

**BALDOR • RELIANCE**

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# Customer information packet

## CDRX28344T

30HP, 1770//1470RPM, 3PH, 60/50HZ, 286TC, XPF

Class - CLI GP C,D

Division - Division I

## Specifications

|                                |  |
|--------------------------------|--|
| Enclosure                      | XPFC   |
| Frame                          | 286TC  |
| 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             | 30.000 HP @ 60 HZ<br>25.000 HP @ 50 HZ   |
| Phase                          | 3  |
| Synchronous Speed @ Frequency  | 1800 RPM @ 50 HZ   |
| Voltage @ Frequency            | 460.0 V @ 60 HZ<br>190.0 V @ 50 HZ<br>230.0 V @ 60 HZ<br>380.0 V @ 50 HZ             |
| Agency Approvals               | UL<br>CSA EEV  |
| 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              | 38.000 A @ 380.0 V<br>38.000 A @ 460.0 V<br>76.000 A @ 190.0 V<br>76.000 A @ 230.0 V |
| Design Code                    | A  |
| Drip Cover                     | No Drip Cover  |
| Duty Rating                    | CONT   |

## Part detail

|              |              |
|--------------|--------------|
| Revision     | J            |
| Type         | AC           |
| Mech. spec.  |              |
| Base         |              |
| Status       | PRD/A        |
| Elec. spec.  | 10WGY538     |
| Layout       | 10LY-000-133 |
| Eff. date    | 07-17-2023   |
| CD Diagram   | CD0180       |
| Poles        | 04           |
| Leads        | 9#8          |
| Proprietary  | False        |
| Created date | 05-31-2019   |

|                               |                            |
|-------------------------------|----------------------------|
| Efficiency @ 100% Load        | 93.6 %                     |
| Electrically Isolated Bearing | Not Electrically Isolated  |
| Feedback Device               | NO FEEDBACK                |
| Haz Area Temp Code            | T3C                        |
| Heater Indicator              | No Heater                  |
| High Voltage Full Load Amps   | 38.0 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                    | 1056M                      |
| Mounting Arrangement          | F1                         |
| Number of Poles               | 4                          |
| Overall Length                | 28.61 IN                   |
| Power Factor                  | 80                         |
| Product Family                | Hazardous Location Motor   |
| Pulley Face Code              | C-Face                     |
| Rodent Screen                 | None                       |
| RoHS Status                   | ROHS NON-COMPLIANT         |
| Service Factor                | 1.00                       |
| Shaft Diameter                | 1.875 IN                   |
| Shaft Ground Indicator        | No Shaft Grounding         |
| Shaft Rotation                | Reversible                 |
| Speed                         | 1760 rpm                   |
| Speed Code                    | Single Speed               |
| Starting Method               | Direct on line             |
| Thermal Device - Bearing      | None                       |
| Thermal Device - Winding      | Normally Closed Thermostat |
| Vibration Sensor Indicator    | No Vibration Sensor        |

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

**Nameplate**

| <b>NP1401XPSLEV</b> |                            |                  |                   |              |                 |                 |      |  |  |  |
|---------------------|----------------------------|------------------|-------------------|--------------|-----------------|-----------------|------|--|--|--|
| <b>NO.</b>          |                            | <b>CC</b>        | 010A              |              |                 |                 |      |  |  |  |
| <b>S/N</b>          |                            | <b>TEMP CODE</b> | T3C               |              |                 |                 |      |  |  |  |
| <b>SPEC.</b>        | 10-0000-0820               |                  | <b>INV.TYPE</b>   | PWM          |                 |                 |      |  |  |  |
| <b>CAT.NO.</b>      | CDRX28344T                 |                  | <b>C HP FR</b>    | 60           | <b>C HP TO</b>  | 90              |      |  |  |  |
| <b>HP</b>           | 30//25                     |                  | <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>         | 76/38//76/38               |                  | <b>MAG CUR</b>    | 39.6/19.8    |                 |                 |      |  |  |  |
| <b>RPM</b>          | 1760//1475                 |                  | <b>MX RPM</b>     | 2700         |                 |                 |      |  |  |  |
| <b>HZ</b>           | 60//50                     | <b>PH</b>        | 3                 | <b>CL</b>    | F               | <b>NOM.EFF.</b> | 93.6 |  |  |  |
| <b>SER.F.</b>       | 1.00                       | <b>DES</b>       | A                 | <b>SL HZ</b> | 1.3             | <b>WK2</b>      | 4.46 |  |  |  |
| <b>FRAME</b>        | 286TC                      | <b>RATING</b>    | 40C AMB-CONT      |              |                 |                 |      |  |  |  |
|                     | 55C AMB @ 1.0 SF, 60C RISE |                  |                   |              |                 |                 |      |  |  |  |
|                     | 1.15SF ON SINEWAVE         |                  |                   |              |                 |                 |      |  |  |  |
|                     |                            |                  |                   |              |                 |                 |      |  |  |  |
|                     |                            |                  |                   |              |                 |                 |      |  |  |  |

**AC Induction Motor Performance Data**

Record # 83882

Typical performance - not guaranteed values

| <b>Winding: 10WGY538-R047</b> |                  | <b>Type: 1056M</b>  |  | <b>Enclosure: XPFC</b>       |           |
|-------------------------------|------------------|---------------------|--|------------------------------|-----------|
| <b>Nameplate Data</b>         |                  |                     | <b>460 V, 60 Hz:<br/>High Voltage Connection</b> |                              |           |
| <b>Rated Output (HP)</b>      | 30//25           |                     | <b>Full Load Torque</b>                          | 88.7 LB-FT                   |           |
| <b>Volts</b>                  | 230/460//190/380 |                     | <b>Start Configuration</b>                       | direct on line               |           |
| <b>Full Load Amps</b>         | 76/38            |                     | <b>Breakdown Torque</b>                          | 330 LB-FT                    |           |
| <b>R.P.M.</b>                 | 1760//1475       |                     | <b>Pull-up Torque</b>                            | 142 LB-FT                    |           |
| <b>Hz</b>                     | 60               | <b>Phase</b>        | 3  | <b>Locked-rotor Torque</b>   | 178 LB-FT |
| <b>NEMA Design Code</b>       | A                | <b>KVA Code</b>     | J  | <b>Starting Current</b>      | 270 A     |
| <b>Service Factor (S.F.)</b>  | 1                |                     | <b>No-load Current</b>                           | 17.9 A                       |           |
| <b>NEMA Nom. Eff.</b>         | 93.6             | <b>Power Factor</b> | 80   | <b>Line-line Res. @ 25°C</b> | 0.19377 Ω |
| <b>Rating - Duty</b>          | 40C AMB-CONT     |                     | <b>Temp. Rise @ Rated Load</b>                   | 64°C                         |           |
|                               |                  |                     | <b>Locked-rotor Power Factor</b>                 | 30.9                         |           |
|                               |                  |                     | <b>Rotor inertia</b>                             | 4.47 lb-ft <sup>2</sup>      |           |

**Load Characteristics 460 V, 60 Hz, 30 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>    | 41        | 63        | 73        | 80         | 82         | 85         |
| <b>Efficiency</b>      | 87.6      | 92.3      | 93.5      | 93.7       | 93.4       | 92.9       |
| <b>Speed</b>           | 1792.2    | 1787.6    | 1782.4    | 1776.5     | 1770.3     | 1762.1     |
| <b>Line amperes</b>    | 19.8      | 24.3      | 30.7      | 37.6       | 45.6       | 55.2       |

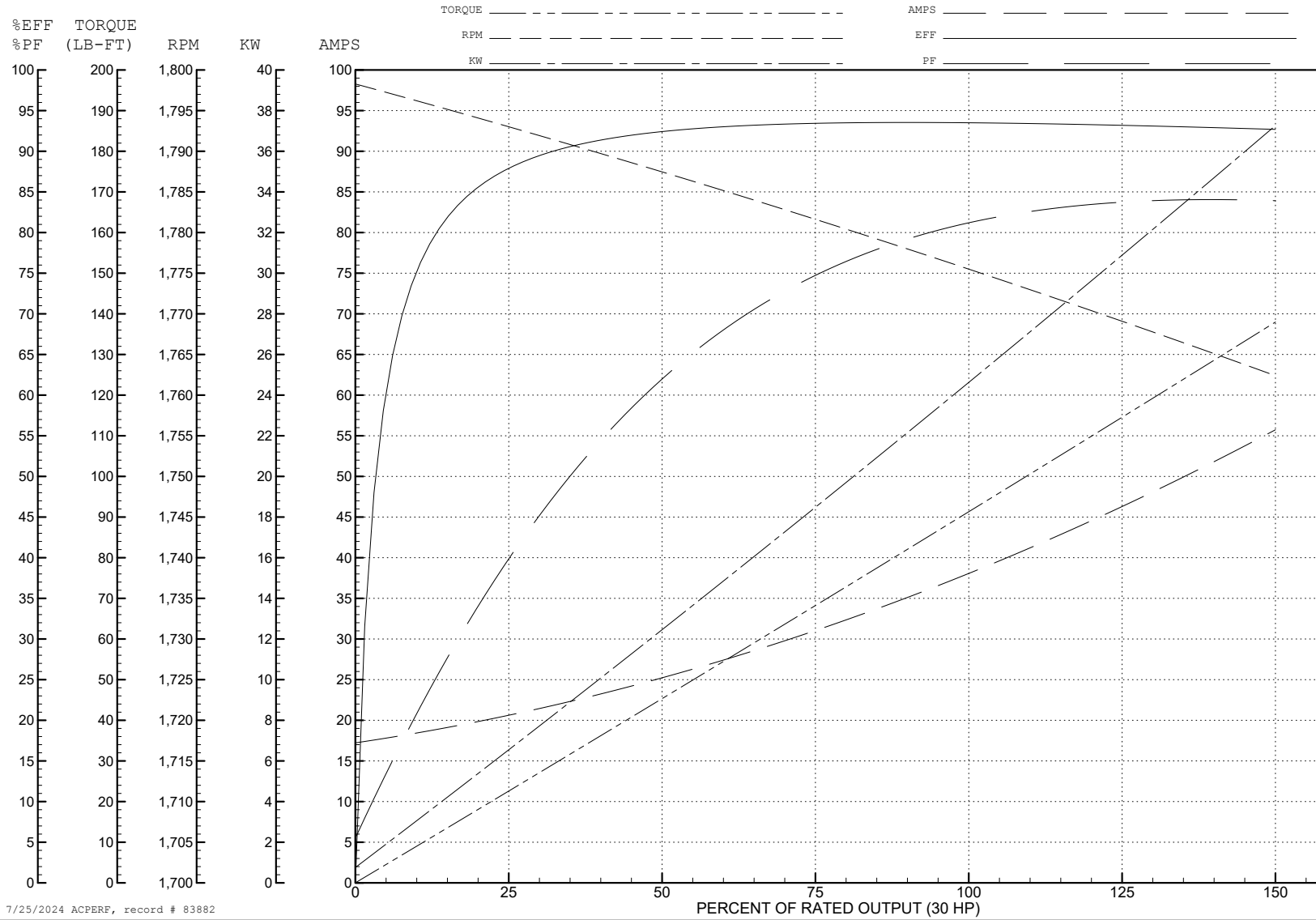
ABB Motors and Mechanical Inc.

WINDING # 10WGY538

Typical performance - not guaranteed values.

30 HP 3 PH 60 HZ 1776.5 RPM 460 V 1056M

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



7/25/2024 ACPERF, record # 83882

**AC Induction Motor Performance Data**

Record # 83883

Typical performance - not guaranteed values

| Winding: 35WGM218-R026 |                 | Type: 3516M         | Enclosure: TEFC                               |                           |
|------------------------|-----------------|---------------------|---|---------------------------|
| <b>Nameplate Data</b>  |                 |                     | <b>575 V, 60 Hz:<br/>Single Voltage Motor</b> |                           |
| Rated Output (HP)      | .75             | Full Load Torque    | 2.22 LB-FT                                    |                           |
| Volts                  | 575             | Start Configuration | direct on line                                |                           |
| Full Load Amps         | .9              | Breakdown Torque    | 10.6 LB-FT                                    |                           |
| R.P.M.                 | 1750            | Pull-up Torque      | 6.34 LB-FT                                    |                           |
| Hz                     | 60 Phase        | 3                   | Locked-rotor Torque                           | 7.57 LB-FT                |
| NEMA Design Code       | B KVA Code      | M                   | Starting Current                              | 7.89 A                    |
| Service Factor (S.F.)  |                 | 1.25                | No-load Current                               | 0.621 A                   |
| NEMA Nom. Eff.         | 84 Power Factor | 71                  | Line-line Res. @ 25°C                         | 34.7 Ω                    |
| Rating - Duty          |                 | 40C AMB-CONT        | Temp. Rise @ Rated Load                       | 30°C                      |
| S.F. Amps              |                 | 1.1                 | Temp. Rise @ S.F. Load                        | 38°C                      |
|                        |                 |                     | Locked-rotor Power Factor                     | 65.1                      |
|                        |                 |                     | Rotor inertia                                 | 0.0946 lb-ft <sup>2</sup> |

**Load Characteristics 575 V, 60 Hz, 0.75 HP**

| % of Rated Load | 25    | 50    | 75    | 100   | 125  | 150  | S.F. |
|-----------------|-------|-------|-------|-------|------|------|------|
| Power Factor    | 31    | 48    | 62    | 71    | 78   | 83   | 78   |
| Efficiency      | 68.4  | 80    | 83.4  | 84.4  | 84.3 | 82.1 | 84.3 |
| Speed           | 1790  | 1778  | 1766  | 1753  | 1739 | 1722 | 1739 |
| Line amperes    | 0.647 | 0.711 | 0.808 | 0.924 | 1.07 | 1.24 | 1.07 |



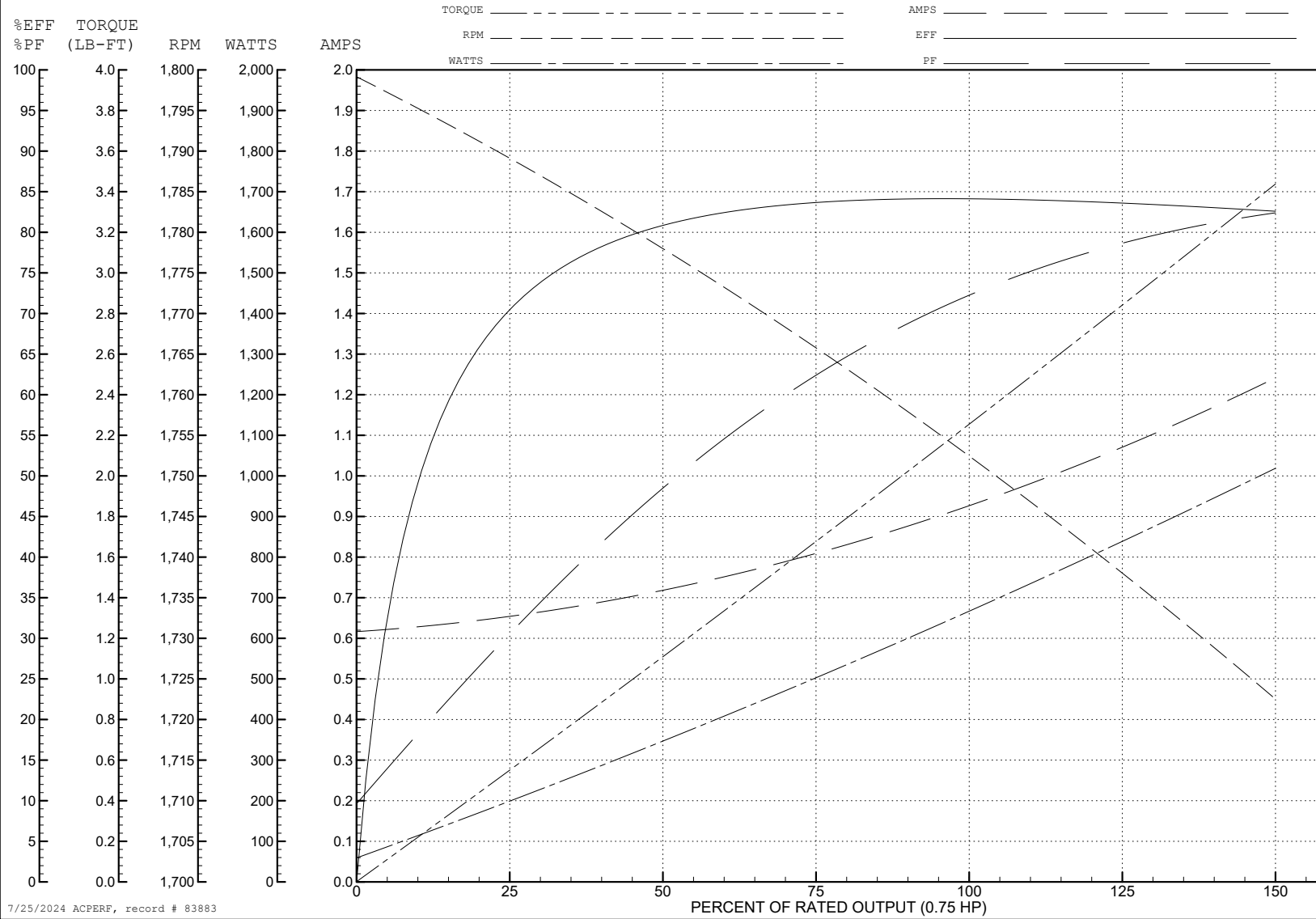
ABB Motors and Mechanical Inc.

WINDING # 35WGM218

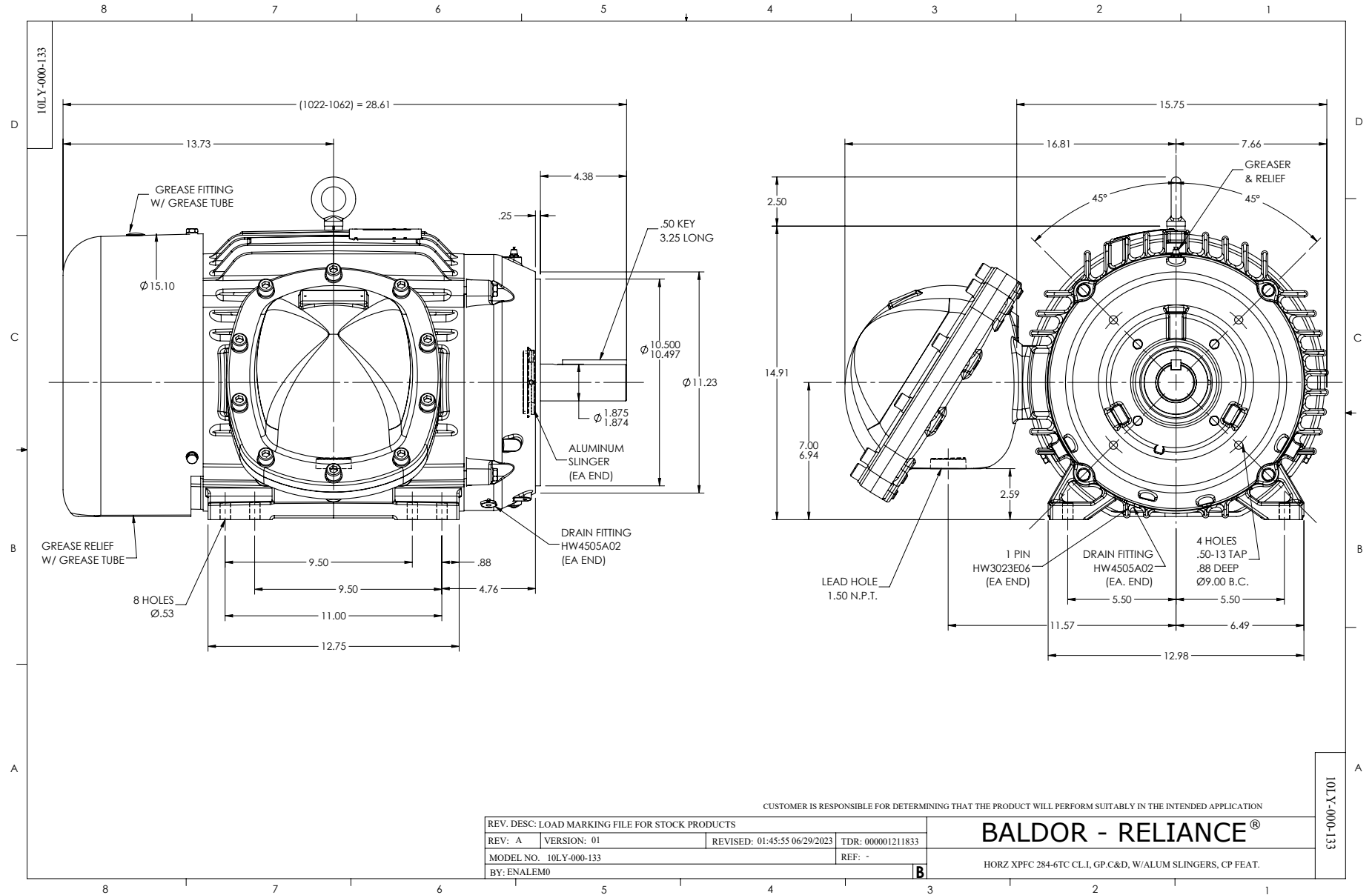
0.75 HP 3 PH 60 HZ 1750 RPM 575 V 3516M

Typical performance - not guaranteed values.

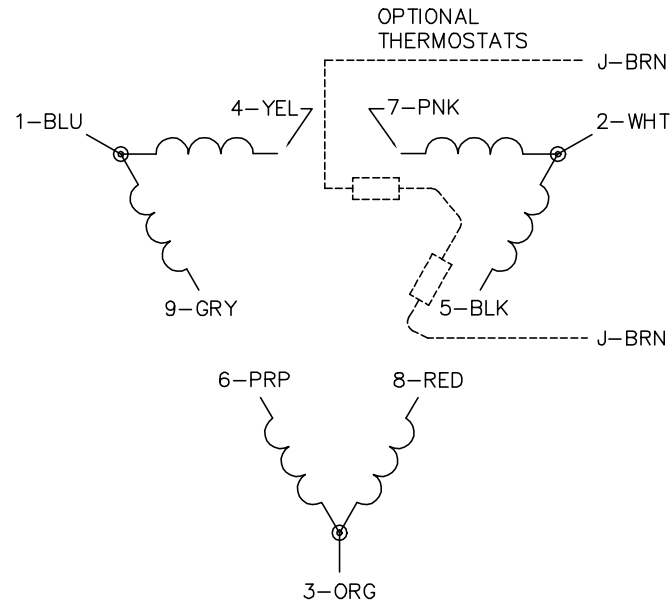
TORQUES (LB-FT): PO=10.6 PU=6.34 LR=7.57 LRA=7.89



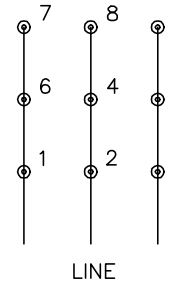
7/25/2024 ACPERF, record # 83883



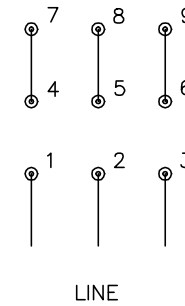
CD0180



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