

ABB BALDOR RELIANCE III

Customer information packet IDNRPM18054C

5HP, 1770RPM, 3PH, 60HZ, 1838C, TENV, FT/180T

Specifications

| | |
|--------------------------------------|-------------------------|
| Enclosure | TENV |
| Frame | FL1838C |
| Frame Material | Aluminum |
| Frequency | 60.00 Hz |
| Output @ Frequency | 5.000 HP @ 60 HZ |
| Phase | 3 |
| Synchronous Speed @ Frequency | 1800 RPM @ 60 HZ |
| Voltage @ Frequency | 460.0 V @ 60 HZ |
| Agency Approvals | CCSA US UR |
| Auxiliary Box | NO AUXILLARY BOX |
| Base Indicator | Rigid |
| Bearing Grease Type | Polyrex EM (-20F +300F) |
| Current @ Voltage | 7.200 A @ 460.0 V |
| Duty Rating | CONT |
| Feedback Device | NO FEEDBACK |
| Frame Prefix | FL |
| Heater Indicator | No Heater |
| High Voltage Full Load Amps | 7.2 a |
| Insulation Class | H |
| Motor Standards | NEMA |
| Mounting Arrangement | F3 |
| Overall Length | 17.87 IN |
| Product Family | General Industrial |
| Pulley End Bearing Type | Ball |
| Pulley Face Code | C-Face |
| Service Factor | 1.00 |
| Shaft Diameter | 1.125 IN |
| Shaft Ground Indicator | No Shaft Grounding |
| Shaft Rotation | Reversible |
| Speed | 1770 rpm |
| Thermal Device - Bearing | None |

Part Detail

| | |
|---------------------|------------|
| Revision | C |
| Type | AC |
| Mech. spec. | |
| Base | |
| Status | PRD/A |
| Elec. spec. | L3221A |
| Layout | 617228-003 |
| Eff. date | 01-21-2022 |
| CD Diagram | 422927-001 |
| Poles | 04 |
| Leads | |
| Proprietary | False |
| Created date | 04-10-2015 |

Thermal Device - Winding

Normally Closed Thermostat

Nameplate

000613006MY

| | DUTY | HP | RPM | AMPS | VOLTS | HZ | |
|-------------------|--------------|-----------------------|------------------|--------------|--------------|------------------|-----|
| | CONT | 5 | 1770 | 7.2 | 460 | | 60 |
| | CONT | 5 | 3540 | 6.2 | 460 | | 120 |
| | CONT | 5 | 1770 | 14.4 | 230 | | 60 |
| | CONT | 5 | 3540 | 12.4 | 230 | | 120 |
| CAT.NO. | IDNRPM18054C | | SPEC. NO. | P18T0348 | | | |
| SER.NO | | FR | FL 1838C | INSUL | H | | |
| PH. | 3 | MAX SAFE SPEED | 7200 | AMB. | 40 | MIN. AMB. | -25 |
| DESIGN NO. | L3221A | TYPE | | ENCL. | TENV | | |
| S.F. | 1.0 | D.E. BRG. | 45BC02JPP30A | | | | |
| ENCL MOD | | O.D.E. BRG. | 35BC02JPP30A | | | | |

| | | | | | | | | |
|-------------|--------|--------------|------|---------------------------------------|-----------|--------------------------------|------|---------|
| REL S.O. | - | VOLTS | 460 | ENCLOSURE | TENV | WYE CONN EQ CKT OHMS PER PHASE | | |
| FRAME | FL1838 | AMPS | 7.2 | MAX SAFE RPM | 7200 | (AT BASE RATING, 25 °C) | | |
| HP | 5 | DUTY | CONT | IM (AMPS) | 4.4 | R1 | .803 | X1 2.62 |
| BASE SPEED | 1770 | S.F. | 1.0 | P.F.@NL/FL | .069/.745 | R2 | .523 | X2 3.46 |
| PHASE/HERTZ | 3/60 | AMB °C/INSUL | 60/H | WK ² (Lb-Ft ²) | .528 | | | XM 59.7 |

RATED FULL LOAD DATA

| | RPM | HP | TORQUE LB-FT | FUND VOLTS | FREQ-HZ | AMPS |
|------------|------|------|-----------------|---------------|---------|------|
| BASE SPEED | 1770 | 5.01 | 15 | 460 | 60 | 7.44 |
| MAX SPEED | 3534 | 5.00 | 7 | 460 | 120 | 6.76 |
| MIN SPEED | 0 | 0 | 15 | 16.7 | .989 | 7.44 |

LOAD PERFORMANCE AT BASE SPEED

| | RPM | HP | TORQUE LB-FT | FUND VOLTS | FREQ-HZ | AMPS |
|-----------|------|------|-----------------|---------------|---------|------|
| NO LOAD | 1800 | 0 | 0 | 460 | 60 | 4.30 |
| 1/4 | 1792 | 1.25 | 4 | 460 | 60 | 4.71 |
| 1/2 | 1785 | 2.50 | 7 | 460 | 60 | 5.38 |
| 3/4 | 1778 | 3.75 | 11 | 460 | 60 | 6.30 |
| FULL LOAD | 1770 | 5.00 | 15 | 460 | 60 | 7.44 |
| O/L | 1718 | 12.1 | 37 | 460 | 60 | 15.8 |

**BLOWER
DATA**

| VOLTS | PH/HZ | FL AMPS | LR AMPS | FRAME | CFM |
|-------|-------|---------|---------|-------|-----|
| | | | | | |

REMARKS: TYPICAL DATA

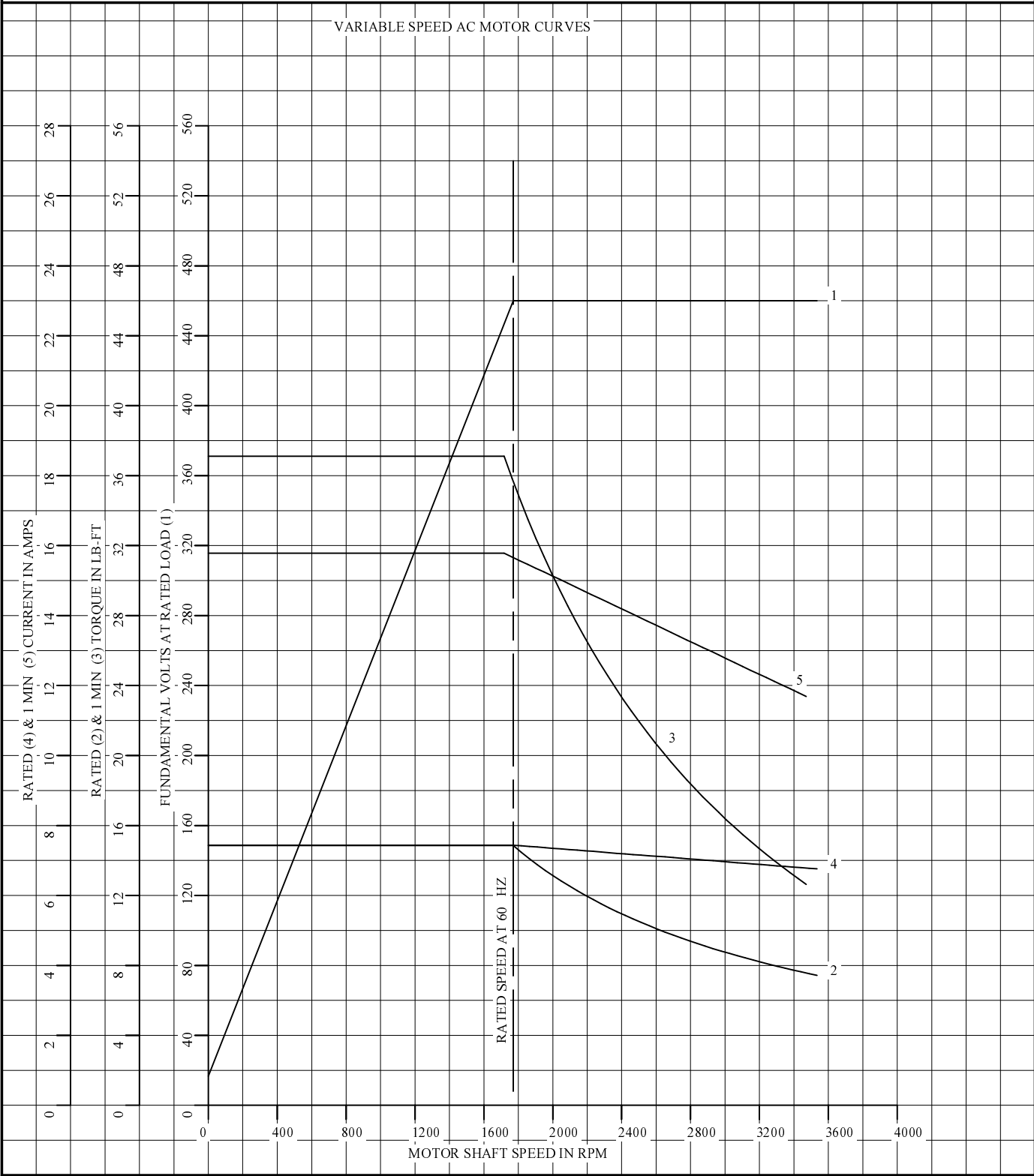


DR. BY B. GRANT
 CK. BY B. GRANT
 APP. BY T. CUFR
 DATE 3-7-06

**A-C MOTOR
 PERFORMANCE DATA** L3221A
 ISSUE DATE 3-7-06

| | | | | | | | |
|-------------|--------|--------------|------|---------------------------------------|-----------|--------------------------------|---------|
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| FRAME | FL1838 | AMPS | 7.2 | MAX SAFE RPM | 7200 | (AT BASE RATING, 25 °C) | |
| HP | 5 | DUTY | CONT | IM (AMPS) | 4.4 | R1 .803 | X1 2.62 |
| BASE SPEED | 1770 | S.F. | 1.0 | P.F.@NL/FL | .069/.745 | R2 .523 | X2 3.46 |
| PHASE/HERTZ | 3/60 | AMB °C/INSUL | 60/H | WK ² (Lb-Ft ²) | .528 | XM 59.7 | |

VARIABLE SPEED AC MOTOR CURVES



REMARKS: TYPICAL DATA
DATA VALID FOR NAMEPLATE SPEED RANGE ONLY



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**A-C MOTOR
PERFORMANCE
CURVES**

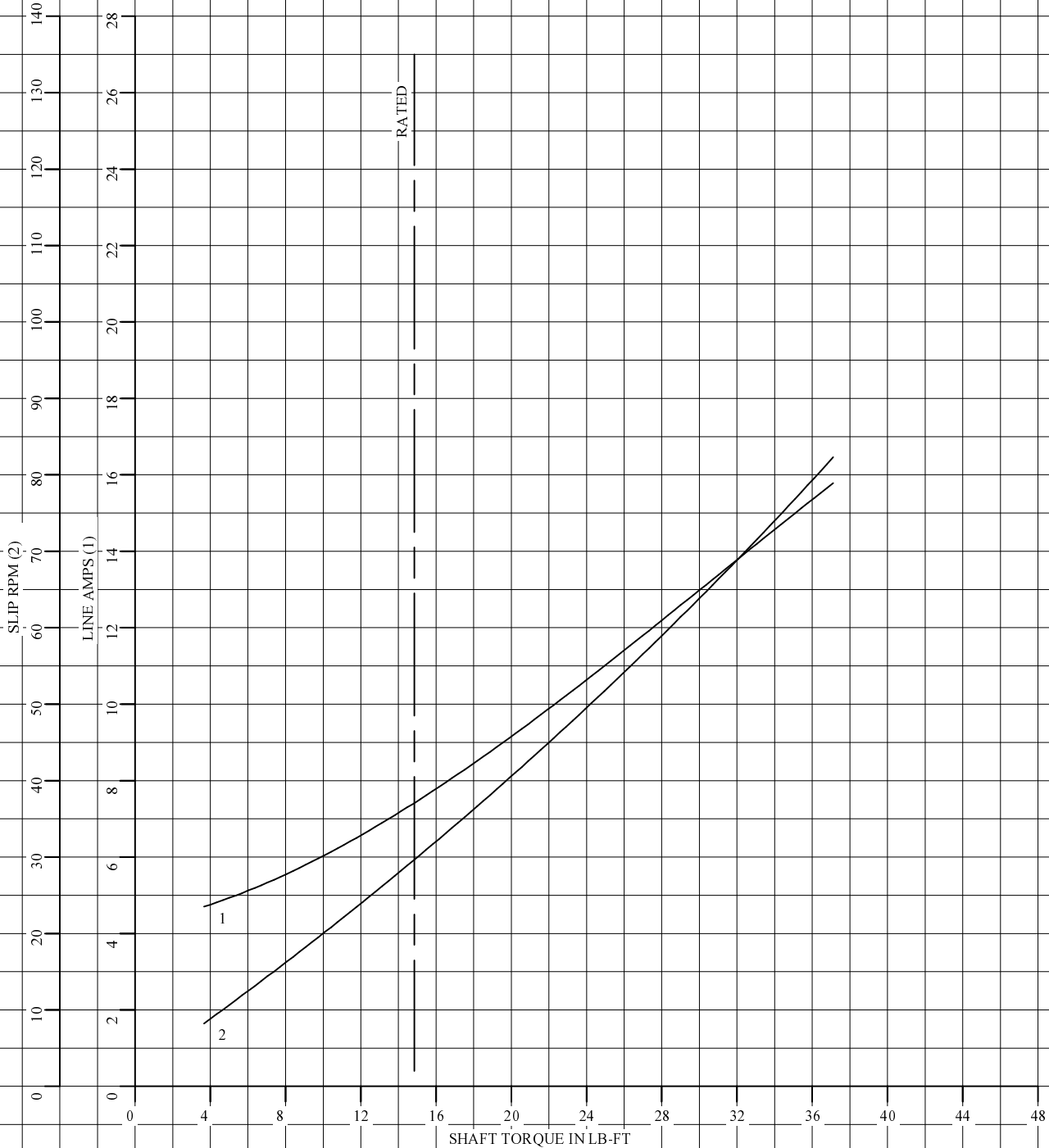
L3221A

SH 1 OF 2

ISSUE DATE 3-7-06

| | | | | | | | |
|-------------|--------|--------------|------|---------------------------------------|-----------|--------------------------------|---------|
| REL S.O. | - | VOLTS | 460 | ENCLOSURE | TENV | WYE CONN EQ CKT OHMS PER PHASE | |
| FRAME | FL1838 | AMPS | 7.2 | MAX SAFE RPM | 7200 | (AT BASE RATING, 25 °C) | |
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| PHASE/HERTZ | 3/60 | AMB °C/INSUL | 60/H | WK ² (Lb-Ft ²) | .528 | XM 59.7 | |

LOAD PERFORMANCE (CONSTANT V/HZ RANGE)



REMARKS: TYPICAL DATA
DATA VALID FOR NAMEPLATE SPEED RANGE ONLY



DR. BY B. GRANT
CK. BY B. GRANT
APP. BY T. CUFR
DATE 3-7-06

**A-C MOTOR
PERFORMANCE
CURVES**

L3221A

SH 2 OF 2

ISSUE DATE 3-7-06

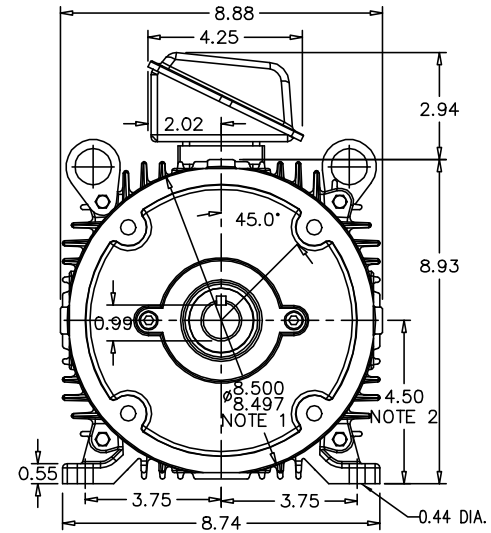
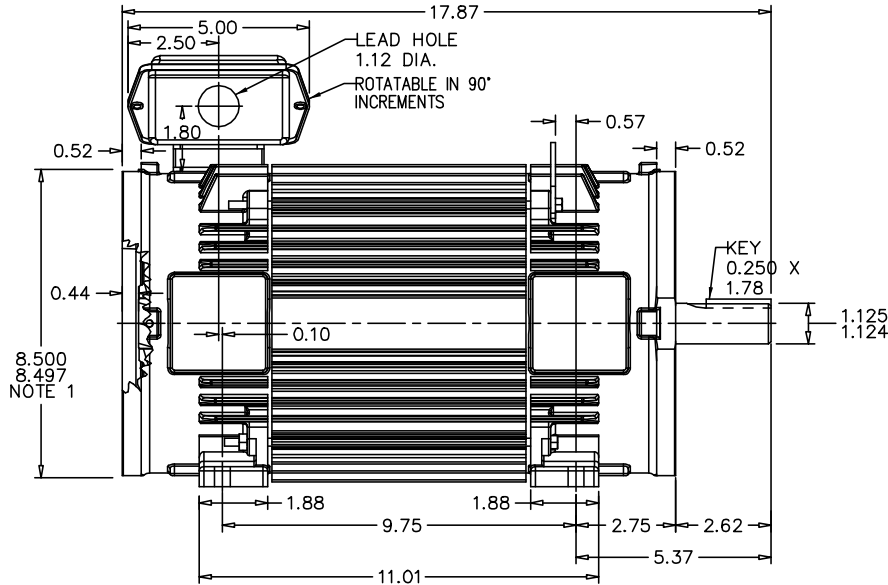
**RPM-AC FINNED FRAME VARIABLE SPEED ALTERNATING CURRENT MOTOR
FL1838C**

617228-003

ENCLOSURE: TOTALLY ENCLOSED
MOUNTING: FOOT / NEMA 180TC C-FACE
DRIVE METHOD: COUPLED OR BELTED

COOLING: NON-VENTILATED

ACCESSORIES: PROVISIONS FOR
TACHOMETER MOUNTING
ONLY WHEN SPECIFIED



NOTE 1: C-FACE & TACHOMETER MOUNTING
1/2-13 TAP, 1.00 DEEP, ON A 7.25 DIA. BOLT CIRCLE
FACE RUNOUT AND ECCENTRICITY 0.004 MAX. T.I.R.
NOTE 2: SHAFT HEIGHT WILL NOT BE EXCEEDED
SHIMS UP TO 0.03 INCHES IN THICKNESS ARE USUALLY
REQUIRED FOR COUPLED OR GREARED MACHINES

TERMINAL BOX MAY BE LOCATED F1 OR F2 IF SPECIFIED
40 AMP STEEL TERMINAL BOX SHOWN
REFER TO 616779-50 FOR SPECIFIED TERMINAL BOX DIMENSIONS
REFER TO 616779-55 FOR SPECIFIED TACHOMETER DIMENSIONS

MOTOR WEIGHT: 143 LBS. (MAY VARY 15%)
DIMENSIONS ARE IN INCHES SCALE: 1.00

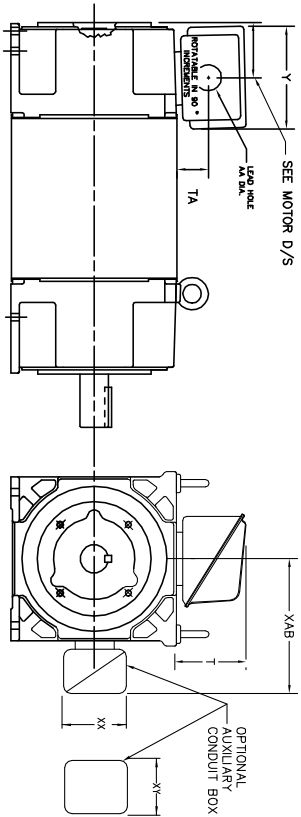
CUSTOMER IS RESPONSIBLE FOR DETERMINING THAT BALDOR'S PRODUCT WILL PERFORM SUITABLY IN THE INTENDED APPLICATION.

| | | | | |
|---|------------------------------|------------------|---|--|
| REV. DESC: ADD DIMENSION FROM FOOT HOLE TO END OD SHAFT | | | BALDOR | |
| REV. LTR: A | VERSION: 01 | TDR: 00000892384 | DIM SHT RPM AC TE NON VENT FL1838C FT / 180TC MTG PROV TACH | |
| FILE: \RGG\00003\495 | REVISED: 12:55:38 02/12/2015 | BY: RCGWT | SH 1 of 1 | |
| MTL: - | | | | |

617228-003

INDUSTRIAL ALTERNATING CURRENT MOTORS
RPM AC

STEEL, CAST IRON, MILL AND TERMINAL BOARD CONDUIT BOX DIMENSIONS
NEMA FRAMES RL210 thru RL280 and IEC FRAMES RDL132 thru RDL180
NEMA FRAMES FL180 thru FL280 and IEC FRAMES FDL112 thru FDL180



| FRAME | TYPE | TERMINAL STRIP | AMPS | C/BOX | Y | TA | T | AA |
|---------------|-----------|----------------|------|-------------|-------|------|-------|-----------|
| FL180 | STEEL | N | 40 | 706320003A | 5.00 | 1.62 | 3.00 | 1.12 |
| FL180 | STEEL | N | 75 | 706320003A | 6.12 | 2.38 | 4.38 | 1.75/2.00 |
| FL180 | STEEL | N | 208 | 706320007A | 6.82 | 2.00 | 7.00 | 2.50/2.00 |
| FL180 | CAST IRON | N | 208 | 706320007A | 6.82 | 2.38 | 4.38 | 1.50/1.75 |
| FL180 & FDL11 | MILL | Y | 100 | 706310028A | 7.75 | 2.30 | 4.40 | PC29/PG16 |
| FL210 & RL210 | STEEL | N | 61 | 0754520009 | 6.34 | 2.00 | 4.12 | 1.75 |
| FL210 & RL210 | STEEL | N | 121 | 075452001A | 7.69 | 2.38 | 5.25 | 1.94 |
| FL210 & RL210 | STEEL | N | 175 | 075452001A | 7.69 | 2.38 | 5.25 | 1.94 |
| FL210 & RL210 | STEEL | N | 305 | 706320016A | 9.00 | 4.12 | 8.42 | 4.89 |
| FL210 & RL210 | CAST IRON | N | 110 | 075460052B | 7.25 | 2.50 | 5.25 | 1.5 TAP |
| FL210 & RL210 | MILL | Y | 100 | 7063100225A | 7.75 | 2.30 | 4.40 | PC29/PG16 |
| FL210 & RL210 | MILL | Y | 160 | 706310056A | 9.00 | 3.06 | 5.40 | PC36/PG16 |
| FL210 & RL210 | MILL | Y/N | 235 | 706310056B | 11.42 | 4.00 | 6.72 | 2.50 |
| FL210 & RL210 | MILL | Y | 400 | 7063100637A | 14.39 | 7.43 | 12.15 | BLANK |
| FL250 & RL250 | STEEL | N | 61 | 0754520009 | 6.34 | 2.00 | 4.12 | 1.75 |
| FL250 & RL250 | STEEL | N | 121 | 075452001A | 7.69 | 2.38 | 5.25 | 1.94 |
| FL250 & RL250 | STEEL | N | 175 | 075452001A | 7.69 | 2.38 | 5.25 | 1.94 |
| FL250 & RL250 | CAST IRON | N | 110 | 075460052B | 7.25 | 2.50 | 5.25 | 1.5 TAP |
| FL250 & RL250 | CAST IRON | N | 210 | 706320016A | 10.50 | 4.88 | 9.00 | 4.0 TAP |
| FL250 & RL250 | MILL | Y | 100 | 7063100225A | 7.75 | 2.30 | 4.40 | PC29/PG16 |
| FL250 & RL250 | MILL | Y | 160 | 706310056A | 9.00 | 3.06 | 5.40 | PC36/PG16 |
| FL250 & RL250 | MILL | Y | 160 | 706310056B | 9.00 | 3.06 | 5.40 | PC36/PG16 |
| FL250 & RL250 | MILL | Y/N | 235 | 706310056B | 11.42 | 4.00 | 6.72 | 2.50 |
| FL250 & RL250 | MILL | Y | 400 | 7063100637A | 14.39 | 7.43 | 12.15 | BLANK |

| FRAME | TYPE | TERMINAL STRIP | AMPS | C/BOX | Y | TA | T | AA |
|---------------|-----------|----------------|------|-------------|-------|------|-------|-----------|
| FL280 & RL280 | STEEL | N | 160 | 706320009A | 7.25 | 3.50 | 7.06 | 2.50 |
| FL280 & RL280 | STEEL | N | 305 | 706320016A | 9.00 | 4.12 | 8.42 | 4.89 |
| FL280 & RL280 | STEEL | N | 500 | 702565001C | 14.62 | 7.56 | 12.70 | 5.00 |
| FL280 & RL280 | CAST IRON | N | 140 | 706320012B | 9.25 | 4.81 | 8.56 | 3.0 TAP |
| FL280 & RL280 | CAST IRON | N | 210 | 706320015A | 10.50 | 4.88 | 9.00 | 4.0 TAP |
| FL280 & RL280 | CAST IRON | N | 510 | 706320014D | 15.00 | 7.56 | 12.81 | 5.0 TAP |
| FL280 & RL280 | MILL | Y | 100 | 706310056A | 7.75 | 2.30 | 4.40 | PC29/PG16 |
| FL280 & RL280 | MILL | Y | 160 | 706310056B | 9.00 | 3.06 | 5.40 | PC36/PG16 |
| FL280 & RL280 | MILL | Y/N | 235 | 706310056B | 11.42 | 4.00 | 6.72 | 2.50 |
| FL280 & RL280 | MILL | Y | 400 | 7063100637A | 14.39 | 7.43 | 12.15 | BLANK |

| FRAME SIZE | XAB | XX | XY | PART NUMBER | FRAME SIZE | XAB | XX | XY | PART NUMBER |
|-------------------------|------|------|------|-------------|-------------------------|-------|------|------|-------------|
| FL107/FL160/FL210/FL182 | 7.38 | 4.25 | 4.25 | 602007-26-A | FL107/FL160/FL210/FL182 | 10.88 | 8.00 | 8.00 | 706310-3-B |
| FL250/FL160/FL210/FL182 | 8.44 | 4.25 | 4.25 | 602007-26-A | FL250/FL160/FL210/FL182 | 11.88 | 8.00 | 8.00 | 706310-3-B |
| FL280/FL180/FL280/FL188 | 9.12 | 4.25 | 4.25 | 602007-26-A | FL280/FL180/FL280/FL188 | 12.62 | 8.00 | 8.00 | 706310-3-B |

(1) 7/8" CONDUIT.
(2) 1" PIPE TAP.
(3) CUSTOMER TO PROVIDE W/LE TYP CONDUIT.
(4) 2" DIA SA OR 1" DIA DN W/2"

TERMINAL BOX CAN BE ROTATED FOR LEAD OUTLET AT TOP, SIDES OR BOTTOM.
TERMINAL BOX LOCATED ON OPPOSITE SIDE WHEN F-2, V-1, V-4, V-5, V-7,
OR C-1 MOUNTING IS SPECIFIED. BOX LOCATED ON TOP WHEN SPECIFIED.

CUSTOMER IS RESPONSIBLE FOR DETERMINING THAT BALDOR'S PRODUCT WILL PERFORM SUITABLY IN THE INTENDED APPLICATION.

| | | |
|-------------------------------------|--------------------------------|-------------------|
| REV. DESC: ADD 706310-637 & 639 BOX | VERSION: 06 | TDR: 000001180260 |
| REV. LTR: F | REVISED: 11: 08: 56 10/26/2021 | BY: RCGRWM |
| FILE: \RGG\00003\692 | | |
| MTL: - | | |

BALDOR - RELIANCE®
DIM SHT NEMA RL210-RL280 FL180-FL280 IEC RDL132-RDL180
SH 1 of 1

422927-001



NOTE:
DATA TO BE SIZED
SO THAT IT FITS INTO
MATERIAL DECAL
DIMENSIONS. MAKE
LETTERS & NUMBERS
AS LARGE AS POSSIBLE.

MATERIAL: CERAMATIC DGF-P4
PERMA GRIP ADHESIVE

ALL LETTERS, NUMBERS
AND LINES TO BE BLACK
ON WHITE BACKGROUND.

422927-001

| | | |
|---|------------------------------|------------------|
| REV. DESC: CHANGE BACKGROUND COLOR FROM GOLD TO WHITE | | |
| REV. LTR: B | VERSION: 02 | TDR: 00000788708 |
| FILE: \RGG\00000\203 | REVISED: 08:09:29 03/04/2013 | |
| MTL: - | BY: RGGWT | |

BALDOR

EXTERNAL CONNECTION LABEL

SH 1 of 1