

**BALDOR® • RELIANCE** 

**Product Information Packet**

**EM2334T-8**

**20HP,1770RPM,3PH,60HZ,256T,0960M,TEFC,F1**

| Part Detail |       |             |            |             |        |               |            |
|-------------|-------|-------------|------------|-------------|--------|---------------|------------|
| Revision:   | B     | Status:     | PRD/A      | Change #:   |        | Proprietary:  | No         |
| Type:       | AC    | Elec. Spec: | 09WGT513   | CD Diagram: | CD0006 | Mfg Plant:    |            |
| Mech. Spec: | 09P11 | Layout:     | 09LYP011   | Poles:      | 04     | Created Date: | 11-24-2017 |
| Base:       | RG    | Eff. Date:  | 06-20-2018 | Leads:      | 3#8    |               |            |

| Specs                           |                         |                                |                       |
|---------------------------------|-------------------------|--------------------------------|-----------------------|
| Catalog Number:                 | EM2334T-8               | Insulation Class:              | F                     |
| Enclosure:                      | TEFC                    | Inverter Code:                 | Inverter Ready        |
| Frame:                          | 256T                    | KVA Code:                      | J                     |
| Frame Material:                 | Iron                    | Lifting Lugs:                  | Standard Lifting Lugs |
| Output @ Frequency:             | 20.000 HP @ 60 HZ       | Locked Bearing Indicator:      | Locked Bearing        |
| Synchronous Speed @ Frequency:  | 1800 RPM @ 60 HZ        | Motor Lead Quantity/Wire Size: | 3 @ 8 AWG             |
| Voltage @ Frequency:            | 200.0 V @ 60 HZ         | Motor Lead Exit:               | Ko Box                |
| XP Class and Group:             | None                    | Motor Lead Termination:        | Flying Leads          |
| XP Division:                    | Not Applicable          | Motor Type:                    | 0960M                 |
| Agency Approvals:               | UR                      | Mounting Arrangement:          | F1                    |
|                                 | CSA EEV                 | Power Factor:                  | 83                    |
|                                 | CSA                     | Product Family:                | General Purpose       |
| Auxillary Box:                  | No Auxillary Box        | Pulley End Bearing Type:       | Ball                  |
| Auxillary Box Lead Termination: | None                    | Pulley Face Code:              | Standard              |
| Base Indicator:                 | Rigid                   | Pulley Shaft Indicator:        | Standard              |
| Bearing Grease Type:            | Polyrex EM (-20F +300F) | Rodent Screen:                 | None                  |
| Blower:                         | None                    | Shaft Extension Location:      | Pulley End            |
| Current @ Voltage:              | 54.000 A @ 208.0 V      | Shaft Ground Indicator:        | No Shaft Grounding    |

|                                       |                           |                                    |                     |
|---------------------------------------|---------------------------|------------------------------------|---------------------|
|                                       | 55.000 A @ 200.0 V        | <b>Shaft Rotation:</b>             | Reversible          |
| <b>Design Code:</b>                   | A                         | <b>Shaft Slinger Indicator:</b>    | Shaft Slinger       |
| <b>Drip Cover:</b>                    | No Drip Cover             | <b>Speed Code:</b>                 | Single Speed        |
| <b>Duty Rating:</b>                   | CONT                      | <b>Motor Standards:</b>            | NEMA                |
| <b>Electrically Isolated Bearing:</b> | Not Electrically Isolated | <b>Starting Method:</b>            | Direct on line      |
| <b>Feedback Device:</b>               | NO FEEDBACK               | <b>Thermal Device - Bearing:</b>   | NONE (OLD)          |
| <b>Front Face Code:</b>               | Standard                  | <b>Thermal Device - Winding:</b>   | None                |
| <b>Front Shaft Indicator:</b>         | None                      | <b>Vibration Sensor Indicator:</b> | No Vibration Sensor |
| <b>Heater Indicator:</b>              | No Heater                 | <b>Winding Thermal 1:</b>          | None                |
|                                       |                           | <b>Winding Thermal 2:</b>          | None                |

|                            |              |  |             |    |                       |      |  |           |           |   |
|----------------------------|--------------|--|-------------|----|-----------------------|------|--|-----------|-----------|---|
| <b>Nameplate NP3441L</b>   |              |  |             |    |                       |      |  |           |           |   |
| <b>CAT.NO.</b>             | EM2334T-8    |  |             |    |                       |      |  |           |           |   |
| <b>SPEC.</b>               | 09P011T513   |  |             |    |                       |      |  |           |           |   |
| <b>HP</b>                  | 20           |  |             |    |                       |      |  |           |           |   |
| <b>VOLTS</b>               | 200          |  |             |    |                       |      |  |           |           |   |
| <b>AMP</b>                 | 55           |  |             |    |                       |      |  |           |           |   |
| <b>RPM</b>                 | 1770         |  |             |    |                       |      |  |           |           |   |
| <b>FRAME</b>               | 256T         |  |             |    | <b>HZ</b>             | 60   |  |           | <b>PH</b> | 3 |
| <b>SER.F.</b>              | 1.15         |  | <b>CODE</b> | J  | <b>DES</b>            | A    |  | <b>CL</b> | F         |   |
| <b>NEMA-NOM-EFF</b>        | 93           |  | <b>PF</b>   | 83 |                       |      |  |           |           |   |
| <b>RATING</b>              | 40C AMB-CONT |  |             |    |                       |      |  |           |           |   |
| <b>CC</b>                  | 010A         |  |             |    | <b>USABLE AT 208V</b> |      |  | 54        |           |   |
| <b>DE</b>                  | 6309         |  |             |    | <b>ODE</b>            | 6208 |  |           |           |   |
| <b>ENCL</b>                | TEFC         |  | <b>SN</b>   |    |                       |      |  |           |           |   |
| <b>VPWM INVERTER READY</b> |              |  |             |    |                       |      |  |           |           |   |
| CT6-60H(10:1)VT3-60H(20:1) |              |  |             |    |                       |      |  |           |           |   |
|                            |              |  |             |    |                       |      |  |           |           |   |

| Parts List    |  |          |
|---------------|--|----------|
| Part Number   | Description                              | Quantity |
| SA348214      | SA 09P011T513                            | 1.000 EA |
| RA336766      | RA 09P011T513                            | 1.000 EA |
| 09FN3001D01SP | EXTERNAL FAN, PLASTIC                    | 1.000 EA |
| HW1002A63     | 0ASHER, 5/8 HI-COLLAR SPRLCKWASHER       | 1.000 EA |
| 09CB3002SP    | CB W/1.38 LEAD HOLE FOR 37, 39, 307 & 30 | 1.000 EA |
| 09GS1000SP    | GASKET-CONDUIT BOX, 1/16 THICK LEXIDE    | 1.000 EA |
| 10XN2520K12   | 1/4-20 X.75 GRD 5                        | 2.000 EA |
| HW1001A25     | LOCKWASHER 1/4, ZINC PLT .493 OD, .255 I | 2.000 EA |
| 09EP1101A136  | PU ENDPLATE, MACH                        | 1.000 EA |
| WD1000B16     | T&B CX70TN TERMINAL                      | 1.000 EA |
| 59XW2520G07   | .25-20X.44,HEX SER WSHR,TAPTITE 2,GREEN  | 1.000 EA |
| 09EP1100A194  | ENDPLATE, MACH                           | 1.000 EA |
| XY3816A12     | 3/8-16 FINISHED NUT                      | 4.000 EA |
| HW1001A38     | LOCKWASHER 3/8, ZINC PLT .688 OD, .382 I | 4.000 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 |
| HW1001A25     | LOCKWASHER 1/4, ZINC PLT .493 OD, .255 I | 2.000 EA |
| HW4600B44     | V-RING SLINGER 1.500 X 1.810 X .28 VITON | 1.000 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 |
| HA3113A02     | THRUBOLT 3/8-16 X 16.750                 | 4.000 EA |
| HW1001A38     | LOCKWASHER 3/8, ZINC PLT .688 OD, .382 I | 4.000 EA |
| 09FH4000SP    | FAN COVER, STAMPED                       | 1.000 EA |
| HA2081A05     | SPACER TUBE, 309 FAN HSG, 2.00 LONG      | 4.000 EA |

| Parts List (continued) |  |          |
|------------------------|--|----------|
| Part Number            | Description                              | Quantity |
| XY3816A12              | 3/8-16 FINISHED NUT                      | 4.000 EA |
| HW1001A38              | LOCKWASHER 3/8, ZINC PLT .688 OD, .382 I | 4.000 EA |
| 09CB3501SP             | CONDUIT BOX LID FOR 09CB3001 & 09CB3002  | 1.000 EA |
| 09GS1013SP             | 09 GS FOR 09CB3501 LID - LEXIDE          | 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 |
| LB1115N                | LABEL,LIFTING DEVICE (ON ROLLS)          | 1.000 EA |
| HA4051A00              | PLASTIC CAP FOR GREASE FITTING           | 1.000 EA |
| HW4500A05              | 1669B ALEM/UNIV860 GR FTG X              | 1.000 EA |
| HW4500A17              | 317400 ALEMITE GREASE RELIEF             | 1.000 EA |
| HA4066A01              | PUSH IN T-DRAIN FITTING (BLACK)          | 1.000 EA |
| MJ1000A02              | GREASE, POLYREX EM EXXON (USe 4824-15A)  | 0.080 LB |
| HA4051A00              | PLASTIC CAP FOR GREASE FITTING           | 1.000 EA |
| HW4500A03              | GREASE FITTING, .125 NPT 1610(ALEMITE) 8 | 1.000 EA |
| HW4500A17              | 317400 ALEMITE GREASE RELIEF             | 1.000 EA |
| HA4066A01              | PUSH IN T-DRAIN FITTING (BLACK)          | 1.000 EA |
| HW2500A25              | WOODRUFF KEY USA #1008 #BLOW CARBON STEE | 1.000 EA |
| 51XB1214A20            | 12-14X1.25 HXWSSLD SERTYB                | 1.000 EA |
| MG1000Y03              | MUNSELL 2.53Y 6.70/ 4.60, GLOSS 20,      | 0.050 GA |
| 85XU0407S04            | 4X1/4 U DRIVE PIN STAINLESS              | 2.000 EA |
| LB1119N                | WARNING LABEL                            | 1.000 EA |
| LC0006                 | CONNECTION LABEL                         | 1.000 EA |
| NP3441L                | ALUM SUPER-E VPWM INVERTER READY UL      | 1.000 EA |
| 09PA1000               | PACKAGING GROUP COMBINED PRINT           | 1.000 EA |

|            |   |          |
|------------|---|----------|
| MN416A01   | TAG-INSTAL-MAINT no wire (1200/bx) 5/18 | 1.000 EA |
| FE-0000013 | ZRTG FE ASSEMBLY                        | 1.000 EA |
| PE-0000003 | ZRTG PE ASSEMBLY                        | 1.000 EA |

| <b>Accessories</b> |                    |                   |
|--------------------|--------------------|-------------------|
| <b>Part Number</b> | <b>Description</b> | <b>Multiplier</b> |
| 09-1309            | C FACE KIT         | A8                |



**AC Induction Motor Performance Data**

Record # 68097 - Typical performance - not guaranteed values

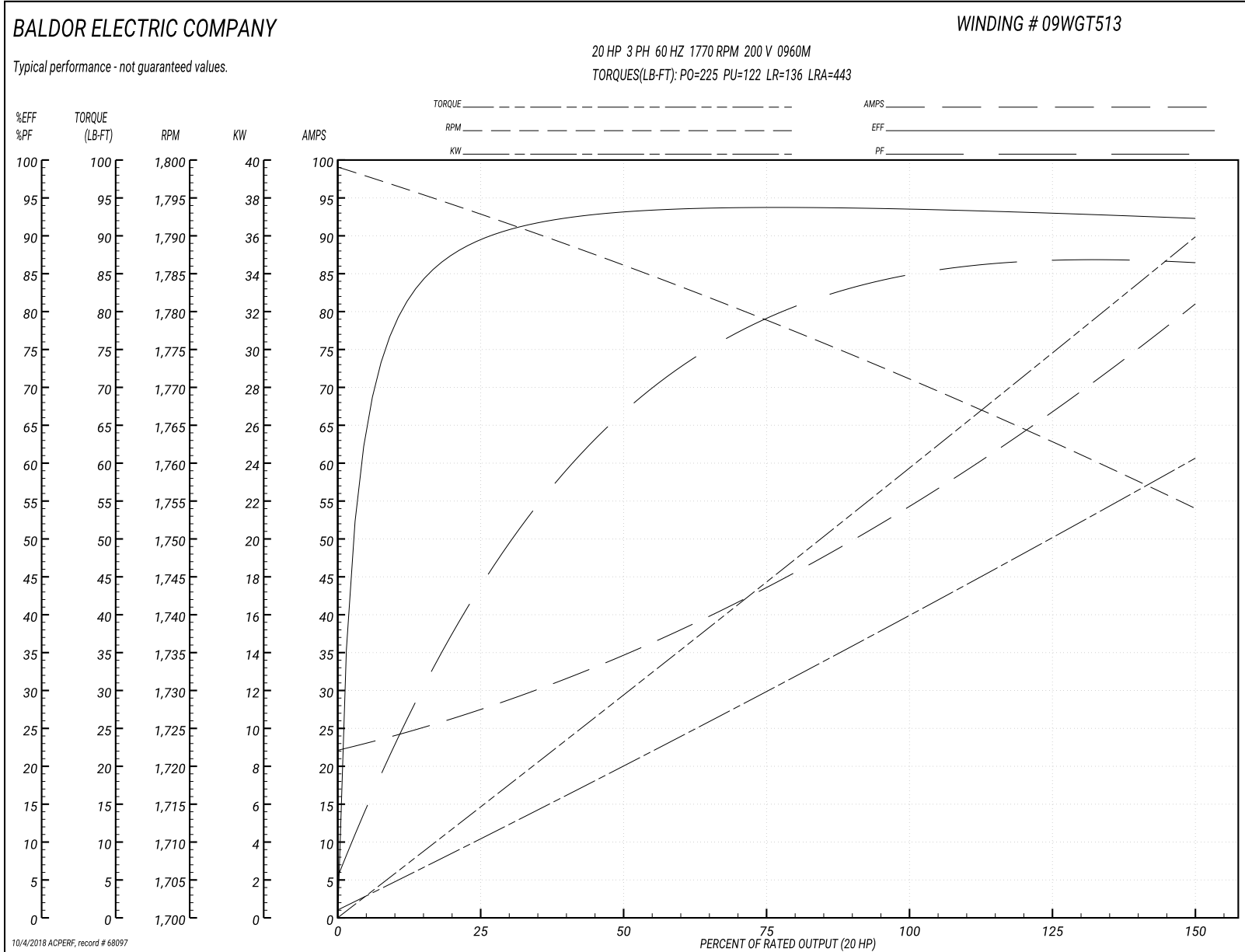
|                               |                    |                        |
|-------------------------------|--------------------|------------------------|
| <b>Winding:</b> 09WGT513-R001 | <b>Type:</b> 0960M | <b>Enclosure:</b> TEFC |
|-------------------------------|--------------------|------------------------|

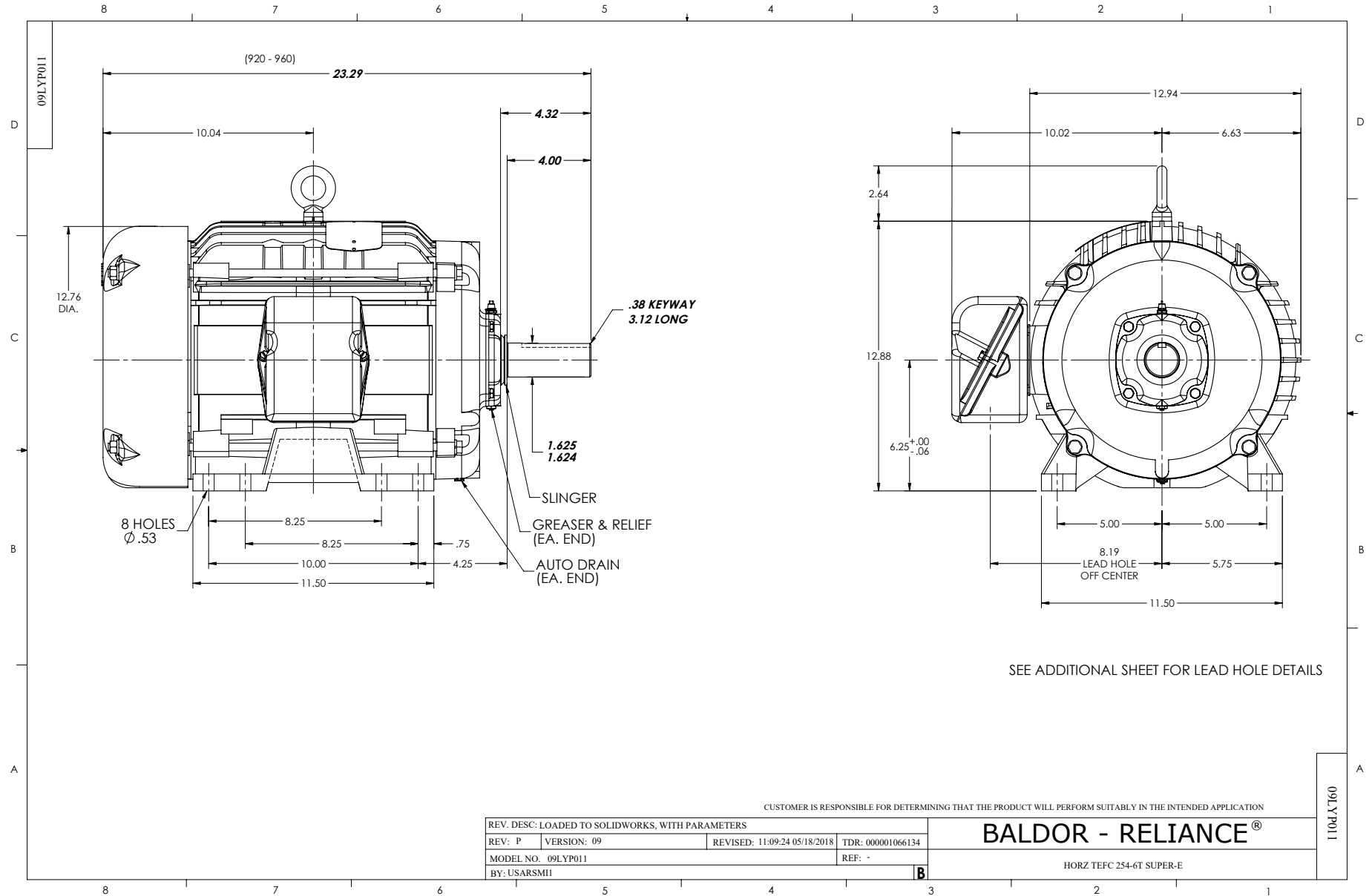
| Nameplate Data        |              |              |    | 200 V, 60 Hz:<br>Single Voltage Motor |                         |
|-----------------------|--------------|--------------|----|---------------------------------------|-------------------------|
| Rated Output (HP)     | 20           |              |    | Full Load Torque                      | 59.29 LB-FT             |
| Volts                 | 200          |              |    | Start Configuration                   | direct on line          |
| Full Load Amps        | 55           |              |    | Breakdown Torque                      | 225 LB-FT               |
| R.P.M.                | 1770         |              |    | Pull-up Torque                        | 122 LB-FT               |
| Hz                    | 60           | Phase        | 3  | Locked-rotor Torque                   | 136 LB-FT               |
| NEMA Design Code      | A            | KVA Code     | J  | Starting Current                      | 443 A                   |
| Service Factor (S.F.) | 1.15         |              |    | No-load Current                       | 23.02 A                 |
| NEMA Nom. Eff.        | 93           | Power Factor | 83 | Line-line Res. @ 25°C                 | 0.064 Ω                 |
| Rating - Duty         | 40C AMB-CONT |              |    | Temp. Rise @ Rated Load               | 59°C                    |
| S.F. Amps             |              |              |    | Temp. Rise @ S.F. Load                | 70°C                    |
|                       |              |              |    | Locked-rotor Power Factor             | 26.7                    |
|                       |              |              |    | Rotor inertia                         | 2.65 LB-FT <sup>2</sup> |

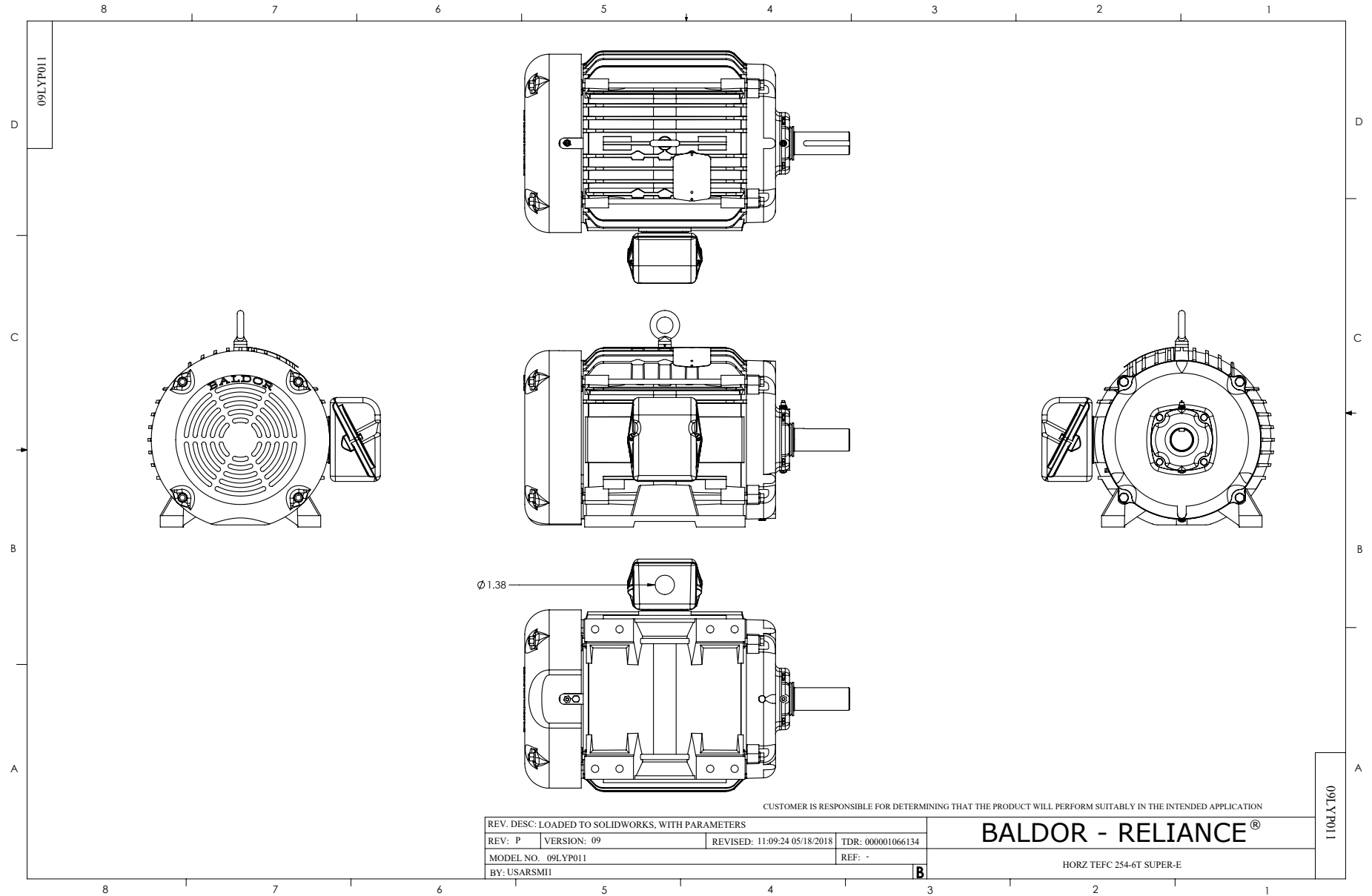
Load Characteristics 200 V, 60 Hz, 20 HP

| % of Rated Load | 25    | 50    | 75    | 100   | 125   | 150   | S.F. |
|-----------------|-------|-------|-------|-------|-------|-------|------|
| Power Factor    | 46    | 68    | 79    | 84    | 86    | 87    | 85   |
| Efficiency      | 89.3  | 93    | 93.7  | 93.5  | 93    | 92.2  | 93.2 |
| Speed           | 1793  | 1786  | 1779  | 1771  | 1763  | 1754  | 1766 |
| Line amperes    | 26.44 | 33.98 | 43.77 | 54.96 | 67.29 | 80.32 | 62.4 |

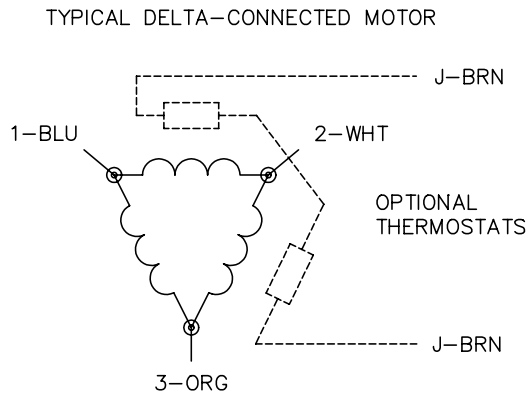
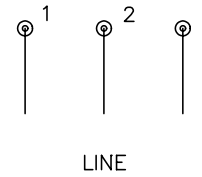
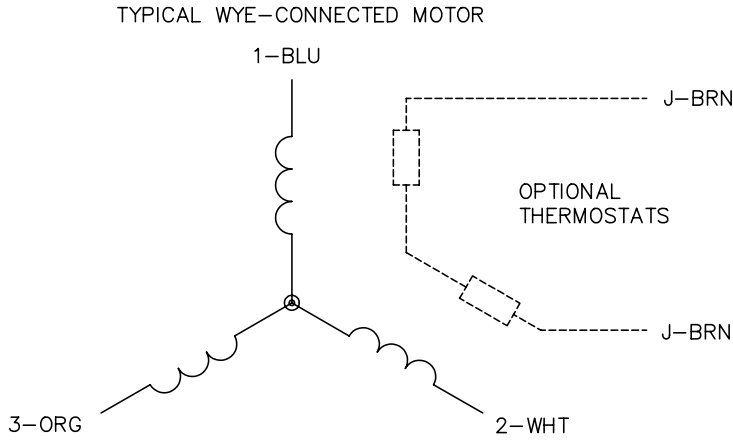
Performance Graph at 200V, 60Hz, 20.0HP Typical performance - Not guaranteed values







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 |
| 9000D                                     |         | FILE: AAA00005141      | MDL: -       |
|   |         | MTL: -                 |              |

**BALDOR ELECTRIC Co.**

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

CD0006

Marketing maintained PDF of MN416:

<http://www.baldor.com/support/Literature/Load.ashx/MN416?ManNumber=MN416>