

ABB BALDOR RELIANCE III

Customer information packet

ZDNM2334T

20HP, 1780RPM, 3PH, 60HZ, 284T, 1056M, TENV, F1

Class - None

Division - Not Applicable

Specifications

| | |
|---------------------------------------|--|
| Enclosure | TENV |
| Frame | 284T |
| 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 | 20.000 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 | 26.000 A @ 460.0 V 52.000 A @ 230.0 V |
| Design Code | A |
| Drip Cover | No Drip Cover |
| Duty Rating | CONT |
| Efficiency @ 100% Load | 93.0 % |
| Electrically Isolated Bearing | Not Electrically Isolated |
| Feedback Device | ENCODER |
| Front Face Code | Encoder/Feedback Device |
| Front Shaft Indicator | None |
| Heater Indicator | No Heater |
| High Voltage Full Load Amps | 26.0 a |

Part Detail

| | |
|---------------------|------------|
| Revision | AG |
| Type | AC |
| Mech. spec. | 10F679 |
| Base | |
| Status | PRD/A |
| Elec. spec. | 10GW586 |
| Layout | 10LYF679 |
| Eff. date | 06-13-2025 |
| CD Diagram | CD0005 |
| Poles | 04 |
| Leads | 9#10 |
| Proprietary | False |
| Created date | 01-01-0001 |

| | |
|--------------------------------------|----------------------------|
| Insulation Class | H |
| Inverter Code | Inverter Duty |
| KVA Code | K |
| Lifting Lugs | Standard Lifting Lugs |
| Locked Bearing Indicator | Locked Bearing |
| Max Speed | 4000 rpm |
| Motor Lead Exit | Ko Box |
| Motor Lead Quantity/Wire Size | 9 @ 10 AWG |
| Motor Lead Termination | Flying Leads |
| Motor Standards | NEMA |
| Motor Type | 1056M |
| Mounting Arrangement | F1 |
| Number of Poles | 4 |
| Overall Length | 27.36 IN |
| Power Factor | 77 |
| Product Family | General Purpose |
| Pulley End Bearing Type | Ball |
| Pulley Face Code | Standard |
| 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 | 1780 rpm |
| Speed Code | Single Speed |
| Starting Method | Direct on line |
| Thermal Device - Bearing | NONE (OLD) |
| Thermal Device - Winding | Normally Closed Thermostat |
| Vibration Sensor Indicator | No Vibration Sensor |
| Winding Thermal 1 | None |
| Winding Thermal 2 | None |

Nameplate

| NP1168L | | | | | |
|---------------------|--------------|----------------|----------|--------------|------|
| CAT NO | ZDNM2334T | | | | |
| SPEC. | 10F679W586Z1 | | | | |
| FRAME | 284T | HP | 20 TE | | |
| VOLTS | 230/460 | | | | |
| MAG CUR | 29/14.5 | FLA | 52/26 | | |
| RPM | 1780 | RPM MAX | 4000 | | |
| HZ | 60 | PH | 3 | CLASS | H |
| SER.F. | 1.00 | DES | A | SL HZ | 0.67 |
| NEMA-NOM-EFF | 93 | WK2 | 4.46 | | |
| BLWR V | PH | HZ | A | | |
| RATING | 40C AMB-CONT | | | | |
| DE BRG | 6311 | ODE BRG | 6309 | | |
| CC | 010A | SER.NO | | | |

| | | | | | | | | | |
|---|-------|------------------------------------|--|--|-------|---|-------|-----|--------|
| ABB BALDOR/460 RELIANCE III NF AMPS 52/26 | | CUSTOMER INFORMATION PACKET | | MAX SAFE RPM 2700 Base Volt 460 | | WYE CONN. EQ. CKT. OHMS PER PHASE (BASE RATING, 20C) PH, 60HZ, 284T, 1056M, TENV, F1 | | | |
| HP | 20 HP | | | NL AMPS | 14.50 | R1 | 0.131 | X1 | 0.594 |
| BASE SPEED | 1784 | | | Slips(HZ) | 0.53 | R2 | 0.644 | X2 | 0.478 |
| PHASE/HZ | 3/60 | | | WK2 (LB-FT2) | 4.440 | R2B | 0.094 | X2B | 0.811 |
| | | | | | | R2E | 0.027 | XM | 17.600 |

Rated Full Load Data

| | RPM | HP | Torque | Volts | Freq-Hz | Amps |
|------------|------|------|--------|-------|---------|------|
| Base Speed | 1784 | 20.3 | 59.8 | 460 | 60 | 26.1 |
| Max Speed | 2676 | 20.3 | 39.8 | 460 | 90 | 23.5 |
| Min Speed | 0 | 0.0 | 59.8 | 13.24 | 0.53 | 26.1 |

Load Performance at Base Speed

| | RPM | HP | Torque | Volts | Freq-Hz | Amps |
|-----------|------|------|--------|-------|---------|------|
| No Load | 1799 | 0.0 | 0.0 | 460 | 60 | 14.5 |
| 1/4 | 1796 | 5.1 | 15.0 | 460 | 60 | 15.6 |
| 1/2 | 1792 | 10.2 | 30.0 | 460 | 60 | 18.2 |
| 3/4 | 1788 | 15.3 | 44.8 | 460 | 60 | 21.7 |
| Full Load | 1784 | 20.3 | 59.8 | 460 | 60 | 26.1 |
| O/L | 1765 | 40.7 | 121.0 | 460 | 60 | 47.5 |

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

Remarks: Calculated Data
Vector PWM Inverter Duty



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CK BY
APP BY USBRRANI
DATE 9/8/2017

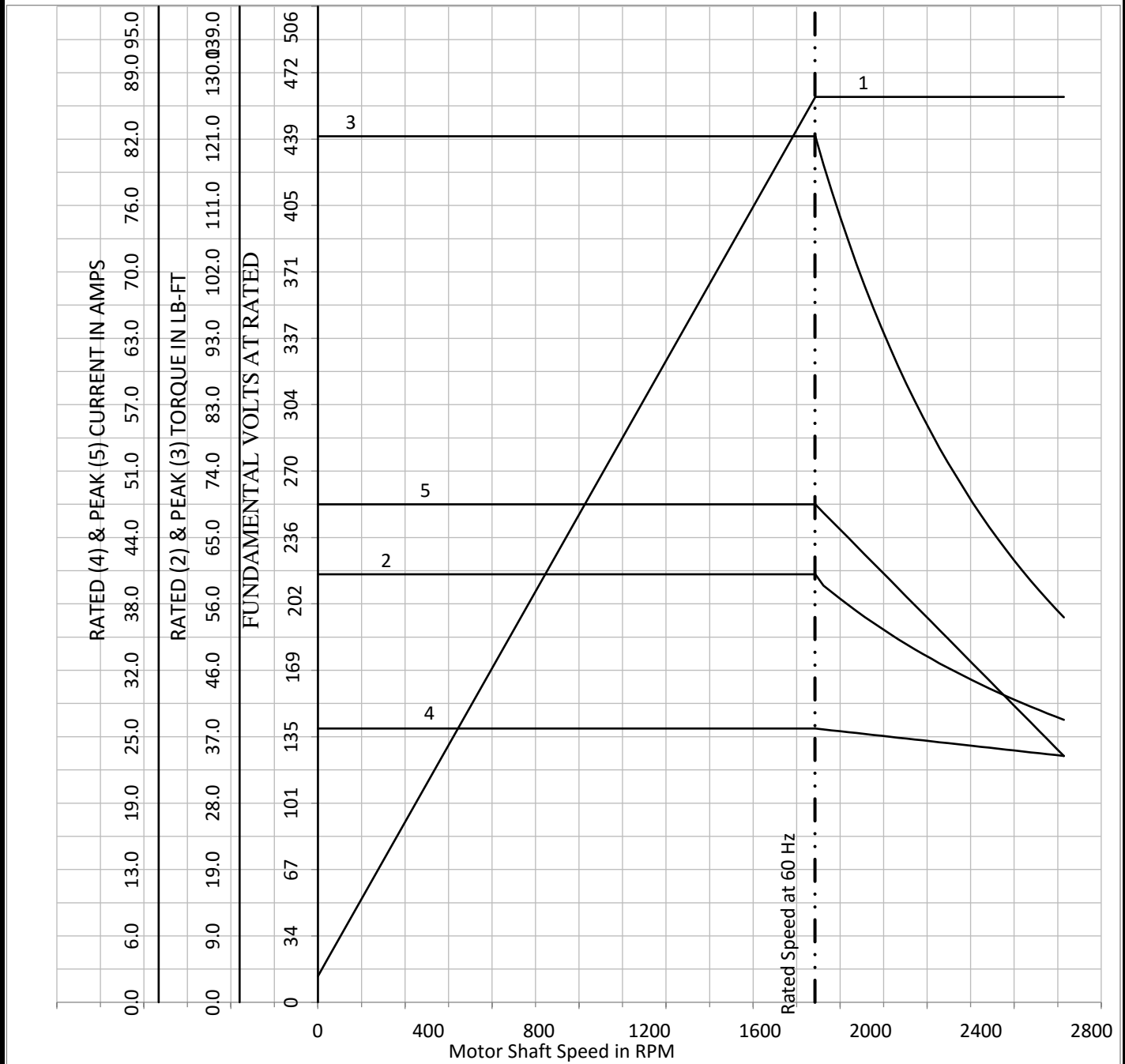
A-C MOTOR PERFORMANCE CURVES
10GW586
Record: 2299

| | |
|---------------------------|-------|
| MAX SAFE RPM | 2700 |
| Base Volt | 460 |
| NL AMPS | 14.50 |
| Slips(HZ) | 0.53 |
| WK2 (LB-FT ²) | 4.440 |

| | | |
|---|-------|-----------|
| WYE CONN EQ CKT OHMS PER PHASE (BASE RATING, 20C) | | |
| R1 | 0.131 | X1 0.594 |
| R2 | 0.644 | X2 0.478 |
| R2B | 0.094 | X2B 0.811 |
| R2E | 0.027 | XM 17.600 |

HP 20 HP
 BASE SPEED 1784
 PHASE/HZ 3/60

Vector PWM Inverter Duty
 Variable Speed AC Motor Curves



Calculated Data

Data Valid For Nameplate Speed Range only



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**A-C MOTOR
 PERFORMANCE
 CURVES**

10GW586

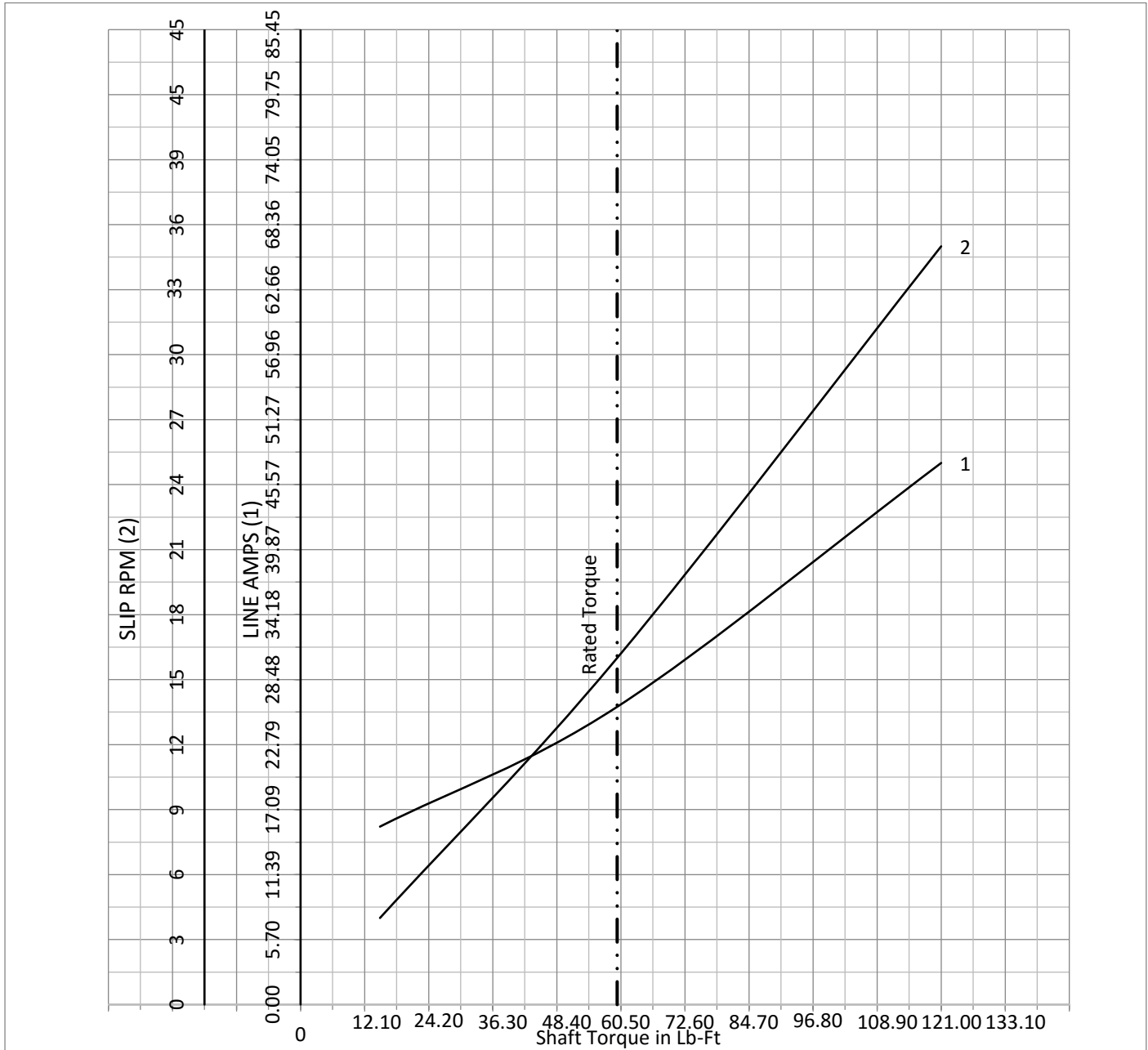
Record: 2299

| | |
|--------------|-------|
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|---|-------|-----|--------|
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HP 20 HP
BASE SPEED 1784
PHASE/HZ 3/60

Vector PWM Inverter Duty
Variable Speed AC Motor Curves



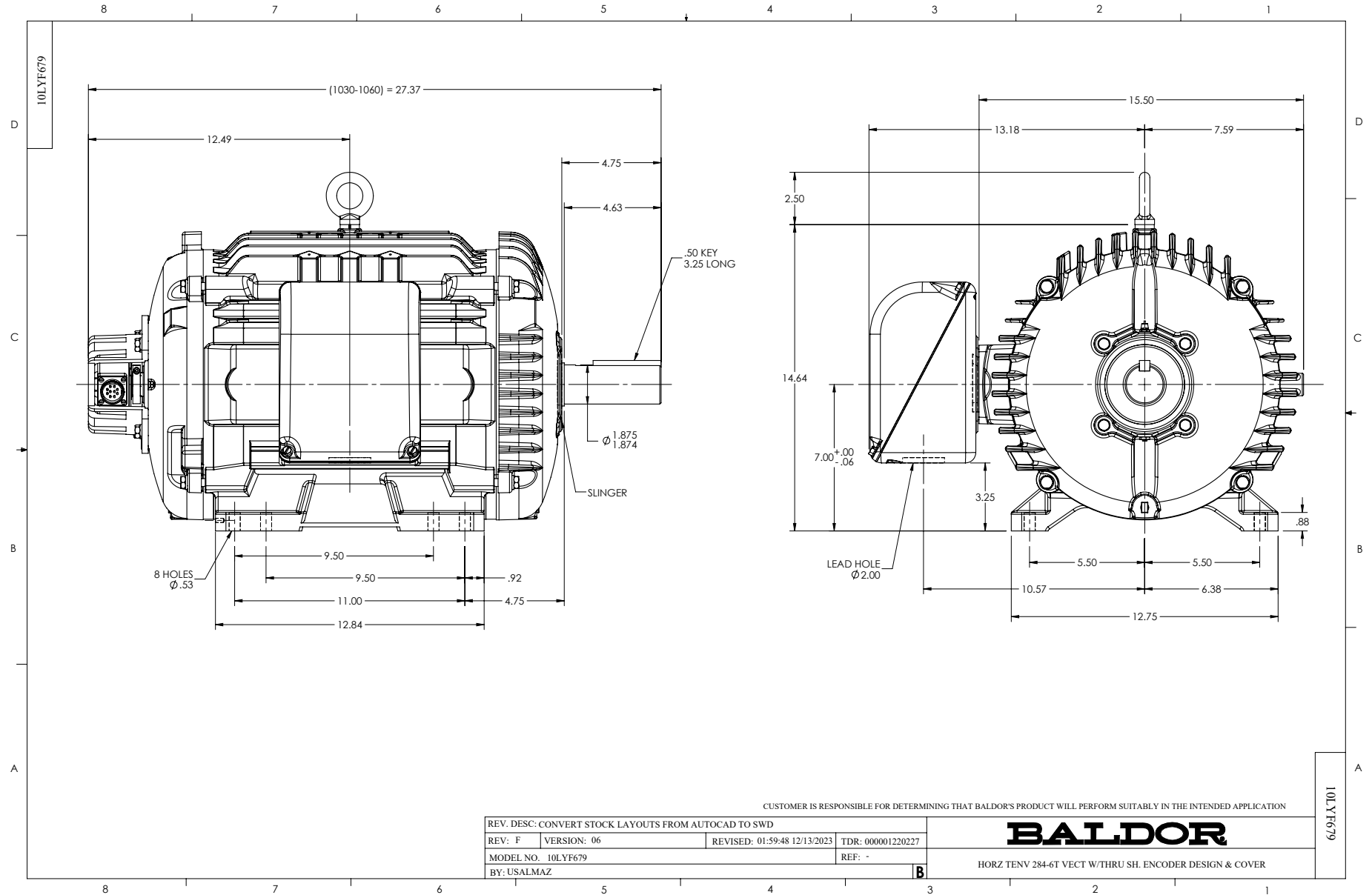
Calculated Data

Data Valid For Nameplate Speed Range only



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CK BY
APP BY USBRRAN1
DATE 9/8/2017

A-C MOTOR PERFORMANCE CURVES
10WG586
Record: 2299



CD0005



LOW VOLTAGE
(2Y)



LINE

HIGH VOLTAGE
(1Y)



LINE

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.

CD0005

REV. DESC: REVISE TO SHOW OPTIONAL COLORS

REV. LTR: E BY: JLP REVISED: 01/19/99 10:15 TDR: 0171435

500000

FILE: AAA00005140

MDL: -

MTL: -

BALDOR ELECTRIC Co.

3PH, DV, 9 LEADS