ABB BALDOR RELIANCE

Customer information packet

EM7090T-I-5

100HP, 1780RPM, 3PH, 60HZ, 405T, A40072M, TEFC
Class - CLI GP C,D
Division - Division I

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Specifications

Enclosure	TEFC
Frame	405T
Frame Material	Iron
Frequency	60.00 Hz
Haz Area Class and Group	CLI GP C,D
Haz Area Division	Division I
Motor Letter Type	Three Phase
Output @ Frequency	100.000 HP @ 60 HZ
Phase	3
Synchronous Speed @ Frequency	1800 RPM @ 60 HZ
Voltage @ Frequency	575.0 V @ 60 HZ
Agency Approvals	CCSA US
	CSA
	CSA EEV
	UL
Ambient Temperature	40 °C
Auxiliary Box	NO AUXILLARY BOX
Base Indicator	Rigid
Bearing Grease Type	Polyrex EM (-20F +300F)
Current @ Voltage	89.600 A @ 575.0 V
Design Code	B
Drip Cover	No Drip Cover
Duty Rating	CONT
Efficiency @ 100% Load	95.4 %
Feedback Device	NO FEEDBACK
Haz Area Temp Code	T3C
Heater Indicator	No Heater
High Voltage Full Load Amps	89.6 a
Insulation Class	F
Inverter Code	Inverter Ready
KVA Code	G
Lifting Lugs	Standard Lifting Lugs

Part Detail

Revision	F
Type	AC
Mech. spec.	
Base	
Status	NLA/A
Elec. spec.	A40WG0496
Layout	617433-513
Eff. date	09-29-2026
CD Diagram	416820-036
Poles	04
Leads	3#2
Proprietary	False
Created date	04-24-2015

Motor Lead Quantity/Wire Size	3 @ 2 AWG
Motor Standards	NEMA
Motor Type	A40072M
Mounting Arrangement	F1
Number of Poles	4
Overall Length	38.23 IN
Power Factor	88
Product Family	General Industrial
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	1780 rpm
Speed Code	Single Speed
Starting Method	Direct on line
Thermal Device - Bearing	None
Thermal Device - Winding	Normally Closed Thermostat

Nameplate

NP2496L
MOBIL POLYREX EM

000613006PC			
CLASS I GROUP	C D X	**NO.**	
CLASS II GROUP	X X X		
OPERATING TEMP CODE	T3C		

NP2293L									
CAT.NO.	EM7090T-I-5			**SPEC NO.**	A40-6593-0496			**FRAME**	405T
HP	100	**PHASE**	3	**DESIGN**	B	**TYPE**	P		
RPM	1780	**HZ**	60	**AMB**	40	**SF**	1.15		
VOLTS	575			**DUTY**	CONT	**INSUL.CLASS**	F		
AMPS	89.6			**ENCL**	TEFC	**CODE**	G		
DRIVE END BEARING	80BC03J30X			**NEMA-NOM-EFFICIENCY**	95.4				
OPP D.E. BEARING	80BC03J30X								
SER.NO.			SUITABLE FOR 55C AMB @ 1.0 SF						
	NEMA MG-1 PT 5, IP55						**MOTOR WEIGHT**		

REL. S.O.	FRAME	HP	TYPE	PHASE/ HERTZ	RPM	VOLTS
	405T	100	P	3/60	1780	575

AMPS	DUTY	AMB °C/ INSUL.	S.F.	NEMA DESIGN	CODE LETTER	ENCL.
89.6	CONT	40/F	1.15	B	G	FCXE

E/S	ROTOR	TEST S.O.	TEST DATE	STATOR RES.@25 °C OHMS (BETWEEN LINES)
-	418142037AE	---	---	.0882

PERFORMANCE

LOAD	HP	AMPERES	RPM	% POWER FACTOR	% EFFICIENCY
NO LOAD	0	27.4	1800	4.25	0
1/4	25.0	34.6	1796	58.0	93.5
2/4	50.0	50.3	1792	78.0	95.5
3/4	74.9	69.0	1787	85.1	95.7
4/4	100	89.6	1782	87.7	95.4
5/4	125	112	1777	88.3	94.8

SPEED TORQUE

	RPM	TORQUE % FULL LOAD	TORQUE LB.-FT.	AMPERES
LOCKED ROTOR	0	169	498	566
PULL UP	270	148	437	532
BREAKDOWN	1712	242	714	328
FULL LOAD	1782	100	295	89.6

AMPERES SHOWN FOR 575. VOLT CONNECTION. IF OTHER VOLTAGE CONNECTIONS ARE AVAILABLE, THE AMPERES WILL VARY INVERSELY WITH THE RATED VOLTAGE

REMARKS: CALCULATED DATA
NEMA PREMIUM - 95.4 PCT NOMINAL EFFICIENCY

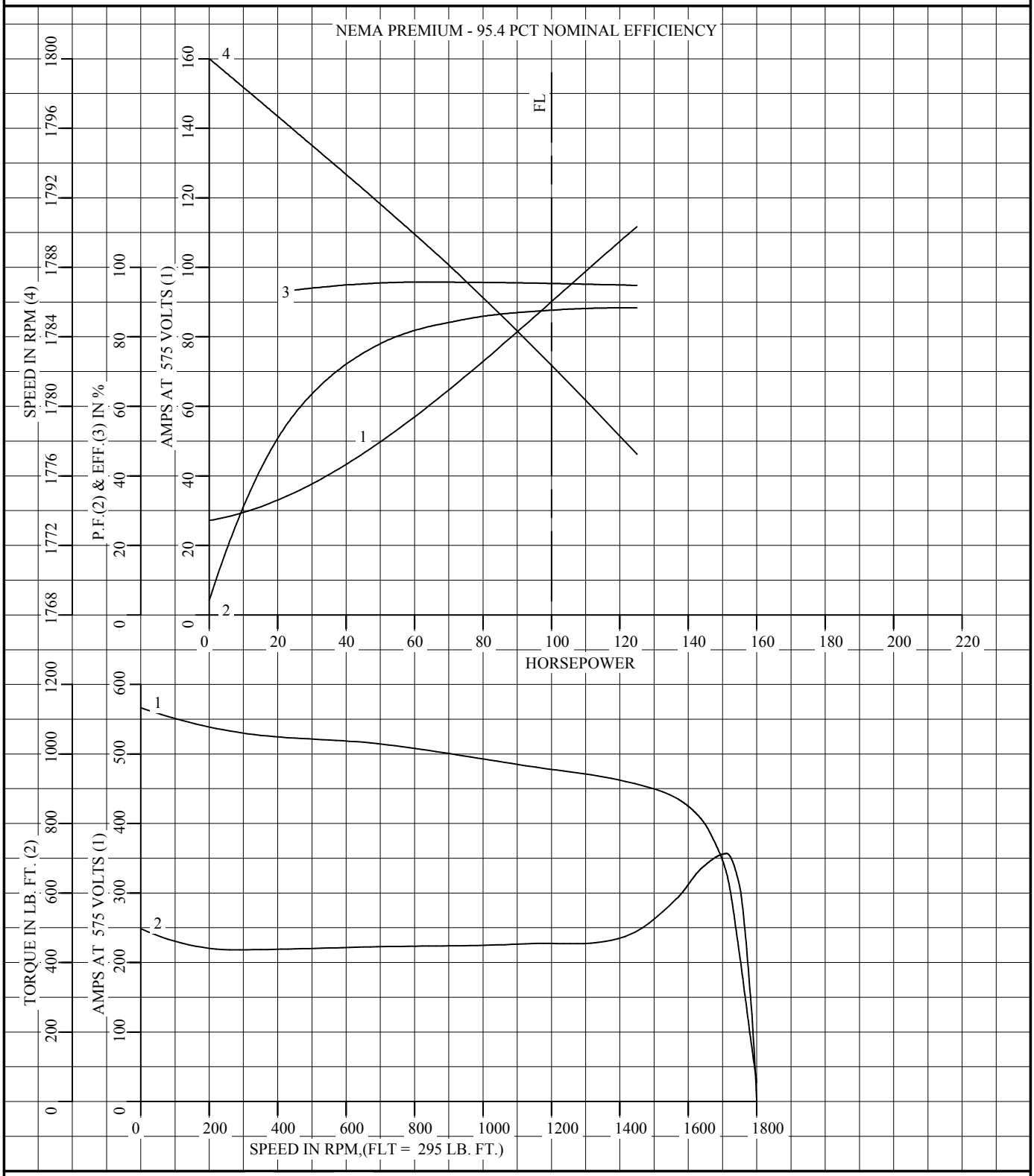
BALDOR
A MEMBER OF THE ABB GROUP

DR. BY J.P.TSAO
CK. BY E.CHRISTIAN
APP. BY E.CHRISTIAN
DATE 10/28/14

A-C MOTOR PERFORMANCE DATA

A40WG0496-R001
ISSUE DATE 10/28/14

REL S.O.		RPM	1780	S.F.	1.15	ROTOR	418142037AE
FRAME	405T	VOLTS	575	NEMA DESIGN	B	TEST S.O.	CALCULATED DATA
HP	100	AMPS	89.6	CODE LETTER	G	TEST DATE	---
TYPE	P	DUTY	CONT	ENCLOSURE	FCXE	STATOR RES.@ 25 °C	.0882
PHASE/HERTZ	3/60	AMB °C/INSUL	40/F	E/S	–		OHMS (BETWEEN LINES)



AMPERES SHOWN FOR 575 VOLT CONNECTION, IF OTHER VOLTAGE CONNECTIONS ARE AVAILABLE, THE AMPERES WILL VARY INVERSELY WITH THE RATED VOLTAGE.

BALDOR A MEMBER OF THE ABB GROUP

DR. BY	J.P.TSAO
CK. BY	E.CHRISTIAN
APP. BY	E.CHRISTIAN
DATE	10/28/14

A-C MOTOR PERFORMANCE CURVES

A40WG0496-R001

ISSUE DATE 10/28/14

Printed on 10/28/14 15:08 @ ragsun

617433-513

DUTY MASTER ALTERNATING CURRENT MOTORS

SQUIRREL-CAGE INDUCTION

ENCLOSURE: X/P, UNDERWRITERS LISTED

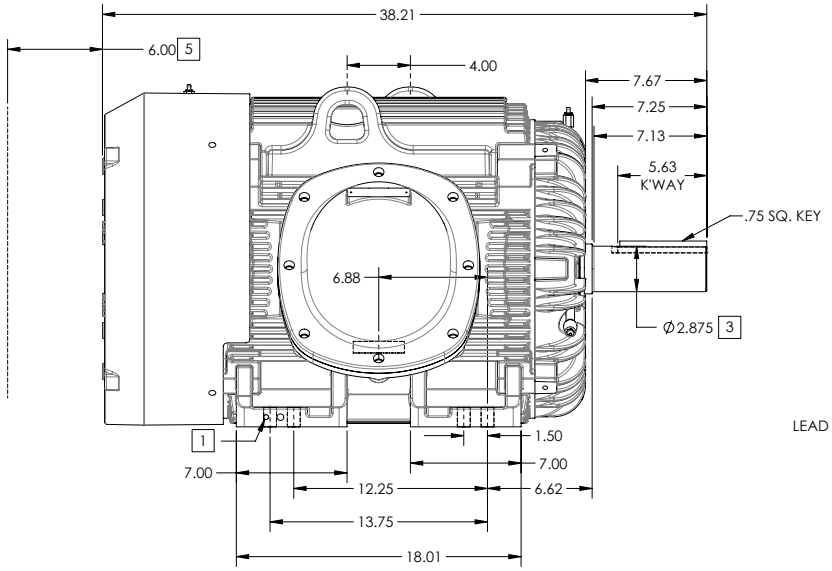
FRAME G405T

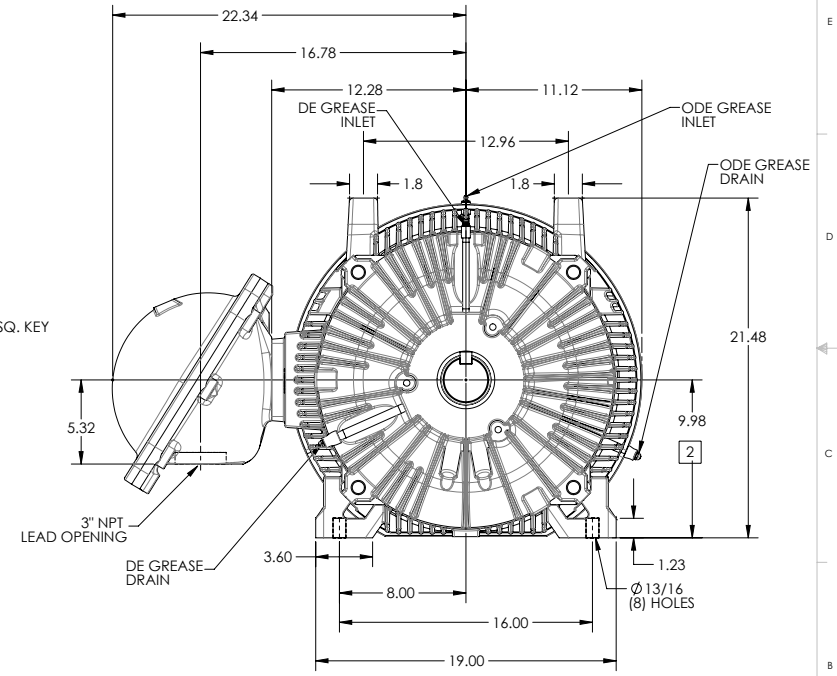
COOLING: FAN COOLED

MOUNTING: FOOT

INCLUDES 404T FRAME MOUNTING HOLES

XT/ECP SEVERE DUTY ENCLOSURE





1. GROUND HOLES QTY 1 1/2-13 TAP; QTY 1 3/8-16 TAP
2. VARIES +.00,-.06
3. VARIES +.000,-.001
4. MOTOR WEIGHTS MAY VARY BY 15% DEPENDING ON RATING.
5. OBSTRUCTION MUST NOT ENCROACH ON AIR INLET

4 WEIGHT (LBS): 1400

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 .003" T.I.R. TO 5 INCH DIA.

DIMENSIONS ARE IN INCHES; SEE SHEET 2 FOR DIMENSIONS IN MILLIMETERS

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

SHEET NUMBER 1 OF 2

617433-513

REV. DESC: NEW			
REV: -	VERSION: 00	REVISED: 08:51:52 11/20/2015	TDR: 000000926001
MODEL NO. 617433-513			REF:
BY: RAGTBM	Material:		C

BALDOR

G405T/404T XP TEFC,FOOT,DRILL RIG DUTY,16CB1001A01 BOX

617433-513

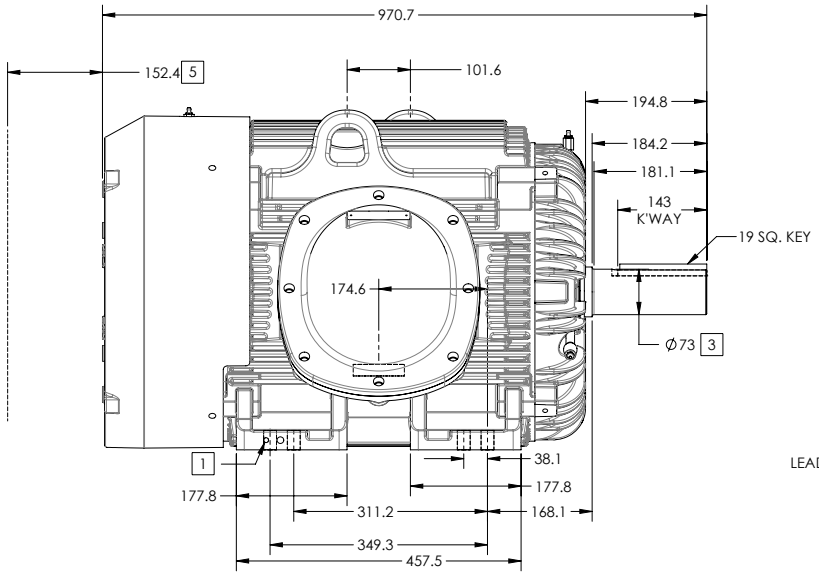
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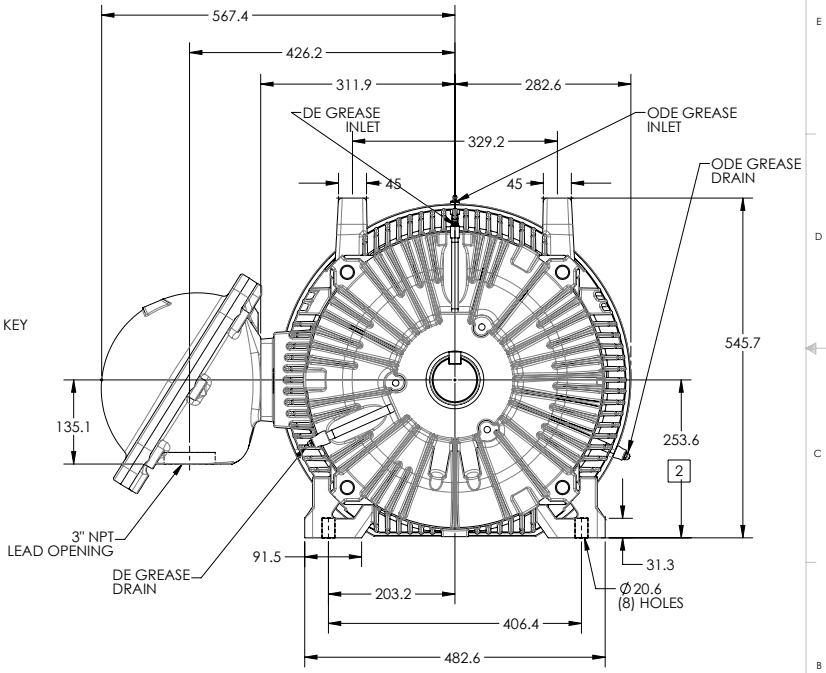
DUTY MASTER ALTERNATING CURRENT MOTORS

SQUIRREL-CAGE INDUCTION

ENCLOSURE: X/P, UNDERWRITERS LISTED | FRAME G405T | COOLING: FAN COOLED

MOUNTING: FOOT | INCLUDES 404T FRAME MOUNTING HOLES | XT/ECP SEVERE DUTY ENCLOSURE





1. GROUND HOLES QTY 1 1/2-13 TAP; QTY 1 3/8-16 TAP
2. VARIES +.00,-1.5MM
3. VARIES +.000,-.025MM
4. MOTOR WEIGHTS MAY VARY BY 15% DEPENDING ON RATING.
5. OBSTRUCTION MUST NOT ENCROACH ON AIR INLET

6 MASS (KGS): 635

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 .076MM T.I.R. TO 130MM DIA.

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

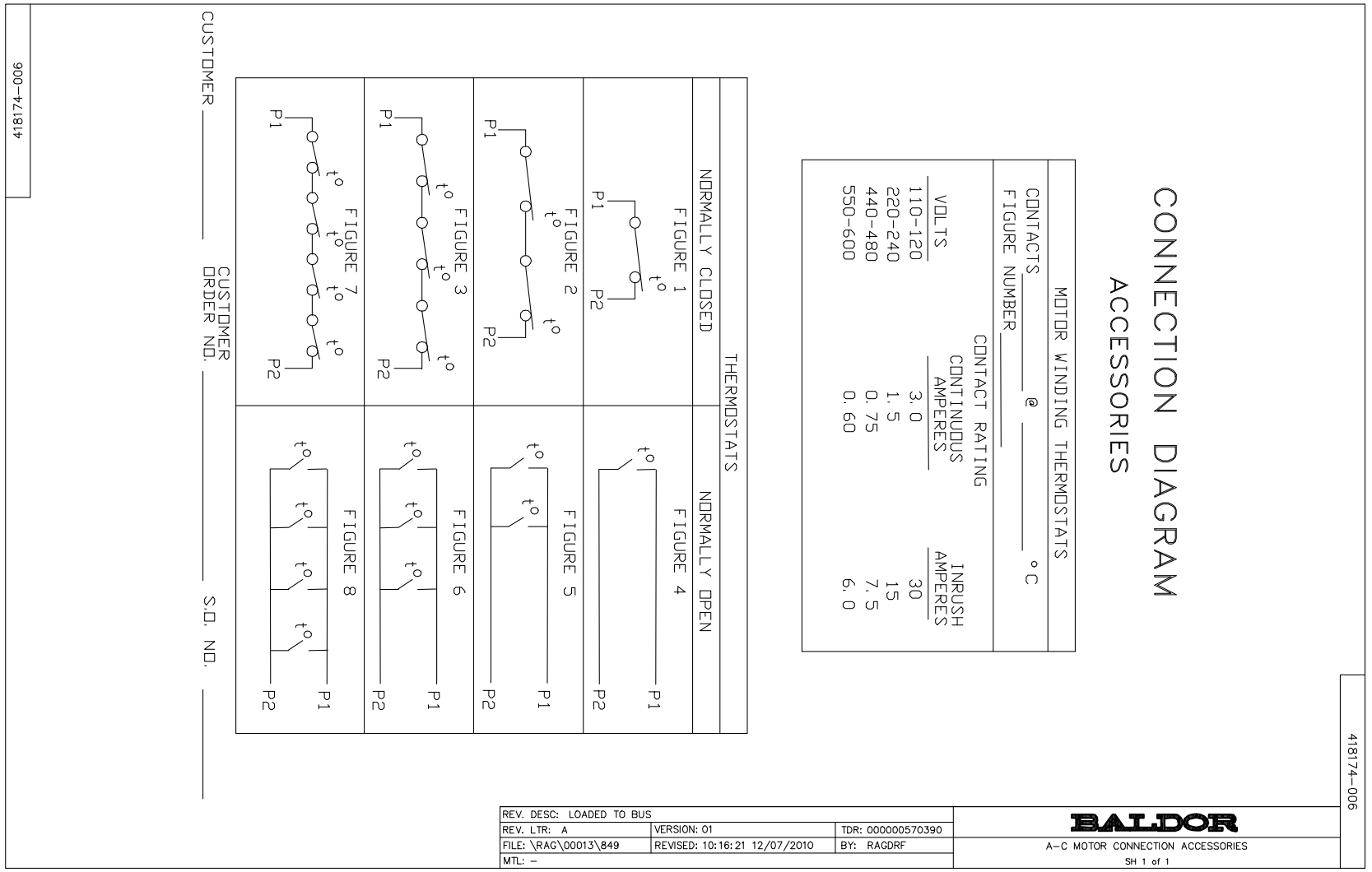
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REV: -	VERSION: 00	REVISED: 08:51:52 11/20/2015	TDR: 000000926001
MODEL NO. 617433-513			REF:
BY: RAGTBM	Material:		C

BALDOR

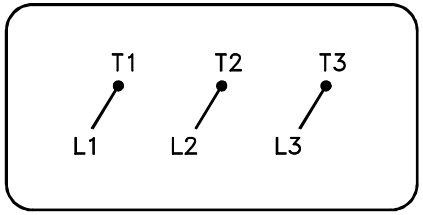
G405T/404T XP TEFC,FOOT,DRILL RIG DUTY,16CB1001A01 BOX

617433-513


CONNECTION DIAGRAM
ACCESSORIES
MOTOR WINDING THERMOSTATS
CONTACTS @ °C
FIGURE NUMBER
CONTACT RATING
VOLTS
CONTINUOUS AMPERES
INRUSH AMPERES
110-120 3.0 30
220-240 1.5 15
440-480 0.75 7.5
550-600 0.60 6.0
THERMOSTATS
NORMALLY CLOSED
NORMALLY OPEN
FIGURE 1
FIGURE 2
FIGURE 3
FIGURE 4
FIGURE 5
FIGURE 6
FIGURE 7
FIGURE 8
P1
P2
CUSTOMER
CUSTOMER ORDER NO.
S.O. NO.
418174-006
BALDOR
A-C MOTOR CONNECTION ACCESSORIES
SH 1 of 1
REV. DESC: LOADED TO BUS
REV. LTR: A
VERSION: 01
TDR: 000000570390
FILE: \RAG\00013\849
REVISED: 10:16:21 12/07/2010
BY: RAGDRF
MTL: -
418174-006

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			BALDOR
REV. LTR: –	VERSION: 00	TDR: 000000538207	
FILE: \MGA\00000\682		REVISED: 11:54:06 04/30/2010	CONN DIAG – STANDARD 3 LEAD
MTL: –		BY: RAGRA	SH 1 of 1