

ABB BALDOR RELIANCE III

Customer information packet ZDNRPM18054C

5HP, 1750RPM, 3PH, 60HZ, 1838C, TENV, FOOT,

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	TACHOMETER
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	12-21-2021
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.	ZDNRPM18054C		SPEC. NO.	P18T0369			
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

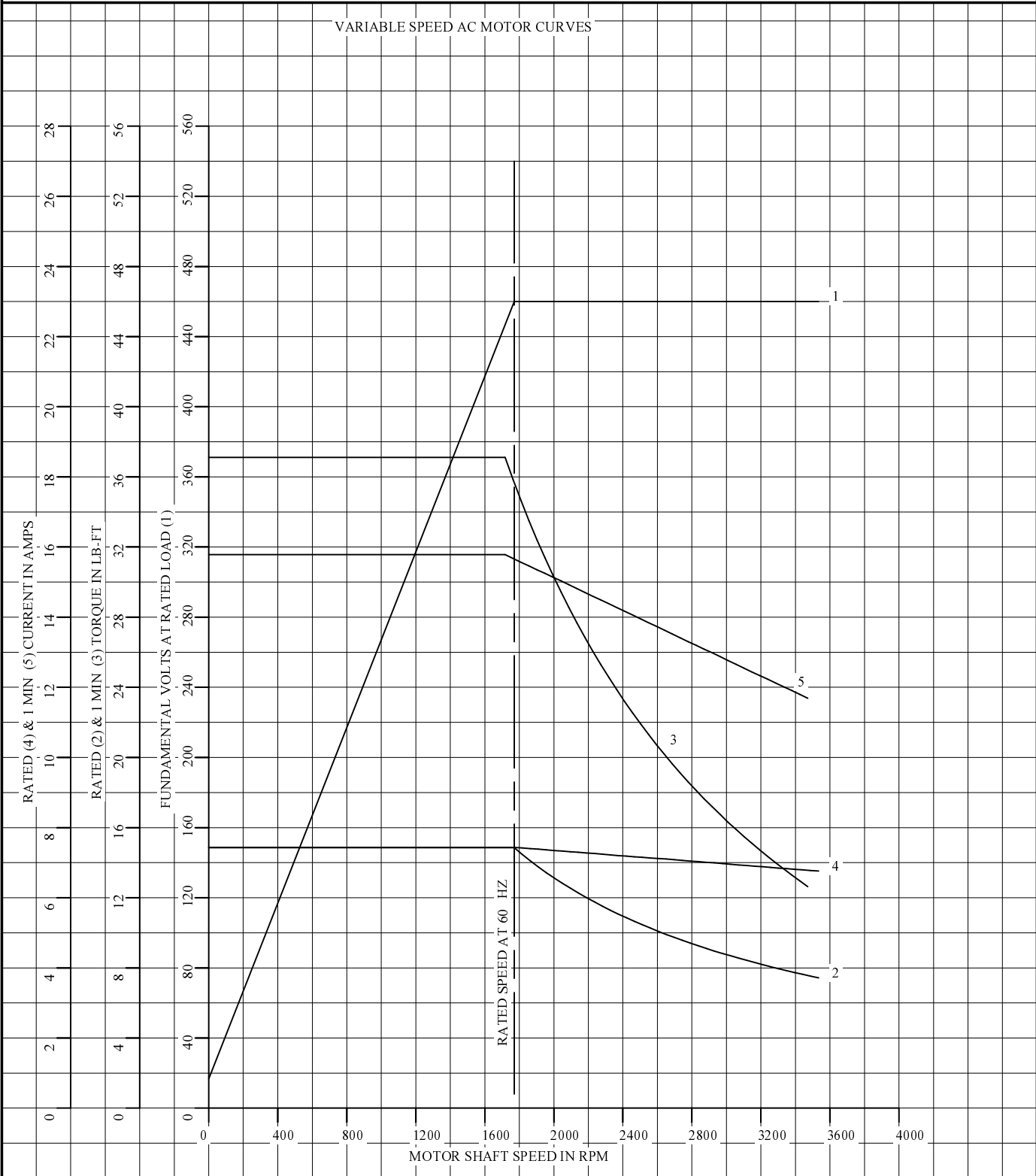


DR. BY B. GRANT
 CK. BY B. GRANT
 APP. BY T. CUFR
 DATE 3-7-06

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

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	

VARIABLE SPEED AC MOTOR CURVES



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**

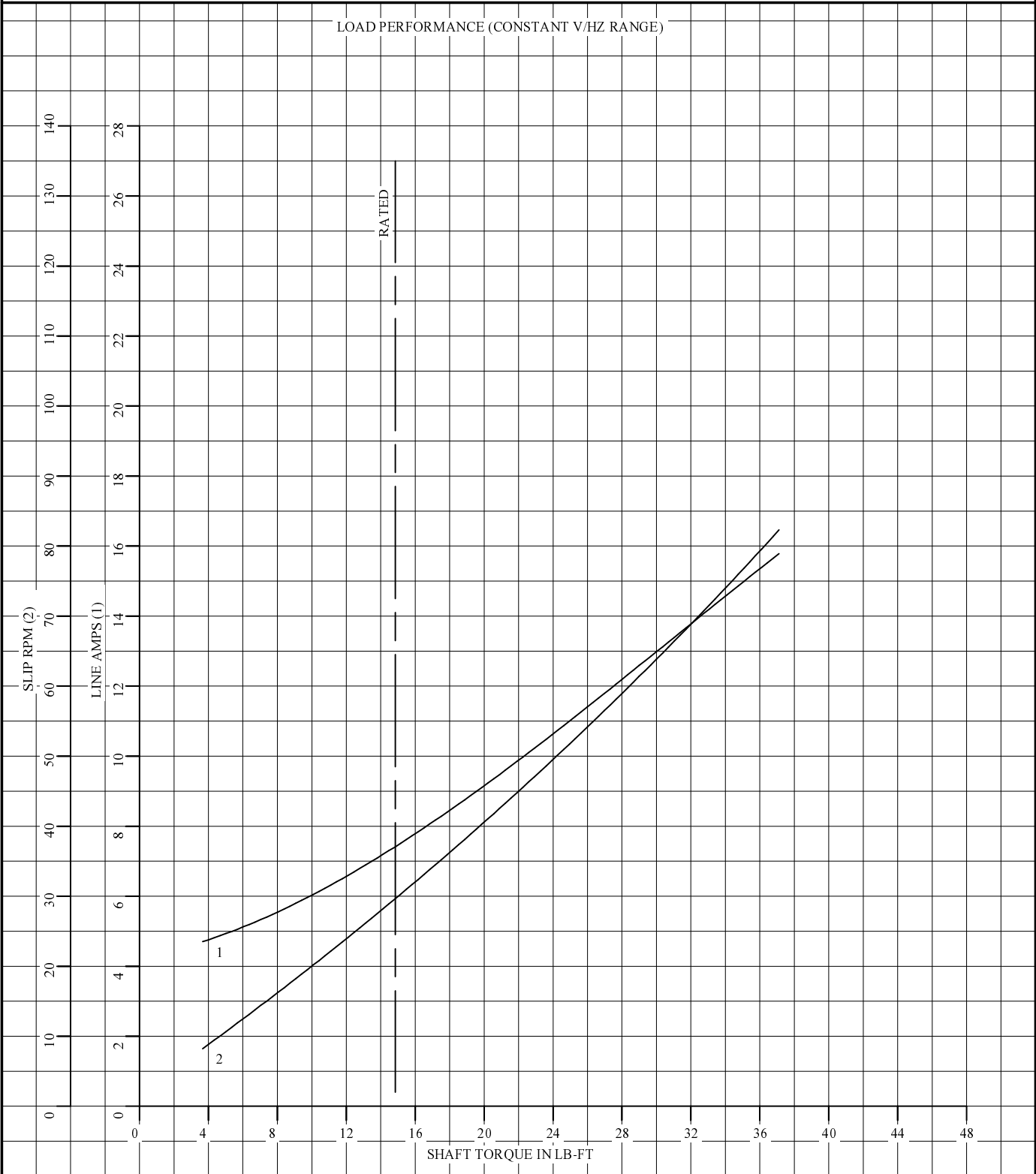
L3221A

SH 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)	
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	

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

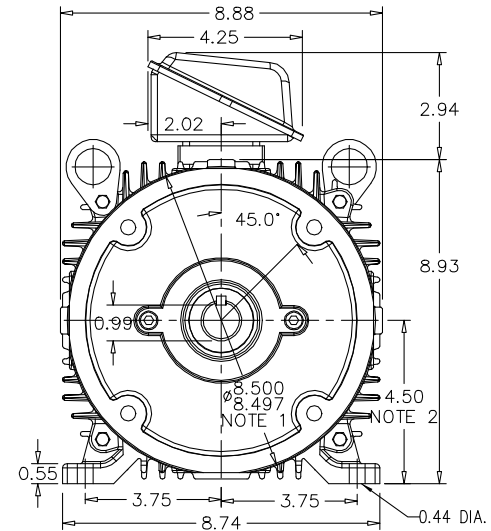
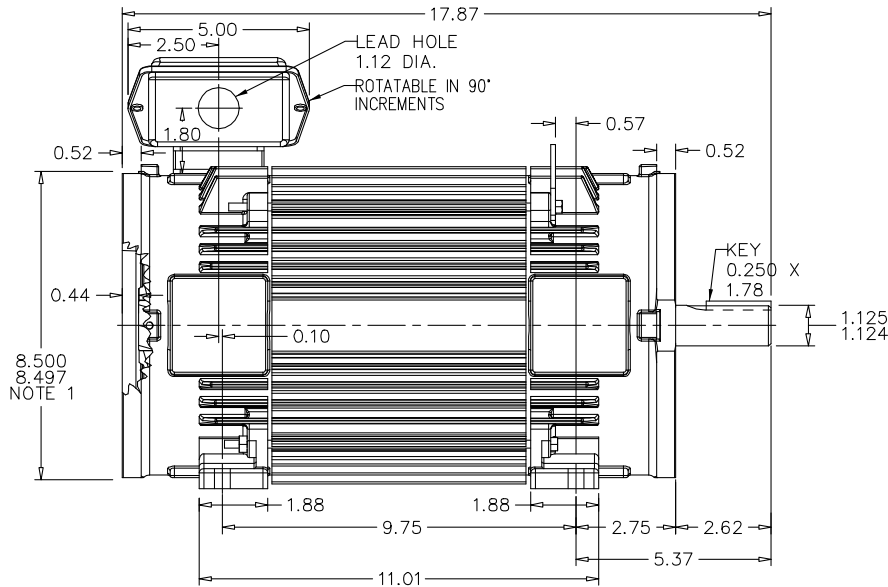
**RPM-AC FINNED FRAME VARIABLE SPEED ALTERNATING CURRENT MOTOR
FL1838C**

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

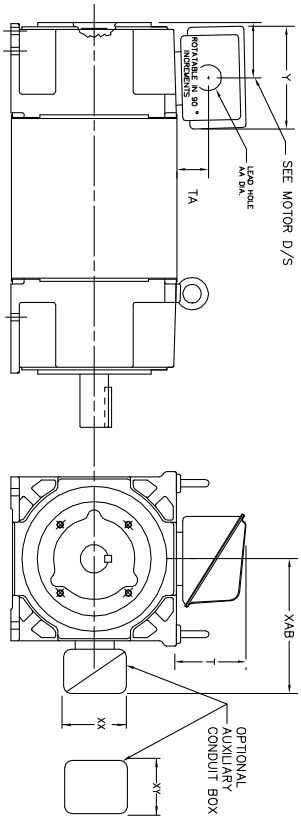
CUSTOMER IS RESPONSIBLE FOR DETERMINING THAT BALDOR'S PRODUCT WILL PERFORM SUITABLY IN THE INTENDED APPLICATION.

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

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	Y/N	75	706320003A	6.12	2.38	4.38	1.75/2.00
FL180	CAST IRON	N	208	706320007A	6.82	2.00	7.00	2.50/2.00
FL180	CAST IRON	Y/N	400	706320007A	6.75	2.38	4.38	3.00/2.50
FL180 & FDL11	MILL	Y	100	706310028A	7.75	2.30	4.40	PC329/PG16
FL210 & RL210	STEEL	N	61	0754520009B	6.34	2.00	4.12	1.75
FL210 & RL210	STEEL	N	121	0754520009B	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	PC329/PG16
FL210 & RL210	MILL	Y	160	706310056A	9.00	3.06	5.40	PC329/PG16
FL210 & RL210	MILL	Y/N	235	706310056B	11.42	4.00	6.72	2.50
FL210 & RL210	MILL	Y/N	400	706310056B	14.39	7.43	12.15	BLANK
FL250 & RL250	STEEL	N	61	0754520009B	6.34	2.00	4.12	1.75
FL250 & RL250	STEEL	N	121	0754520009B	7.69	2.38	5.25	1.94
FL250 & RL250	STEEL	N	305	706320016A	9.00	4.12	8.42	4.89
FL250 & RL250	CAST IRON	N	110	075460052B	7.25	2.50	5.25	1.5 TAP
FL250 & RL250	CAST IRON	N	210	706320017A	10.50	4.88	9.00	4.0 TAP
FL250 & RL250	CAST IRON	N	510	706320014D	15.00	7.56	12.81	5.0 TAP
FL250 & RL250	MILL	Y	100	706310056A	7.75	2.30	4.40	PC329/PG16
FL250 & RL250	MILL	Y	160	706310056B	9.00	3.06	5.40	PC329/PG16
FL250 & RL250	MILL	Y/N	235	706310056B	11.42	4.00	6.72	2.50
FL250 & RL250	MILL	Y	400	706310056B	14.39	7.43	12.15	BLANK
FL280 & RL280	STEEL	N	160	706310056B	9.00	3.06	5.40	PC329/PG16
FL280 & RL280	STEEL	N	305	706320016A	11.42	4.00	6.72	2.50
FL280 & RL280	STEEL	N	500	706320017A	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	PC329/PG16
FL280 & RL280	MILL	Y	160	706310056B	9.00	3.06	5.40	PC329/PG16
FL280 & RL280	MILL	Y/N	235	706310056B	11.42	4.00	6.72	2.50
FL280 & RL280	MILL	Y	400	706310056B	14.39	7.43	12.15	BLANK

FRAME SIZE	OPTIONAL AUXILIARY CONDUIT BOX DIMENSIONS (MAXIMUM)								
	XAB	XX	XY	PART NUMBER	FRAME SIZE	PART NUMBER			
FL180/FL180A/FL180B	7.38	4.25	4.25	602007-26-A	FL180/FL180A/FL180B	10.88	8.00	8.00	706310-3-B
FL210/FL210A/FL210B	8.44	4.25	4.25	602007-26-A	FL210/FL210A/FL210B	11.88	8.00	8.00	706310-3-B
FL250/FL250A/FL250B	9.12	4.25	4.25	602007-26-A	FL250/FL250A/FL250B	12.62	8.00	8.00	706310-3-B
FL280/FL280A/FL280B	9.12	4.25	4.25	602007-26-A	FL280/FL280A/FL280B	12.62	8.00	8.00	706310-3-B

- (1) 1/4" PIPE CONDUIT.
- (2) 1/2" PIPE CONDUIT.
- (3) CUSTOMER TO PROVIDE THE LEAD WIRE CONDUIT.
- (4) 2" DIA. SA OR 1" DIA. DN -40.

TERMINAL BOX CAN BE ROTATED FOR LEAD INLET 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®

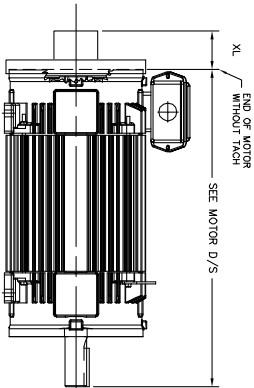
DIM SHT NEMA RL210-RL280 FL180-FL280 IEC RDL132-RDL180

RPM AC TACHOMETER DIMENSIONS
NEMA FRAMES FL180 thru FL440 and IEC FRAMES FDL112 thru FDL280
 DIMENSIONS ARE IN INCHES(mm)

DPSV, DPSV, TEPV, TESV, TENV & TEAO-PB
 IC06, IC17, IC37, IC410, & IC416-PB

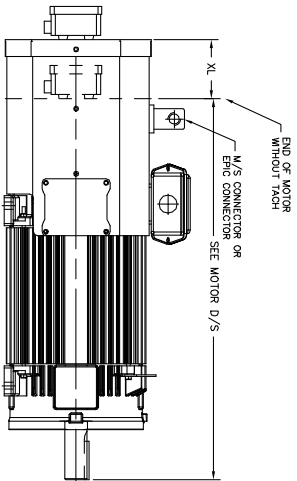
616779-055

TACH MODEL	XL Inches(mm)	LBS.
BEI DR DYNAPAR HS35	2.88 (74)	5
DYNAPAR H20	7.50 (191)MAX	10
NDRHSTAR HS35M	3.31 (84)	10
NDRHSTAR ST67	2.88 (74)	5
DYNAPAR HS6	10.56 (268)	40
AVTRON M3 DR M4	3.62 (92)	10
TAMAGAMA TSS013(X17)	6.00 (152)	10
NDRHSTAR ST56	2.88 (74)	5
NDRHSTAR ST85	2.00 (51)	5
BEI T590	10.19 (259)	15
TAMAGAMA T52151	2.64 (67)	15
BEI T623	7.50 (191)	15
DYNAPAR H20	2.00 (50.8)	5
DYNAPAR H25	12.88 (327)	10
STEWART SRS25	7.25 (184.4)	10
HEIDENHAIN EDW425	3.00 (76.2)	10
AVTRON HS35M	4.19 (106.4)	5
HEIDENHAIN ERN480	5.00 (127.0)	5
DYNAPAR H425	7.00 (177.8)	10
DYNAPAR H42	3.62 (92.1)	5
AVTRON M25	2.54 (64.5)	9
AVTRON AV850	2.54 (64.5)	9
AVTRON AV56	4.50 (115)	15
HS308	3.30 (84)	5
HS325	3.30 (84)	2
NDRHSTAR R18	3.25 (83)	15
DYNAPAR H4625	5.88 (150)	10
AVTRON AV485	9.50 (241)	18
AVTRON AV32	1.93 (49)	7
DYNAPAR RH25	3.80 (97)	1.6
AVTRON AV95	2.40 (61.5)	3

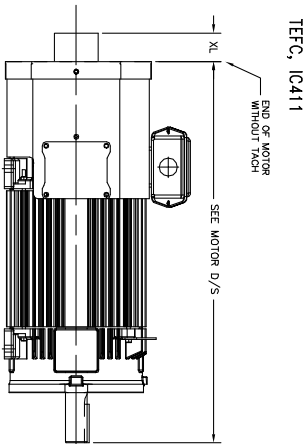


TEAO-BC, IC416-BC
EXCLUDES NEMA FRAMES FL320 THRU FL440
AND
IEC FRAMES FDL200 THRU FDL280

TACH MODEL	XL Inches(mm)	LBS.
BEI DR DYNAPAR HS35	4.50 (115)	10
DYNAPAR H20	4.50 (115)	15
AVTRON M3 DR M4	4.50 (115)	10
NDRHSTAR HS35M	4.50 (115)	15
NDRHSTAR ST56	4.50 (115)	10
NDRHSTAR ST67	4.50 (115)	10
NDRHSTAR S185	4.50 (115)	5
TAMAGAMA TSS008 TSS013	4.50 (115)	10
DYNAPAR H20	4.50 (115)	15
STEWART SRS25	4.50 (115)	10
STEWART SRS/SRS50	4.50 (115)	3
HE20 & HE5E	4.50 (115)	15
AVTRON HS35M	4.50 (115)	10
AVTRON AV85	4.50 (115)	10
AVTRON M56	4.50 (115)	5
AVTRON AV67	4.50 (115)	10
HS308	4.50 (115)	5
TSS014	4.50 (115)	10
AVTRON HS45	4.50 (115)	15
DYNAPAR HST38M	4.50 (115)	15
AVTRON AV32	4.50 (115)	7
AVTRON AV950	4.50 (115)	9



TACH MODEL	XL Inches(mm)	LBS.
BEI HS35	2.88 (74)	7
NDRHSTAR HS35M	3.31 (84)	10
DYNAPAR H20	3.75 (95)	15
DYNAPAR HS35 HS398	2.88 (74)	7
H20(X17)	9.75 (248)	35
EDW425	7.90 (201)	35
AVTRON HS35M	4.19 (106)	2
STEWART SRS50	3.75 (95)	1
DYNAPAR H20	2.00 (51)	1
NDRHSTAR HS35S	2.81 (71)	2
NDRHSTAR HS398	3.30 (84)	5
AVTRON AV92	1.93 (49)	.7



550-677919

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

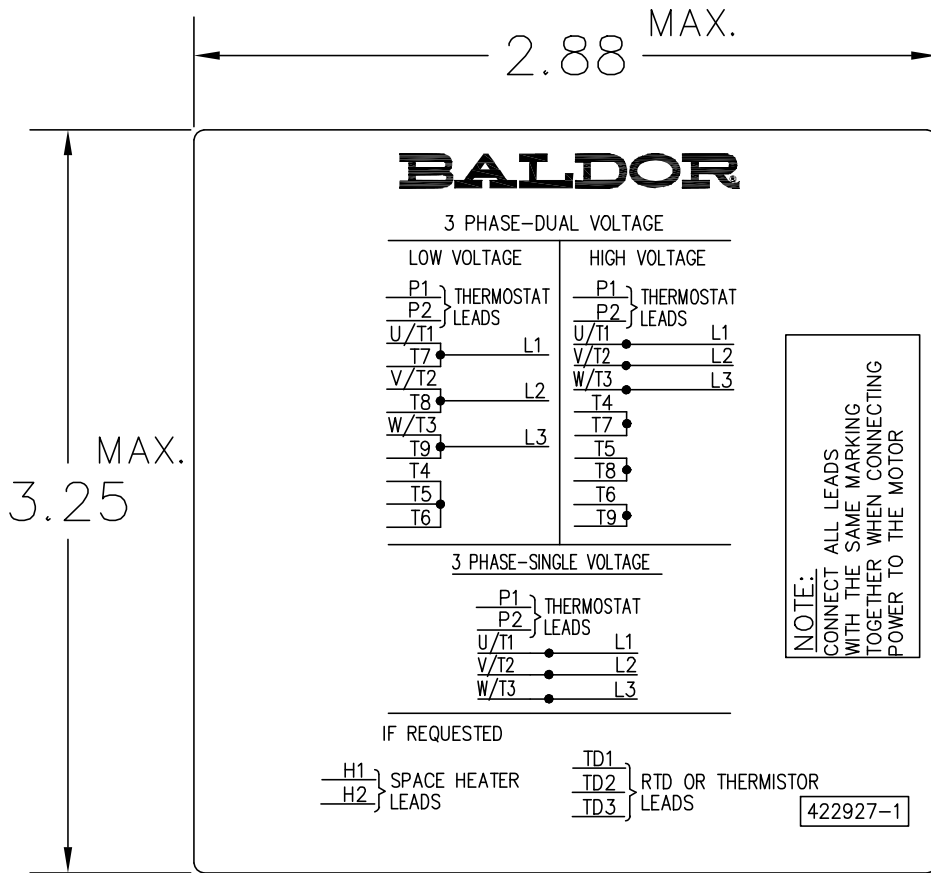
REV. DESC: ADD AV85	VERSION: 25	TDR: 00000111552
REV. LTR: AA	REVISED: 03:54:15 06/26/2019	BY: RGRWMM
FILE: \RGG\00003\694		
MTL: -		

BALDOR - RELIANCE®

DIM SHT TACH DIM NEMA FL180 - FL440 IEC FDL112 - FDL280

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