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# Customer information packet

## CDRX25244T

20HP, 1770//1470RPM, 3PH, 60/50HZ, 256TC, XPF

Class - CLI GP C,D

Division - Division I

## Specifications

|                                |  |
|--------------------------------|--|
| Enclosure                      | XPFC   |
| Frame                          | 256TC  |
| Frame Material                 | Iron   |
| Frequency                      | 50.00 Hz<br>60.00 Hz   |
| Haz Area Class and Group       | CLI GP C,D   |
| Haz Area Division              | Division I   |
| Motor Letter Type              | Three Phase  |
| Output @ Frequency             | 15.000 HP @ 50 HZ<br>20.000 HP @ 60 HZ   |
| Phase                          | 3  |
| Synchronous Speed @ Frequency  | 1800 RPM @ 60 HZ   |
| Voltage @ Frequency            | 380.0 V @ 50 HZ<br>230.0 V @ 60 HZ<br>190.0 V @ 50 HZ<br>460.0 V @ 60 HZ                                   |
| Agency Approvals               | CSA EEV<br>UL  |
| 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   |
| Constant Torque Speed Range    | 6  |
| Current @ Voltage              | 52.000 A @ 208.0 V<br>48.000 A @ 230.0 V<br>44.000 A @ 190.0 V<br>24.000 A @ 460.0 V<br>22.000 A @ 380.0 V |
| Design Code                    | A  |
| Drip Cover                     | No Drip Cover  |

## Part detail

|              |            |
|--------------|------------|
| Revision     | M          |
| Type         | AC         |
| Mech. spec.  |            |
| Base         |            |
| Status       | PRD/A      |
| Elec. spec.  | 09WGT459   |
| Layout       | 09LYF368   |
| Eff. date    | 02-14-2024 |
| CD Diagram   | CD0180     |
| Poles        | 04         |
| Leads        | 9#10       |
| Proprietary  | False      |
| Created date | 06-04-2019 |

|                               |                            |
|-------------------------------|----------------------------|
| Duty Rating                   | CONT                       |
| Efficiency @ 100% Load        | 93.0 %                     |
| Electrically Isolated Bearing | Not Electrically Isolated  |
| Feedback Device               | NO FEEDBACK                |
| Haz Area Temp Code            | T3C                        |
| Heater Indicator              | No Heater                  |
| High Voltage Full Load Amps   | 22.0 a                     |
| Insulation Class              | F                          |
| Inverter Code                 | Inverter Duty              |
| IP Rating                     | NONE                       |
| KVA Code                      | J                          |
| Lifting Lugs                  | Standard Lifting Lugs      |
| Locked Bearing Indicator      | Locked Bearing             |
| Max Speed                     | 2700 rpm                   |
| Motor Lead Termination        | Flying Leads               |
| Motor Standards               | NEMA                       |
| Motor Type                    | 0960M                      |
| Mounting Arrangement          | F1                         |
| Number of Poles               | 4                          |
| Overall Length                | 26.00 IN                   |
| Power Factor                  | 83                         |
| Product Family                | Hazardous Location Motor   |
| Pulley Face Code              | C-Face                     |
| Rodent Screen                 | None                       |
| RoHS Status                   | ROHS NON-COMPLIANT         |
| Service Factor                | 1.00                       |
| Shaft Diameter                | 1.625 IN                   |
| Shaft Ground Indicator        | No Shaft Grounding         |
| Shaft Rotation                | Reversible                 |
| Speed                         | 1770 rpm                   |
| Speed Code                    | Single Speed               |
| Starting Method               | Direct on line             |
| Thermal Device - Bearing      | None                       |
| Thermal Device - Winding      | Normally Closed Thermostat |

| <b>Vibration Sensor Indicator</b> | <b>No Vibration Sensor</b> |
|-----------------------------------|----------------------------|
| <b>Winding Thermal 1</b>          | <b>None</b>                |
| <b>Winding Thermal 2</b>          | <b>None</b>                |

**Nameplate**

**NP1401XPSLEV**

|                |                            |                   |                     |                 |    |                 |      |
|----------------|----------------------------|-------------------|---------------------|-----------------|----|-----------------|------|
| <b>NO.</b>     |                            | <b>CC</b>         | 010A                |                 |    |                 |      |
| <b>S/N</b>     |                            | <b>TEMP CODE</b>  | T3C                 |                 |    |                 |      |
| <b>SPEC.</b>   | 09-0000-1449               | <b>INV.TYPE</b>   | PWM                 |                 |    |                 |      |
| <b>CAT.NO.</b> | CDRX25244T                 | <b>C HP FR</b>    | 60                  | <b>C HP TO</b>  | 90 |                 |      |
| <b>HP</b>      | 20//15                     | <b>CT HZ FROM</b> | 6                   | <b>CT HZ TO</b> | 60 |                 |      |
| <b>VOLTS</b>   | 230/460//190/380           | <b>VT HZ FROM</b> | 6                   | <b>VT HZ TO</b> | 60 |                 |      |
| <b>AMPS</b>    | 48/24//44/22               | <b>MAG CUR</b>    | 20.8/10.4           |                 |    |                 |      |
| <b>RPM</b>     | 1770//1470                 | <b>MX RPM</b>     | 2700                |                 |    |                 |      |
| <b>HZ</b>      | 60//50                     | <b>PH</b>         | 3                   | <b>CL</b>       | F  | <b>NOM.EFF.</b> | 93   |
| <b>SER.F.</b>  | 1.00                       | <b>DES</b>        | A                   | <b>SL HZ</b>    | 1  | <b>WK2</b>      | 2.62 |
| <b>FRAME</b>   | 256TC                      | <b>RATING</b>     | 40C AMB-CONT        |                 |    |                 |      |
|                | 55C AMB @ 1.0 SF, 60C RISE |                   |                     |                 |    |                 |      |
|                | 1.15SF ON SINEWAVE         |                   | NEMA MG-1 PT.5,IP55 |                 |    |                 |      |

**AC Induction Motor Performance Data**

Record # 68068

Typical performance - not guaranteed values

| <b>Winding:</b> 09WGT459-R009 |              | <b>Type:</b> 0960M         |  | <b>Enclosure:</b> XPFC       |           |
|-------------------------------|--------------|----------------------------|--|------------------------------|-----------|
| <b>Nameplate Data</b>         |              |                            | <b>460 V, 60 Hz:<br/>High Voltage Connection</b> |                              |           |
| <b>Rated Output (HP)</b>      | 20           | <b>Full Load Torque</b>    | 59.27 LB-FT                                      |                              |           |
| <b>Volts</b>                  | 230/460      | <b>Start Configuration</b> | direct on line                                   |                              |           |
| <b>Full Load Amps</b>         | 48/24        | <b>Breakdown Torque</b>    | 232 LB-FT  |                              |           |
| <b>R.P.M.</b>                 | 1770         | <b>Pull-up Torque</b>      | 126 LB-FT  |                              |           |
| <b>Hz</b>                     | 60           | <b>Phase</b>               | 3  | <b>Locked-rotor Torque</b>   | 141 LB-FT |
| <b>NEMA Design Code</b>       | A            | <b>KVA Code</b>            | J  | <b>Starting Current</b>      | 198 A     |
| <b>Service Factor (S.F.)</b>  | 1            | <b>No-load Current</b>     | 10.4 A   |                              |           |
| <b>NEMA Nom. Eff.</b>         | 93           | <b>Power Factor</b>        | 83   | <b>Line-line Res. @ 25°C</b> | 0.33814 Ω |
| <b>Rating - Duty</b>          | 40C AMB-CONT |                            | <b>Temp. Rise @ Rated Load</b>                   | 58°C                         |           |
|                               |              |                            | <b>Locked-rotor Power Factor</b>                 | 26.5                         |           |

**Load Characteristics 460 V, 60 Hz, 20 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>Power Factor</b>    | 45        | 67        | 78        | 83         | 86         | 87         |
| <b>Efficiency</b>      | 89.2      | 93        | 93.7      | 93.6       | 93.1       | 92.4       |
| <b>Speed</b>           | 1793.2    | 1786.4    | 1779.1    | 1771.9     | 1763.7     | 1755.3     |
| <b>Line amperes</b>    | 11.8      | 15        | 19.2      | 24         | 29.3       | 34.9       |

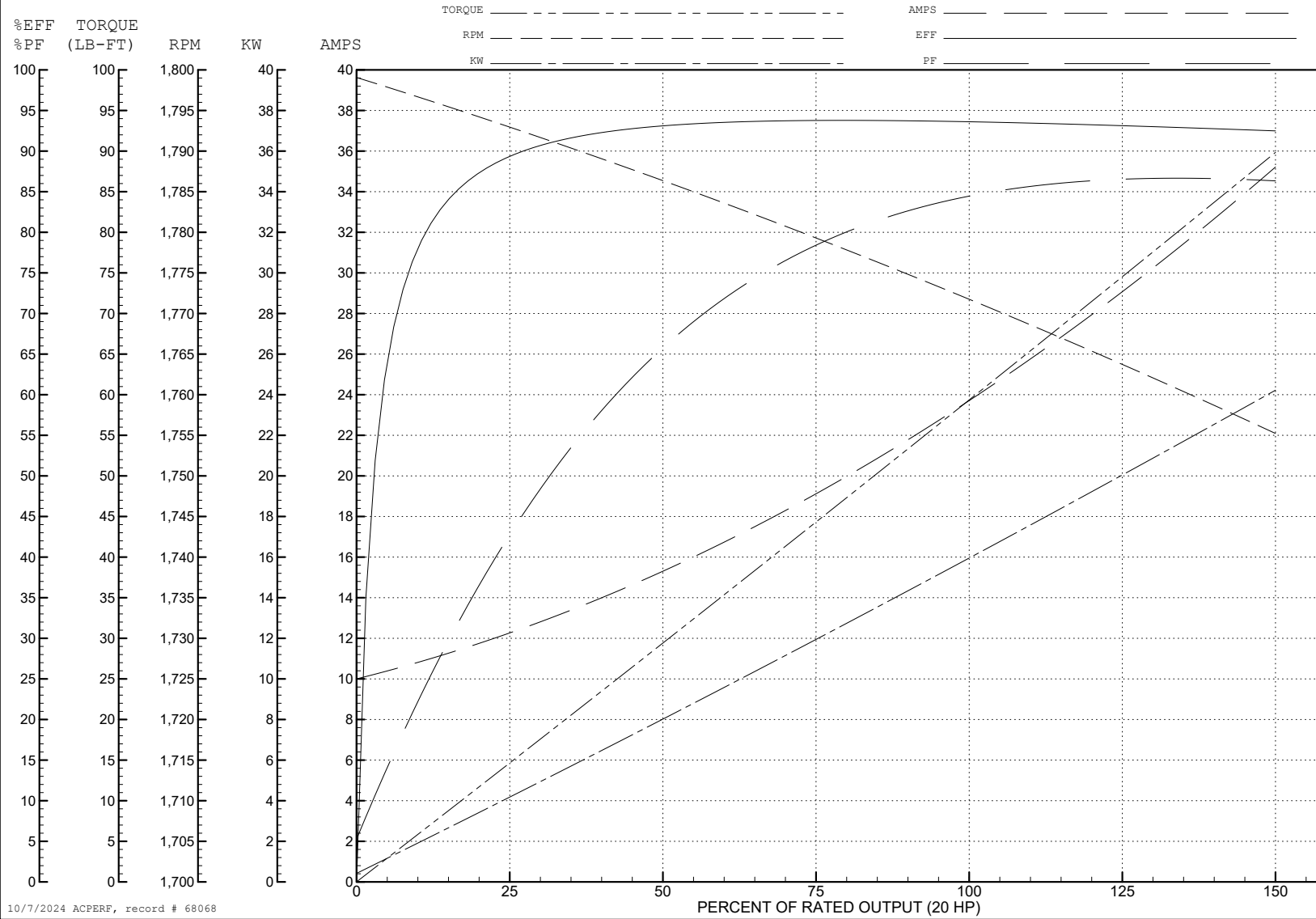
ABB Motors and Mechanical Inc.

WINDING # 09WGT459

Typical performance - not guaranteed values.

20 HP 3 PH 60 HZ 1770 RPM 460 V 0960M

TORQUES (LB-FT): PO=232 PU=126 LR=141 LRA=198



10/7/2024 ACPERF, record # 68068

**AC Induction Motor Performance Data**

Record # 75710

Typical performance - not guaranteed values

| <b>Winding: 09WGT459-R033</b> |                  | <b>Type: 0960M</b>  |  | <b>Enclosure: XPFC</b>           |                         |       |
|-------------------------------|------------------|---------------------|--|----------------------------------|-------------------------|-------|
| <b>Nameplate Data</b>         |                  |                     | <b>380 V, 50 Hz:<br/>High Voltage Connection</b> |                                  |                         |       |
| <b>Rated Output (HP)</b>      | 20//15           |                     | <b>Full Load Torque</b>                          | 53.39 LB-FT                      |                         |       |
| <b>Volts</b>                  | 230/460//190/380 |                     | <b>Start Configuration</b>                       | direct on line                   |                         |       |
| <b>Full Load Amps</b>         | 48/24//44/22     |                     | <b>Breakdown Torque</b>                          | 224 LB-FT                        |                         |       |
| <b>R.P.M.</b>                 | 1770//1470       |                     | <b>Pull-up Torque</b>                            | 130 LB-FT                        |                         |       |
| <b>Hz</b>                     | 60//50           | <b>Phase</b>        | 3  | <b>Locked-rotor Torque</b>       | 146 LB-FT               |       |
| <b>NEMA Design Code</b>       | A                |                     | <b>KVA Code</b>                                  | J                                | <b>Starting Current</b> | 193 A |
| <b>Service Factor (S.F.)</b>  | 1                |                     |  | <b>No-load Current</b>           | 10.15 A                 |       |
| <b>NEMA Nom. Eff.</b>         | 93               | <b>Power Factor</b> | 83   | <b>Line-line Res. @ 25°C</b>     | 0.332 Ω                 |       |
| <b>Rating - Duty</b>          | 40C AMB-CONT     |                     |  | <b>Temp. Rise @ Rated Load</b>   | 50°C                    |       |
|                               |                  |                     |  | <b>Locked-rotor Power Factor</b> | 29.8                    |       |
|                               |                  |                     |  | <b>Rotor inertia</b>             | 2.65 lb-ft <sup>2</sup> |       |

**Load Characteristics 380 V, 50 Hz, 15 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>Power Factor</b>    | 43        | 65        | 77        | 83         | 85         | 87         |
| <b>Efficiency</b>      | 89.1      | 92.8      | 93.5      | 93.4       | 92.8       | 92.1       |
| <b>Speed</b>           | 1494      | 1488      | 1481      | 1475       | 1467       | 1460       |
| <b>Line amperes</b>    | 11.28     | 14        | 17.72     | 21.99      | 26.74      | 31.76      |



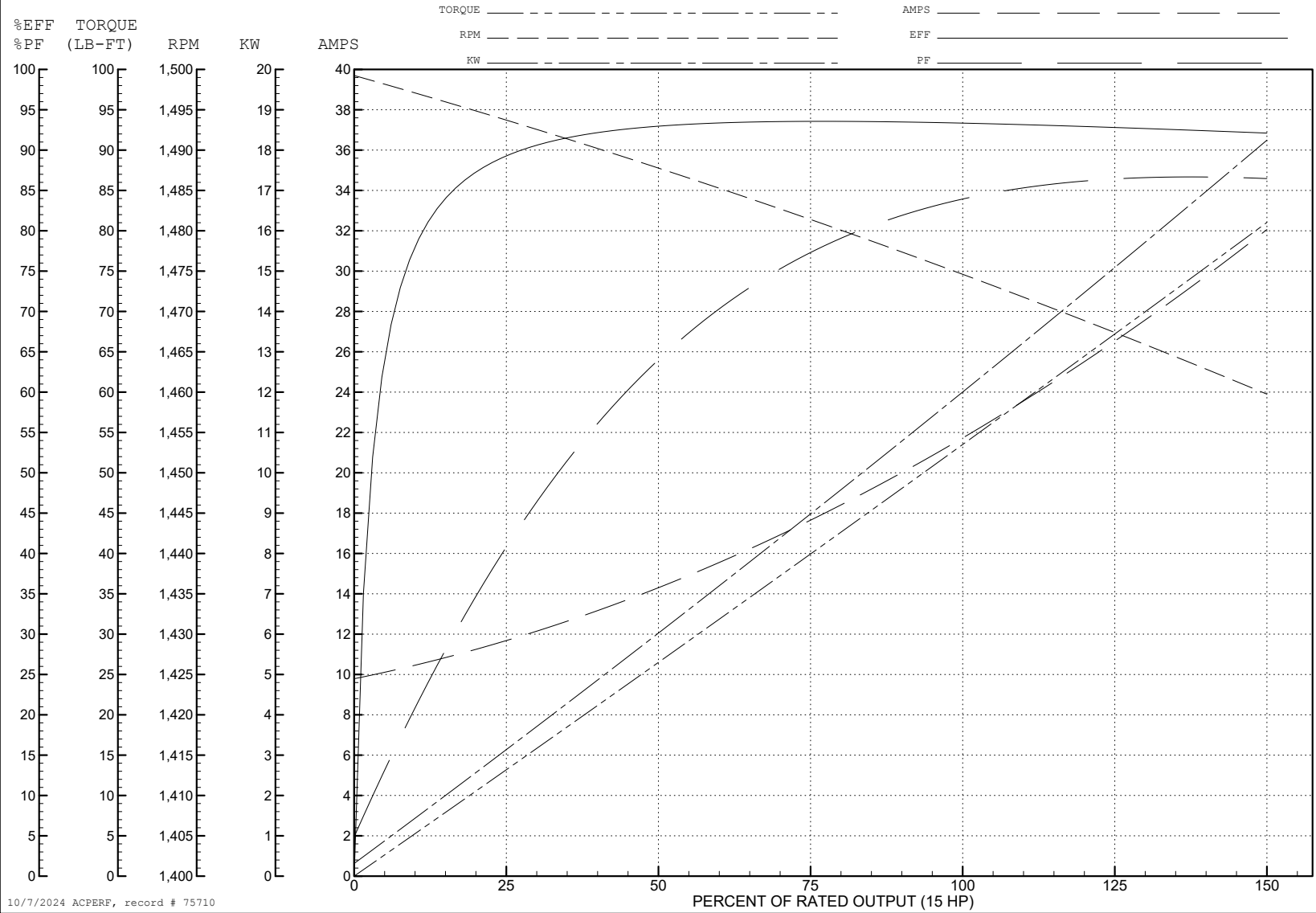
ABB Motors and Mechanical Inc.

WINDING # 09WGT459

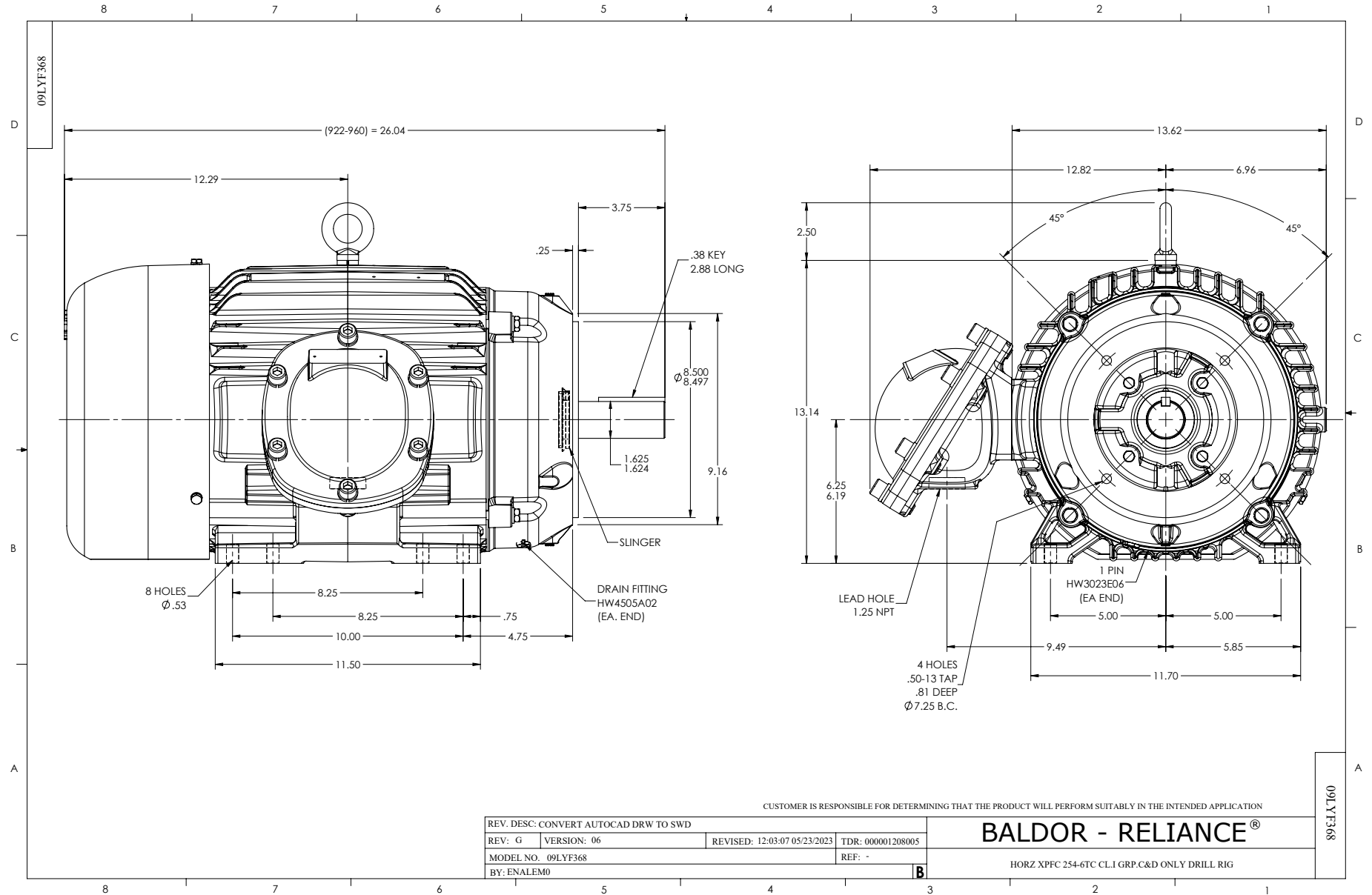
Typical performance - not guaranteed values.

15 HP 3 PH 50 HZ 1475 RPM 380 V 0960M

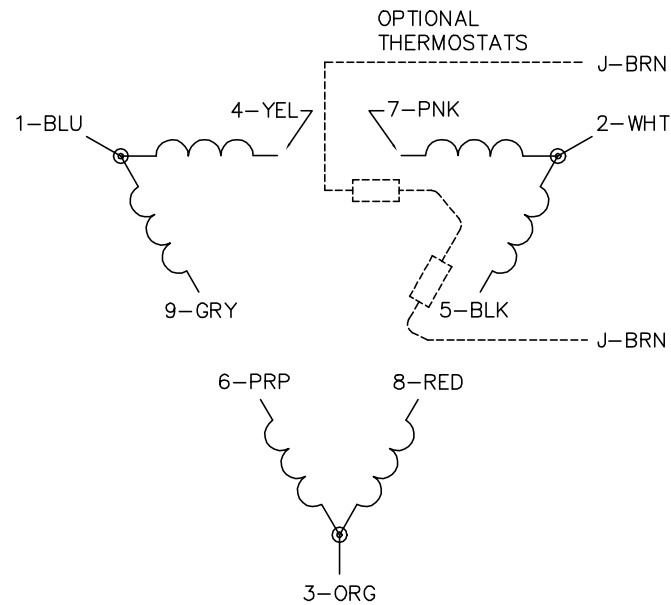
TORQUES (LB-FT): PO=224 PU=130 LR=146 LRA=193



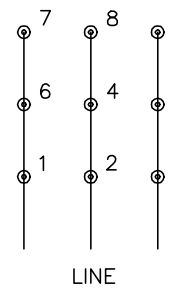
10/7/2024 ACPERF, record # 75710



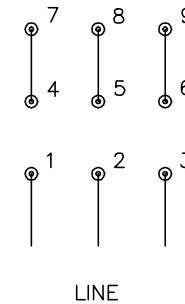
CD0180



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