ABB BALDOR RELIANCE

# Customer information packet

## ZDVSCP4104T

30HP, 1760RPM, 3PH, 60HZ, 286TC, 1056M, TEFC, F
Class - None
Division - Not Applicable

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## Specifications

| | |
|---|---|
| **Enclosure** | TEFC |
| **Frame** | 286TC |
| **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** | 30.000 HP @ 60 HZ |
| **Phase** | 3 |
| **Synchronous Speed @ Frequency** | 1800 RPM @ 60 HZ |
| **Voltage @ Frequency** | 230.0 V @ 60 HZ |
| | 460.0 V @ 60 HZ |
| **Agency Approvals** | UR |
| | CSA |
| **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** | 38.000 A @ 460.0 V |
| | 76.000 A @ 230.0 V |
| **Design Code** | A |
| **Drip Cover** | No Drip Cover |
| **Duty Rating** | CONT |
| **Efficiency @ 100% Load** | 93.6 % |
| **Electrically Isolated Bearing** | Not Electrically Isolated |
| **Feedback Device** | TACHOMETER |
| **Front Face Code** | Standard |
| **Front Shaft Indicator** | None |
| **Heater Indicator** | No Heater |
| **High Voltage Full Load Amps** | 38.0 a |

## Part Detail

| | |
|---|---|
| **Revision** | K |
| **Type** | AC |
| **Mech. spec.** | 10H956 |
| **Base** | |
| **Status** | PRD/A |
| **Elec. spec.** | 10WGY538 |
| **Layout** | 10LYH956 |
| **Eff. date** | 06-05-2026 |
| **CD Diagram** | CD0180 |
| **Poles** | 04 |
| **Leads** | 9#8 |
| **Proprietary** | False |
| **Created date** | 08-24-2017 |

| | |
|---|---|
| **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 Exit** | Ko Box |
| **Motor Lead Quantity/Wire Size** | 9 @ 8 AWG |
| **Motor Lead Termination** | Flying Leads |
| **Motor Standards** | NEMA |
| **Motor Type** | 1056M |
| **Mounting Arrangement** | F1 |
| **Number of Poles** | 4 |
| **Overall Length** | 30.79 IN |
| **Power Factor** | 80 |
| **Product Family** | Chemical Processing (Not DC) |
| **Pulley End Bearing Type** | Ball |
| **Pulley Face Code** | C-Face |
| **Pulley Shaft Indicator** | Standard |
| **Rodent Screen** | None |
| **Service Factor** | 1.00 |
| **Shaft Diameter** | 1.875 IN |
| **Shaft Extension Location** | Pulley End |
| **Shaft Ground Indicator** | No Shaft Grounding |
| **Shaft Rotation** | Reversible |
| **Shaft Slinger Indicator** | Shaft Slinger |
| **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**

| NP3303L | | | | | |
|---|---|---|---|---|---|
| **CAT NO** | ZDVSCP4104T | | | | |
| **SPEC.** | 10H956Y538Z1 | | | | |
| **FRAME** | 286TC | **HP** | 30 TE | | |
| **VOLTS** | 230/460 | | | | |
| **MAG CUR** | 36/18 | | **FLA** | 76/38 | |
| **RPM** | 1760 | **RPM MAX** | 2700 | | |
| **HZ** | 60 | **PH** | 3 | **CLASS** | F |
| **SER.F.** | 1.00 | **SL HZ** | 1.33 | | |
| **NEMA-NOM-EFF** | 93.6 | **WK2** | 4.46 | | |
| **RATING** | 40C AMB-CONT | | | | |
| **DE BRG** | 6311 | **ODE BRG** | 6311 | | |
| **CC** | 010A | **SN** | | | |
| | 1.5:1 CHP PWM | | | | |
| | 1000:1 CT, 1000:1 VT | | | | |

| NP0090L | |
|---|---|
| **FRONT** | 6311 |
| **PULLEY** | 6311 |
| **LUBRICATE WITH** | |
| **GREASE** | POLYREX EM |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| INP AMPS | 76/38 | MAX SAFE RPM | 2700 | WYE CONN EQ CKT OHMS PER PHASE (BASE RATING, 20C) | | | |
| HP | 30 HP | Base Volt | 460 | R1 | 0.107 | X1 | 0.492 |
| BASE SPEED | 1777 | NL AMPS | 17.90 | R2 | 0.515 | X2 | 0.443 |
| PHASE/HZ | 3/60 | Slips(HZ) | 0.78 | R2B | 0.075 | X2B | 0.692 |
| | | WK2 (LB-FT2) | 4.470 | R2E | 0.022 | XM | 12.800 |

## Rated Full Load Data

| | RPM | HP | Torque | Volts | Freq-Hz | Amps |
|---|---|---|---|---|---|---|
| Base Speed | 1776.5 | 30.0 | 88.7 | 460 | 60 | 37.6 |
| Max Speed | 2664 | 30.0 | 59.1 | 460 | 90 | 33.4 |
| Min Speed | 0 | 0.0 | 88.7 | 16.78 | 0.78 | 37.6 |

## Load Performance at Base Speed

| | RPM | HP | Torque | Volts | Freq-Hz | Amps |
|---|---|---|---|---|---|---|
| No Load | 1798.9 | 0.0 | 0.0 | 460 | 60 | 17.9 |
| 1/4 | 1792.2 | 7.5 | 22.1 | 460 | 60 | 19.8 |
| 1/2 | 1787.6 | 15.0 | 44.1 | 460 | 60 | 24.3 |
| 3/4 | 1782.4 | 22.5 | 66.2 | 460 | 60 | 30.7 |
| Full Load | 1776.5 | 30.0 | 88.7 | 460 | 60 | 37.6 |
| O/L | 1749 | 60.0 | 180.0 | 460 | 60 | 73.0 |

| Blower Data | Volts | Ph/Hz | FL Amps | LR Amps | Frame | CFM |
|---|---|---|---|---|---|---|
| | | | | | | |

Remarks: Calculated Data
Vector PWM Inverter Duty

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A-C MOTOR PERFORMANCE CURVES

10WGY538
Record: 52925

ZDVSCP4104T - 30HP, 1760RPM, 3PH, 60HZ, 286TC, 1056M, TEFC, F

| | |
|---|---|
| NP AMPS | 79.38 |
| HP | 30 HP |
| BASE SPEED | 1776.5 |
| PHASE/HZ | 3/60 |

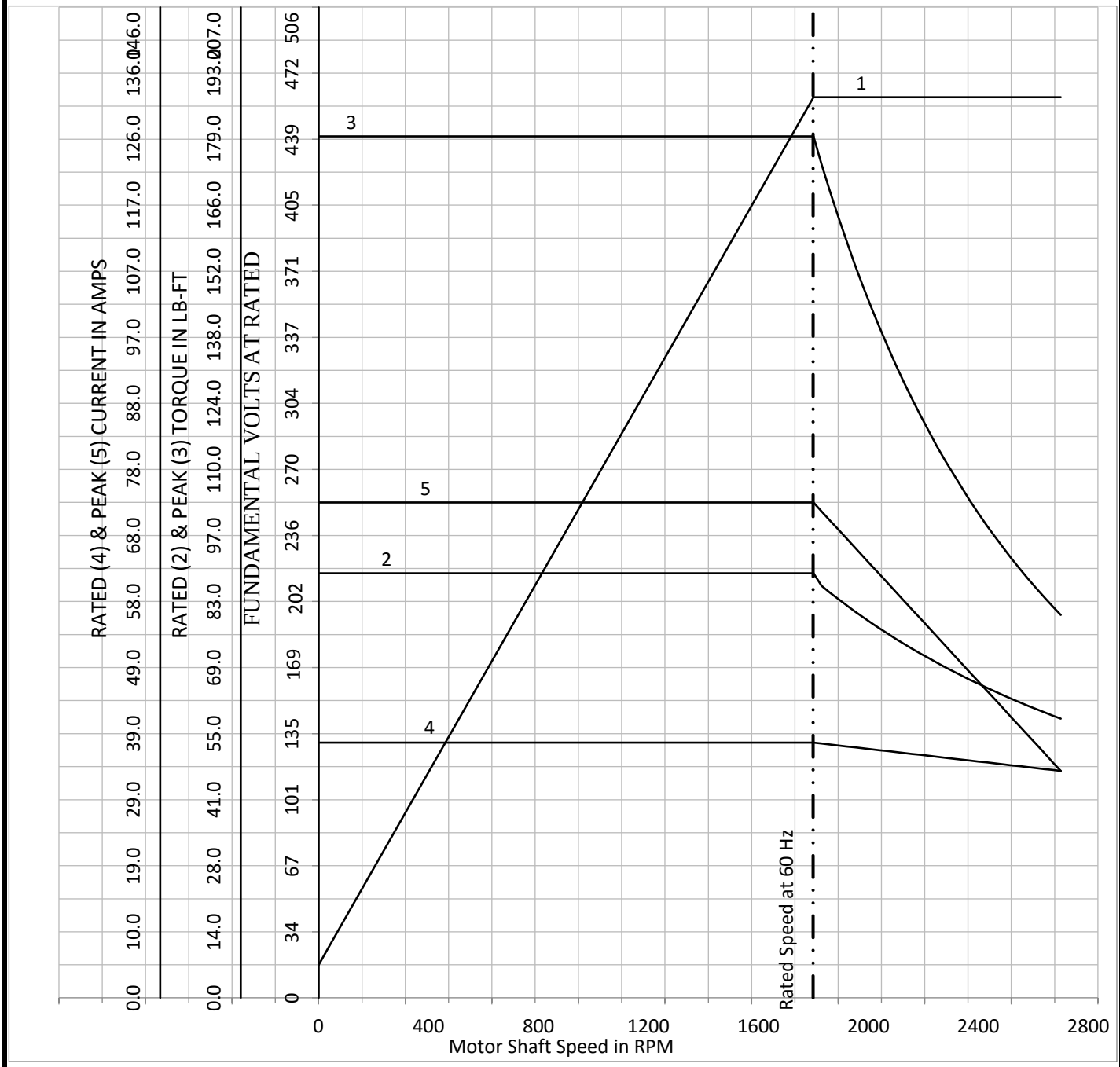
| | |
|---|---|
| MAX SAFE RPM | 2700 |
| Base Volt | 460 |
| NL AMPS | 17.90 |
| Slips(HZ) | 0.78 |
| WK2 (LB-FT2) | 4.470 |

WYE CONN EQ CKT OHMS PER PHASE (BASE RATING, 20C)

| | | | |
|---|---|---|---|
| R1 | 0.107 | X1 | 0.492 |
| R2 | 0.515 | X2 | 0.443 |
| R2B | 0.075 | X2B | 0.692 |
| R2E | 0.022 | XM | 12.800 |

Vector PWM Inverer Duty

Variable Speed AC Motor Curves




Calculated Data

Data Valid For Nameplate Speed Range only

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**A-C MOTOR PERFORMANCE CURVES**

**10WGY538**

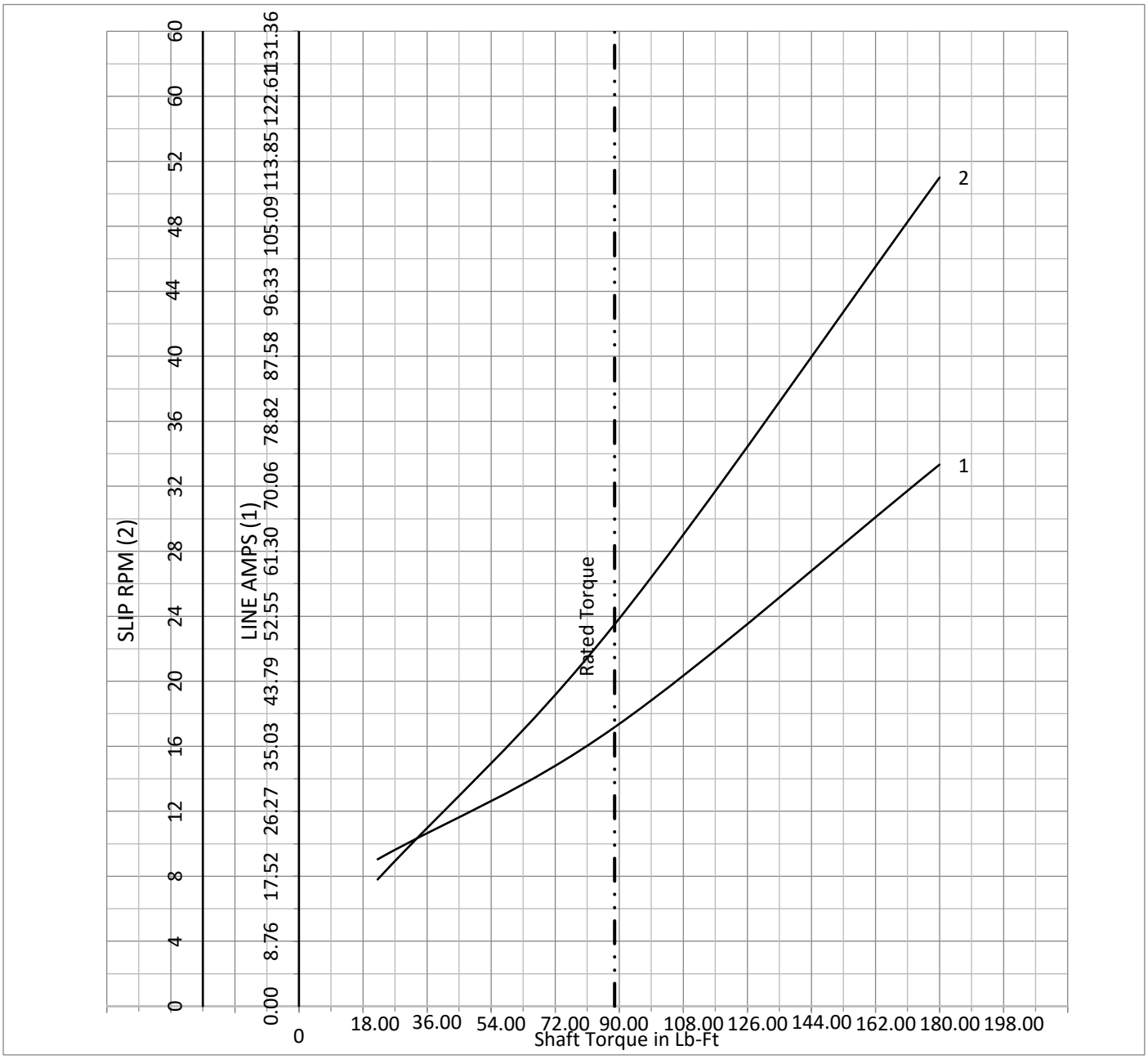
Record: 52925

ZDVSCP4104T - 30HP, 1760RPM, 3PH, 60HZ, 286TC, 1056M, TEFC, F

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| VOLTS | 208/460 | MAX SAFE RPM | 2700 | WYE CONN EQ CKT OHMS PER PHASE (BASE RATING, 20C) | | | |
| FULL AMPS | 79/38 | Base Volt | 460 | R1 | 0.107 | X1 | 0.492 |
| HP | 30 HP | NL AMPS | 17.90 | R2 | 0.515 | X2 | 0.443 |
| BASE SPEED | 1776.5 | Slips(HZ) | 0.78 | R2B | 0.075 | X2B | 0.692 |
| PHASE/HZ | 3/60 | WK2 (LB-FT2) | 4.470 | R2E | 0.022 | XM | 12.800 |

Vector PWM Inverer Duty

Vaiable Speed AC Motor Curves




Calculated Data

Data Valid For Nameplate Speed Range only

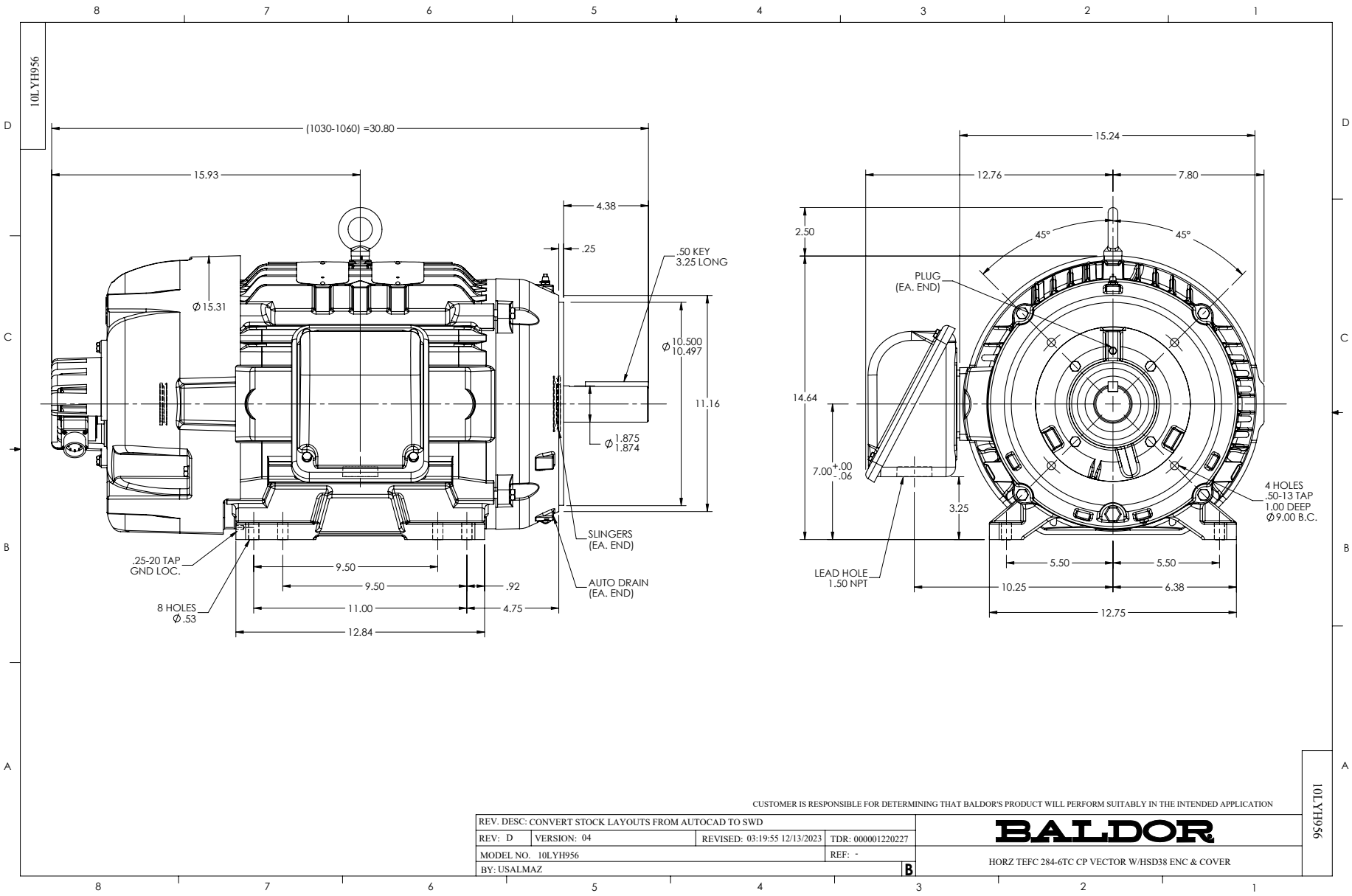
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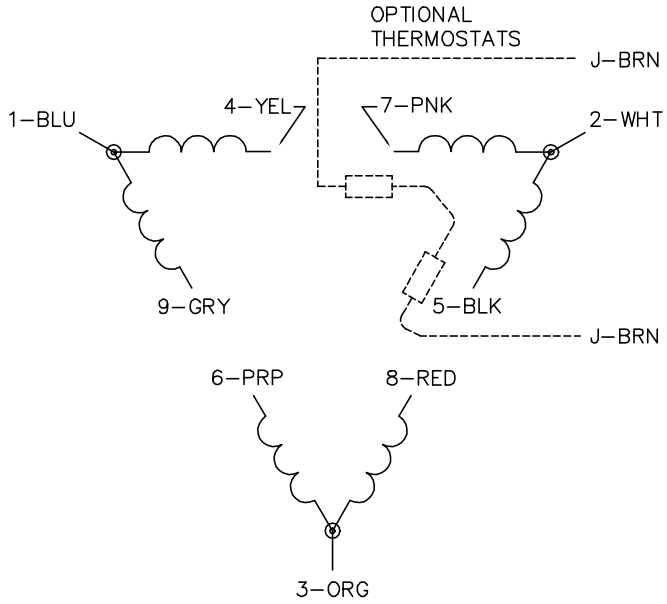
**A-C MOTOR PERFORMANCE CURVES**

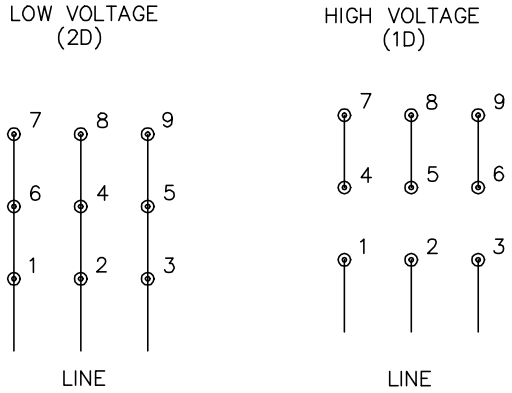
**10WGY538**

Record: 52925


10LYH956
(1030-1060) =30.80
15.93
4.38
.25
.50 KEY
3.25 LONG
Ø15.31
Ø10.500
10.497
11.16
Ø1.875
1.874
.25-20 TAP
GND LOC.
9.50
9.50
.92
8 HOLES
Ø.53
11.00
4.75
12.84
SLINGERS
(EA. END)
AUTO DRAIN
(EA. END)
15.24
12.76
7.80
2.50
45°
45°
PLUG
(EA. END)
14.64
7.00 +.00 -.06
3.25
4 HOLES
.50-13 TAP
1.00 DEEP
Ø9.00 B.C.
LEAD HOLE
1.50 NPT
5.50
5.50
10.25
6.38
12.75
CUSTOMER IS RESPONSIBLE FOR DETERMINING THAT BALDOR'S PRODUCT WILL PERFORM SUITABLY IN THE INTENDED APPLICATION
REV. DESC: CONVERT STOCK LAYOUTS FROM AUTOCAD TO SWD
REV: D
VERSION: 04
REVISED: 03:19:55 12/13/2023
TDR: 000001220227
MODEL NO. 10LYH956
REF: -
BY: USALMAZ
B
BALDOR
HORZ TEFC 284-6TC CP VECTOR W/HSD38 ENC & COVER
10LYH956

CD0180




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: ENBRIR0 |
| MTL: – | | |

BALDOR - RELIANCE®

3PH, DV, 9 LEADS, DELTA CONNECTION

SH 1 of 1