

**BALDOR® • RELIANCE** 

**Product Information Packet**

**SUM76004-4**

**60HP,1770RPM,3PH,60HZ,320TY,TENV,FOOTLE**

Part Detail							
Revision:	A	Status:	PRD/A	Change #:		Proprietary:	No
Type:	AC	Elec. Spec:	E09222C J 001	CD Diagram:	416820-036	Mfg Plant:	
Mech. Spec:		Layout:	066930-018	Poles:	04	Created Date:	04-09-2015
Base:		Eff. Date:	08-06-2015	Leads:			

Specs			
Catalog Number:	SUM76004-4		
Enclosure:	TENV		
Frame:	320TY		
Frame Material:	Iron		
Output @ Frequency:	60.000 @ 60 HZ		
Voltage @ Frequency:	460 V @ 60 HZ		
XP Class and Group:	CLI GP C,D		
XP Division:	Division I		
Agency Approvals:	CCSA US		
	CSA		
	UL		
Base Indicator:	No Mounting		
Bearing Grease Type:	Polyrex EM (-20F +300F)		
Current @ Voltage:	74.9 A @ 460 V		
Design Code:	B		
Drip Cover:	No Drip Cover		
Duty Rating:	15 MIN		
Heater Indicator:	No Heater		

<b>Insulation Class:</b>	F		
<b>Inverter Code:</b>	Inverter Ready		
<b>KVA Code:</b>	F		
<b>Lifting Lugs:</b>	Vertical Lifting Lugs		
<b>Motor Type:</b>	M		
<b>Mounting Arrangement:</b>	V1		
<b>Product Family:</b>	Other		
<b>Pulley End Bearing Type:</b>	Ball		
<b>Pulley Face Code:</b>	D-Flange		
<b>Shaft Rotation:</b>	Reversible		
<b>Shaft Slinger Indicator:</b>	No Slinger		
<b>Speed Code:</b>	Single Speed		
<b>Motor Standards:</b>	NEMA		
<b>Starting Method:</b>	Direct on line		
<b>Thermal Device - Winding:</b>	Normally Closed Thermostat		
<b>XP Temp Code:</b>	T3C		

Nameplate 000613007AC		
CLASS I GROUP	C D X	NO. <input type="text"/>
CLASS II GROUP	X X X	
OPERATING TEMP CODE	T3C	

<b>Nameplate 000613007MN</b>									
<b>CAT NO</b>	SUM76004-4			<b>SPEC NO.</b>	P32G2706				
<b>HP</b>	60	<b>AMPS</b>	74.9	<b>VOLTS</b>	460			<b>DESIGN</b>	B
<b>FRAME SIZE</b>	X0320TY	<b>RPM</b>	1770	<b>HZ</b>	60	<b>AMB</b>	40	<b>SF</b>	1.15
<b>D.E. BRG.</b>	85BJ33J30X			<b>PH</b>	3	<b>DUTY</b>	15MIN		
<b>O.D.E. BRG.</b>	50BC03JPG30A			<b>TYPE</b>	P	<b>ENCL</b>	TENV		
		<b>POWER FACTOR</b>							
		<b>MAX CORR KVAR</b>							
		<b>NEMA NOM/CSA QUOTED EFF @</b>							
<b>SER.NO.</b>				<b>MOTOR WEIGHT</b>	910		<b>LBS.</b>		
	*15 MIN IN AIR ;SUB.IN								
	WATER/SEWAGE ONLY SEE MANUAL								
	FOR MAXDEPTH; P32G2706E								
		<b>NEMA-NOM-EFF</b>							
		<b>INSUL</b>	F						
		<b>CODE</b>	F						
		<b>GUARANTEED EFFICIENCY</b>	100% LOAD						

<b>Nameplate 000613007MR</b>									
<b>CAT NO</b>	SUM76004-4		<b>SPEC NO.</b>	P32G2706					
<b>HP</b>	60	<b>AMPS</b>	74.9	<b>VOLTS</b>	460		<b>DESIGN</b>	B	
<b>FRAME SIZE</b>	X0320TY		<b>RPM</b>	1770		<b>HZ</b>	60	<b>AMB</b>	40
<b>D.E. BRG.</b>	85BJ33J30X		<b>PH</b>	3		<b>DUTY</b>	15MIN		
<b>O.D.E. BRG.</b>	50BC03JPG30A		<b>TYPE</b>	P		<b>ENCL</b>	TENV		
			<b>POWER FACTOR</b>						
			<b>MAX CORR KVAR</b>						
			<b>NEMA NOM/CSA QUOTED EFF @</b>						
<b>SER.NO.</b>			<b>MOTOR WEIGHT</b>	910		<b>LBS.</b>		<b>GUARANTEED EFFICIENCY</b>	
								<b>100% LOAD</b>	
	*15 MIN IN AIR ;SUB.IN								
	WATER/SEWAGE ONLY SEE MANUAL								
	FOR MAXDEPTH; P32G2706E								

Parts List		
Part Number	Description	Quantity
SA297296	SA P32G2706	1.000 EA
RA283508	RA P32G2706	1.000 EA
424476003WL	WIRING DIAGRAM MEDIUMA	1.000 EA
000613007AC	UL NAMEPLATE FOR HAZARDOUS LOCATIONS	1.000 EA
000613007MN	NP,MEDIUM AC,NO CERT,STD INDUSTRIAL	1.000 EA
000613007MR	NP, MEDIUM AC, CSA, STD INDUSTRIAL	1.000 EA
000692000EJ	NAME PLATE	1.000 EA
000901001AA	LABEL WARNING	1.000 EA
034692002AE	HCSPP 1/4" 304 S.S.	1.000 EA
004824015A	GREASE POLYREX EM	0.400 LB
032018016EG	HHCS 5/8-11X2 316S.S.	6.000 EA
032130016DD	HSHCS 1/2-13X2L 316 S.S.	6.000 EA
032620020JD	HSSS 10-24X5/8L 304S.S.	2.000 EA
034141300AC	RETAINING RING	1.000 EA
034141275AC	RETAINING RING	1.000 EA
064262018F	SEAL 320 SUBMERSIBLE	1.000 EA
064262018G	SEAL SUBMERSIBLE	1.000 EA
413412004C	SUBM MOISTURE PROBE	2.000 EA
413412005Y	LEAD WIRE ASSY(BLANKET)	1.000 EA
413480001R	RESISTOR ASSEMBLY-BLANKET	1.000 EA
421900192FU	ORING	1.000 EA
421900208FU	ORING	1.000 EA
004824018AF	SHELL ROTELLA OIL 10W	5.483 LB
603762053B	SLINGER BLKT	1.000 EA

Parts List (continued)		
Part Number	Description	Quantity
802076002A	BRKT,DE,320SUB	1.000 EA
802077002A	MTGPLT 320 802077001WCA	1.000 EA
032018006BM	HHCS 5/16-18X3/4 PLTGRN.	1.000 EA
032018006BM	HHCS 5/16-18X3/4 PLTGRN.	1.000 EA
032018016EG	HHCS 5/8-11X2 316S.S.	4.000 EA
032080003LB	HWHMS 1/4-20X3/8L PLTED	3.000 EA
032080003JB	HWHMS 10-24X3/8L PLTED	4.000 EA
034036013AB	LCKW 5/16 EXT.TOOTH LCKW	1.000 EA
047024003AH	T/LUG AMP 34112	4.000 EA
047024003R	LUG	3.000 EA
415031017A	NUT W/WASHER 10-24 C.PLT	4.000 EA
415031017B	NUT W/WASHER1/4-20 C.P	3.000 EA
421900124FU	ORING	1.000 EA
609181014D	HEAT SHRINK TUBING 3/4	7.000 EA
004824007K	SPECIAL PAINT	0.100 EA
700385014AA	CCA #2 25' 320/360	1.000 EA
033775004EA	DRSCR #6-1/4 304 S.S.	6.000 EA
034180024GD	KEY 1/2X1/2X3L 303 S.S.	1.000 EA
421900208FU	ORING	1.000 EA
802075002A	BRKT,ODE,320SUB	1.000 EA
032018010CG	HHCS 3/8-16X1-1/4L 316SS	3.000 EA
032018016EG	HHCS 5/8-11X2 316S.S.	6.000 EA
B3630-9	SUBM THERMOSTAT TAG	1.000 EA
B-3664002	TAG, (NON REGREASABLE)	1.000 EA



034692003AE	PPLG 3/8" 304 S.S.	2.000 EA
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S/O	FRAME	HP	TYPE	PHASE/ HERTZ	RPM	VOLTS
	320TY	60	P	3/60	1770	460
AMPS	DUTY	AMB °C/ INSUL	S.F.	NEMA DESIGN	CODE LETTER	ENCLOSURE
74.9	*	40/F	1.15	B	F	SUB
E/S	ROTOR	TEST S.O.	TEST DATE	STATOR RES. @25 °C OHMS (BETWEEN LINES)		
490168	418140031NE	---	---	.124		

**PERFORMANCE**

LOAD	HP	AMPERES	RPM	INPUT KW	% POWER FACTOR	% EFFICIENCY
NO LOAD	0	28.5	1800	1.61	7.07	0
1/4	15.0	34.2	1792	12.9	47.6	86.5
2/4	30.0	44.6	1785	69.1	69.1	91.3
3/4	45.0	58.7	1777	36.4	77.8	92.2
4/4	60.0	74.9	1768	81.4	81.4	92.0
5/4	75.0	92.7	1758	61.3	82.9	91.3

**SPEED TORQUE**

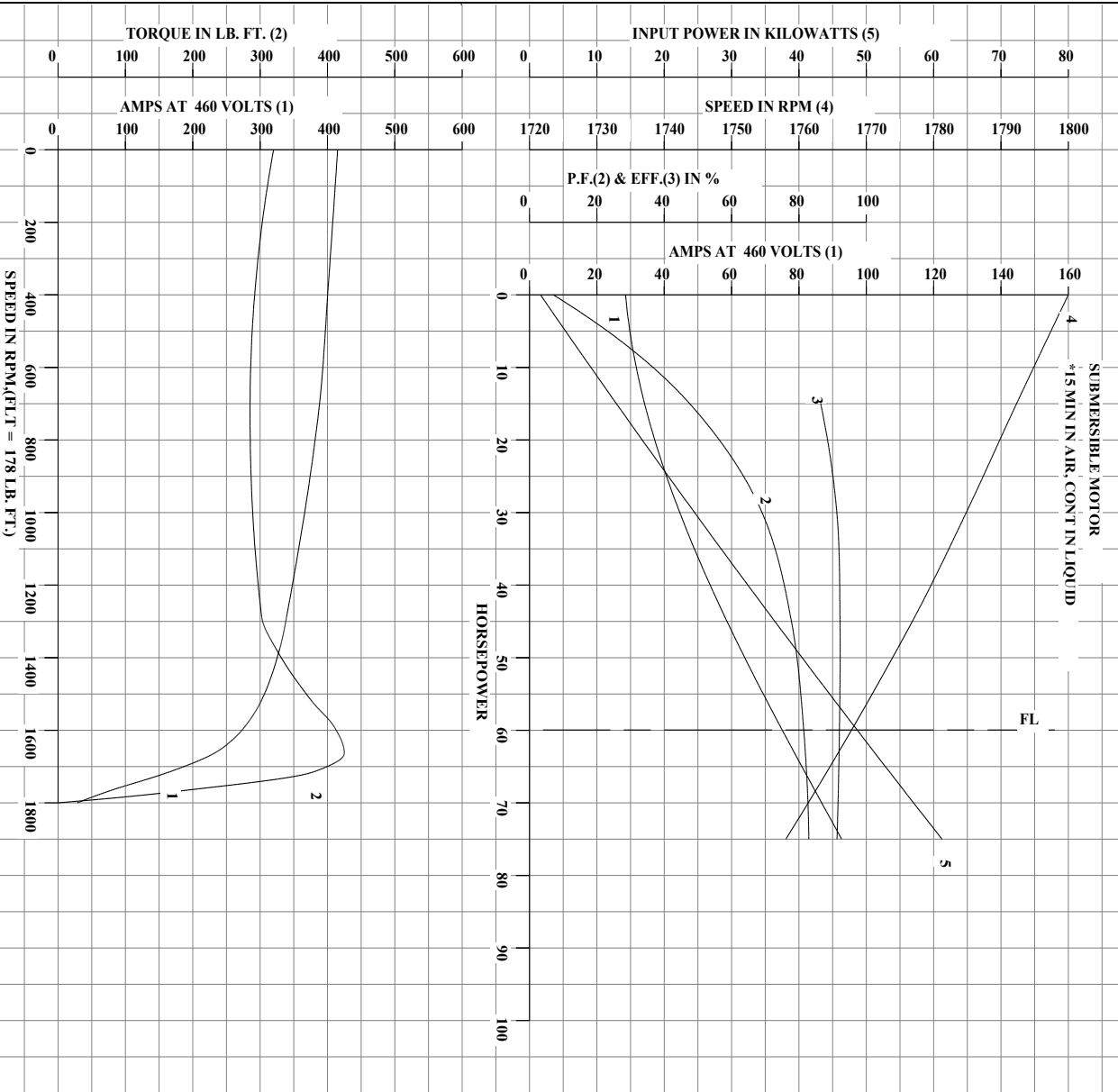
	RPM	TORQUE % FULLLOAD	TORQUE LB.-FT.	AMPERES
LOCKED ROTOR	0	180	320	415
PULL UP	720	160	285	387
BREAKDOWN	1663	239	425	232
FULL LOAD	1768	100	178	74.9

AMPERES SHOWN FOR 460 VOLT CONNECTION. IF OTHER CONNECTIONS ARE AVAILABLE, THE AMPERES WILL VARY INVERSELY WITH THE RATED VOLTAGE.

CALCULATED DATA  
SUBMERSIBLE MOTOR  
\*15 MIN IN AIR, CONTIN LIQUID

<b>BALDOR</b> A MEMBER OF THE ABB GROUP	DRAWN BY: D. M. BYRD	AC MOTOR PERFORMANCE DATA
	CHECKED BY: T. S. WILLIAMS APPROVED BY: D. M. BYRD DATE: 10/20/04	
		DATE ISSUED 10/20/04

REL.S.O. FRAME 320TY HP 60 TYPE P PHASE/HERTZ 3/60	RPM 1770 VOLTS 460 AMPS 74.9 DUTY * AMB °C/INSUL 40/F	S.F. 1.15 NEMA DESIGN B CODE LETTER F ENCLOSURE SUB E/S 490168	ROTOR 418140031NE TEST S.O. CALCULATED DATA TEST DATE -- STATOR RES. @ 25°C .124 OHMS (BETWEEN LINES)
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AMPERES SHOWN FOR 460 VOLT CONNECTION, IF OTHER VOLTAGE CONNECTIONS ARE AVAILABLE, THE AMPERES WILL VARY INVERSELY WITH THE RATED VOLTAGE.

<b>BALDOR</b> A MEMBER OF THE ABB GROUP	DRAWN BY: D. M. BYRD CHECKED BY: T. S. WILLIAMS APPROVED BY: D. M. BYRD DATE: 10/20/04	AC MOTOR PERFORMANCE DATA	E09222-C-J001 ISSUE DATE 10/20/04
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USZAWOL

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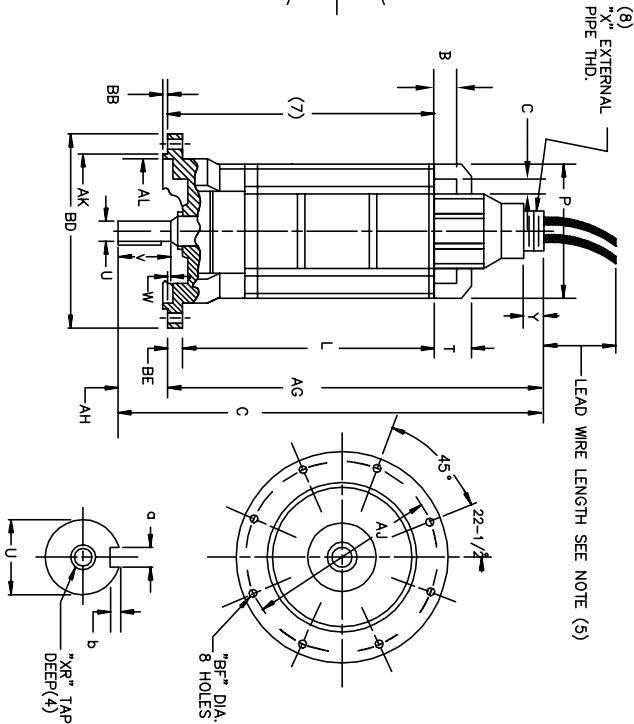
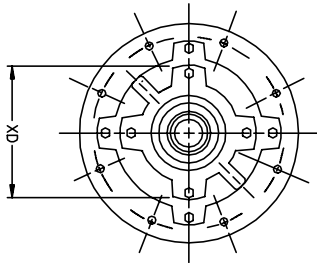
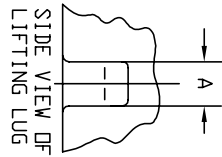
# DUTY MASTER ALTERNATING CURRENT MOTORS

SQUIRREL-CAGE INDUCTION  
ENCLOSURE: TOTALLY ENCLOSED

SUBMERSIBLE

FRAMES 210TY THRU 320TY

066930-018



DIMENSIONS ARE IN INCHES. SEE SHEET 2 FOR MILLIMETERS.

FRAME	C	L	P	T	U(3)	V	W	AG	AH	AJ	AK (6)	AL	A	B	C
210TY	31.69	21.12	11.50	2.25	1.4380	2.00	.44	30.12	1.56	14.12	13.125	12.00	.88	1.50	1.75
250TY	37.34	23.63	12.75	3.50	1.7500	3.31	.28	34.31	3.03	16.00	15.000	14.00	.75	2.25	2.12
320TY	43.12	24.69	15.75	4.25	2.500	3.19	2.12	37.81	5.31	17.25	16.000	15.25	1.25	2.25	1.50

FRAME	BD(2)	BE	BF	XR(4)	X (8)	Y	XD	BB	B	LENGTH	WEIGHT
210TY	15.250	.75	.56	5/8-11	2-1/2-8	1.25	7.75	.25	.375	.19	1.12
250TY	17.000	.88	.69	5/8-11	2-1/2-8	1.25	7.75	.25	.375	.19	2.25
320TY	18.750	.88	.69	3/4-10	3-8	1.25	10.88	.25	.500	.25	3.00

- (1) SPECIAL DIMENSIONS ON THIS LINE.
- (2) "BD" VARIES ±.010.
- (3) "U" VARIES — UP TO 1.625 DIA. +.0000, —.0005  
1.625 DIA. AND LARGER +.000, —.001.
- (4) TAP DEPTH ON 210TY THRU 250TY IS 1.38"  
TAP DEPTH ON 320TY IS 1.50"
- (5) LEAD WIRE LENGTH AS SPECIFIED ON CERTIFICATION
- (6) "AK" VARIES +.000, —.002
- (7) MINIMUM SUBMERGED DEPTH.

FACE RUNOUT AND ECCENTRICITY .008 MAX. T.I.R.  
PROTECTIVE CONDUIT FURNISHED BY CUSTOMER.  
(8) 3" — 8 PIPE THREAD SUPPLIED WITH CABLE  
SIZES NO. 4 AND LARGER.

FRAME \_\_\_\_\_ TYPE \_\_\_\_\_ CERTIFIED FOR \_\_\_\_\_  
 ORDER \_\_\_\_\_ ITEM \_\_\_\_\_ HP \_\_\_\_\_ RPM \_\_\_\_\_ PH \_\_\_\_\_ HZ \_\_\_\_\_ VOLTS \_\_\_\_\_  
 RELIANCE SALES ORDER \_\_\_\_\_ APPROVED BY \_\_\_\_\_ DATE \_\_\_\_\_

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

REV. DESC: MOVE V DIM. TO CORRECT POSITION (SH1)	VERSION: 04	TDR: 000000876933
REV. LTR: D	REVISED: 08:13:18 10/21/2014	BY: RGGWT
FILE: \RGG\00006\320		
MTL: —		

**BALDOR**

DIMENSION SHEET DUTY MASTER A/C MOTORS

SH 1 of 2

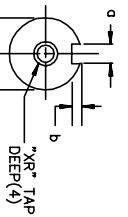
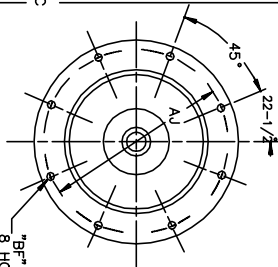
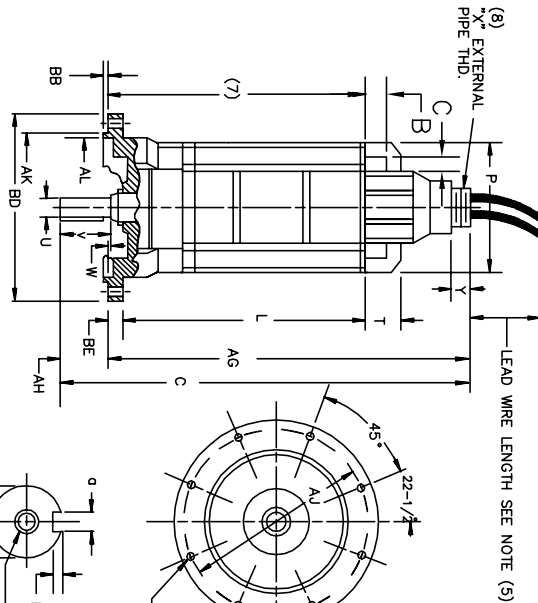
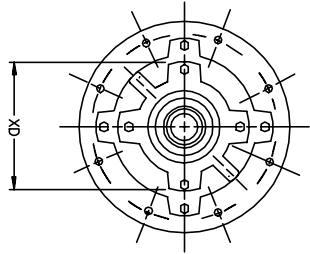
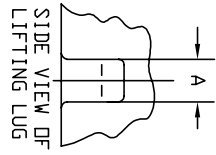
066930-018

**DUTY MASTER ALTERNATING CURRENT MOTORS**

SQUIREL-CAGE INDUCTION  
ENCLOSURE: TOTALLY ENCLOSED  
SUBMERSIBLE

FRAMES 210TY THRU 320TY

066930-018



DIMENSIONS ARE IN MILLIMETERS. SEE SHEET 1 FOR INCHES.

FRAME	C	L	P	T	U(3)	V	W	AG	AH	AJ	AK (6)	AL	LINE DIMENSIONS
210TY	804.9	536.4	292.1	57.1	36.525	50.8	11.2	765.0	39.6	358.6	333.38	304.8	22.3 36.1 44.4
250TY	948.4	600.2	323.8	88.9	44.45	84.1	7.1	871.5	77.0	406.4	381.00	355.6	19.0 57.1 53.8
320TY	1095.2	627.1	400.0	108.0	63.50	81.0	53.8	960.4	134.9	438.1	406.40	387.3	31.7 57.1 38.1

FRAME	BD(2)	BE	BF	YR(4,9)	X (6,9)	Y	X0	BB	KEYWAY	WEIGHT
210TY	387.35	18.0	14.2	5/8-11	2-1/2-8	31.7	198.8	6.4	9.52 4.8	143
250TY	431.80	22.4	17.5	5/8-11	2-1/2-8	31.7	198.8	6.4	9.52 4.8	340
320TY	476.25	22.4	17.5	3/4-10	3-8	31.7	276.4	6.4	12.70 6.4	521

- (1) SPECIAL DIMENSIONS ON THIS LINE.
- (2) "BD" VARIES ±25
- (3) "U" VARIES — [IP TO 41.28 DIA. +.000, -.013  
41.28 DIA. AND LARGER +.000, -.025.
- (4) TAP DEPTH ON 210TY THRU 250TY IS 35MM.  
TAP DEPTH ON 320TY IS 38MM.
- (5) LEAD WIRE LENGTH AS SPECIFIED ON CERTIFICATION
- (6) "AK" VARIES +.000, -.050
- (7) MINIMUM SUBMERGED DEPTH.
- (8) FACE RUNOUT AND ECCENTRICITY .20 MAX. T.I.R.  
PROTECTIVE CONDUIT FURNISHED BY CUSTOMER.
- (9) 3" — 8 PIPE THREAD SUPPLIED WITH CABLE  
SIZES NO. 4 AND LARGER.
- (9) DIMENSIONS IN INCHES.

sh2

FRAME— TYPE— CERTIFIED FOR—  
 ORDER— ITEM— HP— RPM— PH— HZ— VOLTS—  
 RELIANCE SALES ORDER— APPROVED BY— DATE—

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

REV. DESC: MOVE V DIM. TO CORRECT POSITION (SH1)		
REV. LTR: D	VERSION: 04	TDR: 000000876933
FILE: \RGG\00006\320	REVISED: 08:13:18 10/21/2014	BY: RGGWT
MTL: —		

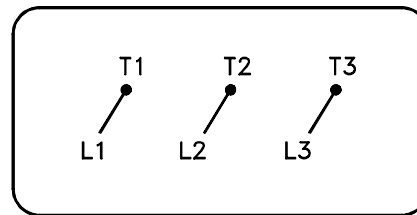
**BALDOR**

DIMENSION SHEET DUTY MASTER A/C MOTORS

SH 2 of 2

416820-036

A-C MOTOR  
 CONNECTION DIAGRAM  
 STANDARD 3 LEAD CONNECTED



(N.P. 1575-BA)

416820-036

REV. DESC: LOADED TO BUS, C/R 335225		
REV. LTR: -	VERSION: 00	TDR: 000000538207
FILE: \MGA\00000\682	REVISED: 11:54:06 04/30/2010	
MTL: -	BY: RAGRA	

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CONN DIAG - STANDARD 3 LEAD  
 SH 1 of 1

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