ABB BALDOR RELIANCE

Customer information packet

D50300P2-BV

506AT, 300HP, 1750RPM, 500, 300, DPFG, F1

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Specifications

Armature Voltage	500 V
Base Speed	1750 rpm
Enclosure	DPFG
Field Voltage	300 V
Frame	506AT
Frame Material	Steel
Output Power	300.000 HP
Agency Approvals	CSA
Ambient Temperature	40 °C
Armature Current	478.0 a
Bearing Grease Type	Polyrex EM (-20F +300F)
Drip Cover	No Drip Cover
Duty Rating	CONT
Feedback Device	NO FEEDBACK
Field Winding Type	STR. SHUNT
Heater Indicator	No Heater
Insulation Class	F
Lifting Lugs	Standard Lifting Lugs
Motor Standards	NEMA
Mounting Arrangement	F1
Overall Length	49.00 IN
Service Factor	1.00
Shaft Diameter	3.249 IN
Shaft Extension Location	Pulley End
Shaft Ground Indicator	No Shaft Grounding
Shaft Slinger Indicator	No Slinger
Thermal Device - Bearing	None

Part Detail

Revision	D
Type	DC
Mech. spec.	
Base	
Status	PRD/A
Elec. spec.	K0125A
Layout	1336-6
Eff. date	03-22-2022
CD Diagram	15209
Poles	00
Leads	
Proprietary	False
Created date	04-09-2015

Nameplate

NP1734									
CAT.NO.	D50300P2-BV			**MODEL**	T50R8004				
HP	300	**RPM**	1750		**FRAME**	0506AT			
ARM V	500	**ARM A**	478.00		**WOUND**	STR. SHUNT			
FLD V	150/300	**FLD A**	18.14-12.40/9.07-6.20						
CONN		**OHMS**			**CL**	F			
ENCL	DPFG	**DUTY**	CONT		**MX AMB**	40			
P CODE	C	**CTSR**			**SER.F.**	1.00			
S/N				**E/S**	K00125A				
	BRUSH:50034-2								
O.D.E. BRG.	6216	**D.E. BRG.**	6218		**BRUSH**		**QTY**		

REL S.O.	FRAME	RATING	RPM	ARM. VOLTS	ARM. AMPS
	506	300HP	1750	500	478

WINDING TYPE	S.F.	ENCL.	AMB °C/INSUL	DUTY	FIELD VOLTS
STRAIGHT SHUNT	1.0	DPFV	40/F	CONT	300

POWER CODE	TYPE	WK^2 (LB-FT^2)	HOT ARM.CIR.RES.	FLD. AMPS@25 °C	HOT FIELD RES
C	TR	93.43	.0267	9.07	48.3

ARM. CIR. IND. (mh)	FIELD IND. (H)	COOLING AIR(CFM/IN H_2O)	TURNS PER COIL SHUNT/SERIES	TEST DATE
.908	32.3	1120/1.58	1000/.00000	-

LOAD PERFORMANCE

LOAD	AMPERES	TORQUE IN LB.-FT.	OUTPUT IN HP	RPM	% EFFICIENCY
NO LOAD	6.7	0	0	1743	0
1/4	120	225	74.4	1739	89.0
2/4	239	460	152	1739	92.9
3/4	359	689	228	1741	93.7
4/4	478	912	303	1745	93.6
O.L.	717	1320	448	1781	92.5

RPM VS. FIELD AMPS / Eg VS. FIELD AMPS

FIELD AMPS	RPM N.L.	RPM F.L.	Eg N.L. @ BASE SPEED	Eg F.L. @ BASE SPEED
6.20	1742	1744	501	487
5.84	1780	1788	491	474
5.48	1827	1844	479	460
5.13	1888	1913	463	443
4.77	1965	2000	445	424

REMARKS: TYPICAL DATA

ABB BALDOR RELIANCE

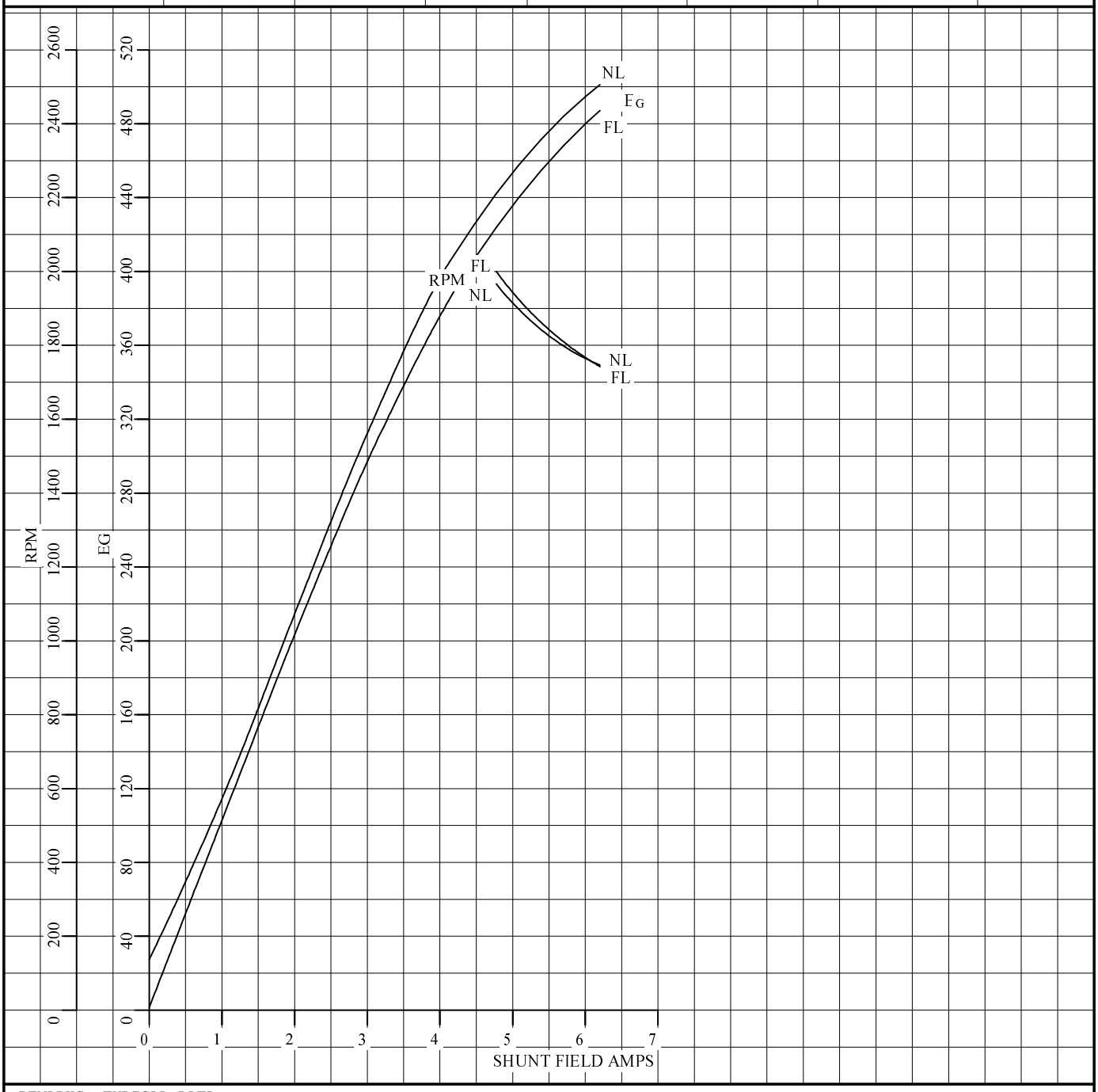
CUSTOMER INFORMATION PACKET

FRAME	RATING	BASE SPEED	WINDING TYPE
506	300HP	1750	STRAIGHT SHUNT

S.F.	ENCL.	AMB °C/INSUL	DUTY	POWER CODE/FORM FACTOR	TYPE	WK^2 (LB-FT^2)
1.0	DPFV	40/F	CONT	C	TR	93.43

COOLING AIR (CFM/IN H_2O)	$\bar{J}$ (sec)	$\bar{R}$ (hot)	T_E	T_M	BASIC RPM	MAX CONT RPM	WINDER RPM	MAX. SAFE
1120/1.58	.589	.0309	.0289	.0182	1950	2000	–	–

WINDING	VOLTS	RESISTANCE		CURRENT		INDUCTANCE		TURNS PER COIL
		25°C	HOT	25°C	HOT			
ARM CIRCUIT	500	.0190	.0267	–	478	.909	mH	–
SERIES S1-S2	–	–	–	–	–	–		–
SHUNT F1-F2	300	33.1	48.4	9.07	6.20	32.3	H	1000



REMARKS: TYPICAL DATA
CURVES VALID FOR NAMEPLATE SPEED RANGE ONLY

BALDOR · DODGE · RELIANCE

DR. BY E.H. GILLOT
CK. BY R.ERLACHER
APP. BY R.ERLACHER
DATE 08-11-2009

D-C APPLICATION DATA

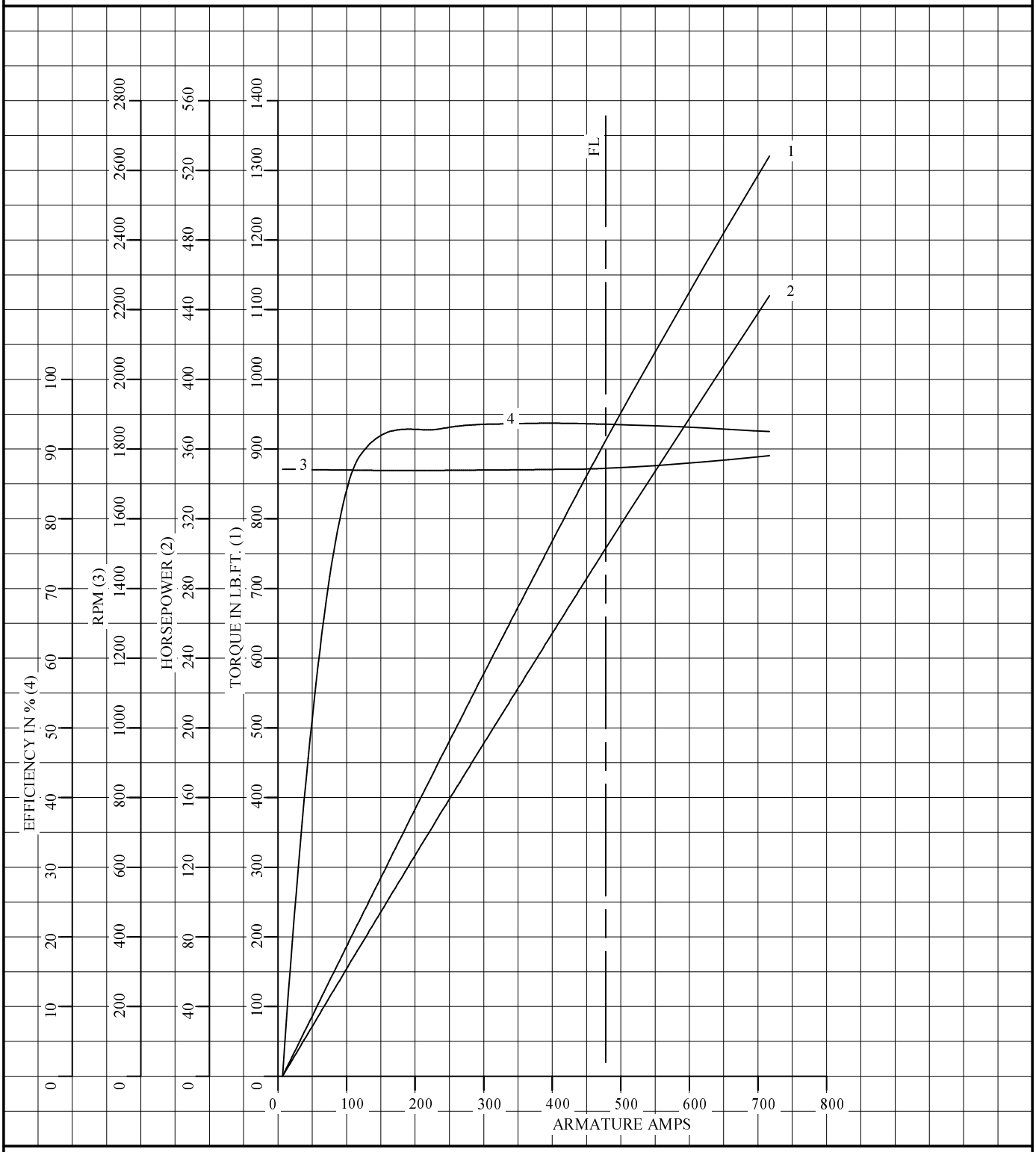
SK0125A

ISSUE DATE 08-11-2009

ABB BALDOR RELIANCE

CUSTOMER INFORMATION PACKET DRIVE TYPE 1300PE4BV - 506AT, 300HP, 1750RPM, 500, 300, DPFG, F1

FRAME 506	ENCL. DPFV	WK^2(LB-FT^2) 93.43	FLD.AMPS@25 °C 9.07
HP/KW 300HP	AMB °C INSL. 40/F	HOT ARM. CIR. RES. .0267	FIELD IND (H) 32.3
RPM 1750	ARM. AMPS 478	ARM. CIRCUIT IND(mh) .908	CFM/IN. H_2O 1120/1.58
ARM. VOLTS 500	FIELD VOLTS 300	HOT FIELD RES. 48.3	TEST S.O. –
WDG. TYPE STRAIGHT SHUNT	POWER CODE C		TEST DATE –



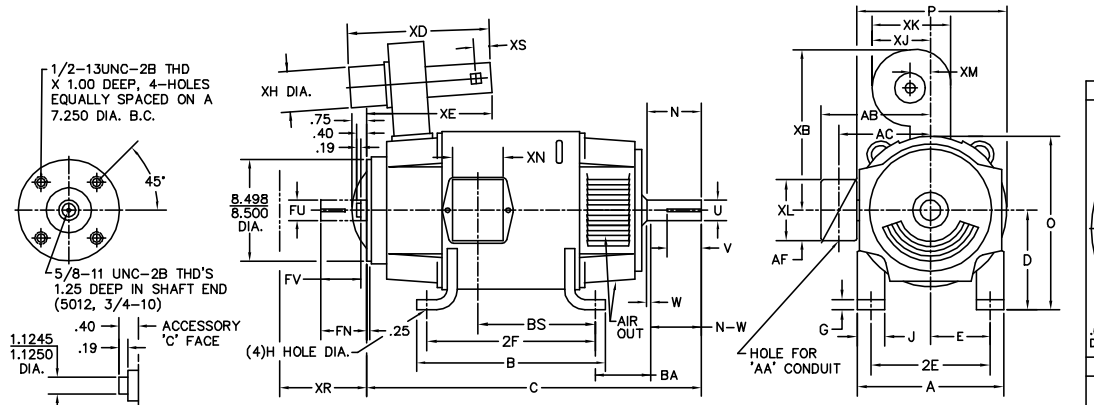
REMARKS: TYPICAL DATA

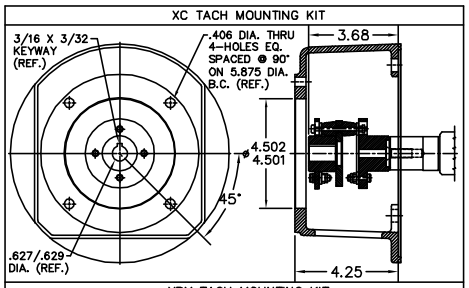
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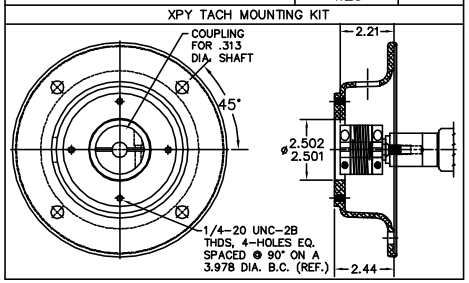
DR. BY	E.H. GILLOT
CK. BY	R.ERLACHER
APP. BY	R.ERLACHER
DATE	08-11-2009

D–C PERFORMANCE CURVES PK0125A ISSUE DATE 08-11-20

1336-6

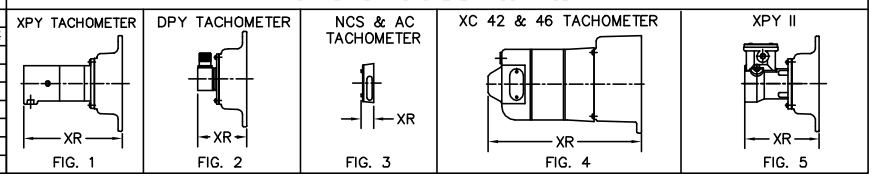






TACHOMETER			
TACH	XR	LBS	FIG #
XPY	9.00	6.00	1
DPY	6.91	3.00	2
NCS	3.25	7.00	3
AC	2.77	7.00	3
XC42	12.49	25.00	4
XC46	14.50	35.00	4
XPYII	6.89	15.00	5

STANDARD TACHOMETER MOUNTINGS



	FOOT MOUNTING						D.E. SHAFT EXTENSION					DRIVE KEY		ACC SHAFT EXTENSION			ACC KEY		FRAME					
FRAME	BA	E	2F	G	H	J	N	N-W	U	V	W	KEY-SQ.	KEY-LONG	FN	FU	FV	KEY-SQ.	KEY-LONG	A	B	C	D	O	P
504AT	8.50	10.00	16.00	1.18	1.188	4.50	6.76	6.57	3.250	6.32 [3]	.19	.750	5.25	5.95	2.875	5.70	.750	5.00	24.88	18.88	45.00	12.50 [2]	24.91	24.81
506AT	8.50	10.00	20.00	1.18	1.188	4.50	6.76	6.57	3.250	6.32 [3]	.19	.750	5.25	5.95	2.875	5.70	.750	5.00	24.88	22.88	49.00	12.50 [2]	24.91	24.81
508AT	8.50	10.00	25.00	1.18	1.188	4.50	6.76	6.57	3.250	6.32 [3]	.19	.750	5.25	5.95	2.875	5.70	.750	5.00	24.88	27.88	54.00	12.50 [2]	24.91	24.81
5010AT	8.50	10.00	32.00	1.18	1.188	4.50	6.76	6.57	3.250	6.32 [3]	.19	.750	5.25	5.95	2.875	5.70	.750	5.00	24.88	34.88	61.00	12.50 [2]	24.91	24.81
5011AT	8.50	10.00	36.00	1.18	1.188	4.50	6.76	6.57	3.375	6.32 [3]	.19	.875	5.25	5.95	2.875	5.70	.750	5.00	24.88	38.88	65.00	12.50 [2]	24.91	24.81
5012AT	8.50	10.00	43.00	1.18	1.188	4.50	7.06	6.87	4.250	6.62 [3]	.19	1.000	5.25	5.95	2.875	5.70	1.000	5.00	24.88	45.88	73.75	12.50 [2]	24.91	24.81

	CONDUIT BOX							BLOWER									ARM APPROX. WK² LBS.FT.²	APPROXIMATE WEIGHT
FRAME	AA	AB	AC	AF	BS	XL	XN	SIZE	XB	XD	XE	XH	XM	XJ	XK	XS		
504AT	3	20.65	16.81	2.62	13.25	11.63	7.76	LM8	25.50	27.38	20.94	10.75	5.50	12.38	15.25	3.75	79.10	1957 [5]
506AT	3	20.65	16.81	2.62	17.25	11.63	7.76	LM8	25.50	27.38	20.94	10.75	5.50	12.38	15.25	3.75	98.76	2337 [5]
508AT	3	20.65	16.81	2.62	22.25	11.63	7.76	LM8	25.50	27.38	20.94	10.75	5.50	12.38	15.25	3.75	121.87	2867 [5]
5010AT	4 [4]	21.20	16.81	2.84	30.12	13.40	13.50	LM9	25.50	28.31	20.94	10.75	5.50	12.38	15.25	3.75	156	3520 [5]
5011AT	4 [4]	21.20	16.81	2.84	34.12	13.40	13.50	LM9	25.50	28.31	21.88	10.75	5.50	12.38	15.25	3.75	161	3880 [5]
5012AT	4 [4]	21.20	17.19	2.84	41.12	13.40	13.50	LM9	25.50	28.31	21.88	10.75	5.50	12.38	15.25	3.75	170	5177 [5]

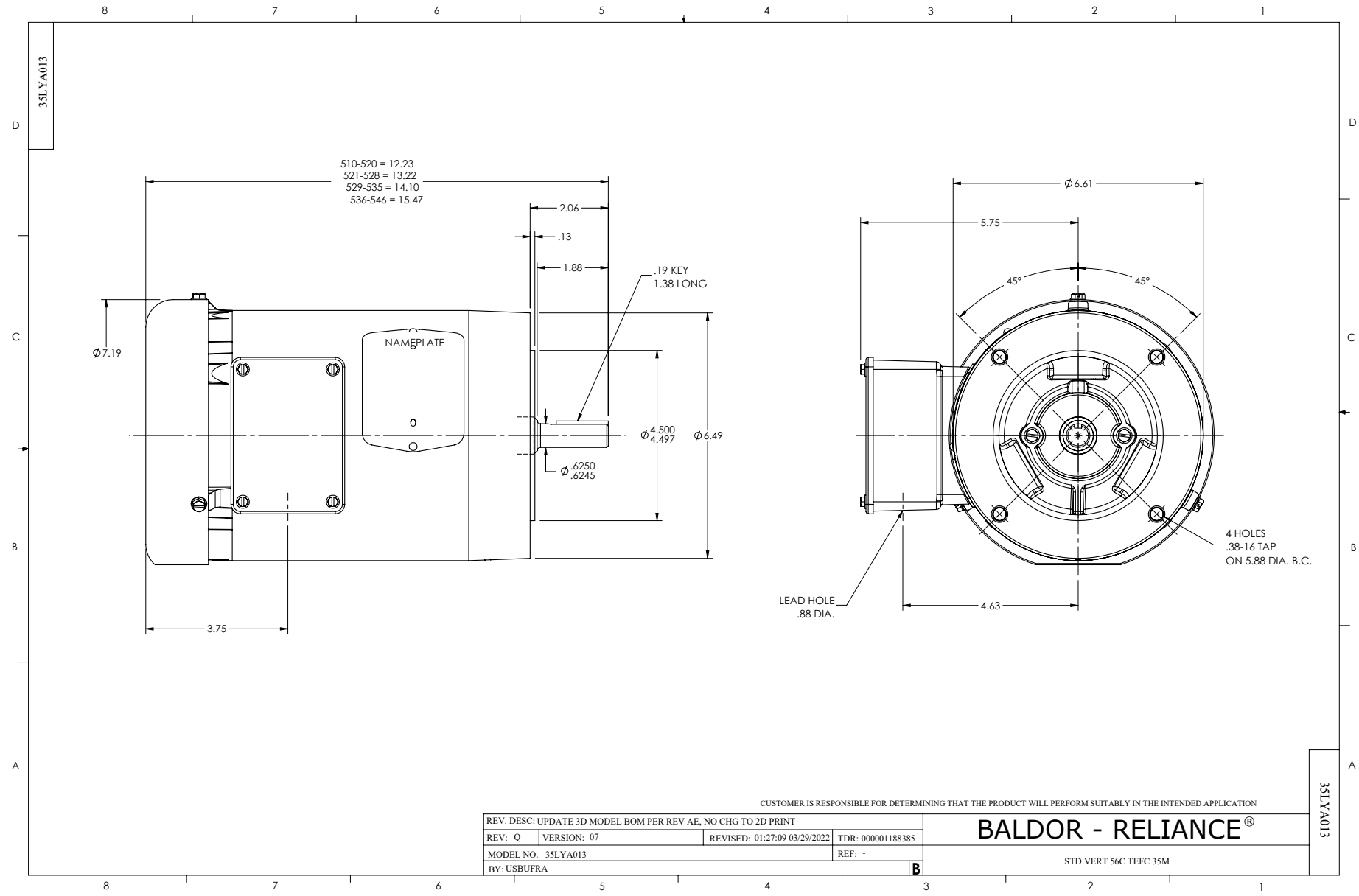
1) SHAFT DIAMETERS TO 1.500 TOLERANCE +.0000 -.0005
SHAFT DIAMETERS ABOVE 1.500 TOLERANCE +.0000 -.0010
SHAFT DIAMETERS TO 1.625 RUNOUT .002 T.I.R. MAX.
SHAFT DIAMETERS ABOVE 1.625 RUNOUT .003 T.I.R. MAX.
2) 'D' DIMENSION TOLERANCE +.000 - .060
3) 'V' DIMENSION IS MAX. HUB LENGTH ON SHAFT
4) THERE ARE TWO HOLES FOR 4" CONDUIT, SECOND HOLE IS 6" TOWARD DRIVE END.
5) TOTAL WEIGHT OF MOTOR AND BLOWER LESS TACH WEIGHT.
6) ALL DIMENSIONS NOT NOTED ARE NOMINAL DIMENSIONS CONSULT FACTORY FOR TOLERANCES.

FOR F1 OR F2 CONDUIT BOX
LOCATION SEE SALES ORDER

CUSTOMER IS RESPONSIBLE FOR DETERMINING THAT MOTOR PERFORMANCE IS SUITABLE IN THE APPLICATION.

REV. DESC: CHG (5011)U DIM TO 3.375, KEY-SQ TO .875			BALDOR ELECTRIC Co.
REV. LTR: G	BY: MBT	REVISED: 15:36:36 07/17/2002	TDR: 273841
9-9ƐƐ1		FILE: CHB00001076	REF: 1336-6
		MTL: -	DIM SHEET: 504-5012AT,DPBV,W/TACH

1336-6


35LYA013
510-520 = 12.23
521-528 = 13.22
529-535 = 14.10
536-546 = 15.47
2.06
.13
1.88
.19 KEY
1.38 LONG
NAMEPLATE
Ø7.19
Ø4.500
4.497
Ø6.49
Ø .6250
.6245
3.75
Ø6.61
5.75
45°
45°
4 HOLES
.38-16 TAP
ON 5.88 DIA. B.C.
LEAD HOLE
.88 DIA.
4.63
CUSTOMER IS RESPONSIBLE FOR DETERMINING THAT THE PRODUCT WILL PERFORM SUITABLY IN THE INTENDED APPLICATION
REV. DESC: UPDATE 3D MODEL BOM PER REV AE, NO CHG TO 2D PRINT
REV: Q
VERSION: 07
REVISED: 01:27:09 03/29/2022
TDR: 000001188385
MODEL NO. 35LYA013
REF: -
BY: USBUFRA
B
BALDOR - RELIANCE®
STD VERT 56C TEFC 35M
35LYA013

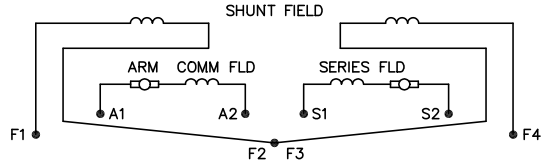
15209

ALUMINUM (MATT) BACKGROUND WITH BLACK LETTERS

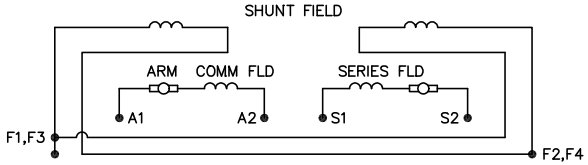
LABEL MANUFACTURER IDENTIFYING MARK TO APPEAR HERE

3 1/4

CONNECTIONS AND TERMINAL MARKINGS



HIGH FIELD EXCITATION VOLTAGE (SERIES CONN.)



LOW FIELD EXCITATION VOLTAGE (PARALLEL CONN.)

FOR STRAIGHT SHUNT MOTORS: DISREGARD S1 AND S2.
FOR SERIES MOTORS: DISREGARD F1,F2,F3,F4.
STRAIGHT SHUNT: F1 AND A1 SAME POLARITY, ROTATION CCW.
SERIES: CONNECT A2 AND S1, ROTATION CCW.
STABILIZED SHUNT AND COMPOUND: F1 AND A1 SAME POLARITY. CONNECT A2 AND S1, ROTATION CCW.
FOR CW ROTATION: INTERCHANGE A1 AND A2. ROTATION VIEWED FROM OPPOSITE DRIVE END. FOR FIELD REVERSING MOTORS WITH A SERIES FIELD: S1 MUST REVERSE POLARITY WHEN F1 REVERSES.
THERMOSTAT: WHEN SUPPLIED WILL HAVE LEADS TAGGED P1 AND P2. THERMOSTAT SENSES HEAT OF COMMUTATING FIELD COIL.

AMPERE RATINGS OF CONTACTS.

MAX AMPS BREAK			MAX CONTINUOUS
120 VAC	240 VAC	24 VDC	AMP – ALL VOLTAGES
12	8	2	2

SPACE HEATER: WHEN SUPPLIED WILL HAVE LEADS TAGGED H1 AND H2. SEE MOTOR NAMEPLATE FOR HEATER VOLTAGE AND CURRENT.

15209

2 1/2

NOTE:
MATERIAL .005 MINUMUM FULL HARD ALUMINUM DULL FINISH.
TEMP. RANGE −20°C TO +125°C MAXIMUM.
FOR INDOOR AND OUTDOOR MOUNTING BACK.
METAL, PRESSURE SENSITIVE BACK.
MUST MEET CSA STANDARD.
THE CSA INDENTIFYING MARK OF THE LABEL MANUFACTURER MUST APPEAR IN THE UPPER RIGHT HAND CORNER AS INDICATED.

UNLESS OTHERWISE SPECIFIED,
BREAK ALL SHARP EDGES .010/.020.
REMOVE ALL BURRS.

TOLERANCES

.X ±.015	FRACTIONS ±1/32
.XX ±.010	RADII ±1/16
.XXX +.005	ANGLES ±1°

MATL: NOTED				BALDOR ELECTRIC Co.
REV:	G	CHANGE ALL "NAMEPLATE" TEXT TO "LABEL"		
15209	SCALE: –	BY: BKW	REVISED: 02/19/97	LABEL, CONNECTIONS AND TERMINAL MARKINGS DC
	FILE: CHB00002485		TDR: 0115147	

15209