

ABB BALDOR RELIANCE III

Customer information packet

AEM4312-4

50HP, 1185RPM, 3PH, 60HZ, 405U, A40048M, TEFC

Class - None

Division - Not Applicable

Specifications

Enclosure	TEFC
Frame	405U
Frame Material	Iron
Frequency	60.00 Hz
Haz Area Class and Group	None
Haz Area Division	Not Applicable
Motor Letter Type	Three Phase
Output @ Frequency	50.000 HP @ 60 HZ
Phase	3
Synchronous Speed @ Frequency	1200 RPM @ 60 HZ
Voltage @ Frequency	460.0 V @ 60 HZ
Agency Approvals	CCSA US
Ambient Temperature	40 °C
Auxiliary Box	NO AUXILLARY BOX
Base Indicator	Rigid
Bearing Grease Type	Polyrex EM (-20F +300F)
Current @ Voltage	58.200 A @ 460.0 V
Design Code	B
Drip Cover	No Drip Cover
Duty Rating	CONT
Efficiency @ 100% Load	94.1 %
Feedback Device	NO FEEDBACK
Heater Indicator	No Heater
High Voltage Full Load Amps	58.2 a
Insulation Class	F
Inverter Code	Not Inverter
KVA Code	G
Lifting Lugs	Standard Lifting Lugs
Motor Lead Quantity/Wire Size	3 @ 4 AWG
Motor Standards	Other
Motor Type	A40048M
Mounting Arrangement	F1

Part Detail

Revision	C
Type	AC
Mech. spec.	
Base	
Status	INA/A
Elec. spec.	A40WG0470
Layout	617429-100
Eff. date	12-15-2016
CD Diagram	416820-036
Poles	06
Leads	3#4
Proprietary	False
Created date	07-19-2013

Number of Poles	6
Overall Length	38.08 IN
Pulley End Bearing Type	Ball
Pulley Face Code	Standard
Service Factor	1.15
Shaft Ground Indicator	No Shaft Grounding
Shaft Rotation	Reversible
Shaft Slinger Indicator	Shaft Slinger
Speed	1185 rpm
Speed Code	Single Speed
Starting Method	Direct on line
Thermal Device - Bearing	None
Thermal Device - Winding	None

Nameplate

NP2436L											
SPEC NO.	P40G3943			CAT.NO.						FRAME	405U
HP	50	VOLTS	460	PHASE	3	DESIGN	B	TYPE	P		
RPM	1185	AMPS	58.2	HZ	60	AMB	40	SF	1.15		
DRIVE END BEARING	BLANK			DUTY	CONT		INSUL.CLASS			F	
OPP D.E. BEARING				ENCL	TEFC	CODE	G				
NEMA-NOM-EFF	94.1										
GUARANTEED EFFICIENCY	93										
SER.NO.											
MOTOR WEIGHT	1184										

NP2496L	
MOBIL POLYREX EM	

REL. S.O.	FRAME	HP	TYPE	PHASE/ HERTZ	RPM	VOLTS			
	405U	50	P	3/60	1185	460			
AMPS	DUTY	AMB °C/ INSUL.	S.F.	NEMA DESIGN	CODE LETTER	ENCL.			
58.2	CONT	40/F	1.15	B	G	TEFC			
E/S	ROTOR	TEST S.O.	TEST DATE	STATOR RES. @25 °C OHMS (BETWEEN LINES)					
496173	418142-71-AE	---	---	.142					
PERFORMANCE									
LOAD	HP	AMPERES	RPM	% POWER FACTOR	% EFFICIENCY				
NO LOAD	0	21.0	1200	4.92	0				
1/4	12.5	25.1	1197	51.3	91.1				
2/4	25.0	34.1	1193	72.9	94.0				
3/4	37.5	45.4	1190	81.8	94.4				
4/4	50.0	58.2	1186	85.4	94.1				
5/4	62.5	72.2	1182	86.8	93.4				
SPEED TORQUE									
		RPM	TORQUE % FULL LOAD	TORQUE LB.-FT.	AMPERES				
LOCKED ROTOR		0	145	321	360				
PULL UP		300	126	280	340				
BREAKDOWN		1120	249	551	213				
FULL LOAD		1186	100	221	58.2				
AMPERES SHOWN FOR 460. VOLT CONNECTION. IF OTHER VOLTAGE CONNECTIONS ARE AVAILABLE, THE AMPERES WILL VARY INVERSELY WITH THE RATED VOLTAGE REMARKS: TYPICAL DATA XE DESIGN--MEETS GM 7EHQ									
		DR. BY P.B. GREENE		A-C MOTOR PERFORMANCE DATA					
		CK. BY K.W. KANOUFF							
		APP. BY K.W. KANOUFF							
		DATE 10/20/91							
				A40WG0470-R001 ISSUE DATE 12/15/10					

FRAME 405U

RPM 1185

VOLTS 460

NEMA DESIGN B

HP 50

AMPS 58.2

CODE LETTER G

TEST S.O. TYPICAL DATA

TYPE P

DUTY CONT

ENCLOSURE TEFC

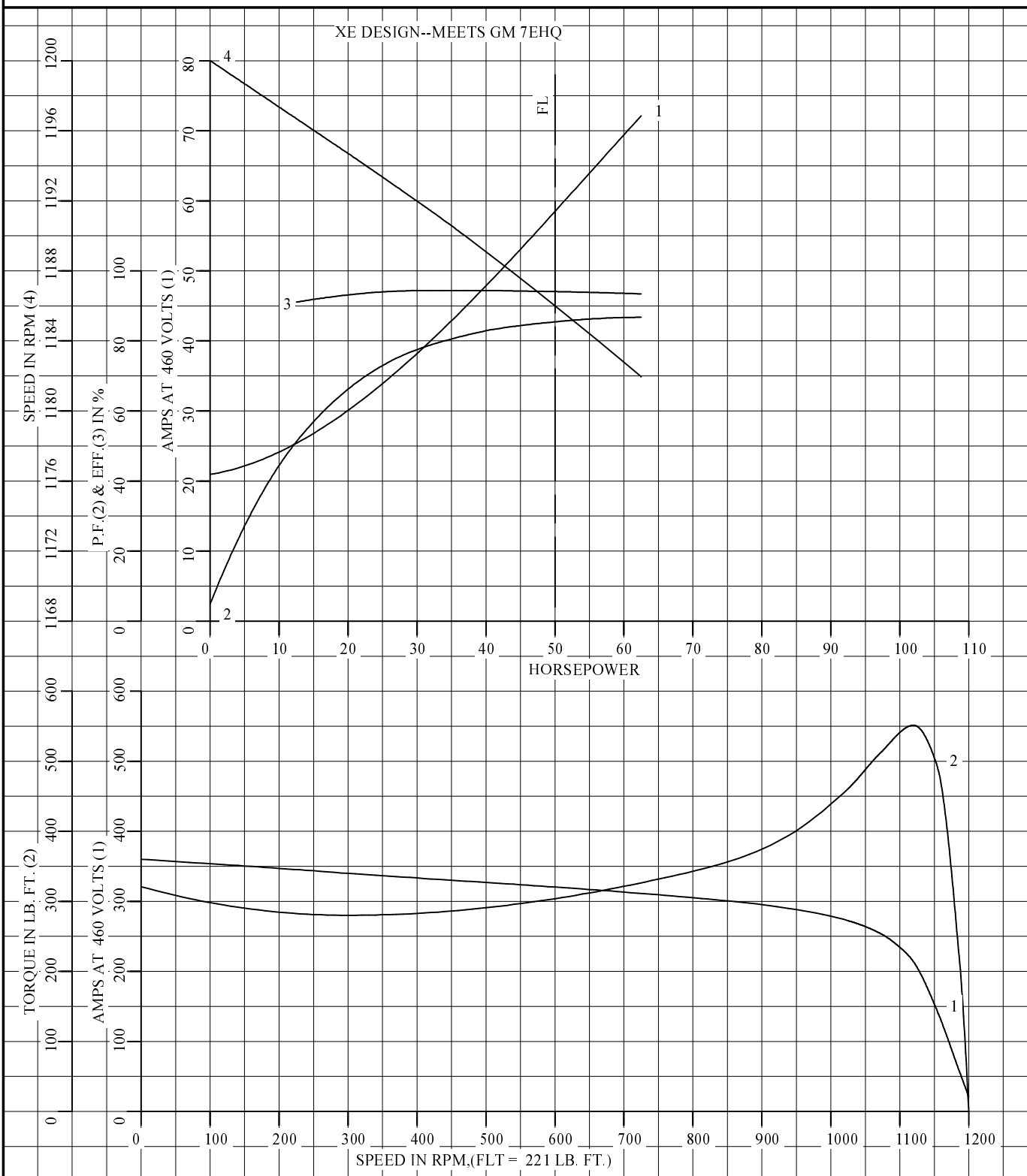
TEST DATE ---

PHASE/HERTZ 3/60

AMB °C/INSUL 40/F

E/S 496173

STATOR RES. @ 25 °C .142
OHMS (BETWEEN LINES)



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

BALDOR

DR. BY P.B. GREENE
CK. BY K.W. KANOUFF
APP. BY K.W. KANOUFF
DATE 10/20/91

**A-C MOTOR
PERFORMANCE
CURVES** A40WG0470-R001
ISSUE DATE 12/15/10

REL. S.O.

RPM 1185

S.F. 1.15

ROTOR 418142-71-AE

FRAME 405U

VOLTS 460

NEMA DESIGN B

TEST S.O. TYPICAL DATA

HP 50

AMPS 58.2

CODE LETTER G

TEST DATE ---

TYPE P

DUTY CONT

ENCLOSURE TEFC

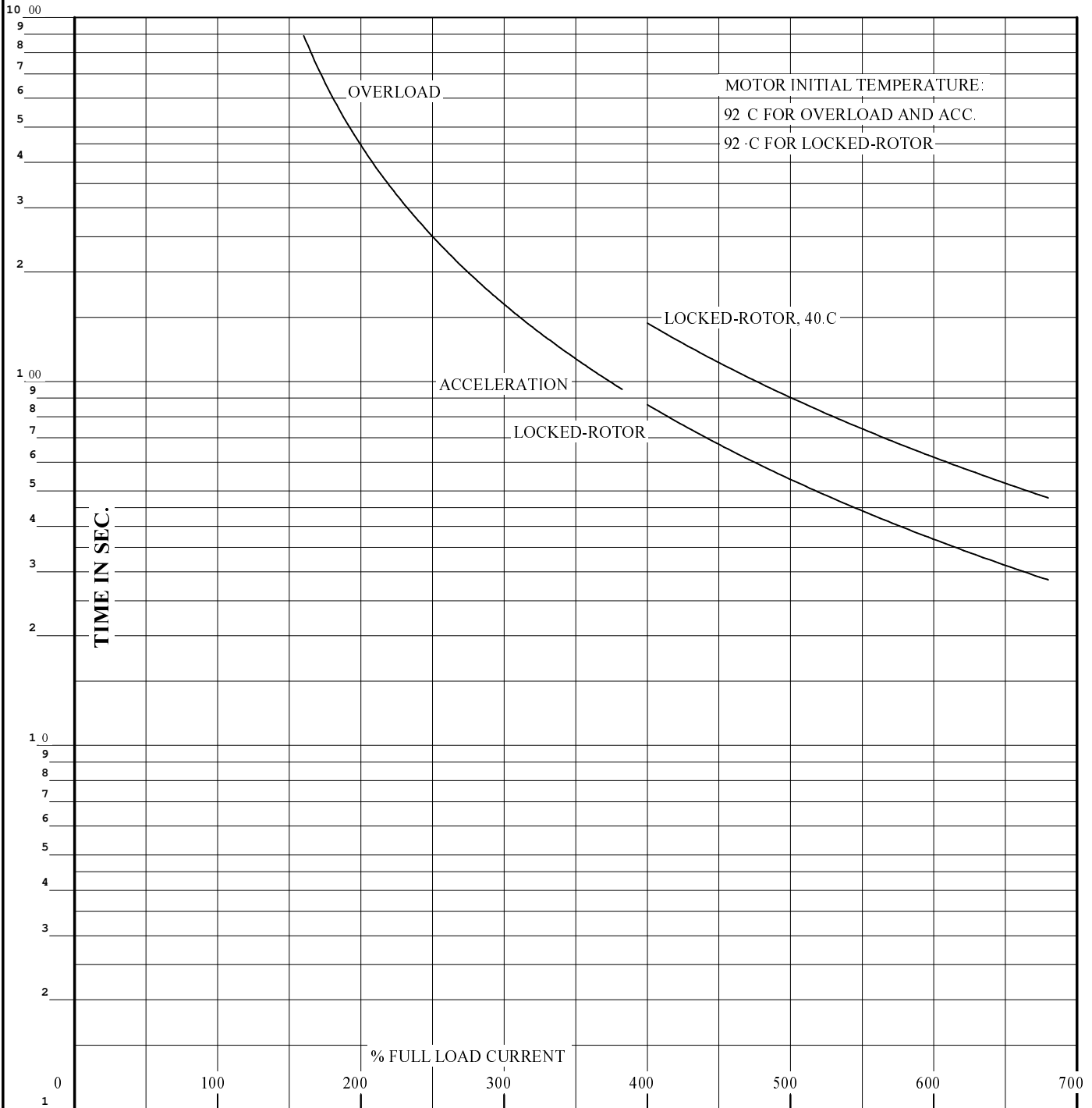
STATOR RES. @ 25 °C .142

PHASE/HERTZ 3/60

AMB °C/INSUL 40/F

E/S 496173

OHMS (BETWEEN LINES)



THERMAL LIMIT CURVE

REMARKS:

XE DESIGN--MEETS GM 7EHQ

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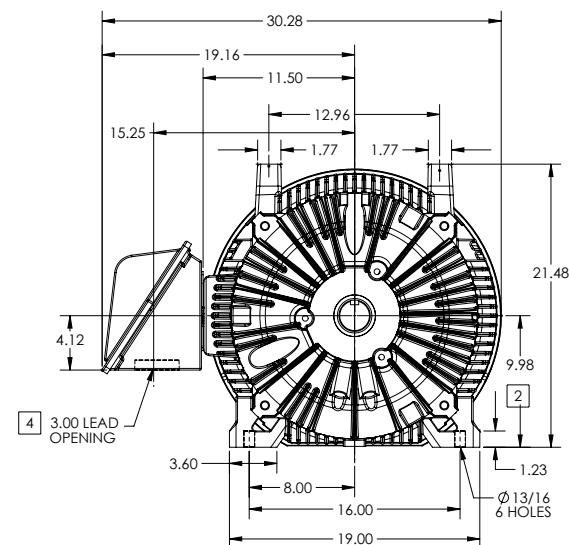
BALDOR

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DATE 10/20/91

**A-C MOTOR
PERFORMANCE CURVES**
A40WG0470-R001
ISSUE DATE 12/15/10

SQUIRREL-CAGE INDUCTION

U-FRAME/ AUTOMOTIVE DUTY ENCLOSURE



- 5 WEIGHT (LBS): 1370

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

BALDOR

G405U/404U STD – FOOTED – U-FRAME AUTOMOTIVE DUTY ENCLOSURE

DUTY MASTER ALTERNATING CURRENT MOTORS

SQUIRREL-CAGE INDUCTION

ENCLOSURE: TOTALLY ENCLOSED

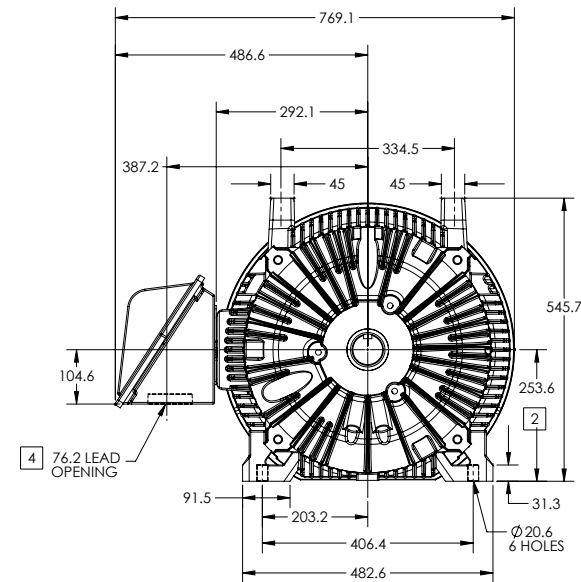
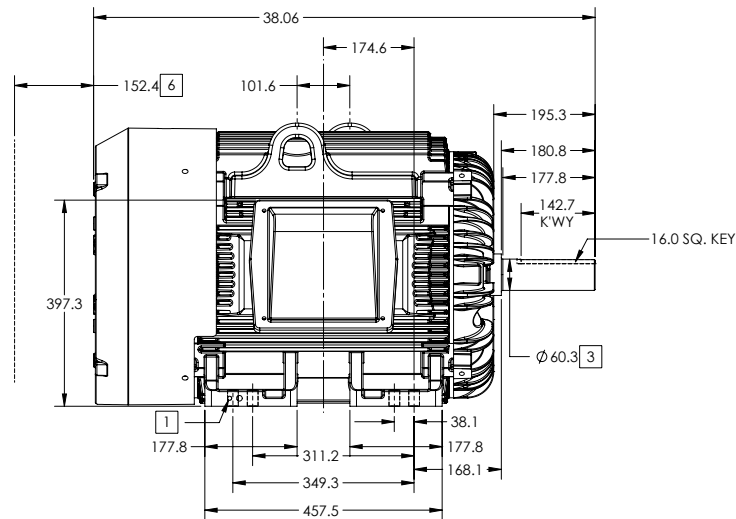
FRAME G405T ABOVE NEMA RATINGS

COOLING: FAN COOLED

MOUNTING: FOOT

INCLUDES 404T FRAME MOUNTING HOLES

U-FRAME/ AUTOMOTIVE DUTY ENCLOSURE



1. GROUND HOLES QTY 1 1/2-13 TAP; QTY 1 3/8-16 TAP
2. VARIES +0,-1.5
3. VARIES +.00,-.03
4. ON STANDARD MOTORS THIS IS CONDUIT SIZE. ON XT AND CORROSION PROOF MOTOR THIS IS PIPE TAP.
5. MOTOR WEIGHTS MAY VARY BY 15% DEPENDING ON RATING.
6. OBSTRUCTION MUST NOT ENCR OACH ON AIR INLET

CONDUIT BOX LOCATED ON OPPOSITE SIDE WHEN F-2.
IF MOUNTING CLEARANCE DETAILS ARE REQUIRED, CONSULT FACTORY.
MAXIMUM PERMISSIBLE SHAFT RUNOUT WHEN MEASURED AT END OF
STANDARD SHAFT EXTENSION IS .08 MM T.I.R. TO 127 MM DIA.

5 WEIGHT (KGS): 630

DIMENSIONS ARE IN MILLIMETERS; SEE SHEET 1 FOR DIMENSIONS IN INCHES

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

SHEET NUMBER
2 OF 2

001-627219

REV. DESC	CHG SHAFT TO MEET "BA" REQUIREMENT OF 6.62	TDR: 00000983755
REV: B	VERSION: 02	REVISED: 08-54-51 05/31/2017
MODEL NO. 617429-100	REF:	
BY: RAGGDM	Material:	

BALDOR

G405U/404U STD - FOOTED - U-FRAME AUTOMOTIVE DUTY ENCLOSURE

617429-100

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

BALDOR

CONN DIAG - STANDARD 3 LEAD
SH 1 of 1