

# ABB BALDOR RELIANCE III

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## Customer information packet

DRX40144T-5

100HP, 1785RPM, 3PH, 60HZ, 405T, TEFC, F1

Class - CLI GP C,D

Division - Division I

**Specifications**

<b>Enclosure</b>	TEFC
<b>Frame</b>	405T
<b>Frame Material</b>	Iron
<b>Frequency</b>	60.00 Hz
<b>Haz Area Class and Group</b>	CLI GP C,D
<b>Haz Area Division</b>	Division I
<b>Motor Letter Type</b>	Three Phase
<b>Output @ Frequency</b>	100.000 HP @ 60 HZ
<b>Phase</b>	3
<b>Synchronous Speed @ Frequency</b>	1800 RPM @ 60 HZ
<b>Voltage @ Frequency</b>	575.0 V @ 60 HZ
<b>Agency Approvals</b>	CCSAUSEEV CSA UL
<b>Ambient Temperature</b>	40 °C
<b>Auxiliary Box</b>	NO AUXILLARY BOX
<b>Base Indicator</b>	Rigid
<b>Bearing Grease Type</b>	Polyrex EM (-20F +300F)
<b>Constant Torque Speed Range</b>	6-60
<b>Current @ Voltage</b>	89.600 A @ 575.0 V
<b>Design Code</b>	B
<b>Drip Cover</b>	No Drip Cover
<b>Duty Rating</b>	CONT
<b>Efficiency @ 100% Load</b>	95.4 %
<b>Feedback Device</b>	NO FEEDBACK
<b>Haz Area Temp Code</b>	T3C
<b>Heater Indicator</b>	No Heater
<b>High Voltage Full Load Amps</b>	89.6 a
<b>Insulation Class</b>	F
<b>Inverter Code</b>	Inverter Ready
<b>IP Rating</b>	NONE
<b>KVA Code</b>	G

**Part Detail**

<b>Revision</b>	A
<b>Type</b>	AC
<b>Mech. spec.</b>	
<b>Base</b>	
<b>Status</b>	PRD/A
<b>Elec. spec.</b>	A40WG0665
<b>Layout</b>	617433-608
<b>Eff. date</b>	10-22-2021
<b>CD Diagram</b>	416820-036
<b>Poles</b>	04
<b>Leads</b>	3#2
<b>Proprietary</b>	False
<b>Created date</b>	07-12-2019

<b>Lifting Lugs</b>	<b>Standard Lifting Lugs</b>
<b>Max Speed</b>	3600 rpm
<b>Motor Lead Quantity/Wire Size</b>	3 @ 2 AWG
<b>Motor Standards</b>	NEMA
<b>Motor Type</b>	A40064M
<b>Mounting Arrangement</b>	F1
<b>Number of Poles</b>	4
<b>Overall Length</b>	38.22 IN
<b>Power Factor</b>	88
<b>Product Family</b>	General Industrial
<b>Pulley End Bearing Type</b>	Ball
<b>Pulley Face Code</b>	Standard
<b>Service Factor</b>	1.00
<b>Shaft Diameter</b>	2.875 IN
<b>Shaft Ground Indicator</b>	No Shaft Grounding
<b>Shaft Rotation</b>	Reversible
<b>Shaft Slinger Indicator</b>	Shaft Slinger
<b>Speed</b>	1785 rpm
<b>Speed Code</b>	Single Speed
<b>Starting Method</b>	Direct on line
<b>Thermal Device - Bearing</b>	None
<b>Thermal Device - Winding</b>	Normally Closed Thermostat

**Nameplate**

<b>NP2496L</b>
MOBIL POLYREX EM

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**000613006PC**

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<b>CLASS I GROUP</b>	C D X	<b>NO.</b>	
<b>CLASS II GROUP</b>	X X X		
<b>OPERATING TEMP CODE</b>	T3C		

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**NP3140L**

<b>SPEC NO.</b>	A40-7256-0665	<b>CAT.NO.</b>	DRX40144T-5	<b>FRAME</b>	405T
<b>HP</b>	100	<b>VOLTS</b>	575	<b>PHASE</b>	3
				<b>DESIGN</b>	B
				<b>TYPE</b>	P
<b>RPM</b>	1785	<b>AMPS</b>	89.6	<b>HZ</b>	60
				<b>AMB</b>	40
				<b>SF</b>	1.00
<b>DRIVE END BEARING</b>	80BC03J30X	<b>DUTY</b>	CONT	<b>INSUL.CLASS</b>	F
<b>OPP D.E. BEARING</b>	80BC03J30X	<b>ENCL</b>	TEFC	<b>CODE</b>	G
<b>SF</b>	1.15	<b>WK2</b>	26.346	<b>MAG CUR</b>	25.5
				<b>RPM MAX</b>	3600
<b>CT HZ</b>	6-60	<b>VT HZ</b>	0-60	<b>CHP HZ</b>	60-90
				<b>NEMA-NOM-EFF</b>	95.4
	SUIT FOR 55C AMB AT 1.00 SF			IP55	
<b>SER.NO.</b>		<b>MOTOR WEIGHT</b>			

REL. S.O.	FRAME	HP	TYPE	PHASE/ HERTZ	RPM	VOLTS
	405T	100	P	3/60	1785	575
AMPS	DUTY	AMB °C/ INSUL.	S.F.	NEMA DESIGN	CODE LETTER	ENCL.
89.6	CONT	40/F	1.00	B	G	TEFC
E/S	ROTOR	TEST S.O.	TEST DATE	STATOR RES. @25 °C OHMS (BETWEEN LINES)		
496079	418142-33RE	---	---	.0761		

**PERFORMANCE**

LOAD	HP	AMPERES	RPM	% POWER FACTOR	% EFFICIENCY
NO LOAD	0	25.5	1800	5.02	0
1/4	25.0	33.6	1796	60.0	92.9
2/4	50.0	49.5	1792	79.3	95.3
3/4	75.0	68.8	1788	85.3	95.6
4/4	100	89.6	1783	87.6	95.4
5/4	125	111	1778	88.8	94.9

**SPEED TORQUE**

	RPM	TORQUE % FULL LOAD	TORQUE LB.-FT.	AMPERES
LOCKED ROTOR	0	151	445	580
PULL UP	360	136	400	565
BREAKDOWN	1721	250	735	306
FULL LOAD	1783	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

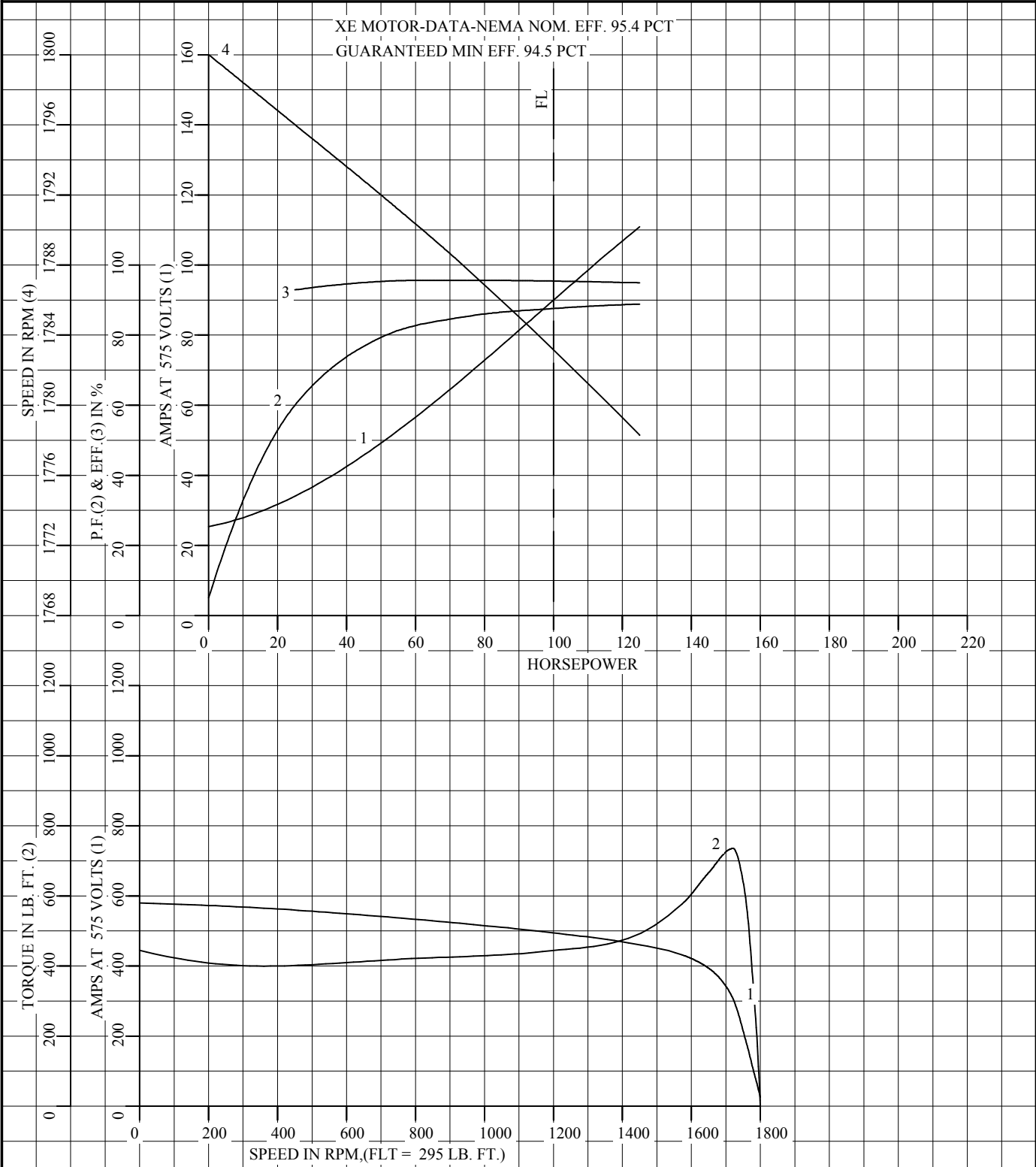
REMARKS: TYPICAL DATA  
XE MOTOR-DATA-NEMA NOM. EFF. 95.4 PCT  
GUARANTEED MIN EFF. 94.5 PCT



DR. BY G. R. WEBB  
CK. BY W. L. SMITH  
APP. BY W. L. SMITH  
DATE 06/23/15

**A-C MOTOR  
PERFORMANCE A40WG0665-R010  
DATA** ISSUE DATE 09/17/20

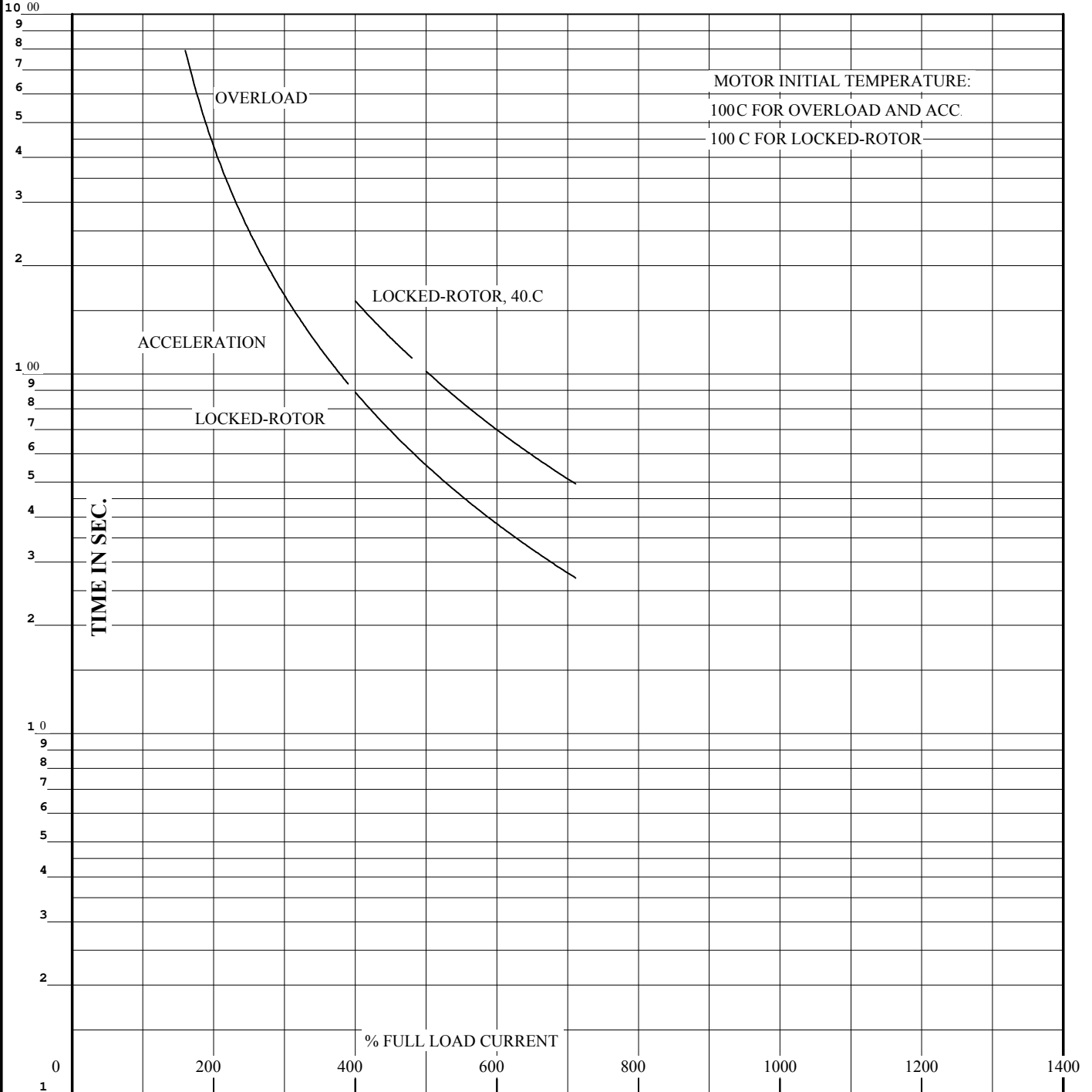
REL S.O.	RPM <b>1785</b>	S.F. <b>1.00</b>	ROTOR <b>418142-33RE</b>
FRAME <b>405T</b>	VOLTS <b>575</b>	NEMA DESIGN <b>B</b>	TEST S.O. <b>TYPICAL DATA</b>
HP <b>100</b>	AMPS <b>89.6</b>	CODE LETTER <b>G</b>	TEST DATE ---
TYPE <b>P</b>	DUTY <b>CONT</b>	ENCLOSURE <b>TEFC</b>	STATOR RES. @ 25 °C <b>.0761</b>
PHASE/HERTZ <b>3/60</b>	AMB °C/INSUL <b>40/F</b>	E/S <b>496079</b>	OHMS (BETWEEN LINES)



DR. BY G. R. WEBB  
 CK. BY W. L. SMITH  
 APP. BY W. L. SMITH  
 DATE 06/23/15

**A-C MOTOR  
 PERFORMANCE CURVES** A40WG0665-R010  
 ISSUE DATE 09/17/20

REL. S.O.	RPM <b>1785</b>	S.F. <b>1.00</b>	ROTOR <b>418142-33RE</b>
FRAME <b>405T</b>	VOLTS <b>575</b>	NEMA DESIGN <b>B</b>	TEST S.O. <b>TYPICAL DATA</b>
HP <b>100</b>	AMPS <b>89.6</b>	CODE LETTER <b>G</b>	TEST DATE <b>---</b>
TYPE <b>P</b>	DUTY <b>CONT</b>	ENCLOSURE <b>TEFC</b>	STATOR RES. @ 25 °C <b>.0761</b>
PHASE/HERTZ <b>3/60</b>	AMB °C/INSUL <b>40/F</b>	E/S <b>496079</b>	OHMS (BETWEEN LINES)



THERMAL LIMIT CURVE

REMARKS: XE MOTOR-DATA-NEMA NOM. EFF. 95.4 PCT  
GUARANTEED MIN EFF. 94.5 PCT

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



DR. BY G. R. WEBB  
CK. BY W. L. SMITH  
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DATE 06/23/15

**A-C MOTOR  
PERFORMANCE CURVES** **A40WG0665-R010**  
ISSUE DATE 09/17/20 Page 9 of 12

**DUTY MASTER ALTERNATING CURRENT MOTORS**  
SQUIRREL-CAGE INDUCTION

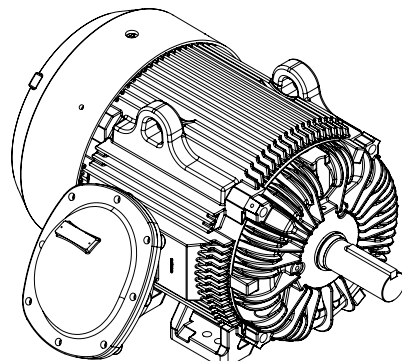
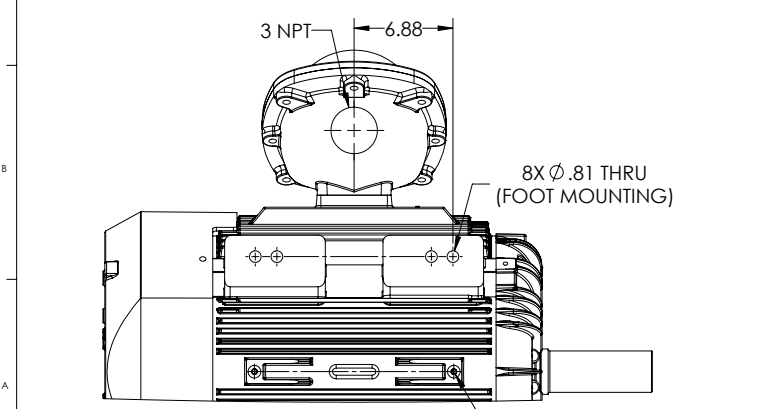
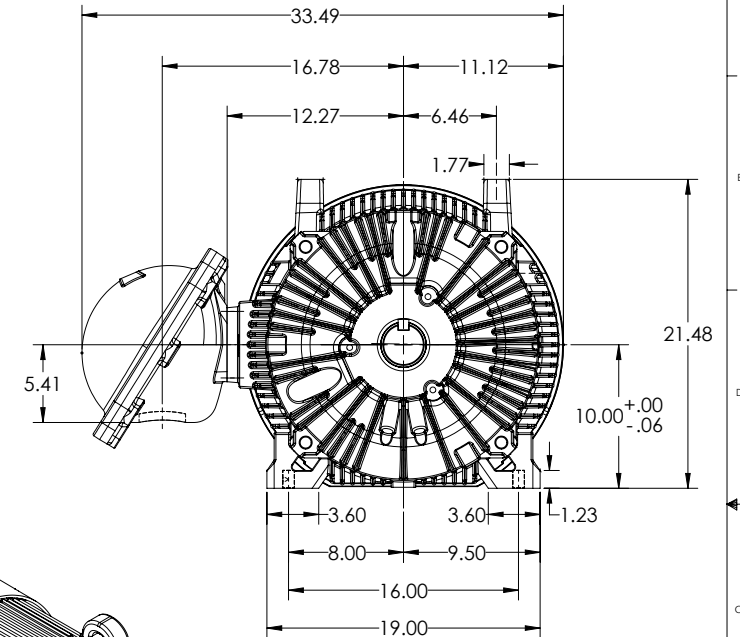
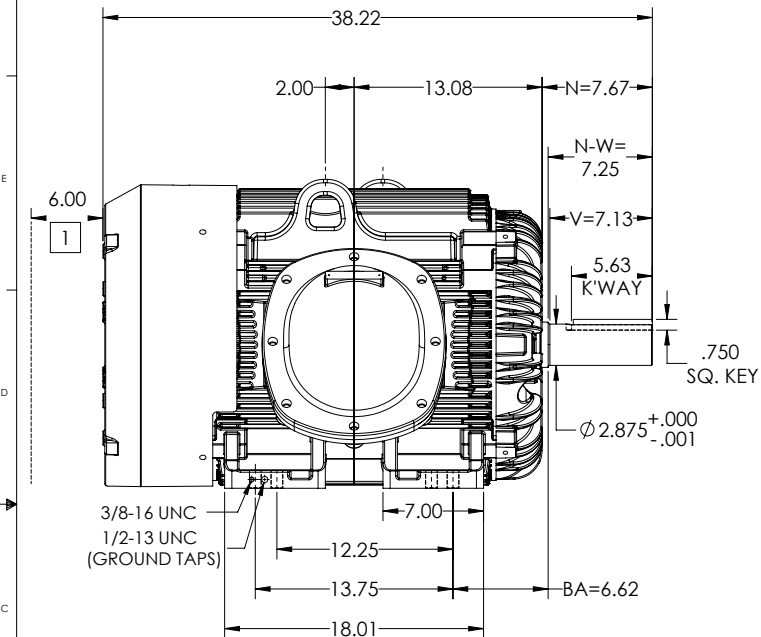
ENCLOSURE: X/P, UNDERWRITERS LISTED

MOUNTING: FOOT, F-1 MOUNT

G405T/G404T FRAME MOUNTING HOLES

COOLING: FAN COOLED

CL. 1, GRP. C & D



DIMENSIONS ARE IN INCHES.  
WEIGHT: 1400 LBS ± 15% DEPENDING ON RATING.  
IF MOUNTING CLEARANCE DETAILS ARE REQUIRED, CONSULT FACTORY.  
MAX PERMISSIBLE SHAFT RUNOUT WHEN MEASURED AT END OF STANDARD SHAFT EXTENSION IS .003" T.I.R.  
CUSTOMER IS RESPONSIBLE FOR DETERMINING THAT MOTOR PERFORMANCE IS SUITABLE IN THE APPLICATION.

SHEET NUMBER <b>1 OF 1</b>	OBSTRUCTION MUST NOT ENCR OACH ON AIR INLET.
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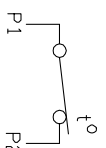
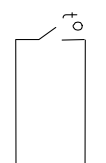
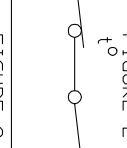
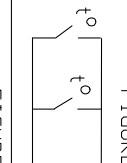
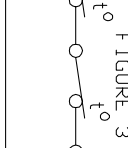
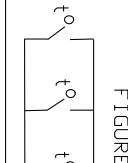
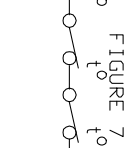
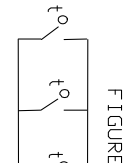
REV. DESC: NEW DRAWING	VERSION: 00	REVISED: 02-53-03 03.08/2019	TDR: 000001101608
MODEL NO. 617433-608	BY: USJEDIL	Material:	REF:

<b>BALDOR</b>	G405/404T TEFC XP F1 FOOT/CAST IRON BOX/CL.1 GRP C & D
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617433-608

## CONNECTION DIAGRAM ACCESSORIES

MOTOR WINDING THERMOSTATS	
CONTACTS _____ @ _____ °C	
FIGURE NUMBER _____	
CONTACT RATING	
VOLTS	CONTINUOUS AMPERES
110-120	3.0
220-240	1.5
440-480	0.75
550-600	0.60
	INRUSH AMPERES
	30
	15
	7.5
	6.0

NORMALLY CLOSED	THERMOSTATS	NORMALLY OPEN
 <p>FIGURE 1</p>		 <p>FIGURE 4</p>
 <p>FIGURE 2</p>		 <p>FIGURE 5</p>
 <p>FIGURE 3</p>		 <p>FIGURE 6</p>
 <p>FIGURE 7</p>		 <p>FIGURE 8</p>

CUSTOMER \_\_\_\_\_ CUSTOMER ORDER NO. \_\_\_\_\_ S.O. NO. \_\_\_\_\_

418174-006

418174-006

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: -		

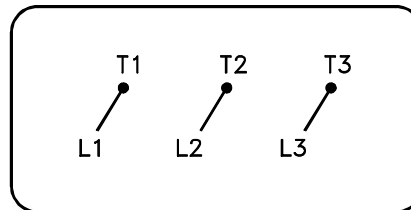
**BALDOR**

A-C MOTOR CONNECTION ACCESSORIES

SH 1 of 1

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