ABB BALDOR RELIANCE

Customer information packet

ZDPM18010C-BV

10HP, 1800RPM, 3PH, 60HZ, 1831C, TEBC, FOOT,

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11/14/2026 3:14:55 PM

Specifications

Enclosure	TEAO
Frame	FL1831C
Frame Material	Aluminum
Frequency	60.00 Hz
Output @ Frequency	10.000 HP @ 60 HZ
Phase	3
Synchronous Speed @ Frequency	1800 RPM @ 60 HZ
Voltage @ Frequency	460.0 V @ 60 HZ
Auxiliary Box	NO AUXILLARY BOX
Base Indicator	Rigid
Bearing Grease Type	No Grease
Current @ Voltage	10.600 A @ 460.0 V
Duty Rating	CONT
Feedback Device	TACHOMETER
Frame Prefix	FL
Heater Indicator	No Heater
High Voltage Full Load Amps	10.6 a
Insulation Class	H
Motor Standards	NEMA
Mounting Arrangement	F3
Overall Length	22.08 IN
Product Family	General Industrial
Pulley End Bearing Type	Ball
Pulley Face Code	C-Face
Service Factor	1.00
Shaft Diameter	1.375 IN
Shaft Ground Indicator	No Shaft Grounding
Shaft Rotation	Reversible
Speed	1800 rpm
Thermal Device - Bearing	None
Thermal Device - Winding	Normally Closed Thermostat

Part Detail

Revision	F
Type	AC
Mech. spec.	
Base	
Status	PRD/A
Elec. spec.	PM3923A
Layout	617227-326
Eff. date	12-21-2021
CD Diagram	422927-001
Poles	04
Leads	
Proprietary	False
Created date	04-09-2015

Nameplate

000613006MY

DUTY	HP	RPM	AMPS	VOLTS	HZ
CONT	10	1800	10.6	460	60
CONT	10	3000	10.3	460	100
CONT	10	1800	21.2	230	60
CONT	10	3000	20.6	230	100

CAT.NO.	ZDPM18010C-BV	**SPEC. NO.**	P18M0501				
SER.NO		**FR**	FL 1831C	**INSUL**	H		
PH.	3	**MAX SAFE SPEED**	7200	**AMB.**	40	**MIN. AMB.**	-25
DESIGN NO.	PM3923A	**TYPE**		**ENCL.**	TEAO-BC		
S.F.	1.0	**D.E. BRG.**	45BC02JPP30A				
ENCL MOD		**O.D.E. BRG.**	35BC02JPP30A				

000692000VY

MEAS OPEN CIRCUIT VOLTAGE

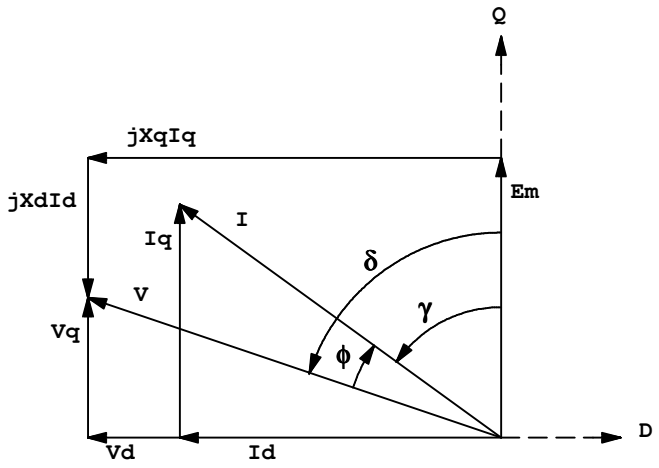
IS **VOLTS AT** **RPM.**

S.O. 0	VOLTS 460	TYPE IPM	STATOR RES.@ 25 °C 1.303
FRAME FL1831	AMPS 10.3	ENCLOSURE TEBC	OHMS (BETWEEN LINES)
HP 10	DUTY CONT	MAX SAFE RPM 7200	
BASE SPEED 1800	S.F. 1.0	WK^2 ($Lb-Ft^2$) .46	
PHASE/HERTZ 3/60	AMB °C/INSUL 40/H	MAX INSTANTANEOUS OVERLOAD AMPS 30.9	

VARIABLE SPEED PERFORMANCE

HP	AMPS (rms)	RPM	GAMMA*	POWER FACT.	EFF.	VOLTS (L-L) (rms)	Em (L-N) (rms)	Lq (mH)	Ld (mH)
OpenCkt**	N/A	1800	5.0	N/A	N/A	N/A	196	N/A	N/A
OpenCkt,hot	N/A	1800	5.0	N/A	N/A	N/A	179	N/A	N/A
2.03	2.6	1800	28.5	98.1	90.5	382	179	164	23.8
4.57	5.2	1800	39.0	97.9	92.8	420	179	123	23.3
7.20	7.7	1800	44.2	97.4	93.8	439	179	100	22.7
10.0	10.3	1800	49.5	97.1	94.0	458	179	91.1	22.1

Remarks: TYPICAL DATA
CONSTANT TORQUE 0-1800 RPM, CONSTANT POWER 1800-3000 RPM
200% OVERLOAD BELOW BASE SPEED TAPERED TO 100% AT 3000 RPM



*Gamma is the current angle relative to counter emf, defined to be positive when current leads counter emf.

Equivalently, Gamma is positive when Id is negative.

**Data at 25°C - all other data at rated temperature

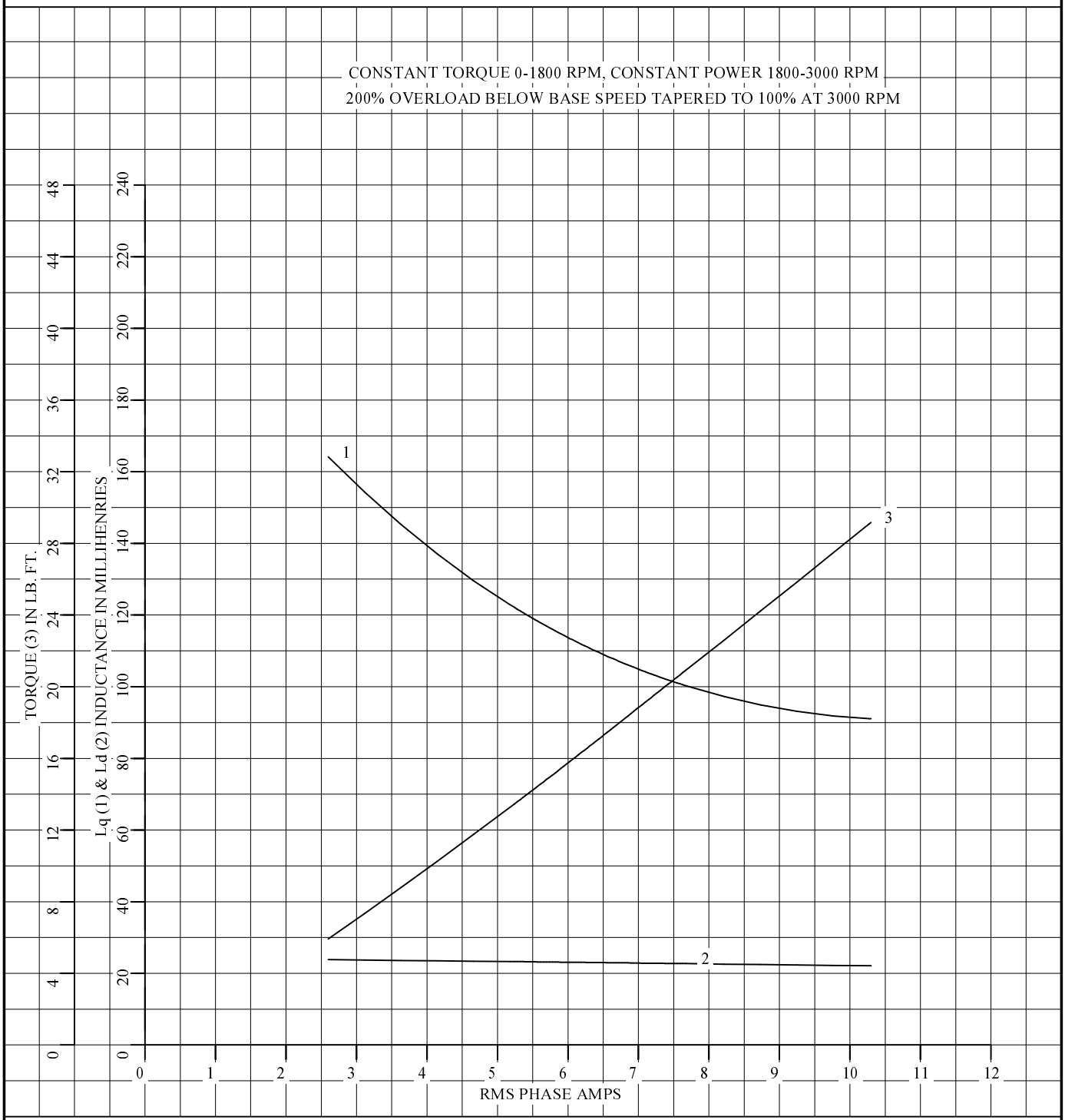
S.O.	0	VOLTS	460	TYPE	IPM	STATOR RES.@ 25 °C	1.303
FRAME	FL1831	AMPS	10.3	ENCLOSURE	TEBC	OHMS (BETWEEN LINES)	
HP	10	DUTY	CONT	MAX SAFE RPM	7200		
BASE SPEED	1800	S.F.	1.0	WK^2 (Lb-Ft^2)	.46		
PHASE/HERTZ	3/60	AMB °C/INSUL	40/H	MAX INSTANTANEOUS OVERLOAD AMPS		30.9	

CUSTOM MOTOR BLOCK PARAMETERS

Parameter Name	Value	Units	Description
Motor Rated HP	10.0	HP	Horsepower rating of the motor
Motor Rated Volt	460.0	V	Motor rated volts at full speed and load
Motor Rated Spd	1800.	RPM	Motor rated speed at full load
Motor Rated Freq	60.00	Hz	Motor rated speed frequency
Motor Rated Amps	10.3	A	Motor rated amps at full load and speed
Motor Peak Amps	30.9	A	Maximum current level that can be applied to motor
Stator R	.651	Ohms	Line-to-Neutral stator resistance
Voltage Constant	172.1	V/KRPM	RMS line-to-line EMF at 1000 RPM
Stator Ld	22.100	mH	D-axis stator inductance
Stator Lq	91.100	mH	Q-axis stator inductance
Lq @ 2.0 Hp	164.100	mH	Q-axis inductance at lowest partial load
Lq @ 4.6 Hp	122.600	mH	Q-axis inductance at mid partial load
Lq @ 7.2 Hp	100.100	mH	Q-axis inductance at highest partial load
Iq @ 2.0 Hp	2.3	A	Optimum Q-axis current at lowest partial load
Iq @ 4.6 Hp	4.0	A	Optimum Q-axis current at mid partial load
Iq @ 7.2 Hp	5.5	A	Optimum Q-axis current at highest partial load
Iq @ 10.0 Hp	6.7	A	Optimum Q-axis current at rated load

S.O.	0	VOLTS	460	TYPE	IPM	STATOR RES.@ 25 °C	1.303
FRAME	FL1831	AMPS	10.3	ENCLOSURE	TEBC		OHMS (BETWEEN LINES)
HP	10	DUTY	CONT	MAX SAFE RPM	7200		
BASE SPEED	1800	S.F.	1.0	WK^2 (Lb-Ft^2)	.46		
PHASE/HERTZ	3/60	AMB °C/INSUL	40/H	MAX INSTANTANEOUS OVERLOAD AMPS		30.9	

Lq, Ld, & Torque vs. RMS Phase Amps



REMARKS: TYPICAL DATA

BALDOR	DR. BY CD CK. BY RM APP. BY RM DATE 11/23/09	**IPM MOTOR PERFORMANCE DATA**	**PM3923A** ISSUE DATE 11/23/09

617227-326

ENCLOSURE: TOTALLY ENCLOSED

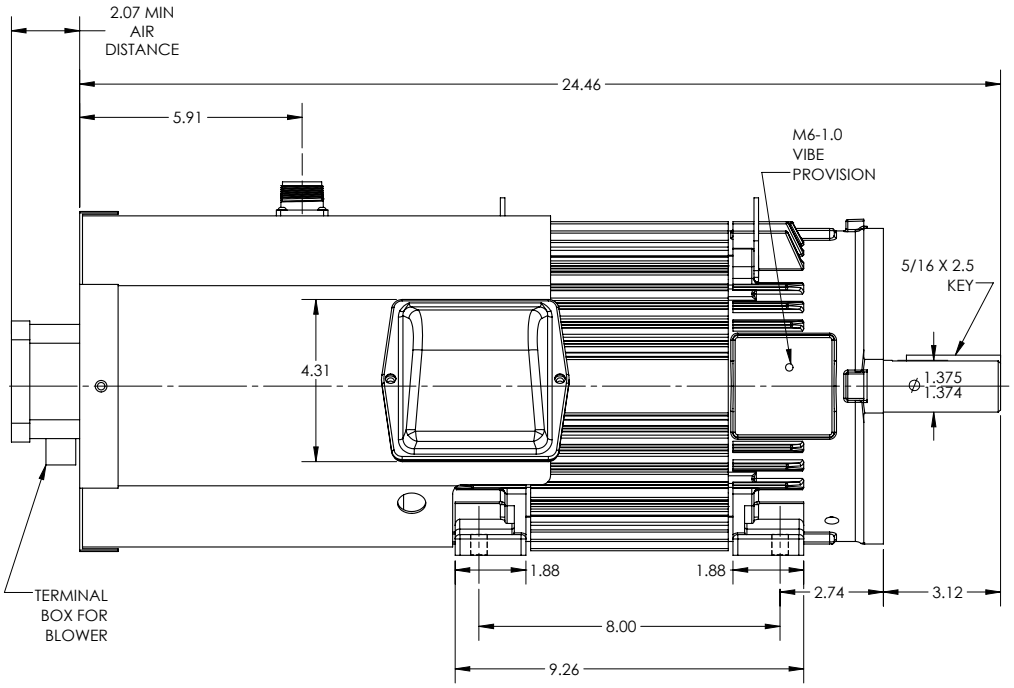
MOUNTING: FOOT/NEMA 210TC C-FACE

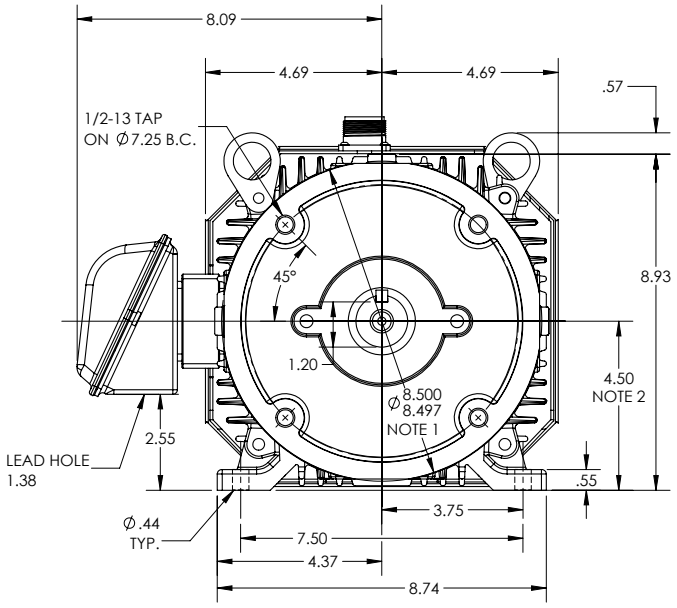
DRIVE METHOD: COUPLED OR BELTED

RPMAC VARIABLE SPEED ALTERNATING CURRENT MOTOR FL1831CZ

COOLING: BLOWER COOLED

ACCESSORIES: ENCODER





NOTE 1 TACHOMETER MOUNTING
1.2-13 TAP .88 DEEP, ON A 7.25 DIA. BOLT CIRCLE
FACE RUNOUT AND ECCENTRICITY .004 MAX T.I.R.

NOTE 2 SHAFT HEIGHT WILL NOT BE EXCEEDED.
SHIMS UP TO .03 INCHES IN THICKNESS ARE USUALLY REQUIRED FOR COUPLED OR GEARED MACHINES.

NOTE 3 MAXIMUM PERMISSIBLE SHAFT RUNOUT WHEN MEASURED AT END OF STD. SHAFT EXTENSION IS .002 T.I.R. UP TO AND INCLUDING 1.625 DIA. AND .003 T.I.R. 1.625 TO 5 INCH DIA.

NOTE 4 TERMINAL BOX MAY BE LOCATED F1 OR F2 IF SPECIFIED.
ROTATABLE IN 90° INCREMENTS
REFER TO 616779-050 FOR SPECIFIED TERMINAL BOX DIMENSIONS
REFER TO 616779-055 FOR SPECIFIED TACHOMETER DIMENSIONS

40 AMP MILL TERMINAL BOX SHOWN

MOTOR WEIGHT 133 LBS. (MAY VARY 15%)

DIMENSIONS ARE IN INCHES SCALE 1:1

CUSTOMER IS RESPONSIBLE FOR DETERMINING THAT THE PRODUCT WILL PERFORM SUITABLY IN THE INTENDED APPLICATION

REV. DESC: CONVERT TO SW			
REV: A	VERSION: 01	REVISED: 04:05:41 02/02/2023	TDR: 000001203038
MODEL NO. 617227-326			REF: -
BY: RGGRWM			B

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DIM SHT,RPMAC,TEBC,FL1831CZ,ENCODER

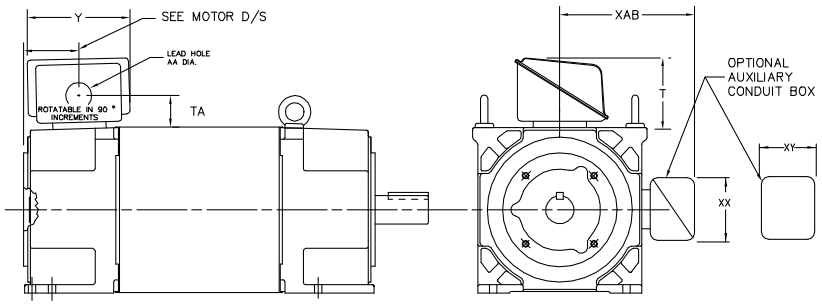
617227-326

616779-050

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	706320005A	6.12	2.38	4.38	1.75/2.00
FL180	STEEL	N	208	706320007A	7.62	2.00	7.00	2.50/3.00
FL180	CAST IRON	Y/N	60	706320004C	5.75	2.38	4.38	1.0 TAP
FL180 & FDL11	MILL	Y	100	706310056A	7.75	2.30	4.40	PG29/PG16
FL210 & RL210	STEEL	N	61	075452000B	6.34	2.00	4.12	1.75
FL210 & RL210	STEEL	N	121	075454001AJ	7.69	2.38	5.25	1.94
FL210 & RL210	STEEL	N	305	706320016A	9.00	4.12	8.44	4.59
FL210 & RL210	CAST IRON	N	110	075460062B	7.25	2.50	5.25	1.5 TAP
FL210 & RL210 FDL13 & RDL13	MILL	Y	100	706310225R 706310056A	7.75	2.30	4.40	PG29/PG16
FL210 & RL210 FDL13 & RDL13	MILL	Y	160	706310226R 706310056B	9.00	3.06	5.40	PG36/PG16
FL210 & RL210 FDL13 & RDL13	MILL	Y/N	235	706310637A	11.42	4.00	6.72	2.50
FL250 & RL250	STEEL	N	61	075452000B	6.34	2.00	4.12	1.75
FL250 & RL250	STEEL	N	121	075454001AJ	7.69	2.38	5.25	1.94
FL250 & RL250	STEEL	N	305	706320016A	9.00	4.12	8.44	4.59
FL250 & RL250	CAST IRON	N	110	075460062B	7.25	2.50	5.25	1.5 TAP
FL250 & RL250	CAST IRON	N	210	706320013A	10.50	4.88	9.00	4.0 TAP
FL250 & RL250 FDL16 & RDL16	MILL	Y	100	706310225R 706310056A	7.75	2.30	4.40	PG29/PG16
FL250 & RL250 FDL16 & RDL16	MILL	Y	160	706310226R 706310056B	9.00	3.06	5.40	PG36/PG16
FL250 & RL250 FDL16 & RDL16	MILL	Y/N	235	706310637A	11.42	4.00	6.72	2.50
FL250 & RL250 FDL16 & RDL16	MILL	Y	400	706310063B	14.39	7.43	12.15	BLANK
FL280 & RL280	STEEL	N	160	706320009A	7.25	3.50	7.06	2.50
FL280 & RL280	STEEL	N	305	706320016A	9.00	4.12	8.44	4.59
FL280 & RL280	STEEL	N	500	702658001C	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	706320013A	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 FDL18 & RDL18	MILL	Y	100	706310056A	7.75	2.30	4.40	PG29/PG16
FL280 & RL280 FDL18 & RDL18	MILL	Y	160	706310056B	9.00	3.06	5.40	PG36/PG16
FL280 & RL280 FDL18 & RDL18	MILL	Y/N	235	706310637A	11.42	4.00	6.72	2.50
FL280 & RL280 FDL18 & RDL18	MILL	Y	400	706310063B	14.39	7.43	12.15	BLANK

OPTIONAL AUXILIARY CONDUIT BOX DIMENSIONS (MAXIMUM)

FRAME SIZE	XAB	XX	XY	PART NUMBER	FRAME SIZE	XAB	XX	XY	PART NUMBER
FL210/FDL132/RL210/RDL132	7.38	4.25	4.25	602007-26-A	FL210/FDL132/RL210/RDL132	10.88	8.00	8.00	706310-3-B
FL250/FDL160/RL250/RDL160	8.44	4.25	4.25	602007-26-A	FL250/FDL160/RL250/RDL160	11.88	8.00	8.00	706310-3-B
FL280/FDL180/RL280/RDL180	9.12	4.25	4.25	602007-26-A	FL280/FDL180/RL280/RDL180	12.62	8.00	8.00	706310-3-B

(1) 'AA' CONDUIT.
(2) 'AA' PIPE TAP.
(3) CUSTOMER TO PROVIDE HOLE FOR CONDUIT.
(4) 2" DN -5A or 1" TAP DN -4C

TERMINAL BOX CAN BE ROTATED FOR LEAD OUTLET AT TOP, SIDES OR BOTTOM. TERMINAL BOX LOCATED ON OPPOSITE SIDE WHEN F-2, W-1, W-4, W-5, W-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.

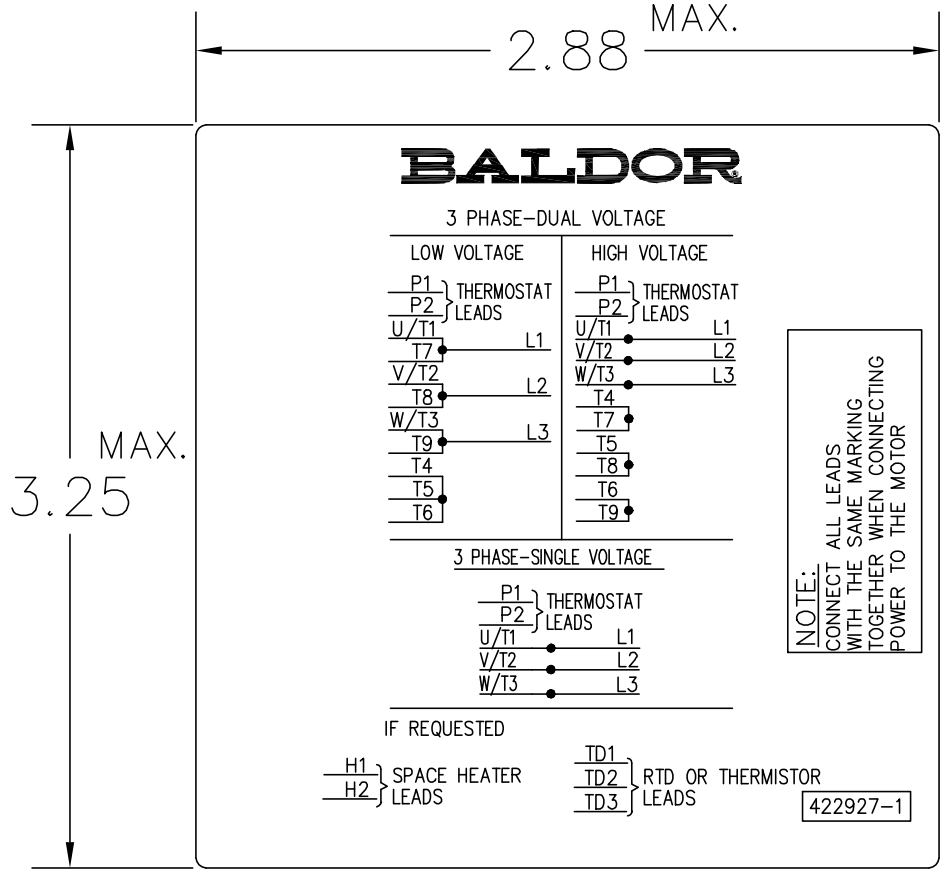
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REV. DESC: ADD 706310-637 & 639 BOX		TDR: 00000118O260
REV. LTR: F	VERSION: 06	
FILE: \RGG\00003\692	REVISED: 11:08:56 10/26/2021	BY: RGGRWM
MTL: -		

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

616779-050

422927-001



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

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: 000000788708
FILE: \RGG\00000\203		REVISED: 08:09:29 03/04/2013
MTL: –		BY: RGGWT

BALDOR
EXTERNAL CONNECTION LABEL
SH 1 of 1