

**BALDOR® • RELIANCE** 

**Product Information Packet**

**EBM4104TY**

**30HP,1760RPM,3PH,60HZ,286T,1056M,TEFC,F1**

| Part Detail |        |             |            |             |        |               |            |
|-------------|--------|-------------|------------|-------------|--------|---------------|------------|
| Revision:   | K      | Status:     | PRD/A      | Change #:   |        | Proprietary:  | No         |
| Type:       | AC     | Elec. Spec: | 10WGY538   | CD Diagram: | CD0180 | Mfg Plant:    |            |
| Mech. Spec: | 10E507 | Layout:     | 10LYE507   | Poles:      | 04     | Created Date: | 03-09-2015 |
| Base:       | RG     | Eff. Date:  | 09-11-2019 | Leads:      | 9#8    |               |            |

| Specs                           |                         |                                |                       |
|---------------------------------|-------------------------|--------------------------------|-----------------------|
| Catalog Number:                 | EBM4104TY               | Insulation Class:              | F                     |
| Enclosure:                      | TEFC                    | Inverter Code:                 | Inverter Ready        |
| Frame:                          | 286T                    | IP Rating:                     | NONE                  |
| Frame Material:                 | Iron                    | KVA Code:                      | J                     |
| Output @ Frequency:             | 30.000 HP @ 60 HZ       | Lifting Lugs:                  | Standard Lifting Lugs |
| Synchronous Speed @ Frequency:  | 1800 RPM @ 60 HZ        | Locked Bearing Indicator:      | Locked Bearing        |
| Voltage @ Frequency:            | 460.0 V @ 60 HZ         | Motor Lead Quantity/Wire Size: | 9 @ 8 AWG             |
|                                 | 230.0 V @ 60 HZ         | Motor Lead Exit:               | Ko Box                |
| XP Class and Group:             | None                    | Motor Lead Termination:        | Flying Leads          |
| XP Division:                    | Not Applicable          | Motor Type:                    | 1056M                 |
| Agency Approvals:               | UR                      | Mounting Arrangement:          | F1                    |
|                                 | CSA EEV                 | Power Factor:                  | 80                    |
|                                 | 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            |

|                                       |                           |                                    |                     |
|---------------------------------------|---------------------------|------------------------------------|---------------------|
| <b>Current @ Voltage:</b>             | 38.000 A @ 460.0 V        | <b>Shaft Ground Indicator:</b>     | No Shaft Grounding  |
|                                       | 76.000 A @ 230.0 V        | <b>Shaft Rotation:</b>             | Reversible          |
|                                       | 78.000 A @ 208.0 V        | <b>Shaft Slinger Indicator:</b>    | No Slinger          |
| <b>Design Code:</b>                   | A                         | <b>Speed Code:</b>                 | Single Speed        |
| <b>Drip Cover:</b>                    | No Drip Cover             | <b>Motor Standards:</b>            | NEMA                |
| <b>Duty Rating:</b>                   | CONT                      | <b>Starting Method:</b>            | Direct on line      |
| <b>Electrically Isolated Bearing:</b> | Not Electrically Isolated | <b>Thermal Device - Bearing:</b>   | None                |
| <b>Feedback Device:</b>               | NO FEEDBACK               | <b>Thermal Device - Winding:</b>   | None                |
| <b>Front Face Code:</b>               | Standard                  | <b>Vibration Sensor Indicator:</b> | No Vibration Sensor |
| <b>Front Shaft Indicator:</b>         | None                      | <b>Winding Thermal 1:</b>          | None                |
| <b>Heater Indicator:</b>              | No Heater                 | <b>Winding Thermal 2:</b>          | None                |

| Nameplate NP2138L |              |    |          |                |          |            |      |           |      |  |        |      |
|-------------------|--------------|----|----------|----------------|----------|------------|------|-----------|------|--|--------|------|
| CAT.NO.           | EBM4104TY    |    |          | P/N            |          |            |      | ENCLOSURE | TEFC |  |        |      |
| SPEC.             | 10E507Y538G1 |    | CC       | 010A           |          | FRAME      | 286T |           | S/N  |  |        |      |
| HP                | 30           |    |          | CLASS          | F        |            | HZ   | 60        |      |  |        |      |
| RPM               | 1760         |    |          | PH             | 3        |            | DES  | A         |      |  |        |      |
| VOLT              | 230/460      |    |          |                | KVA-CODE | J          |      | ODE BRG   | 6211 |  | DE BRG | 6312 |
| AMP               | 76/38        |    |          | USABLE AT 208V | 78       |            |      |           |      |  |        |      |
| RATING            | 40C AMB-CONT |    |          |                | GREASE   | POLYREX EM |      |           |      |  |        |      |
| NEMA-NOM-EFF      | 93.6         | PF | 80       | SER.F.         | 1.15     |            |      |           |      |  |        |      |
| HTR-VOLTS         |              |    | HTR-AMPS |                |          |            |      |           |      |  |        |      |

| Parts List  |  |          |
|-------------|--|----------|
| Part Number | Description                              | Quantity |
| SA295069    | SA 10E507Y538G1                          | 1.000 EA |
| RA281141    | RA 10E507Y538G1                          | 1.000 EA |
| 10CB3000SP  | KOBX, CAST W/2.00 LEAD HOLE              | 1.000 EA |
| 09GS1000SP  | GASKET-CONDUIT BOX, 1/16 THICK LEXIDE    | 1.000 EA |
| 10XN3118K12 | 5/16-18 X .75 GRADE 5, ZINC PLATED       | 4.000 EA |
| HW1001A31   | LOCKWASHER 5/16, ZINC PLT.591 OD, .319 I | 4.000 EA |
| WD1000B25   | GND LUG, BURNDY L125HP OR T&B L125HP-BB  | 1.000 EA |
| 19XW3118G08 | .31-18X.50,HEX WSHR HD,TAPTITE 2,GREEN   | 1.000 EA |
| 10EP1106A11 | FR ENDPLATE, MACH                        | 1.000 EA |
| 10XN3816K32 | BOLT, 3/8-16X2 HH YZ(5)                  | 4.000 EA |
| HW1001A38   | LOCKWASHER 3/8, ZINC PLT .688 OD, .382 I | 4.000 EA |
| HW5100A11   | W3917-042 WVY WSHR (WB)                  | 1.000 EA |
| 10XN3118K44 | 5/16-18 X 2.75" HEX HD, GRADE 5          | 4.000 EA |
| HW1001A31   | LOCKWASHER 5/16, ZINC PLT.591 OD, .319 I | 4.000 EA |
| 10EP1304A01 | PU ENDPLATE, MACH                        | 1.000 EA |
| 10XN3816K28 | 3/8-16 X 1.75 HEX HD CAP SCREW, GRADE 5  | 4.000 EA |
| HW1001A38   | LOCKWASHER 3/8, ZINC PLT .688 OD, .382 I | 4.000 EA |
| 84XN6311J16 | 5/8 11X1 HEX SOCK, BK OX                 | 4.000 EA |
| HW2501G15   | KEY 3/8 X 1.625 LONG                     | 1.000 EA |
| 10FH4000A01 | FAN HSG STAMPED, DBL SH                  | 1.000 EA |
| 51XF2520A08 | SCREW, HEX SER SLT HD, ZN 1/4-20 X .50 L | 4.000 EA |
| 10CB3500SP  | CONDUIT BOX LID, CAST                    | 1.000 EA |
| 10GS1000SP  | GASKET, CONDUIT BOX LID                  | 1.000 EA |
| 51XW2520A12 | .25-20 X .75, TAPTITE II, HEX WSHR SLTD  | 4.000 EA |

| Parts List (continued) |  |          |
|------------------------|--|----------|
| Part Number            | Description                              | Quantity |
| HW2501H28              | KEY, 1/2 SQ X 3.250                      | 1.000 EA |
| LB1115N                | LABEL,LIFTING DEVICE (ON ROLLS)          | 1.000 EA |
| HW4500A21              | 1618BALEMITE FITTING 825 UNIVERSAL       | 1.000 EA |
| HA4017A01              | 1/8 X 4 GREASE EXT (F/S)                 | 1.000 EA |
| HW4500A17              | 317400 ALEMITE GREASE RELIEF             | 1.000 EA |
| HA4054                 | SHORT T-DRAIN FITTING, .125" N.P.T.      | 1.000 EA |
| HA4051A00              | PLASTIC CAP FOR GREASE FITTING           | 1.000 EA |
| MJ1000A02              | GREASE, MOBIL POLYREX EM - 124047        | 0.130 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 |
| HA4051A00              | PLASTIC CAP FOR GREASE FITTING           | 1.000 EA |
| 09FN3001C03            | EXTERNAL FAN, PLASTIC                    | 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,      | 0.125 GA |
| 85XU0407S04            | 4X1/4 U DRIVE PIN STAINLESS              | 4.000 EA |
| 81BK1100FQF            | 1-081-011-00-FQF BRAKE                   | 1.000 EA |
| LB1119N                | WARNING LABEL                            | 1.000 EA |
| LC0181                 | CONNECTION LABEL                         | 1.000 EA |
| NP2138L                | ALUM SUPER-E UL CSA-EEV PREM CC (300     | 1.000 EA |
| 10PA1010               | PACKAGING GROUP, PRINT PK1151A06         | 1.000 EA |
| MN416A01               | TAG-INSTAL-MAINT no wire (1200/bx) 3/19  | 1.000 EA |

**AC Induction Motor Performance Data**

Record # 32189 - Typical performance - not guaranteed values

|                               |                    |                        |
|-------------------------------|--------------------|------------------------|
| <b>Winding:</b> 10WGY538-R004 | <b>Type:</b> 1056M | <b>Enclosure:</b> TEFC |
|-------------------------------|--------------------|------------------------|

| Nameplate Data        |              |              |    | 460 V, 60 Hz:<br>High Voltage Connection |                         |
|-----------------------|--------------|--------------|----|--|-------------------------|
| Rated Output (HP)     | 30           |              |    | Full Load Torque                         | 88.7 LB-FT              |
| Volts                 | 230/460      |              |    | Start Configuration                      | direct on line          |
| Full Load Amps        | 76/38        |              |    | Breakdown Torque                         | 330 LB-FT               |
| R.P.M.                | 1760         |              |    | Pull-up Torque                           | 142 LB-FT               |
| Hz                    | 60           | Phase        | 3  | Locked-rotor Torque                      | 178 LB-FT               |
| NEMA Design Code      | A            | KVA Code     | J  | Starting Current                         | 270 A                   |
| Service Factor (S.F.) | 1.15         |              |    | No-load Current                          | 17.9 A                  |
| NEMA Nom. Eff.        | 93.6         | Power Factor | 80 | Line-line Res. @ 25°C                    | 0.19377 Ω               |
| Rating - Duty         | 40C AMB-CONT |              |    | Temp. Rise @ Rated Load                  | 64°C                    |
| S.F. Amps             |              |              |    | Temp. Rise @ S.F. Load                   | 76°C                    |
|                       |              |              |    | Locked-rotor Power Factor                | 30.9                    |
|                       |              |              |    | Rotor inertia                            | 4.47 LB-FT <sup>2</sup> |

Load Characteristics 460 V, 60 Hz, 30 HP

| % of Rated Load | 25     | 50     | 75     | 100    | 125    | 150    | S.F. |
|-----------------|--------|--------|--------|--------|--------|--------|------|
| Power Factor    | 41     | 63     | 73     | 80     | 82     | 85     | 81   |
| Efficiency      | 87.6   | 92.3   | 93.5   | 93.7   | 93.4   | 92.9   | 93.5 |
| Speed           | 1792.2 | 1787.6 | 1782.4 | 1776.5 | 1770.3 | 1762.1 | 1773 |
| Line amperes    | 19.8   | 24.3   | 30.7   | 37.6   | 45.6   | 55.2   | 42.4 |

Performance Graph at 460V, 60Hz, 30.0HP Typical performance - Not guaranteed values

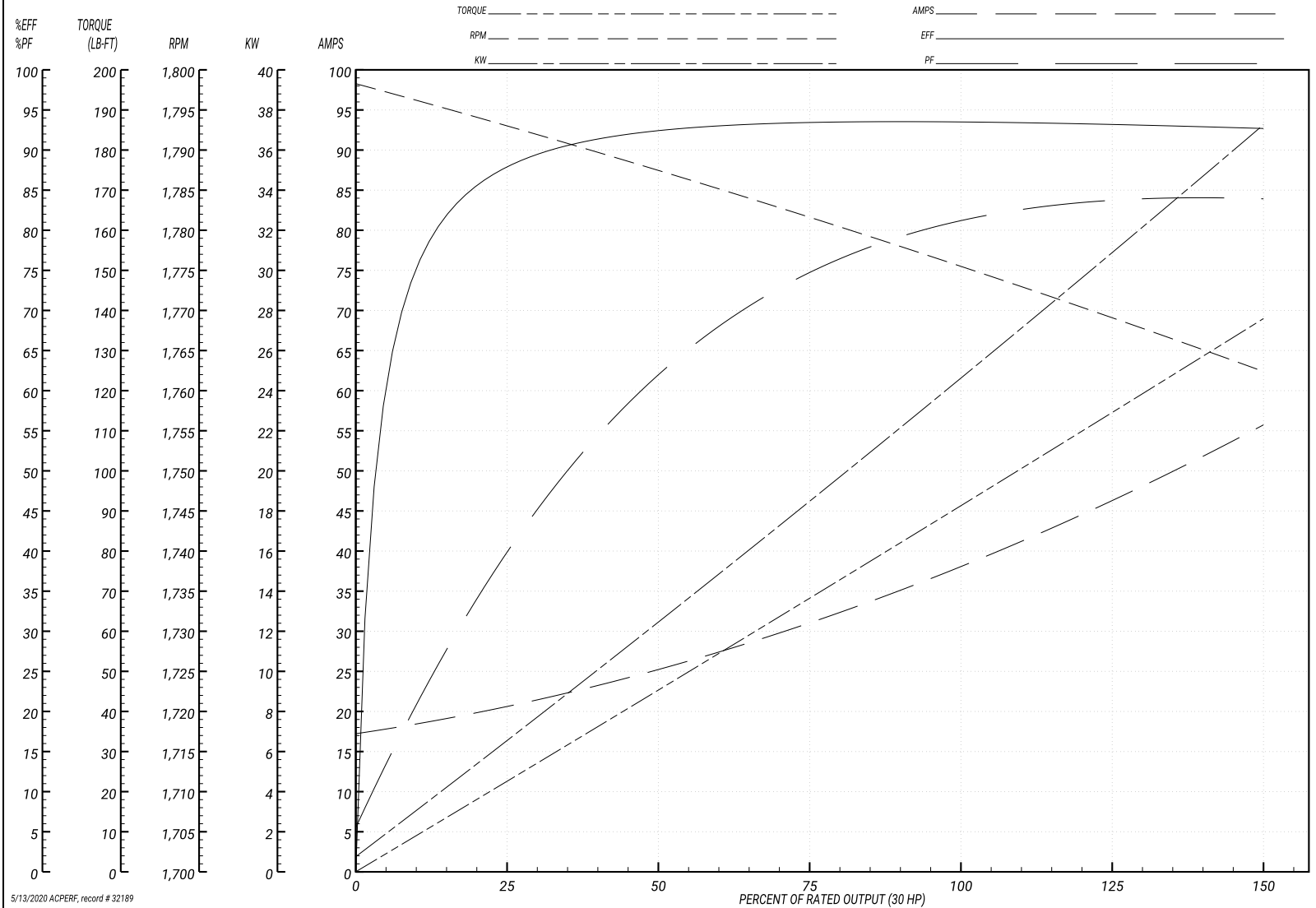
ABB Motors and Mechanical Inc.

WINDING # 10WGY538

Typical performance - not guaranteed values.

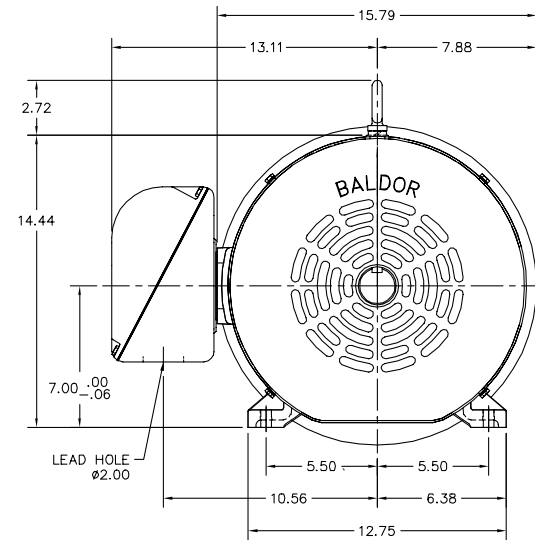
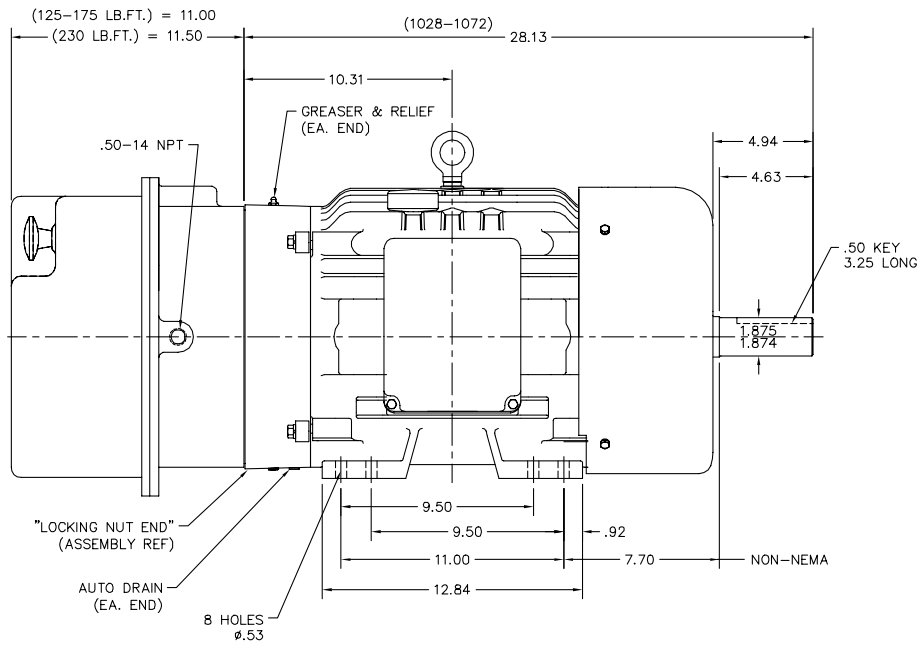
30 HP 3 PH 60 HZ 1760 RPM 460 V 1056M

TORQUES(LB-FT): PO=330 PU=142 LR=178 LRA=270



5/13/2020 ACPERF, record # 32189

10LYE507



10LYE507

CUSTOMER IS RESPONSIBLE FOR DETERMINING THAT BALDOR'S PRODUCT WILL PERFORM SUITABLY IN THE INTENDED APPLICATION.

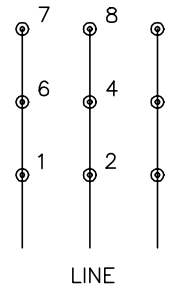
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|------------------------------------|------------------------------|-------------------|
| REV. DESC: INCREASED STACK TO 1072 |                              |                   |
| REV. LTR: E                        | VERSION: 05                  | TDR: 000000970180 |
| FILE: \AAA\00053\823               | REVISED: 10:21:03 03/10/2016 | BY: ENSHABO       |
| MTL: -                             |                              |                   |

**BALDOR**  
 HORZ TEFC 284-6T W/81 BRAKE  
 SH 1 of 1

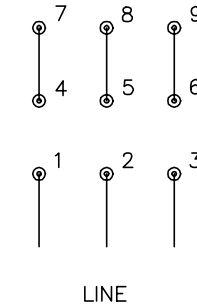
CD0180



LOW VOLTAGE  
(2D)



HIGH VOLTAGE  
(1D)



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.

CD0180

|                                   |                              |                   |
|-----------------------------------|------------------------------|-------------------|
| REV. DESC: ADD CLASS CONN00000007 |                              |                   |
| REV. LTR: D                       | VERSION: 01                  | TDR: 000001099922 |
| FILE: \AAA\00005\148              | REVISED: 10:25:29 02/19/2019 | BY: ENBRIRO       |
| MTL: -                            | © □                          |                   |

**BALDOR - RELIANCE®**

3PH, DV, 9 LEADS, DELTA CONNECTION

SH 1 of 1

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