

BALDOR® • RELIANCE 

Product Information Packet

FDEM4114T

50HP,3540RPM,3PH,60HZ,326TS,1252M,TEFC,F

| Part Detail | | | | | | | |
|-------------|--------|-------------|------------|-------------|--------|---------------|------------|
| Revision: | G | Status: | PRD/A | Change #: | | Proprietary: | No |
| Type: | AC | Elec. Spec: | 12WGY291 | CD Diagram: | CD0180 | Mfg Plant: | |
| Mech. Spec: | 12H685 | Layout: | 12LYH685 | Poles: | 02 | Created Date: | 06-25-2015 |
| Base: | RG | Eff. Date: | 09-16-2019 | Leads: | 9#8 | | |

| Specs | | | |
|---------------------------------|-------------------------|--------------------------------|-----------------------|
| Catalog Number: | FDEM4114T | Heater Indicator: | No Heater |
| Enclosure: | TEFC | Insulation Class: | F |
| Frame: | 326TS | Inverter Code: | Inverter Ready |
| Frame Material: | Iron | KVA Code: | H |
| Output @ Frequency: | 50.000 HP @ 60 HZ | Lifting Lugs: | Standard Lifting Lugs |
| Synchronous Speed @ Frequency: | 3600 RPM @ 60 HZ | Locked Bearing Indicator: | Locked Bearing |
| Voltage @ Frequency: | 460.0 V @ 60 HZ | Motor Lead Quantity/Wire Size: | 9 @ 8 AWG |
| | 230.0 V @ 60 HZ | Motor Lead Exit: | Ko Box |
| XP Class and Group: | None | Motor Lead Termination: | Flying Leads |
| XP Division: | Not Applicable | Motor Type: | 1252M |
| Agency Approvals: | UR | Mounting Arrangement: | F1 |
| | CSA EEV | Power Factor: | 90 |
| | CSA | Product Family: | General Purpose |
| Auxillary Box: | No Auxillary Box | Pulley End Bearing Type: | Sealed Bearing |
| Auxillary Box Lead Termination: | None | Pulley Face Code: | Standard |
| Base Indicator: | Rigid | Pulley Shaft Indicator: | Standard |
| Bearing Grease Type: | Polyrex EM (-20F +300F) | Rodent Screen: | None |
| Blower: | None | Shaft Extension Location: | Pulley End |

| | | | |
|---------------------------------------|---------------------------|------------------------------------|---------------------|
| Current @ Voltage: | 112.000 A @ 230.0 V | Shaft Ground Indicator: | No Shaft Grounding |
| | 122.000 A @ 208.0 V | Shaft Rotation: | Reversible |
| | 56.000 A @ 460.0 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 |
| Feedback Device: | NO FEEDBACK | Thermal Device - Winding: | None |
| Front Face Code: | Standard | Vibration Sensor Indicator: | No Vibration Sensor |
| Front Shaft Indicator: | None | Winding Thermal 1: | None |
| | | Winding Thermal 2: | None |

| | | | | | | | | | | |
|--------------------------|--------------|--|-------------|------------|-----------------------|----|--|-----------|-----------|---|
| Nameplate NP3126L | | | | | | | | | | |
| CAT.NO. | FDEM4114T | | | | | | | | | |
| SPEC. | 12H685Y291G1 | | | | | | | | | |
| HP | 50 | | | | | | | | | |
| VOLTS | 230/460 | | | | | | | | | |
| AMP | 112/56 | | | | | | | | | |
| RPM | 3540 | | | | | | | | | |
| FRAME | 326TS | | | | HZ | 60 | | | PH | 3 |
| SER.F. | 1.15 | | CODE | H | DES | A | | CL | F | |
| NEMA-NOM-EFF | 93 | | PF | 90 | | | | | | |
| RATING | 40C AMB-CONT | | | | | | | | | |
| CC | 010A | | | | USABLE AT 208V | | | 122 | | |
| DE | 6312 | | | ODE | 6311 | | | | | |
| ENCL | TEFC | | SN | | | | | | | |
| | | | | | | | | | | |

| Parts List | | |
|--------------|---|----------|
| Part Number | Description | Quantity |
| SA303860 | SA 12H685Y291G1 | 1.000 EA |
| RA291012 | RA 12H685Y291G1 | 1.000 EA |
| 37FN3002C04 | EXFN, PLASTIC, 6.00 OD, 2.003 ID | 1.000 EA |
| 10CB3000SP | KOBX, CAST W/2.00 LEAD HOLE | 1.000 EA |
| 09GS1000SP | GASKET-CONDUIT BOX, 1/16 THICK LEXIDE | 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 |
| 12EP1107A156 | FREP W/"O" DRN & NO GRSR,RLF,DRN,RET HLS | 1.000 EA |
| HA3400A13 | STUD, 1/2-13 X 7" WELKER | 4.000 EA |
| HW1001A50 | LOCKWASHER 1/2, ZINC PLT.,.879 OD, .509 I | 4.000 EA |
| HW5100A13 | W4627-047 WVY WSHER | 1.000 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 |
| 12EP1106A85 | PUEP, MACH FOR 3.00 LIP SEAL | 1.000 EA |
| 10XN5013K28 | 1/2-13 X 1.75 HEX HEAD MACH SCREW,GRAD | 4.000 EA |
| HW1001A50 | LOCKWASHER 1/2, ZINC PLT.,.879 OD, .509 I | 4.000 EA |
| HW4600B37 | SEAL 2.250 X 3.000 X .375 SINGLE LIP | 1.000 EA |
| HW4600B41 | V-RING SLINGER 2.125 X 2.880 X 0.280 | 1.000 EA |
| 12FH1002SP | FAN COVER, CAST | 1.000 EA |
| HW1001A50 | LOCKWASHER 1/2, ZINC PLT.,.879 OD, .509 I | 4.000 EA |
| XY5013A12 | NUT,1/2-13,HEX,STEEL,ZINCPLATED | 4.000 EA |
| WD4100A02 | DP-1000 HEYCO PLUG OR 62MP1000 MICRO PL | 1.000 EA |

| Parts List (continued) | | |
|-------------------------------|--|-----------------|
| Part Number | Description | Quantity |
| 10CB3500SP | CONDUIT BOX LID, CAST | 1.000 EA |
| 10GS1000SP | GASKET, CONDUIT BOX LID | 1.000 EA |
| 51XW2520A12 | .25-20 X .75, TAPTITE II, HEX WSHR SLTD | 4.000 EA |
| HW2501H18 | KEY, 1/2 SQ X 2.000 | 1.000 EA |
| LB1115N | LABEL,LIFTING DEVICE (ON ROLLS) | 1.000 EA |
| HA4066A01 | PUSH IN T-DRAIN FITTING (BLACK) | 1.000 EA |
| MJ1000A02 | GREASE, MOBIL POLYREX EM - 124047 | 0.200 LB |
| HA4066A01 | PUSH IN T-DRAIN FITTING (BLACK) | 1.000 EA |
| HW2500A25 | WOODRUFF KEY USA #1008 #BLOW CARBON STEE | 1.000 EA |
| 51XB1214A20 | 12-14X1.25 HXWSSLD SERTYB | 1.000 EA |
| MG1025C02 | WILKOFASST SG, 787.105, TAN | 0.080 GA |
| 85XU0407S04 | 4X1/4 U DRIVE PIN STAINLESS | 2.000 EA |
| LB1119N | WARNING LABEL | 1.000 EA |
| LC0181 | CONNECTION LABEL | 1.000 EA |
| NP3126L | ALUM FARM DUTY SUPER-E UL CSA-EEV PREM | 1.000 EA |
| 12PA1000 | PACKAGING GROUP PRINT PK1024A06 | 1.000 EA |
| MN416A01 | TAG-INSTAL-MAINT no wire (1200/bx) 3/19 | 1.000 EA |

AC Induction Motor Performance Data

Record # 35504 - Typical performance - not guaranteed values

| | | |
|-------------------------------|--------------------|------------------------|
| Winding: 12WGY291-R005 | Type: 1252M | Enclosure: TEFC |
|-------------------------------|--------------------|------------------------|

| Nameplate Data | | | | 460 V, 60 Hz: High Voltage Connection | |
|-----------------------|--------------|--------------|----|--|-------------------------|
| Rated Output (HP) | 50 | | | Full Load Torque | 74.4 LB-FT |
| Volts | 230/460 | | | Start Configuration | direct on line |
| Full Load Amps | 112/56 | | | Breakdown Torque | 292 LB-FT |
| R.P.M. | 3540 | | | Pull-up Torque | 112 LB-FT |
| Hz | 60 | Phase | 3 | Locked-rotor Torque | 139 LB-FT |
| NEMA Design Code | A | KVA Code | H | Starting Current | 408 A |
| Service Factor (S.F.) | 1.15 | | | No-load Current | 14.9 A |
| NEMA Nom. Eff. | 93 | Power Factor | 90 | Line-line Res. @ 25°C | 0.11257 Ω |
| Rating - Duty | 40C AMB-CONT | | | Temp. Rise @ Rated Load | 77°C |
| S.F. Amps | | | | Temp. Rise @ S.F. Load | 95°C |
| | | | | Locked-rotor Power Factor | 20.9 |
| | | | | Rotor inertia | 4.07 LB-FT ² |

Load Characteristics 460 V, 60 Hz, 50 HP

| % of Rated Load | 25 | 50 | 75 | 100 | 125 | 150 | S.F. |
|-----------------|--------|--------|--------|--------|--------|--------|------|
| Power Factor | 66 | 82 | 88 | 90 | 91 | 90 | 91 |
| Efficiency | 91.1 | 93.8 | 94.2 | 93.9 | 93.2 | 92.3 | 93.5 |
| Speed | 3584.1 | 3571.8 | 3558.2 | 3544.1 | 3528.2 | 3511.2 | 3535 |
| Line amperes | 20.4 | 30.8 | 42.9 | 55.8 | 69.5 | 84.6 | 64 |

Performance Graph at 460V, 60Hz, 50.0HP Typical performance - Not guaranteed values

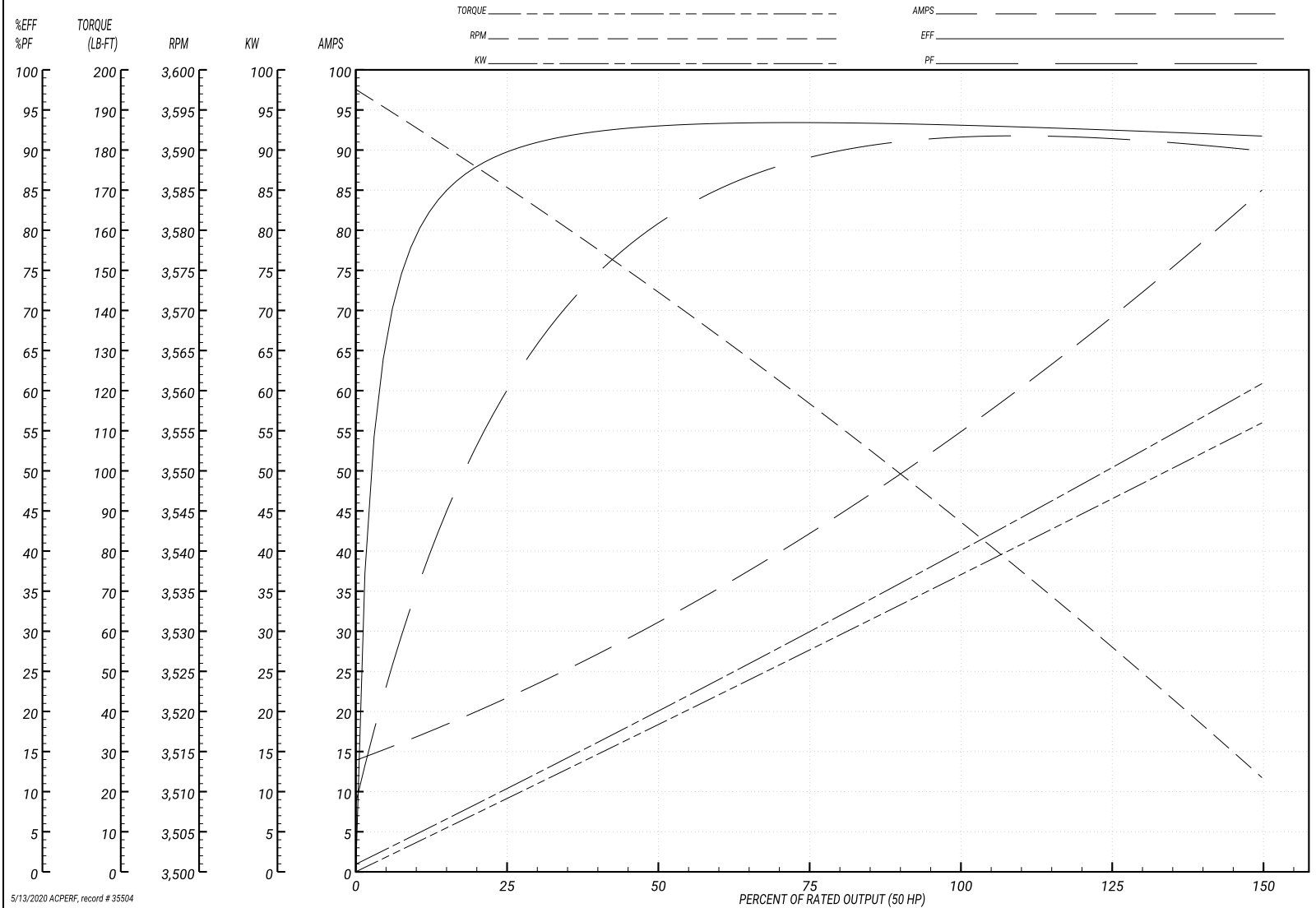
ABB Motors and Mechanical Inc.

WINDING # 12WGY291

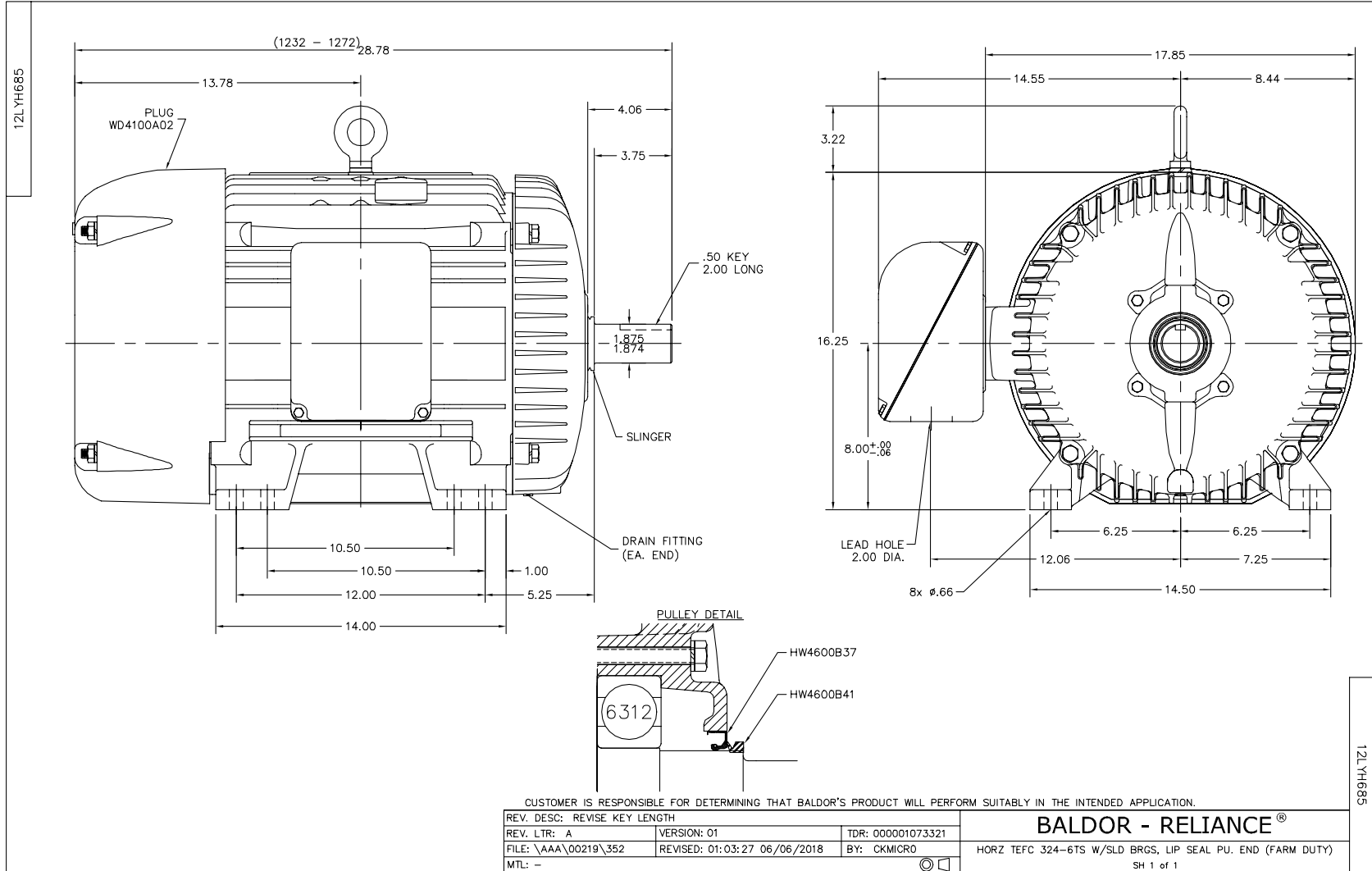
Typical performance - not guaranteed values.

50 HP 3 PH 60 HZ 3540 RPM 460 V 1252M

TORQUES(LB-FT): PO=292 PU=112 LR=139 LRA=408



5/13/2020 ACPERF, record # 35504



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

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|-----------------------------------|------------------------------|-------------------|
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| REV. LTR: D | VERSION: 01 | TDR: 000001099922 |
| FILE: \AAA\00005\148 | REVISED: 10:25:29 02/19/2019 | BY: ENBRIRO |
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BALDOR - RELIANCE®

3PH, DV, 9 LEADS, DELTA CONNECTION

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