ABB BALDOR RELIANCE

# Customer information packet

## VRBM3561T

3HP, 1710RPM, 3PH, 60HZ, 145TC, 3540M, TEFC, F1
Class - None
Division - Not Applicable

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## Specifications

| | |
|---|---|
| **Enclosure** | TEFC |
| **Frame** | 145TC |
| **Frame Material** | Aluminum |
| **Frequency** | 60.00 Hz |
| **Haz Area Class and Group** | None |
| **Haz Area Division** | Not Applicable |
| **Motor Letter Type** | Three Phase |
| **Output @ Frequency** | 3.000 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 |
| **Base Indicator** | No Mounting |
| **Bearing Grease Type** | Polyrex EM (-20F +300F) |
| **Blower** | None |
| **Current @ Voltage** | 8.800 A @ 208.0 V |
| | 8.200 A @ 230.0 V |
| | 4.100 A @ 460.0 V |
| **Design Code** | D |
| **Duty Rating** | CONT |
| **Efficiency @ 100% Load** | 84.0 % |
| **Feedback Device** | NO FEEDBACK |
| **Heater Indicator** | No Heater |
| **High Voltage Full Load Amps** | 4.1 a |
| **Insulation Class** | F |
| **Inverter Code** | Not Inverter |
| **KVA Code** | J |
| **Motor Lead Quantity/Wire Size** | 9 @ 18 AWG |
| **Motor Standards** | NEMA |

## Part Detail

| | |
|---|---|
| **Revision** | E |
| **Type** | AC |
| **Mech. spec.** | 75J035 |
| **Base** | |
| **Status** | PRD/A |
| **Elec. spec.** | 35WGG299 |
| **Layout** | 75LYJ035 |
| **Eff. date** | 01-05-2026 |
| **CD Diagram** | CD0005 |
| **Poles** | 04 |
| **Leads** | 9#18 |
| **Proprietary** | False |
| **Created date** | 03-11-2022 |

| | |
|---|---|
| **Motor Type** | 3540M |
| **Mounting Arrangement** | F1 |
| **Number of Poles** | 4 |
| **Overall Length** | 17.68 IN |
| **Power Factor** | 80 |
| **Product Family** | General Purpose |
| **Rodent Screen** | None |
| **Service Factor** | 1.15 |
| **Shaft Diameter** | 0.875 IN |
| **Shaft Rotation** | Reversible |
| **Shaft Slinger Indicator** | No Slinger |
| **Speed** | 1710 rpm |
| **Speed Code** | Single Speed |
| **Starting Method** | Direct on line |
| **Thermal Device - Winding** | None |
| **Winding Thermal 1** | None |
| **Winding Thermal 2** | None |

**Nameplate**

| NP1256L | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **CAT.NO.** | VRBM3561T | | | | | | | | |
| **SPEC.** | 75J035G299G1 | | | | | | | | |
| **HP** | 3 | | | | | | | | |
| **VOLTS** | 230/460 | | | | | | | | |
| **AMP** | 8.2/4.1 | | | | | | | | |
| **RPM** | 1710 | | | | | | | | |
| **FRAME** | 145TC | **HZ** | 60 | | | **PH** | 3 | | |
| **SER.F.** | 1.15 | **CODE** | J | **DES** | D | **CLASS** | F | | |
| **NEMA-NOM-EFF** | 84 | **PF** | 80 | | | | | | |
| **RATING** | 40C AMB-CONT | | | | | | | | |
| **CC** | | | | | | | | | |
| **DE** | 6205 | **ODE** | 6205 | | | | | | |
| **ENCL** | TEFC | **SN** | | | | | | | |
| | SFA 9.4/4.7 | | | | | | | | |

**Parts List**

| Part number | Description | Quantity |
|---|---|---|
| SA412366 | SA 75J035G299G1 | 1.000 ea |
| RA404054 | RA 75J035G299G1 | 1.000 ea |
| 35FN3002A05SP | EXFN, PLASTIC, 6.376 OD, .638 ID | 1.000 ea |
| NS2512A01 | INSULATOR, CONDUIT BOX X | 1.000 ea |
| 75CB3000A02 | COND BOX FOR 75SF2000 (REL# 7932952C) | 1.000 ea |
| 51XT1032A10 | 10-32X.62 HX SLD WASHER TAPP , NLA | 3.000 ea |
| WD4100A01 | DP-875 HEYCO PLUG OR 62MP0875 MICRO PLAS | 2.000 ea |
| 51XN0832A16 | 8-32 X 1.00 HEX SLOT WSHR HD MACH SCREW | 1.000 ea |
| 11XW1032G06 | 10-32 X .38, TAPTITE II, HEX WSHR SLTD U | 1.000 ea |
| HW3001B01 | BRASS CUP WASHER, FOR #10 SCREW | 1.000 ea |
| HW5100A05 | WVY WSHR F/205 & 304 BRGS | 1.000 ea |
| 35EP3307F00 | MASTER DE,205 BRG,.998SH,#26 DRN | 1.000 ea |
| 51XN1032A20 | 10-32 X 1 1/4 HX WS SL SR | 2.000 ea |
| HW1001A10 | WASHER, #10 SPLT LK, ZN X | 4.000 ea |
| MG1050G01 | CELEROL MEDIUM CHARCOAL METALLIC GRAY | 0.017 ga |
| HW2501D13 | KEY, 3/16 SQ X 1.375 | 1.000 ea |
| BR2003D01 | SPLINED HUB 7/8 W/O KEY, W/SET SCREWS | 1.000 ea |
| WD4006A01 | WIRE JOINT,T&B RB-4 OR RB-44 | 1.000 ea |
| 35FN3003A02 | EXFN, PLASTIC, 5.88 OD, .876 ID (REL) | 1.000 ea |
| 35FH4007A01 | FAN COVER FOR SHORT SERIES BRAKE, PRIMER | 1.000 ea |
| 51XW1032A06 | 10-32 X .38, TAPTITE II, HEX WSHR SLTD S | 4.000 ea |
| 35CB4517 | LIPPED LID, 4 MTG HOLES, (RELIANCE# 7932 | 1.000 ea |
| 51XW0832A07 | 8-32 X .44, TAPTITE II, HEX WSHR SLTD SE | 4.000 ea |
| HW2501D13 | KEY, 3/16 SQ X 1.375 | 1.000 ea |
| HA7000A04 | KEY RETAINER 0.625 DIA SHAFTS | 1.000 ea |
| 85XU0407S04 | 4X1/4 U DRIVE PIN STAINLESS | 2.000 ea |
| LB1418 | INTEGRAL BRK ADJ LABEL (REL# 41171617A) | 1.000 ea |
| MJ1000A02 | GREASE, POLYREX EM EXXON | 0.050 lb |
| HW1001A10 | WASHER, #10 SPLT LK, ZN X | 4.000 ea |
| HA3100A25 | THRUBOLT 10-32 X 11.000 | 4.000 ea |
| 43BK0400B02 | SSB-15-230/460(205) L-HUB | 1.000 ea |

| | | |
|---|---|---|
| 031389 | FAST RESPONSE KIT 230V | 1.000 ea |
| LB1242 | ADHESIVE PATCH 1.10 X 2.03 X .045 THICK | 1.000 ea |
| LB1624 | COMBINED WARNING LABEL, ISO/ANSI PICTOGR | 1.000 ea |
| LC0005 | CONN.DIA.,TY M,9-LD,DUAL VOLT,REVERSING | 1.000 ea |
| NP1256L | ALUM UL CC INDUSTRIAL MOTOR A60 | 1.000 ea |
| G7PA1000 | PKG GRP, PRINT PK1034A07 | 1.000 ea |
| PK3082 | STYROFOAM CRADLE | 1.000 ea |
| PE-0000001 | ZRTG PE ASSEMBLY | 1.000 ea |

**AC Induction Motor Performance Data**
Record # 86941
Preliminary Data Sheet

| **Winding:** 35WGG299-R001 | **Type:** 3540M | **Enclosure:** TEFC |
|---|---|---|

| **Nameplate Data** | | | | **460 V, 60 Hz: High Voltage Connection** | |
|---|---|---|---|---|---|
| **Rated Output (HP)** | | | 3 | **Full Load Torque** | 9.18 LB-FT |
| **Volts** | | | 230/460 | **Start Configuration** | direct on line |
| **Full Load Amps** | | | 8.2/4.1 | **Breakdown Torque** | 34.8 LB-FT |
| **R.P.M.** | | | 1710 | **Pull-up Torque** | 27.3 LB-FT |
| **Hz** | 60 | **Phase** | 3 | **Locked-rotor Torque** | 30.8 LB-FT |
| **NEMA Design Code** | D | **KVA Code** | J | **Starting Current** | 30 A |
| **Service Factor (S.F.)** | | | 1.15 | **No-load Current** | 2.25 A |
| **NEMA Nom. Eff.** | 84 | **Power Factor** | 80 | **Line-line Res. @ 25ºC** | 5.66 Ω |
| **Rating - Duty** | | | 40C AMB-CONT | **Temp. Rise @ Rated Load** | 87°C |
| **S.F. Amps** | | | 9.4/4.7 | **Temp. Rise @ S.F. Load** | 107°C |
| | | | | **Locked-rotor Power Factor** | 59.7 |
| | | | | **Rotor inertia** | 0.289 lb-ft² |

**Load Characteristics 460 V, 60 Hz, 3 HP**

| **% of Rated Load** | **25** | **50** | **75** | **100** | **125** | **150** | **S.F.** |
|---|---|---|---|---|---|---|---|
| **Power Factor** | 37 | 58 | 71 | 79 | 83 | 86 | 82 |
| **Efficiency** | 80.8 | 86.4 | 87.1 | 85.8 | 83.7 | 80.9 | 84.1 |
| **Speed** | 1783 | 1765 | 1746 | 1721 | 1694 | 1662 | 1694 |
| **Line amperes** | 2.39 | 2.81 | 3.41 | 4.18 | 5.06 | 6.08 | 4.68 |

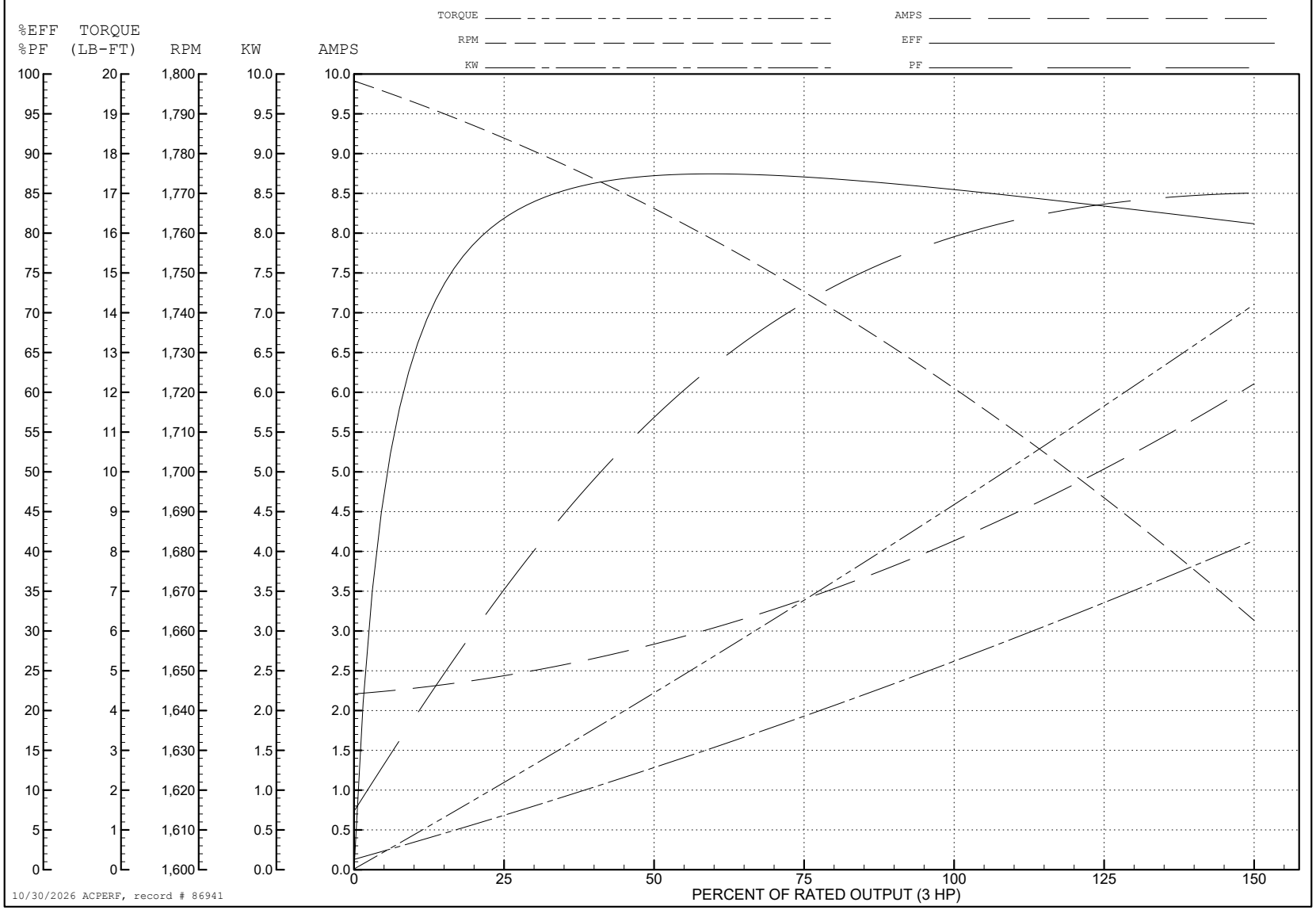
ABB Motors and Mechanical Inc.

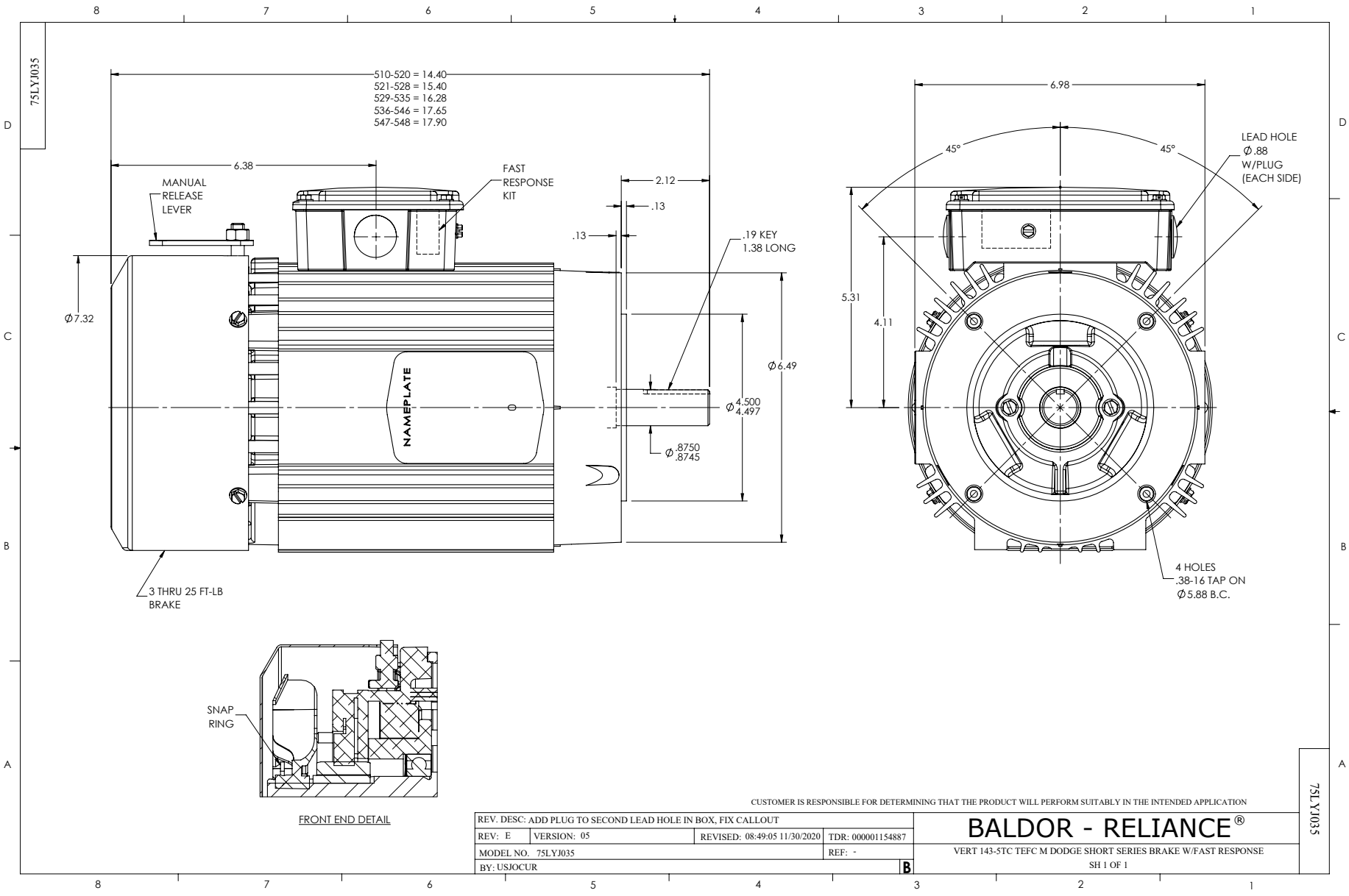
WINDING # 35WGG299

3 HP 3 PH 60 HZ 1710 RPM 460 V 3540M

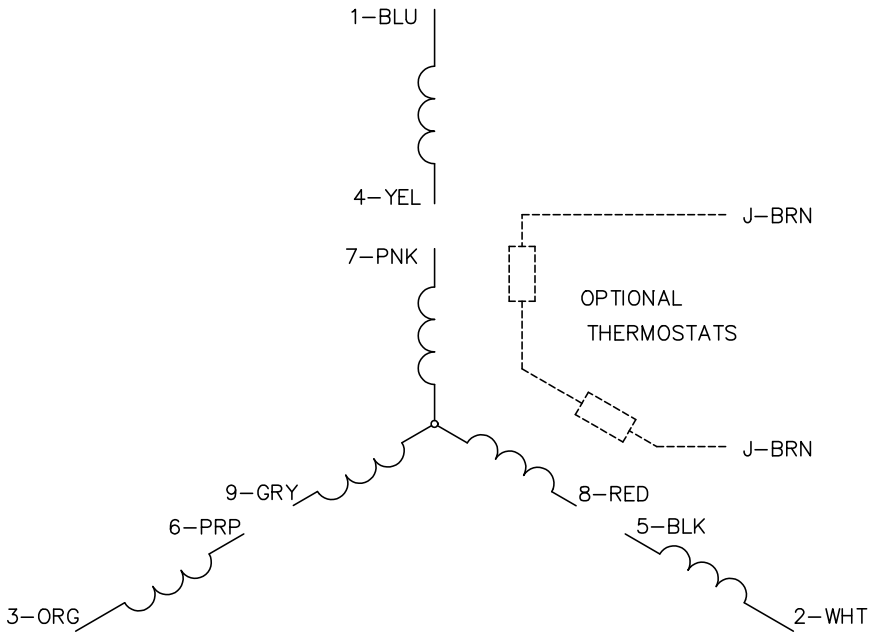
Typical performance - not guaranteed values.

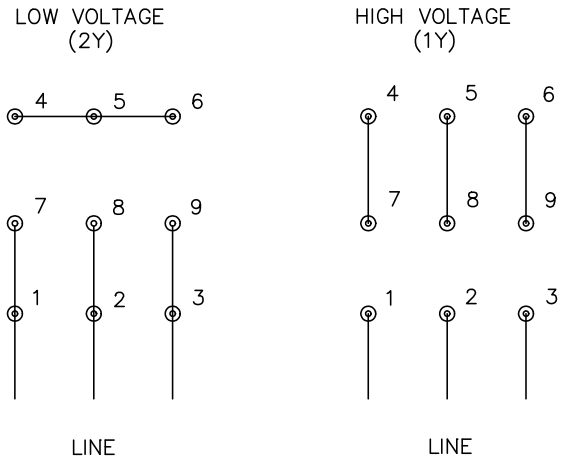
TORQUES(LB-FT): PO=34.8 PU=27.3 LR=30.8 LRA=30




75LYJ035
510-520 = 14.40
521-528 = 15.40
529-535 = 16.28
536-546 = 17.65
547-548 = 17.90
6.38
MANUAL RELEASE LEVER
FAST RESPONSE KIT
2.12
.13
.13
.19 KEY
1.38 LONG
Ø7.32
NAMEPLATE
Ø6.49
Ø4.500
4.497
Ø.8750
.8745
3 THRU 25 FT-LB BRAKE
6.98
45°
45°
LEAD HOLE
Ø.88
W/PLUG
(EACH SIDE)
5.31
4.11
4 HOLES
.38-16 TAP ON
Ø5.88 B.C.
SNAP RING
FRONT END DETAIL
CUSTOMER IS RESPONSIBLE FOR DETERMINING THAT THE PRODUCT WILL PERFORM SUITABLY IN THE INTENDED APPLICATION
REV. DESC: ADD PLUG TO SECOND LEAD HOLE IN BOX, FIX CALLOUT
REV: E
VERSION: 05
REVISED: 08:49:05 11/30/2020
TDR: 000001154887
MODEL NO. 75LYJ035
REF: -
BY: USJOCUR
B
BALDOR - RELIANCE®
VERT 143-5TC TEFC M DODGE SHORT SERIES BRAKE W/FAST RESPONSE
SH 1 OF 1
75LYJ035

CD0005




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 | | | BALDOR ELECTRIC Co. |
| REV. LTR: E | BY: JLP | REVISED: 01/19/99 10:15 | TDR: 0171435 |
| CD0005 | | FILE: AAA00005140 | MDL: – |
| | | MTL: – | 3PH, DV, 9 LEADS |