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# Customer information packet

## EM4110T

40HP, 1775RPM, 3PH, 60HZ, 324T, 1254M, TEFC, F1

Class - None

Division - Not Applicable

## Specifications

|                                |                                                                 |
|--------------------------------|-----------------------------------------------------------------|
| Enclosure                      | TEFC                                                            |
| Frame                          | 324T                                                            |
| Frame Material                 | Iron                                                            |
| Frequency                      | 60.00 Hz                                                        |
| Haz Area Class and Group       | None                                                            |
| Haz Area Division              | Not Applicable                                                  |
| Motor Letter Type              | Three Phase                                                     |
| Output @ Frequency             | 40.000 HP @ 60 HZ                                               |
| Phase                          | 3                                                               |
| Synchronous Speed @ Frequency  | 1800 RPM @ 60 HZ                                                |
| Voltage @ Frequency            | 460.0 V @ 60 HZ<br>230.0 V @ 60 HZ                              |
| Agency Approvals               | NEMA PREMIUM<br>NEMA_PREMIUM<br>UR<br>CSA EEV                   |
| Ambient Temperature            | 40 °C                                                           |
| Auxiliary Box                  | NO AUXILLARY BOX                                                |
| Auxiliary Box Lead Termination | None                                                            |
| Base Indicator                 | Rigid                                                           |
| Bearing Grease Type            | Polyrex EM (-20F +300F)                                         |
| Blower                         | None                                                            |
| Current @ Voltage              | 48.000 A @ 460.0 V<br>96.000 A @ 230.0 V<br>102.000 A @ 208.0 V |
| Design Code                    | A                                                               |
| Drip Cover                     | No Drip Cover                                                   |
| Duty Rating                    | CONT                                                            |
| Efficiency @ 100% Load         | 94.1 %                                                          |
| Electrically Isolated Bearing  | Not Electrically Isolated                                       |
| Feedback Device                | NO FEEDBACK                                                     |
| Front Face Code                | Standard                                                        |

## Part detail

|              |            |
|--------------|------------|
| Revision     | AC         |
| Type         | AC         |
| Mech. spec.  | 12H13      |
| Base         |            |
| Status       | PRD/A      |
| Elec. spec.  | 12WGY276   |
| Layout       | 12LYH013   |
| Eff. date    | 06-27-2024 |
| CD Diagram   | CD0180     |
| Poles        | 04         |
| Leads        | 9#8        |
| Proprietary  | False      |
| Created date | 05-06-2010 |

|                               |                       |
|-------------------------------|-----------------------|
| Front Shaft Indicator         | None                  |
| Heater Indicator              | No Heater             |
| High Voltage Full Load Amps   | 48.0 a                |
| Insulation Class              | F                     |
| Inverter Code                 | Inverter Ready        |
| KVA Code                      | H                     |
| Lifting Lugs                  | Standard Lifting Lugs |
| Locked Bearing Indicator      | Locked Bearing        |
| Motor Lead Exit               | Ko Box                |
| Motor Lead Quantity/Wire Size | 9 @ 8 AWG             |
| Motor Lead Termination        | Flying Leads          |
| Motor Standards               | NEMA                  |
| Motor Type                    | 1254M                 |
| Mounting Arrangement          | F1                    |
| Number of Poles               | 4                     |
| Overall Length                | 30.28 IN              |
| Power Factor                  | 82                    |
| Product Family                | General Purpose       |
| Pulley End Bearing Type       | Ball                  |
| Pulley Face Code              | Standard              |
| Pulley Shaft Indicator        | Standard              |
| Rodent Screen                 | None                  |
| Service Factor                | 1.15                  |
| Shaft Diameter                | 2.125 IN              |
| Shaft Extension Location      | Pulley End            |
| Shaft Ground Indicator        | No Shaft Grounding    |
| Shaft Rotation                | Reversible            |
| Shaft Slinger Indicator       | Shaft Slinger         |
| Speed                         | 1775 rpm              |
| Speed Code                    | Single Speed          |
| Starting Method               | Direct on line        |
| Thermal Device - Bearing      | None                  |
| Thermal Device - Winding      | None                  |
| Vibration Sensor Indicator    | No Vibration Sensor   |

|                   |      |
|-------------------|------|
| Winding Thermal 1 | None |
| Winding Thermal 2 | None |

## Nameplate

| NP3443LUA |                            |                         |                |                           |      |         |        |        |            |      |      |
|-----------|----------------------------|-------------------------|----------------|---------------------------|------|---------|--------|--------|------------|------|------|
| CAT.NO.   | EM4110T                    |                         |                | CUST. P/N                 |      |         |        |        |            | ENCL | TEFC |
| SPEC.     | 12H013Y276                 | CC                      | 010A           | FRAME                     | 324T | SER.NO. |        |        |            |      |      |
| HP        | 40                         |                         | CLASS          | F                         | HZ   | 60      |        |        |            |      |      |
| R.P.M.    | 1775                       |                         | PH.            | 3                         | DES. | A       |        |        |            |      |      |
| VOLTS     | 230/460                    |                         |                | CODE                      | H    | ODE BRG | 6311   | DE BRG | 6312       |      |      |
| AMPS      | 96/48                      |                         |                |                           |      |         |        |        |            |      |      |
| RATING    | 40C AMB-CONT               |                         | NEMA NOM. EFF. |                           |      | 94.1    | GREASE |        | POLYREX EM |      |      |
| P.F.      | 82                         | SER.F.                  | 1.15           | CT6-60H(10:1)VT3-60H(20:1 |      |         |        |        |            |      |      |
| USABLE AT | 50Hz 40HP 190/380V 114/57A |                         |                | SF1.0                     |      |         |        |        |            |      |      |
| VOLTS     | AMPS                       | MAX. SPACE HEATER TEMP. |                |                           |      |         |        |        |            |      |      |

**Accessories**

| Part number   | Description  | Multiplier |
|---------------|--------------|------------|
| 12-1105       | C FACE KIT   | A8         |
| 12EP1501A03SP | D-FLANGE KIT | A8         |

## AC Induction Motor Performance Data

Record # 31673

Typical performance - not guaranteed values

| Winding: 12WGY276-R001 |  |              | Type: 1254M  |                                          | Enclosure: TEFC     |                       |           |        |
|------------------------|--|--------------|--------------|------------------------------------------|---------------------|-----------------------|-----------|--------|
| Nameplate Data         |  |              |              | 460 V, 60 Hz:<br>High Voltage Connection |                     |                       |           |        |
| Rated Output (HP)      |  | 40           |              | Full Load Torque                         |                     | 119 LB-FT             |           |        |
| Volts                  |  | 230/460      |              | Start Configuration                      |                     | direct on line        |           |        |
| Full Load Amps         |  | 96/48        |              | Breakdown Torque                         |                     | 396 LB-FT             |           |        |
| R.P.M.                 |  | 1775         |              | Pull-up Torque                           |                     | 198 LB-FT             |           |        |
| Hz                     |  | 60           | Phase        | 3                                        | Locked-rotor Torque |                       | 222 LB-FT |        |
| NEMA Design Code       |  | A            | KVA Code     |                                          | H                   | Starting Current      |           | 347 A  |
| Service Factor (S.F.)  |  | 1.15         |              | No-load Current                          |                     | 21.03 A               |           |        |
| NEMA Nom. Eff.         |  | 94.1         | Power Factor |                                          | 82                  | Line-line Res. @ 25°C |           | 0.15 Ω |
| Rating - Duty          |  | 40C AMB-CONT |              | Temp. Rise @ Rated Load                  |                     | 54°C                  |           |        |
| S.F. Amps              |  |              |              | Temp. Rise @ S.F. Load                   |                     | 66°C                  |           |        |
|                        |  |              |              | Locked-rotor Power Factor                |                     | 27.1                  |           |        |
|                        |  |              |              | Rotor inertia                            |                     | 7.19 lb-ft²           |           |        |

## Load Characteristics 460 V, 60 Hz, 40 HP

| % of Rated Load | 25    | 50   | 75    | 100   | 125   | 150   | S.F. |
|-----------------|-------|------|-------|-------|-------|-------|------|
| Power Factor    | 45    | 67   | 77    | 82    | 84    | 85    | 83   |
| Efficiency      | 89.8  | 93.4 | 94.1  | 94.4  | 93.9  | 93.1  | 94.1 |
| Speed           | 1794  | 1788 | 1783  | 1777  | 1771  | 1765  | 1773 |
| Line amperes    | 23.93 | 30.4 | 39.12 | 48.68 | 59.71 | 71.22 | 55.3 |

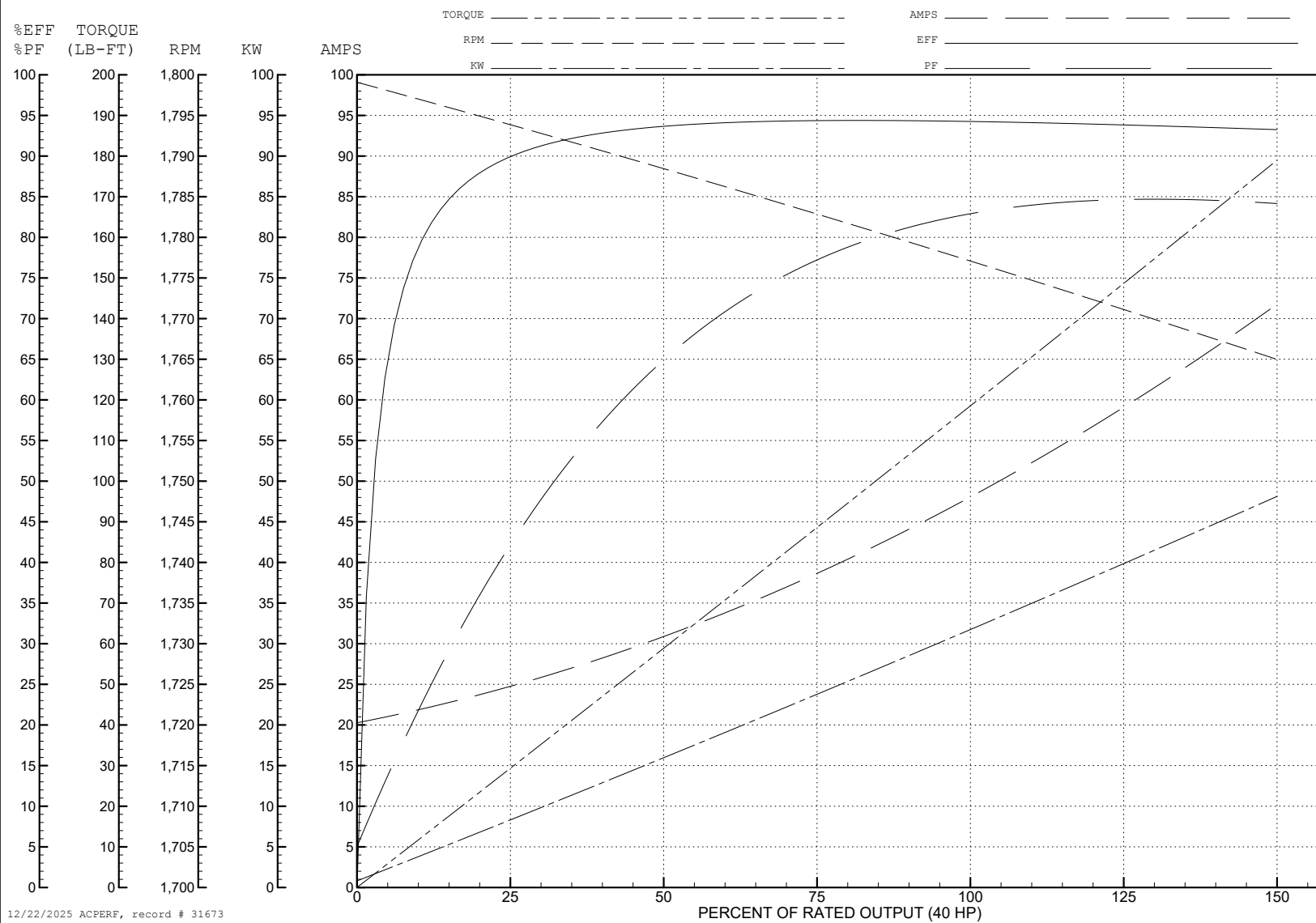
ABB Motors and Mechanical Inc.

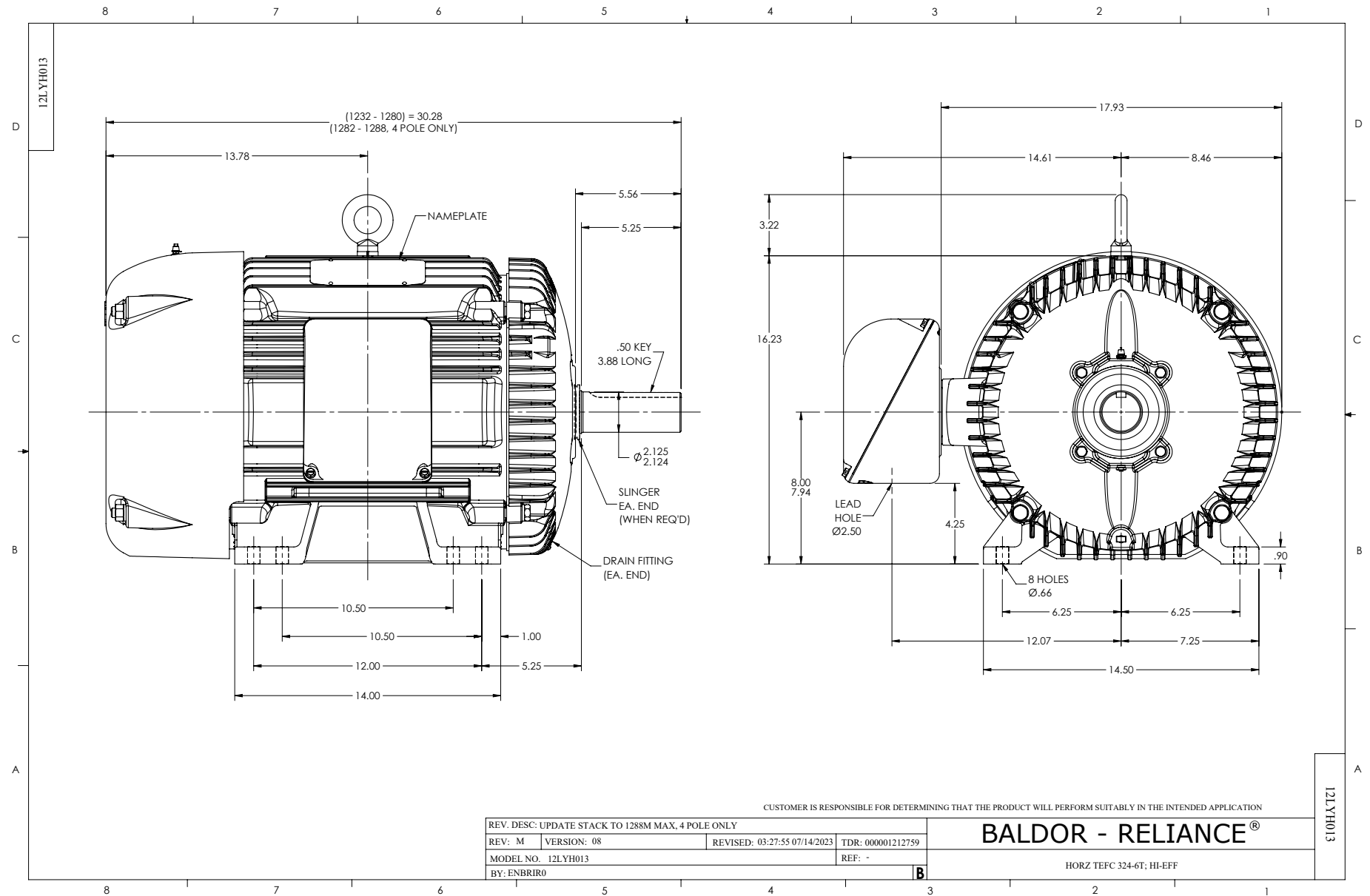
WINDING # 12WGY276

Typical performance - not guaranteed values.

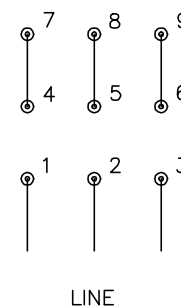
40 HP 3 PH 60 HZ 1775 RPM 460 V 1254M

TORQUES (LB-FT): PO=396 PU=198 LR=222 LRA=347





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