

**BALDOR® • RELIANCE** 

**Product Information Packet**

**EM4104T-5G**

**30HP,1770RPM,3PH,60HZ,286T,1056M,TEFC,F1**

| Part Detail |        |             |            |             |        |               |            |
|-------------|--------|-------------|------------|-------------|--------|---------------|------------|
| Revision:   | W      | Status:     | PRD/A      | Change #:   |        | Proprietary:  | No         |
| Type:       | AC     | Elec. Spec: | 10WGY759   | CD Diagram: | CD0006 | Mfg Plant:    |            |
| Mech. Spec: | 10H279 | Layout:     | 10LYH279   | Poles:      | 04     | Created Date: | 02-11-2011 |
| Base:       | RG     | Eff. Date:  | 09-11-2019 | Leads:      | 3#10   |               |            |

| Specs                           |                         |                                |                       |
|---------------------------------|-------------------------|--------------------------------|-----------------------|
| Catalog Number:                 | EM4104T-5G              | Inverter Code:                 | Inverter Ready        |
| Enclosure:                      | TEFC                    | KVA Code:                      | G                     |
| Frame:                          | 286T                    | Lifting Lugs:                  | Standard Lifting Lugs |
| Frame Material:                 | Iron                    | Locked Bearing Indicator:      | Locked Bearing        |
| Output @ Frequency:             | 30.000 HP @ 60 HZ       | Motor Lead Quantity/Wire Size: | 3 @ 10 AWG            |
| Synchronous Speed @ Frequency:  | 1800 RPM @ 60 HZ        | Motor Lead Exit:               | Ko Box                |
| Voltage @ Frequency:            | 575.0 V @ 60 HZ         | Motor Lead Termination:        | Flying Leads          |
| XP Class and Group:             | None                    | Motor Type:                    | 1056M                 |
| XP Division:                    | Not Applicable          | Mounting Arrangement:          | F1                    |
| Agency Approvals:               | CSA                     | Power Factor:                  | 83                    |
|                                 | CSA EEV                 | Product Family:                | General Purpose       |
|                                 | UR                      | Pulley End Bearing Type:       | Ball                  |
| Auxillary Box:                  | No Auxillary Box        | Pulley Face Code:              | Standard              |
| Auxillary Box Lead Termination: | None                    | Pulley Shaft Indicator:        | Standard              |
| Base Indicator:                 | Rigid                   | Rodent Screen:                 | None                  |
| Bearing Grease Type:            | Polyrex EM (-20F +300F) | Shaft Extension Location:      | Pulley End            |
| Blower:                         | None                    | Shaft Ground Indicator:        | Shaft Grounding       |
| Current @ Voltage:              | 29.000 A @ 575.0 V      | Shaft Rotation:                | 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                |
| <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>Insulation Class:</b>              | H                         | <b>Winding Thermal 2:</b>          | None                |

|                          |              |  |                |      |           |                     |            |         |      |      |
|--------------------------|--------------|--|----------------|------|-----------|---------------------|------------|---------|------|------|
| <b>Nameplate NP3443L</b> |              |  |                |      |           |                     |            |         |      |      |
| CAT.NO.                  | EM4104T-5G   |  |                |      | CUST. P/N |                     |            |         | ENCL | TEFC |
| SPEC.                    | 10H279Y759G1 |  | CC             | 010A | FRAME     | 286T                |            | SER.NO. |      |      |
| HP                       | 30           |  | CLASS          | H    | HZ        | 60                  |            |         |      |      |
| R.P.M.                   | 1770         |  | PH             | 3    | DES       | A                   |            |         |      |      |
| VOLTS                    | 575          |  | CODE           | G    | ODE BRG   | 6309                |            | DE BRG  | 6311 |      |
| AMPS                     | 29           |  | USABLE AT 208V |      |           |                     |            |         |      |      |
| RATING                   | 40C AMB-CONT |  | NEMA NOM. EFF. | 93.6 |           | GREASE              | POLYREX EM |         |      |      |
| P.F.                     | 83           |  | SER.F.         | 1.15 |           | VPWM INVERTER READY |            |         |      |      |
| HTR-VOLTS                |              |  | HTR-AMPS       |      |           | HTR-WATTS           |            |         |      |      |

| Parts List  |                                          |          |
|-------------|------------------------------------------|----------|
| Part Number | Description                              | Quantity |
| SA217079    | SA 10H279Y759G1                          | 1.000 EA |
| RA204257    | RA 10H279Y759G1                          | 1.000 EA |
| 09FN3001C02 | EXTERNAL FAN, PLASTIC                    | 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 |
| HW4600B40   | V-RING SLINGER 2.000 X 2.680 X .28 VITON | 1.000 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 |
| 10EP1106A01 | 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 |
| HA4017A01   | 1/8 X 4 GREASE EXT (F/S)                 | 1.000 EA |
| HW5100A11   | W3917-042 WVY WSHR (WB)                  | 1.000 EA |
| 10XN2520K32 | 1/4-20 X 2.00 HX HD SCRW GRADE 5, ZINC P | 2.000 EA |
| HW1001A25   | LOCKWASHER 1/4, ZINC PLT .493 OD, .255 I | 2.000 EA |
| 10EP1105A01 | PU ENDPLATE                              | 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 |
| 10XN3118K40 | 5/16-18 X 2.50" HEX HD, GRADE 5          | 4.000 EA |
| HW1001A31   | LOCKWASHER 5/16, ZINC PLT.591 OD, .319 I | 4.000 EA |
| 10FH4000    | 310 FAN HOUSING STAMPED                  | 1.000 EA |
| 51XF2520A08 | SCREW, HEX SER SLT HD, ZN 1/4-20 X .50 L | 4.000 EA |

| Parts List (continued) |                                          |          |
|------------------------|------------------------------------------|----------|
| Part Number            | Description                              | Quantity |
| 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 |
| HW2501H28              | KEY, 1/2 SQ X 3.250                      | 1.000 EA |
| MN416A01               | TAG-INSTAL-MAINT no wire (1200/bx) 3/19  | 1.000 EA |
| LB1350                 | BAR CODE LABEL FOR YORK                  | 1.000 EA |
| LB1115N                | LABEL,LIFTING DEVICE (ON ROLLS)          | 1.000 EA |
| HW4500A21              | 1618BALEMITE FITTING 825 UNIVERSAL       | 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, 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 |
| 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,      | 0.070 GA |
| 85XU0407S04            | 4X1/4 U DRIVE PIN STAINLESS              | 4.000 EA |
| LB1119N                | WARNING LABEL                            | 1.000 EA |
| LC0006                 | CONNECTION LABEL                         | 1.000 EA |
| NP3443L                | SS SUPER-E UL CSA-EEV PREM CC            | 1.000 EA |
| 10PA1000               | PACKAGING GROUP COMBINED PRINT PK1023A06 | 1.000 EA |
| FE-0000022             | ZRTG FE ASSEMBLY                         | 1.000 EA |
| PE-0000013             | ZRTG PE ASSEMBLY                         | 1.000 EA |

**AC Induction Motor Performance Data**

Record # 50235 - Typical performance - not guaranteed values

|                               |                    |                        |
|-------------------------------|--------------------|------------------------|
| <b>Winding:</b> 10WGY759-R004 | <b>Type:</b> 1056M | <b>Enclosure:</b> TEFC |
|-------------------------------|--------------------|------------------------|

| Nameplate Data        |              |              |    | 575 V, 60 Hz:<br>Single Voltage Motor |                         |
|-----------------------|--------------|--------------|----|---------------------------------------|-------------------------|
| Rated Output (HP)     | 30           |              |    | Full Load Torque                      | 89.2 LB-FT              |
| Volts                 | 575          |              |    | Start Configuration                   | direct on line          |
| Full Load Amps        | 29           |              |    | Breakdown Torque                      | 255 LB-FT               |
| R.P.M.                | 1770         |              |    | Pull-up Torque                        | 120 LB-FT               |
| Hz                    | 60           | Phase        | 3  | Locked-rotor Torque                   | 136 LB-FT               |
| NEMA Design Code      | B            | KVA Code     | G  | Starting Current                      | 177 A                   |
| Service Factor (S.F.) | 1.15         |              |    | No-load Current                       | 11.5 A                  |
| NEMA Nom. Eff.        | 93.6         | Power Factor | 83 | Line-line Res. @ 25°C                 | 0.375 Ω                 |
| Rating - Duty         | 40C AMB-CONT |              |    | Temp. Rise @ Rated Load               | 58°C                    |
| S.F. Amps             |              |              |    | Temp. Rise @ S.F. Load                | 71°C                    |
|                       |              |              |    | Locked-rotor Power Factor             | 32                      |
|                       |              |              |    | Rotor inertia                         | 4.45 LB-FT <sup>2</sup> |

Load Characteristics 575 V, 60 Hz, 30 HP

| % of Rated Load | 25   | 50   | 75   | 100  | 125  | 150  | S.F. |
|-----------------|------|------|------|------|------|------|------|
| Power Factor    | 47   | 69   | 77   | 84   | 84   | 83   | 84   |
| Efficiency      | 90.9 | 93.9 | 94.4 | 94   | 92.9 | 92.5 | 93.4 |
| Speed           | 1794 | 1786 | 1780 | 1773 | 1764 | 1754 | 1768 |
| Line amperes    | 13.3 | 17.6 | 23.4 | 28.5 | 35.9 | 43.6 | 32.9 |

Performance Graph at 575V, 60Hz, 30.0HP Typical performance - Not guaranteed values

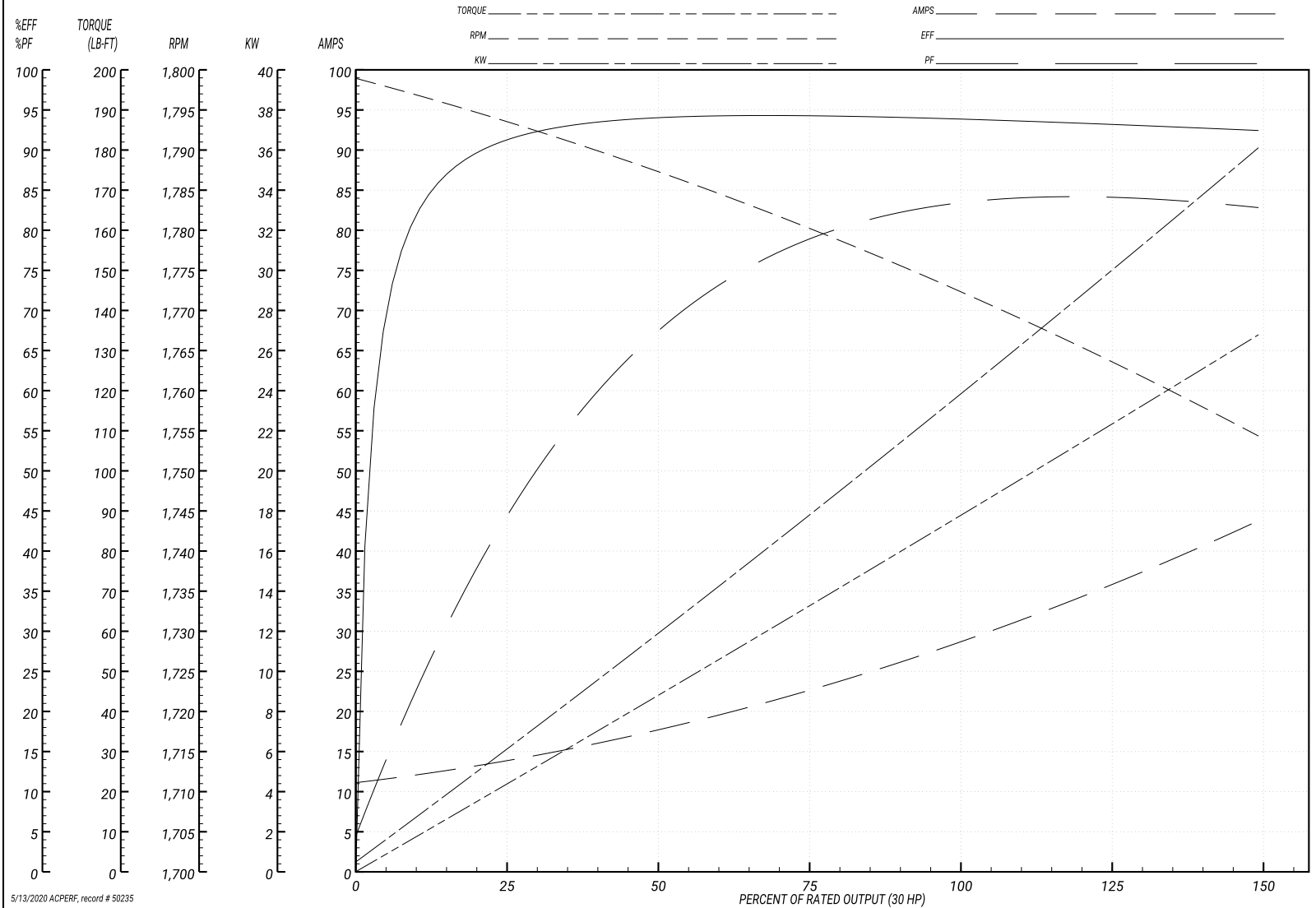
ABB Motors and Mechanical Inc.

WINDING # 10WGY759

Typical performance - not guaranteed values.

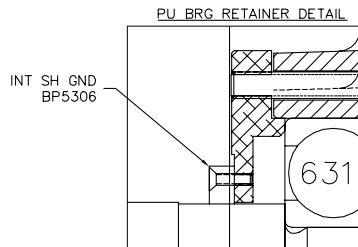
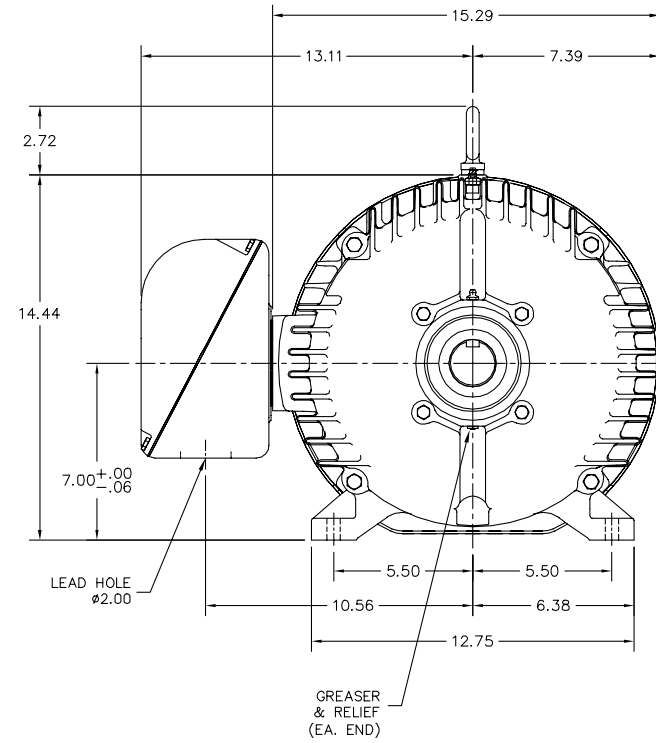
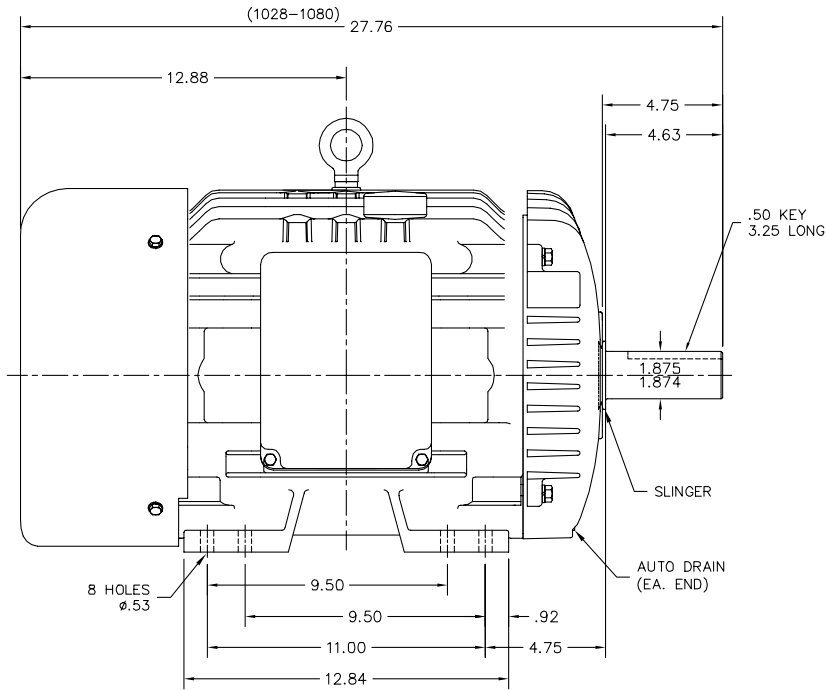
30 HP 3 PH 60 HZ 1770 RPM 575 V 1056M

TORQUES(LB-FT): PO=255 PU=120 LR=136 LRA=177



5/13/2020 ACPERF, record # 50235

10LYH279



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

|                           |                              |                   |
|---------------------------|------------------------------|-------------------|
| REV. DESC: REMOVE LOCKNUT | VERSION: 04                  | TDR: 000000952817 |
| REV. LTR: D               | REVISED: 03:37:46 11/10/2015 | BY: ENMARSO       |
| FILE: \AAA\00174\262      |                              |                   |
| MTL: -                    |                              |                   |

**BALDOR**  
 HORZ TEFC 284-6T W/INT SH GND  
 SH 1 of 1

10LYH279

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.

CD0006

|                                   |                              |                   |
|-----------------------------------|------------------------------|-------------------|
| REV. DESC: ADD CLASS CONN00000007 |                              |                   |
| REV. LTR: E                       | VERSION: 01                  | TDR: 000001099922 |
| FILE: \AAA\00005\141              | REVISED: 10:24:49 02/19/2019 | BY: ENBRIRO       |
| MTL: -                            | © □                          |                   |

**BALDOR - RELIANCE®**

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

SH 1 of 1

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