

BALDOR® • RELIANCE 

Product Information Packet

IDVSM4103T

25HP, 1775RPM, 3PH, 60HZ, 284TC, 1054M, TEFC, F

| Part Detail | | | | | | | |
|-------------|--------|-------------|------------|-------------|--------|---------------|------------|
| Revision: | C | Status: | PRD/A | Change #: | | Proprietary: | No |
| Type: | AC | Elec. Spec: | 10WGZ651 | CD Diagram: | CD0180 | Mfg Plant: | |
| Mech. Spec: | 10H810 | Layout: | 10LYH810 | Poles: | 04 | Created Date: | 12-13-2017 |
| Base: | RG | Eff. Date: | 06-27-2018 | Leads: | 9#10 | | |

| Specs | | | |
|---------------------------------|-------------------------|--------------------------------|-----------------------|
| Catalog Number: | IDVSM4103T | Insulation Class: | F |
| Enclosure: | TEFC | Inverter Code: | Inverter Duty |
| Frame: | 284TC | KVA Code: | J |
| Frame Material: | Iron | Lifting Lugs: | Standard Lifting Lugs |
| Output @ Frequency: | 25.000 HP @ 60 HZ | Locked Bearing Indicator: | Locked Bearing |
| Synchronous Speed @ Frequency: | 1800 RPM @ 60 HZ | Motor Lead Quantity/Wire Size: | 9 @ 10 AWG |
| Voltage @ Frequency: | 460.0 V @ 60 HZ | Motor Lead Exit: | Ko Box |
| | 230.0 V @ 60 HZ | Motor Lead Termination: | Flying Leads |
| XP Class and Group: | None | Motor Type: | 1054M |
| XP Division: | Not Applicable | Mounting Arrangement: | F1 |
| Agency Approvals: | CSA | Power Factor: | 81 |
| | UR | Product Family: | General Purpose |
| Auxillary Box: | No Auxillary Box | Pulley End Bearing Type: | Ball |
| Auxillary Box Lead Termination: | None | Pulley Face Code: | C-Face |
| Base Indicator: | Rigid | Pulley Shaft Indicator: | Standard |
| Bearing Grease Type: | Polyrex EM (-20F +300F) | Rodent Screen: | None |
| Blower: | None | Shaft Extension Location: | Double Shaft |
| Current @ Voltage: | 31.000 A @ 460.0 V | Shaft Ground Indicator: | No Shaft Grounding |

| | | | |
|---------------------------------------|---------------------------|------------------------------------|----------------------------|
| | 62.000 A @ 230.0 V | Shaft Rotation: | Reversible |
| | 64.000 A @ 208.0 V | Shaft Slinger Indicator: | Shaft Slinger |
| Design Code: | A | Speed Code: | Single Speed |
| Drip Cover: | No Drip Cover | Motor Standards: | NEMA |
| Duty Rating: | CONT | Starting Method: | Direct on line |
| Electrically Isolated Bearing: | Not Electrically Isolated | Thermal Device - Bearing: | NONE (OLD) |
| Feedback Device: | NO FEEDBACK | Thermal Device - Winding: | Normally Closed Thermostat |
| Front Face Code: | Standard | Vibration Sensor Indicator: | No Vibration Sensor |
| Front Shaft Indicator: | Standard | Winding Thermal 1: | None |
| Heater Indicator: | No Heater | Winding Thermal 2: | None |

| Nameplate NP3302L | |
|-------------------|---------------------|
| CAT NO | IDVSM4103T |
| SPEC. | 10H810Z651G1 |
| FRAME | 284TC HP 25 TE |
| VOLTS | 230/460 |
| MAG CUR | 27.2/13.6 FLA 62/31 |
| RPM | 1775 RPM MAX 2700 |
| HZ | 60 PH 3 CLASS F |
| SER.F. | 1.00 SL HZ 0.8 |
| NEMA-NOM-EFF | 93.6 WK2 4.13 |
| RATING | 40C AMB-CONT |
| DE BRG | 6311 ODE BRG 6309 |
| CC | 010A SN |
| | 1.5:1 CHP PWM |
| | |

| Parts List | | |
|-------------|--|----------|
| Part Number | Description | Quantity |
| SA349122 | SA 10H810Z651G1 | 1.000 EA |
| RA337720 | RA 10H810Z651G1 | 1.000 EA |
| 09FN3001D02 | EXTERNAL FAN, PLASTIC | 1.000 EA |
| 10CB3000SP | STD KO BOX MODEL 310,312,314 MTRS W/2.00 | 1.000 EA |
| 12GS1000SP | GASKET | 1.000 EA |
| 10XN3118K12 | 5/16-18 X .75 GRADE 5, ZINC PLATED | 4.000 EA |
| HW1001A31 | LOCKWASHER 5/16, ZINC PLT.591 OD, .319 I | 4.000 EA |
| WD1000B25 | GND LUG, BURNDY L125HP OR T&B L125HP-BB | 1.000 EA |
| 19XW3118G08 | .31-18X.50,HEX WSHR HD,TAPTITE 2,GREEN | 1.000 EA |
| 10EP1104A01 | FR ENDPLATE, MACH | 1.000 EA |
| HA4017A11 | 1/8 X 2.75 GREASE EXT (F/S) | 1.000 EA |
| 10XN3816K28 | 3/8-16 X 1.75 HEX HD CAP SCREW, GRADE 5 | 4.000 EA |
| HW1001A38 | LOCKWASHER 3/8, ZINC PLT .688 OD, .382 I | 4.000 EA |
| HW5100A11 | W3917-042 WVY WSHR (WB) | 1.000 EA |
| 10XN2520K32 | 1/4-20 X 2.00 HX HD SCRW GRADE 5, ZINC P | 2.000 EA |
| HW1001A25 | LOCKWASHER 1/4, ZINC PLT .493 OD, .255 I | 2.000 EA |
| 10EP1305A01 | PU ENDPLATE, MACH | 1.000 EA |
| HW4600B40 | V-RING SLINGER 2.000 X 2.680 X .28 VITON | 1.000 EA |
| 10XN3816K28 | 3/8-16 X 1.75 HEX HD CAP SCREW, GRADE 5 | 4.000 EA |
| HW1001A38 | LOCKWASHER 3/8, ZINC PLT .688 OD, .382 I | 4.000 EA |
| 10XN3118K40 | 5/16-18 X 2.50" HEX HD, GRADE 5 | 4.000 EA |
| HW1001A31 | LOCKWASHER 5/16, ZINC PLT.591 OD, .319 I | 4.000 EA |
| 10FH1007A21 | FAN COVER, MACH FOR DBL SHF MTRS | 1.000 EA |
| 10XN3118K20 | 5/16-18 X 1 1/4 GRADE 5 STEEL ZC PLATED | 3.000 EA |

| Parts List (continued) | | |
|------------------------|--|----------|
| Part Number | Description | Quantity |
| HW1001A31 | LOCKWASHER 5/16, ZINC PLT.591 OD, .319 I | 3.000 EA |
| HA6881 | BEI HS35 THRU SHAFT ENCODER PROTECTIVE C | 1.000 EA |
| 10XN2520K12 | 1/4-20 X.75 GRD 5 | 2.000 EA |
| HW1000A25 | 1/4 SAE FLAT WASHER (FS) | 2.000 EA |
| 10CB3500SP | CONDUIT BOX LID, CAST | 1.000 EA |
| 10GS1000SP | GASKET, CONDUIT BOX LID | 1.000 EA |
| 51XW2520A12 | SCREW, HEX SER SLT HD, ZN, 1/4-20 X .75 | 4.000 EA |
| HW2501H28 | KEY, 1/2 SQ X 3.250 | 1.000 EA |
| LB1115N | LABEL,LIFTING DEVICE (ON ROLLS) | 1.000 EA |
| HW4500A21 | 1618BALEMITE FITTING 825 UNIVERSAL | 1.000 EA |
| HW4500A17 | 317400 ALEMITE GREASE RELIEF | 1.000 EA |
| HA4054 | SHORT T-DRAIN FITTING, .125" N.P.T. | 1.000 EA |
| HA4051A00 | PLASTIC CAP FOR GREASE FITTING | 1.000 EA |
| MJ1000A02 | GREASE, POLYREX EM EXXON (USe 4824-15A) | 0.130 LB |
| HW4500A03 | GREASE FITTING, .125 NPT 1610(ALEMITE) 8 | 1.000 EA |
| HW4500A17 | 317400 ALEMITE GREASE RELIEF | 1.000 EA |
| HA4054 | SHORT T-DRAIN FITTING, .125" N.P.T. | 1.000 EA |
| HA4051A00 | PLASTIC CAP FOR GREASE FITTING | 1.000 EA |
| HW2500A25 | WOODRUFF KEY USA #1008 #BLOW CARBON STEE | 1.000 EA |
| 51XB1214A20 | 12-14X1.25 HXWSSLD SERTYB | 1.000 EA |
| MG1025N19 | MUNSELL 8.5BG 3.57/2.0, GLOSS 30, B/G, | 0.070 GA |
| 85XU0407S04 | 4X1/4 U DRIVE PIN STAINLESS | 2.000 EA |
| LB1119N | WARNING LABEL | 1.000 EA |
| LC0181 | CONNECTION LABEL | 1.000 EA |

Product Information Packet: IDVSM4103T - 25HP,1775RPM,3PH,60HZ,284TC,1054M,TEFC,F

| | | |
|----------|---|----------|
| NP3302L | ALUM INV UL CSA CC (W/OUT DESIGN FIELD) | 1.000 EA |
| 12PA1000 | PACKAGING GROUP PRINT PK1024A06 | 1.000 EA |
| MN416A01 | TAG-INSTAL-MAINT no wire (1200/bx) 5/18 | 1.000 EA |

| | | | | | | | | |
|------------|---------|--------------|-------|---|-------|-----|--------|--|
| NP VOLTS | 230/460 | MAX SAFE RPM | 2700 | WYE CONN EQ CKT OHMS PER PHASE (BASE RATING, 20C) | | | | |
| NP AMPS | 62/31 | Base Volt | 460 | R1 | 0.121 | X1 | 0.578 | |
| HP | 25 HP | NL AMPS | 13.60 | R2 | 0.588 | X2 | 0.512 | |
| BASE SPEED | 1778 | Slips(Hz) | 0.74 | R2B | 0.086 | X2B | 0.790 | |
| PHASE/Hz | 3/60 | Wk2 () | 0.000 | R2E | 0.025 | XM | 16.600 | |

Rated Full Load Data



| | RPM | HP | Torque | Volts | Freq-Hz | Amps |
|------------|--------|------|--------|-------|---------|------|
| Base Speed | 1777.8 | 25.1 | 74.0 | 460 | 60 | 30.6 |
| Max Speed | 2666 | 25.1 | 49.4 | 460 | 90 | 27.9 |
| Min Speed | 0 | 0.0 | 74.0 | 15.59 | 0.74 | 30.6 |

Load Performance at Base Speed

| | RPM | HP | Torque | Volts | Freq-Hz | Amps |
|-----------|--------|------|--------|-------|---------|------|
| No Load | 1798.9 | 0.0 | 0.0 | 460 | 60 | 13.6 |
| 1/4 | 1794.1 | 6.2 | 18.2 | 460 | 60 | 15.3 |
| 1/2 | 1789.3 | 12.6 | 36.9 | 460 | 60 | 19.3 |
| 3/4 | 1783.5 | 18.8 | 55.3 | 460 | 60 | 24.6 |
| Full Load | 1777.8 | 25.1 | 74.0 | 460 | 60 | 30.6 |
| O/L | 1753 | 50.1 | 150.0 | 460 | 60 | 59.4 |

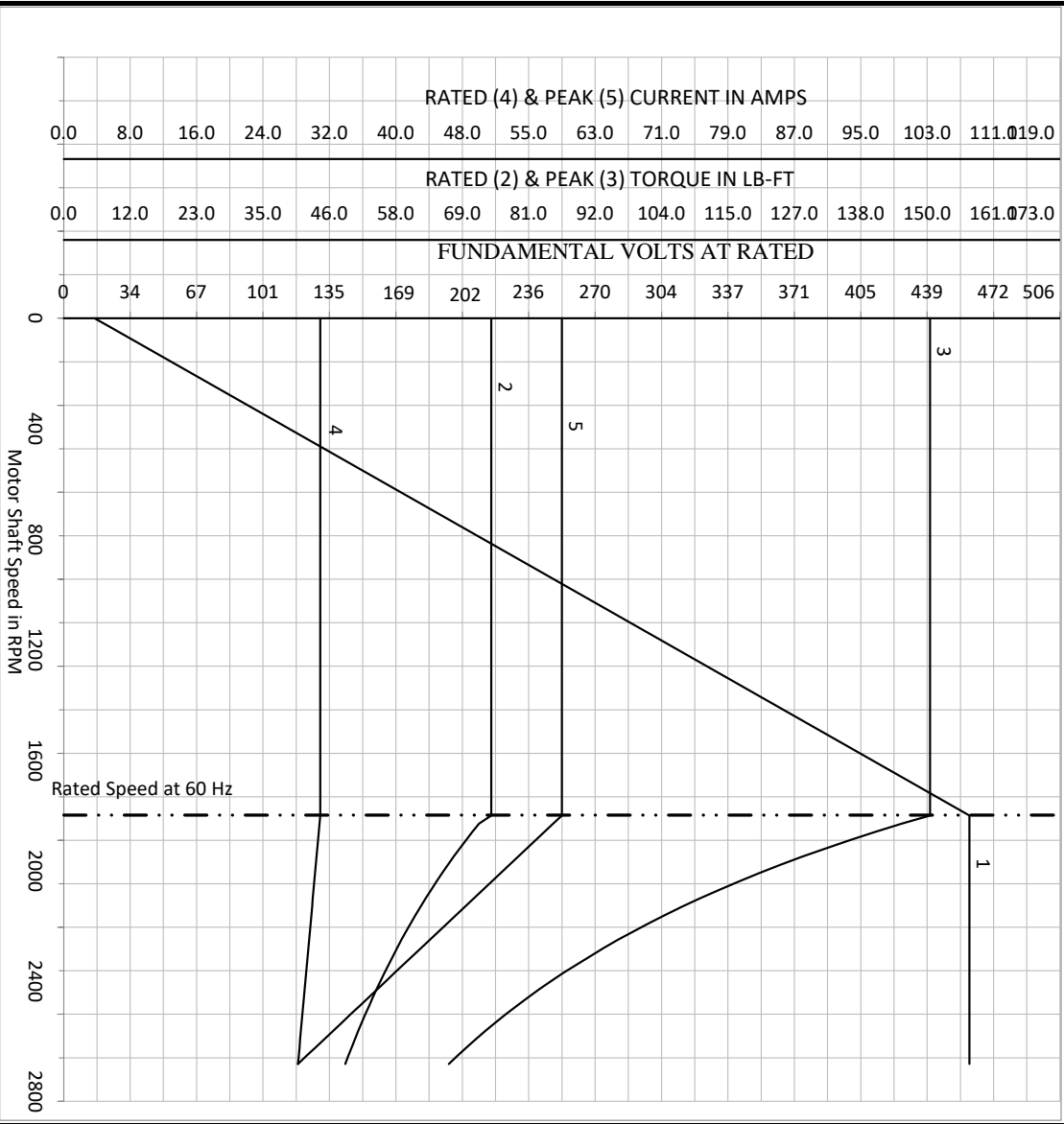
| Blower Data | Volts | Ph/Hz | FL Amps | LR Amps | Frame | CFM |
|-------------|-------|-------|---------|---------|-------|-----|
| | | | | | | |

Remarks: Calculated Data
Vector PWM Inverter Duty

| | | | | |
|---|--------|------------|---|-----------------|
|  | DR BY | USBRRANI | A-C MOTOR PERFORMANCE CURVES | 10WGZ651 |
| | CK BY | USBRRANI | | |
|  | APP BY | USBRRANI | Record: 68462 | |
| A MEMBER OF THE ABB GROUP | DATE | 12/13/2017 | | |

| | | | | | | | |
|------------|------------|--------------|-------|---|-------|-----|--------|
| NP VOLTS | 230/460 | MAX SAFE RPM | 2700 | WYE CONN EQ CKT OHMS PER PHASE (BASE RATING, 20C) | | | |
| NP AMPS | 62/31 | Base Volt | 460 | R1 | 0.121 | X1 | 0.578 |
| HP | 25 HP | NL AMPS | 13.60 | R2 | 0.588 | X2 | 0.512 |
| BASE SPEED | 1777.80005 | Slips(HZ) | 0.74 | R2B | 0.086 | X2B | 0.790 |
| PHASE/HZ | 3/60 | WK2 () | 0.000 | R2E | 0.025 | XM | 16.600 |

Variable Speed AC Motor Curves
Vector PWM Inverter Duty



Calculated Data
Data Valid For Nameplate Speed Range only

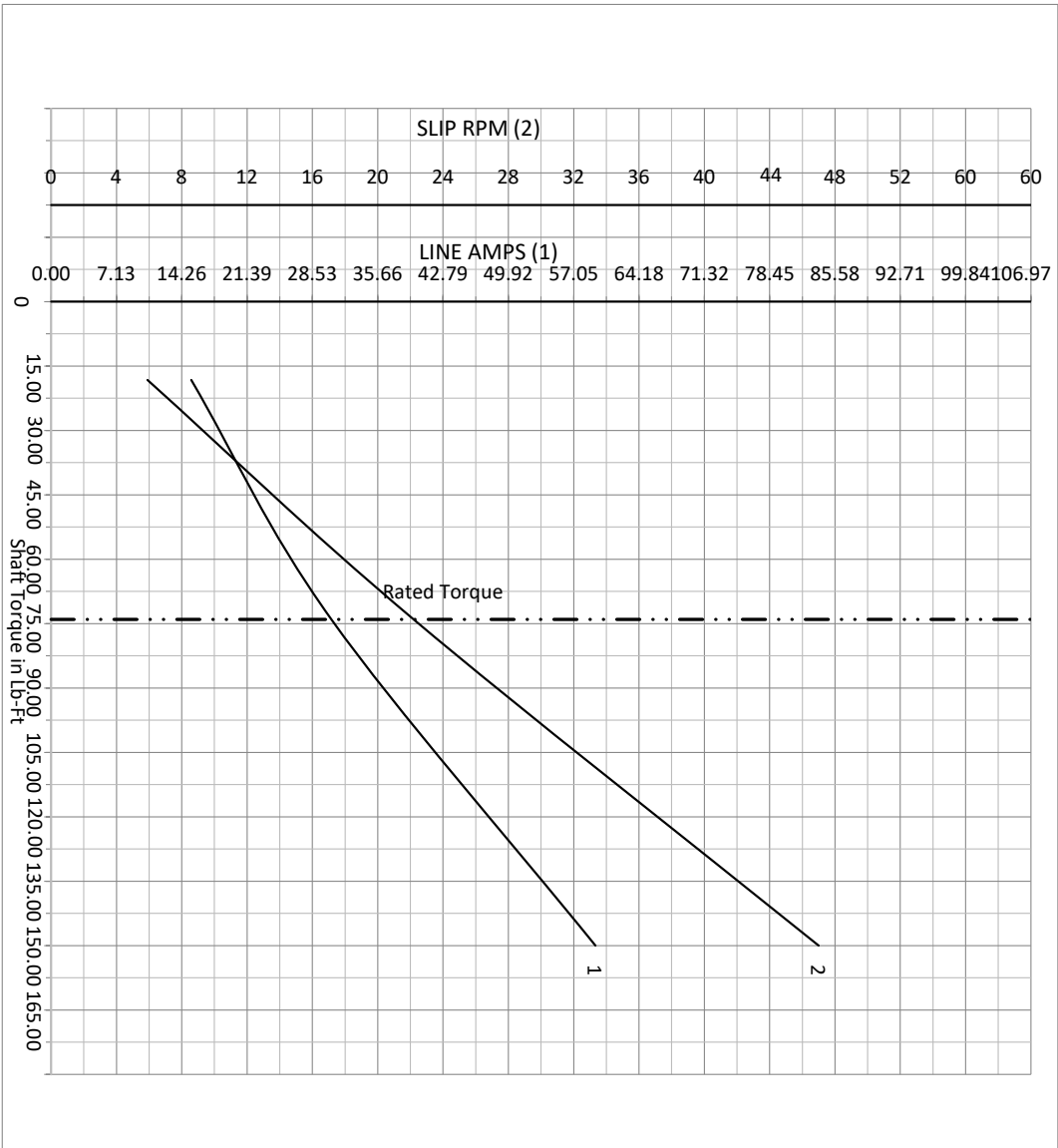
BALDOR
A MEMBER OF THE ABB GROUP

DR BY USBRRANI
CK BY
APP BY USBRRANI
DATE 12/13/2017

A-C MOTOR PERFORMANCE CURVES
10WGZ651
Record: 68462

| | | | | | | | |
|------------|-------------|--------------|-------|---|-------|-----|--------|
| NP VOLTS | 230/460 | MAX SAFE RPM | 2700 | WYE CONN EQ CKT OHMS PER PHASE (BASE RATING, 20C) | | | |
| NP AMPS | 62/31 | Base Volt | 460 | R1 | 0.121 | X1 | 0.578 |
| HP | 25 HP | NL AMPS | 13.60 | R2 | 0.588 | X2 | 0.512 |
| BASE SPEED | 1777.800049 | Slips(HZ) | 0.74 | R2B | 0.086 | X2B | 0.790 |
| PHASE/HZ | 3/60 | WK2 () | 0.000 | R2E | 0.025 | XM | 16.600 |

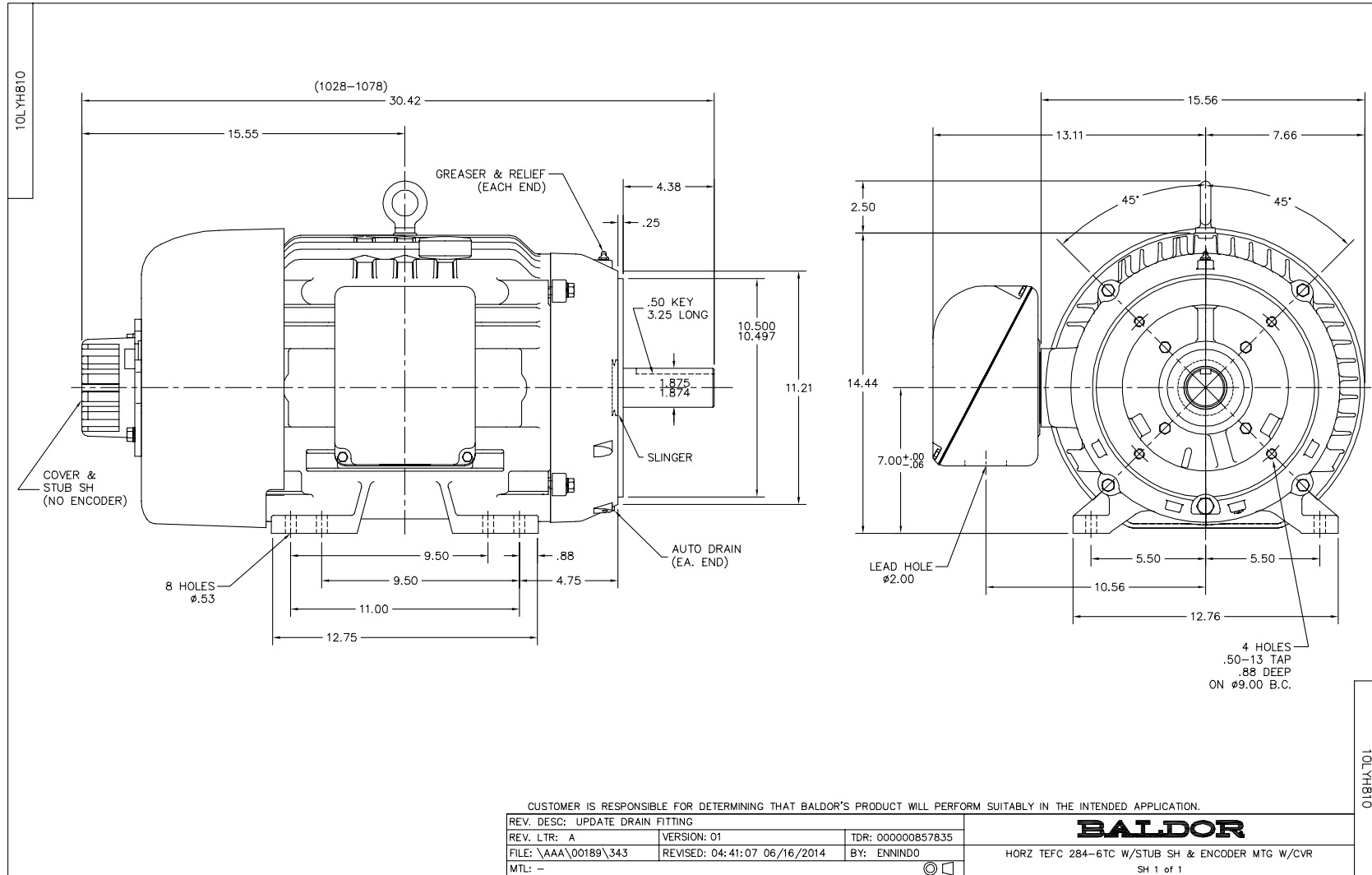
Vector PWM Inverter Duty
Variable Speed AC Motor Curves



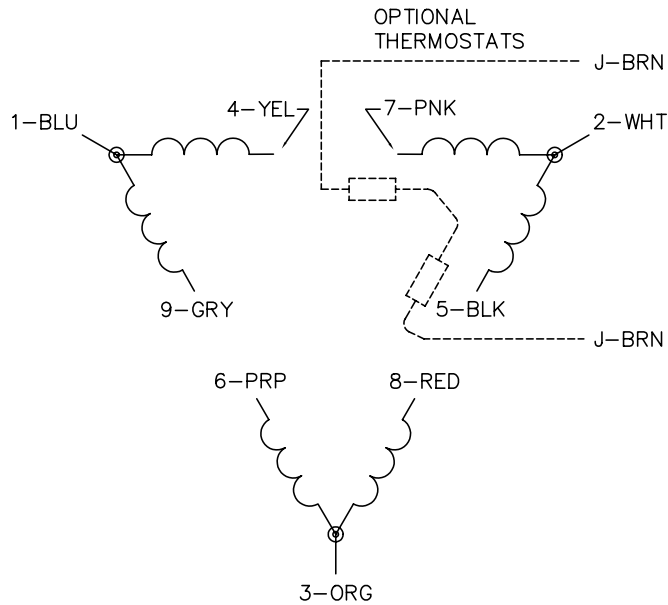
Calculated Data

Data Valid For Nameplate Speed Range only

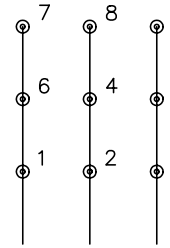
| | | | |
|--|--------|------------|---|
| <p>BALDOR A MEMBER OF THE ABB GROUP</p> | DR BY | USBRRANI | <p>A-C MOTOR PERFORMANCE CURVES</p> <p>10WGZ651</p> <p>Record: 68462</p> |
| | CK BY | | |
| | APP BY | USBRRANI | |
| | DATE | 12/13/2017 | |



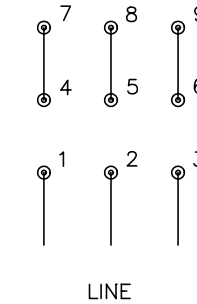
CD0180



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.

| | | | |
|---|---------|------------------------|--------------|
| REV. DESC: REVISE TO SHOW OPTIONAL COLORS | | | |
| REV. LTR: C | BY: JLP | REVISED: 01/21/99 2:28 | TDR: 0171435 |
| 0810D0 | | FILE: AAA00005148 | MDL: - |
| | | MTL: - | |

BALDOR ELECTRIC Co.

3PH, DV, 9 LEADS, DELTA CONNECTION

CD0180

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