

**BALDOR • RELIANCE**

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# Customer information packet

## CEM4110T

40HP, 1775RPM, 3PH, 60HZ, 324TC, 1254M, TEFC, F

Class - None

Division - Not Applicable

## Specifications

|                                |                                                                 |
|--------------------------------|-----------------------------------------------------------------|
| Enclosure                      | TEFC                                                            |
| Frame                          | 324TC                                                           |
| Frame Material                 | Iron                                                            |
| Frequency                      | 60.00 Hz                                                        |
| 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                              |
| XP Class and Group             | None                                                            |
| XP Division                    | Not Applicable                                                  |
| Agency Approvals               | CSA<br>CSA EEV<br>UR                                            |
| Ambient Temperature            | 40 °C                                                           |
| Auxillary Box                  | No Auxillary Box                                                |
| Auxillary 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                                                        |
| Front Shaft Indicator          | None                                                            |

## Part detail

|              |            |
|--------------|------------|
| Revision     | V          |
| Type         | AC         |
| Mech. spec.  | 12C52      |
| Base         |            |
| Status       | PRD/A      |
| Elec. spec.  | 12WGY276   |
| Layout       | 12LYC052   |
| Eff. date    | 08-08-2022 |
| CD Diagram   | CD0180     |
| Poles        | 04         |
| Leads        | 9#8        |
| Proprietary  | False      |
| Created date | 06-25-2010 |

|                               |                       |
|-------------------------------|-----------------------|
| 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              | C-Face                |
| 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 (OLD)            |
| Thermal Device - Winding      | None                  |
| Vibration Sensor Indicator    | No Vibration Sensor   |
| Winding Thermal 1             | None                  |

**Winding Thermal 2**

**None**

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**Nameplate**

**NP3443LUA**

|                  |                            |                                |      |                                   |               |                |             |
|------------------|----------------------------|--------------------------------|------|-----------------------------------|---------------|----------------|-------------|
| <b>CAT.NO.</b>   | CEM4110T                   | <b>CUST. P/N</b>               |      |                                   |               | <b>ENCL</b>    | <b>TEFC</b> |
| <b>SPEC.</b>     | 12C052Y276G1               | <b>CC</b>                      | 010A | <b>FRAME</b>                      | 324TC         | <b>SER.NO.</b> |             |
| <b>HP</b>        | 40                         | <b>CLASS</b>                   | F    | <b>HZ</b>                         | 60            |                |             |
| <b>R.P.M.</b>    | 1775                       | <b>PH.</b>                     | 3    | <b>DES.</b>                       | A             |                |             |
| <b>VOLTS</b>     | 230/460                    | <b>CODE</b>                    | H    | <b>ODE BRG</b>                    | 6311          | <b>DE BRG</b>  | 6312        |
| <b>AMPS</b>      | 96/48                      | <b>USABLE AT 208V</b>          |      | 102                               |               |                |             |
| <b>RATING</b>    | 40C AMB-CONT               | <b>NEMA NOM. EFF.</b>          |      | 94.1                              | <b>GREASE</b> | POLYREX EM     |             |
| <b>P.F.</b>      | 82                         | <b>SER.F.</b>                  | 1.15 | <b>CT6-60H(10:1)VT3-60H(20:1)</b> |               |                |             |
| <b>USABLE AT</b> | 50Hz 40HP 190/380V 114/57A |                                |      | SF1.0                             |               |                |             |
| <b>VOLTS</b>     | <b>AMPS</b>                | <b>MAX. SPACE HEATER TEMP.</b> |      |                                   |               |                |             |

**AC Induction Motor Performance Data**

Record # 31673

Typical performance - not guaranteed values

| <b>Winding: 12WGY276-R001</b> |                          | <b>Type: 1254M</b> |                                                  | <b>Enclosure: TEFC</b>  |  |
|-------------------------------|--------------------------|--------------------|--------------------------------------------------|-------------------------|--|
| <b>Nameplate Data</b>         |                          |                    | <b>460 V, 60 Hz:<br/>High Voltage Connection</b> |                         |  |
| <b>Rated Output (HP)</b>      | 40                       |                    | <b>Full Load Torque</b>                          | 119 LB-FT               |  |
| <b>Volts</b>                  | 230/460                  |                    | <b>Start Configuration</b>                       | direct on line          |  |
| <b>Full Load Amps</b>         | 96/48                    |                    | <b>Breakdown Torque</b>                          | 396 LB-FT               |  |
| <b>R.P.M.</b>                 | 1775                     |                    | <b>Pull-up Torque</b>                            | 198 LB-FT               |  |
| <b>Hz</b>                     | <b>60 Phase</b>          | 3                  | <b>Locked-rotor Torque</b>                       | 222 LB-FT               |  |
| <b>NEMA Design Code</b>       | <b>A KVA Code</b>        | H                  | <b>Starting Current</b>                          | 347 A                   |  |
| <b>Service Factor (S.F.)</b>  | 1.15                     |                    | <b>No-load Current</b>                           | 21.03 A                 |  |
| <b>NEMA Nom. Eff.</b>         | <b>94.1 Power Factor</b> | 82                 | <b>Line-line Res. @ 25°C</b>                     | 0.139 Ω                 |  |
| <b>Rating - Duty</b>          | 40C AMB-CONT             |                    | <b>Temp. Rise @ Rated Load</b>                   | 54°C                    |  |
| <b>S.F. Amps</b>              |                          |                    | <b>Temp. Rise @ S.F. Load</b>                    | 66°C                    |  |
|                               |                          |                    | <b>Locked-rotor Power Factor</b>                 | 27.1                    |  |
|                               |                          |                    | <b>Rotor inertia</b>                             | 7.19 lb-ft <sup>2</sup> |  |

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

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

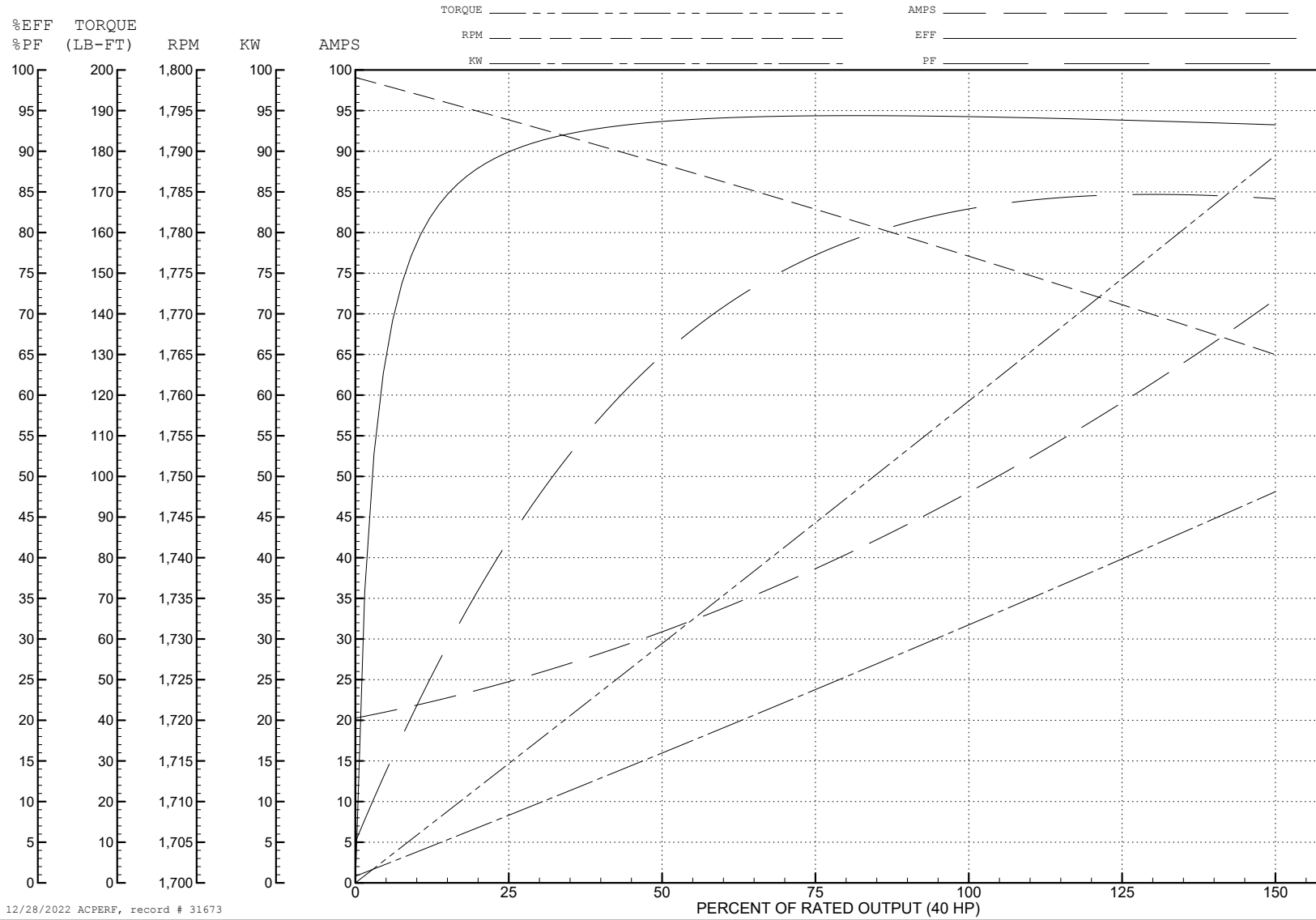
ABB Motors and Mechanical Inc.

WINDING # 12WGY276

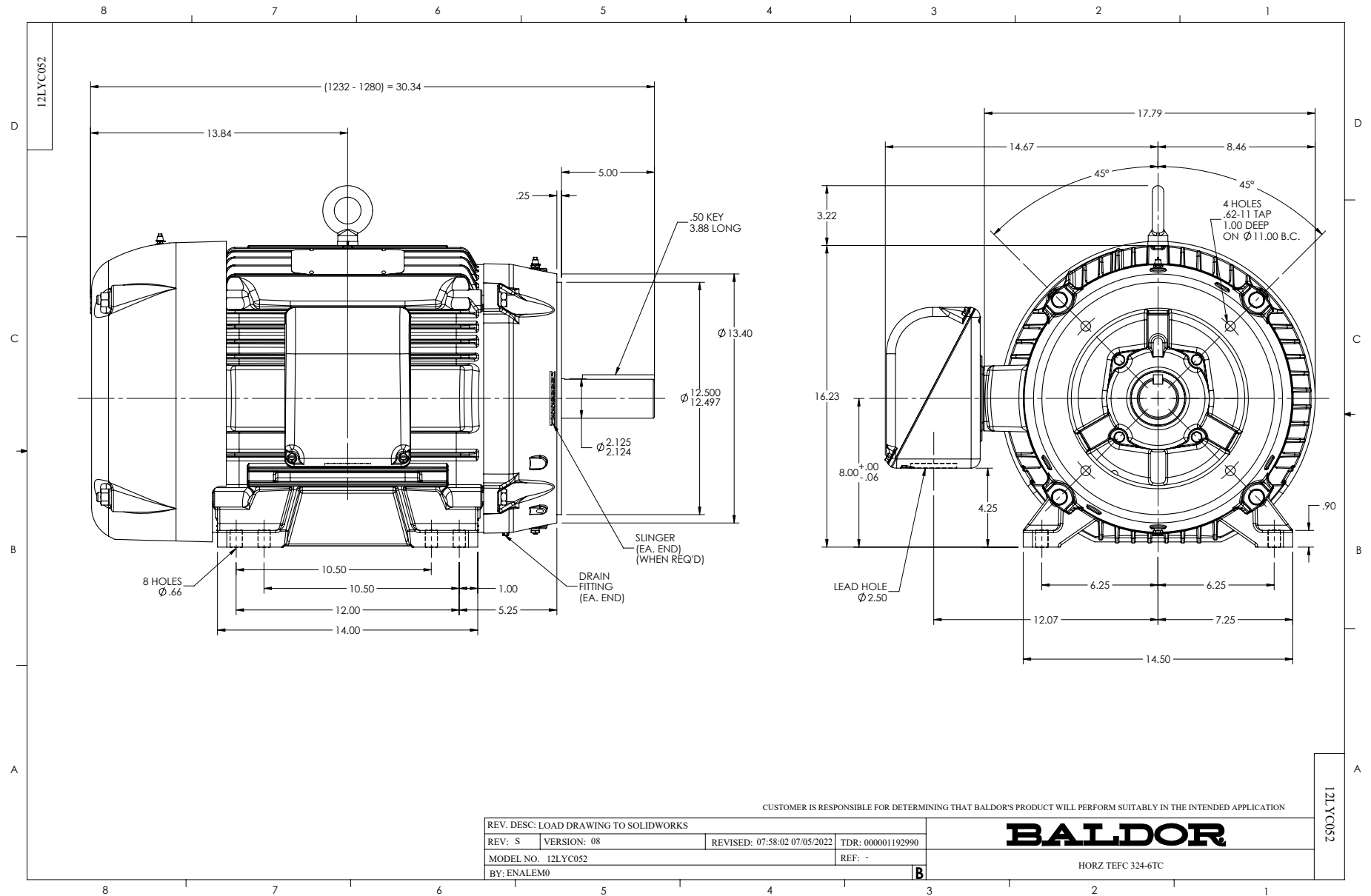
Typical performance - not guaranteed values.

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

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



12/28/2022 ACPERF, record # 31673

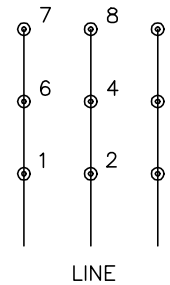




CD0180



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

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