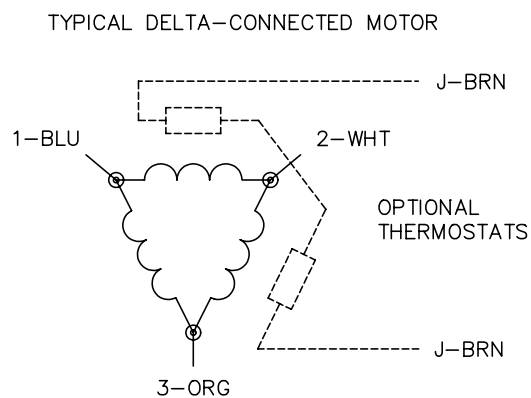
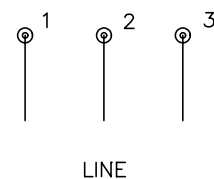
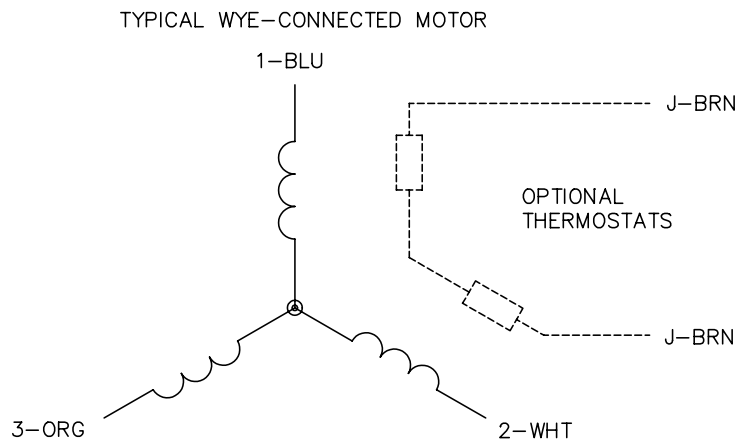
## Performance Graph at 575V, 60Hz, 7.5HP Typical performance - Not guaranteed values







CD0006



## 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.

REV. DESC: REVISE TO SHOW OPTIONAL COLORS

REV. LTR: D

BY: JLP

REVISED: 01/21/99 4:02

TDR: 0171435

90000D

FILE: AAA00005141

MDL: -

MTL: -

**BALDOR ELECTRIC Co.**

3PH, SV, 3 LEADS, WYE OR DELTA CONNECTED

CD0006