

# ABB BALDOR RELIANCE III

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## Customer information packet

EM251502T-4

500HP, 3565RPM, 3PH, 60HZ, 449TS, A44128M, DP

Class - None

Division - Not Applicable

**Specifications**

<b>Enclosure</b>	DP
<b>Frame</b>	449TS
<b>Frame Material</b>	Iron
<b>Frequency</b>	60.00 Hz
<b>Haz Area Class and Group</b>	None
<b>Haz Area Division</b>	Not Applicable
<b>Motor Letter Type</b>	Three Phase
<b>Output @ Frequency</b>	500.000 HP @ 60 HZ
<b>Phase</b>	3
<b>Synchronous Speed @ Frequency</b>	3600 RPM @ 60 HZ
<b>Voltage @ Frequency</b>	460.0 V @ 60 HZ
<b>Agency Approvals</b>	CURUSEEV
<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>Current @ Voltage</b>	544.000 A @ 460.0 V
<b>Design Code</b>	B
<b>Drip Cover</b>	No Drip Cover
<b>Duty Rating</b>	CONT
<b>Efficiency @ 100% Load</b>	96.2 %
<b>Feedback Device</b>	NO FEEDBACK
<b>Heater Indicator</b>	No Heater
<b>High Voltage Full Load Amps</b>	544.0 a
<b>Insulation Class</b>	F
<b>Inverter Code</b>	Inverter Ready
<b>IP Rating</b>	NONE
<b>KVA Code</b>	F
<b>Lifting Lugs</b>	Standard Lifting Lugs
<b>Motor Lead Quantity/Wire Size</b>	12 @ 1 AWG
<b>Motor Standards</b>	NEMA
<b>Motor Type</b>	A44128M

**Part Detail**

<b>Revision</b>	J
<b>Type</b>	AC
<b>Mech. spec.</b>	
<b>Base</b>	
<b>Status</b>	PRD/A
<b>Elec. spec.</b>	A44WG2745
<b>Layout</b>	604989-501
<b>Eff. date</b>	03-21-2018
<b>CD Diagram</b>	416820-008
<b>Poles</b>	02
<b>Leads</b>	6#1 (02 per group)
<b>Proprietary</b>	False
<b>Created date</b>	02-12-2015

<b>Mounting Arrangement</b>	F1
<b>Number of Poles</b>	2
<b>Overall Length</b>	39.37 IN
<b>Power Factor</b>	89
<b>Product Family</b>	General Industrial
<b>Pulley End Bearing Type</b>	Ball
<b>Pulley Face Code</b>	Standard
<b>Service Factor</b>	1.15
<b>Shaft Diameter</b>	2.375 IN
<b>Shaft Ground Indicator</b>	No Shaft Grounding
<b>Shaft Rotation</b>	Reversible
<b>Shaft Slinger Indicator</b>	No Slinger
<b>Speed</b>	3565 rpm
<b>Speed Code</b>	Single Speed
<b>Starting Method</b>	Wye Start - Delta Run
<b>Thermal Device - Bearing</b>	None
<b>Thermal Device - Winding</b>	None

**Nameplate**

<b>NP2496L</b>
MOBIL POLYREX EM

**NP2349L**

<b>SPEC NO.</b>	A44-6890-2745	<b>CAT.NO.</b>	EM251502T-4	<b>FRAME</b>	449TS
<b>HP</b>	500	<b>VOLTS</b>	460	<b>PHASE</b>	3
<b>RPM</b>	3565	<b>AMPS</b>	544	<b>DESIGN</b>	B
<b>DRIVE END BEARING</b>	65BC03J30X	<b>DUTY</b>	CONT	<b>TYPE</b>	P
<b>OPP D.E. BEARING</b>	65BC03J30X	<b>ENCL</b>	DP	<b>INSUL.CLASS</b>	F
<b>SER.NO.</b>		<b>POWER FACTOR</b>	89	<b>AMB</b>	40
				<b>SF</b>	1.15
				<b>MAX CORR KVAR</b>	60
				<b>NEMA-NOM-EFFICIENCY</b>	96.2
				<b>GUARANTEED EFFICIENCY</b>	95.4
				<b>NEMA NOM/CSA QUOTED EFF</b>	
				<b>MOTOR WEIGHT</b>	

REL. S.O.	FRAME	HP	TYPE	PHASE/ HERTZ	RPM	VOLTS
	449T	500	P	3/60	3565	460
AMPS	DUTY	AMB °C/ INSUL.	S.F.	NEMA DESIGN	CODE LETTER	ENCL.
544	CONT	40/F	1.15	B	F	PRXE
E/S	ROTOR	TEST S.O.	TEST DATE	STATOR RES. @25 °C OHMS (BETWEEN LINES)		
433535	418143-13-NE	---	---	.00642		

**PERFORMANCE**

LOAD	HP	AMPERES	RPM	% POWER FACTOR	% EFFICIENCY
NO LOAD	0	122	3600	4.29	0
1/4	125	177	3592	69.6	95.2
2/4	250	281	3584	86.3	96.6
3/4	375	407	3576	89.1	96.7
4/4	500	544	3567	89.3	96.4
5/4	625	684	3557	89.1	96.0

**SPEED TORQUE**

	RPM	TORQUE % FULL LOAD	TORQUE LB.-FT.	AMPERES
LOCKED ROTOR	0	210	1543	3225
PULL UP	2550	148	1089	1957
BREAKDOWN	3470	213	1565	1550
FULL LOAD	3567	100	736	544

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

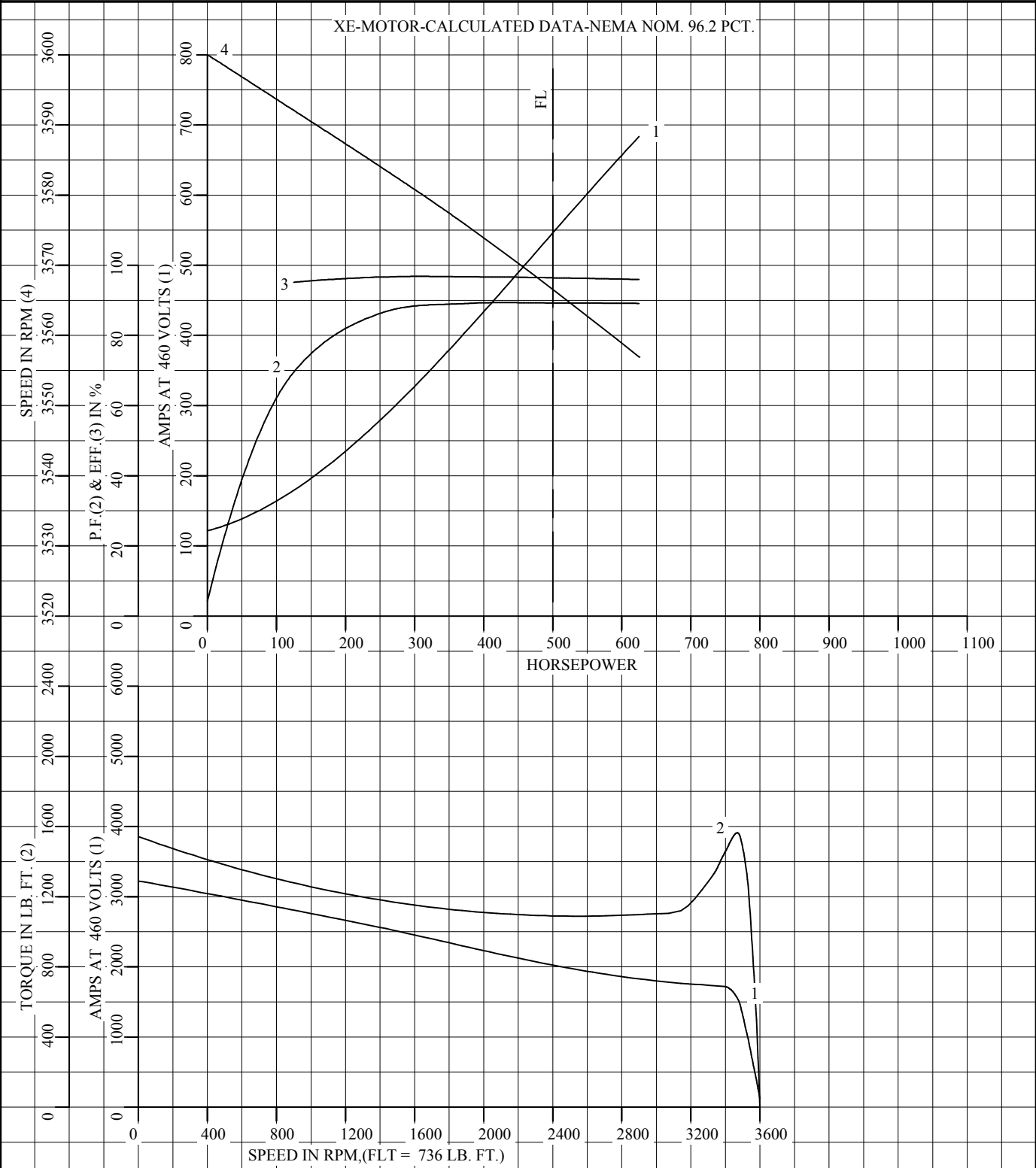
REMARKS: XE-MOTOR-CALCULATED DATA-NEMA NOM. 96.2 PCT.



DR. BY J. J. HARRISON  
 CK. BY W. L. SMITH  
 APP. BY W. L. SMITH  
 DATE 05/03/04

**A-C MOTOR  
 PERFORMANCE DATA** A44WG2745-R001  
 ISSUE DATE 05/03/04

REL S.O.	RPM <b>3565</b>	S.F. <b>1.15</b>	ROTOR <b>418143-13-NE</b>
FRAME <b>449T</b>	VOLTS <b>460</b>	NEMA DESIGN <b>B</b>	TEST S.O. ---
HP <b>500</b>	AMPS <b>544</b>	CODE LETTER <b>F</b>	TEST DATE ---
TYPE <b>P</b>	DUTY <b>CONT</b>	ENCLOSURE <b>PRXE</b>	STATOR RES. @ 25 °C <b>.00642</b>
PHASE/HERTZ <b>3/60</b>	AMB °C/INSUL <b>40/F</b>	E/S <b>433535</b>	OHMS (BETWEEN LINES)



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



DR. BY J.J.HARRISON  
 CK. BY W.L.SMITH  
 APP. BY W.L.SMITH  
 DATE 05/03/04

**A-C MOTOR  
 PERFORMANCE CURVES** **A44WG2745-R001**  
 ISSUE DATE **05/03/04**

**DUTY MASTER ALTERNATING CURRENT MOTORS**

SQUIRREL-CAGE INDUCTION

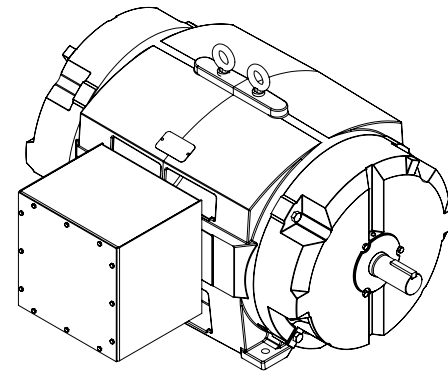
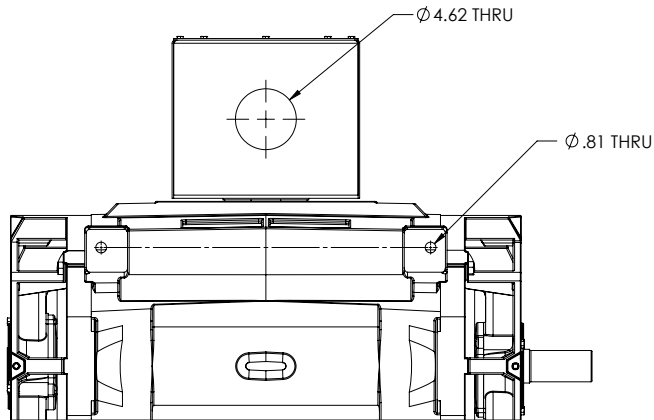
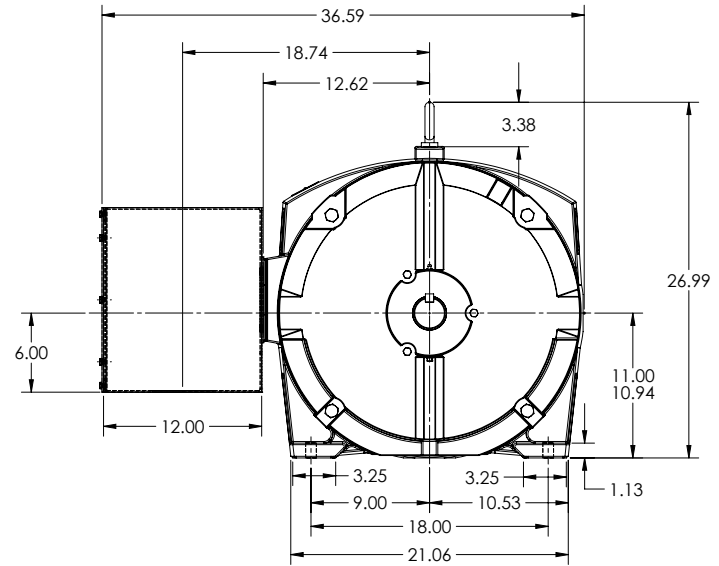
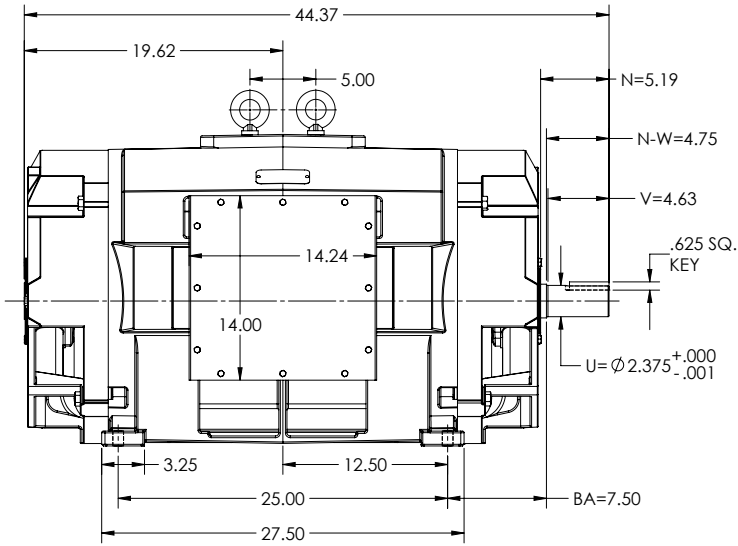
COOLING: SELF-VENTILATED

FRAME E449TS

ENCLOSURE: OPEN DRIP-PROOF (PROTECTED)

MOUNTING: FOOT, F-1

SPECIAL FABRICATED 14 X 14 X 12 STEEL C/BOX



SHEET NUMBER  
**1 OF 1**  
105-686F09

IF MOUNTING CLEARANCE DETAILS ARE REQUIRED, CONSULT FACTORY.

MAXIMUM PERMISSIBLE SHAFT RUNOUT WHEN MEASURED AT END OF STANDARD SHAFT EXTENSION IS .003" MAX. T.I.R.

WEIGHT (LBS) 2100/ MAY VARY 15% DEPENDING ON RATING

DIMENSIONS ARE IN INCHES

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

REV. DESC: UPDATE MODEL TO ADD EXTERNAL HARDWARE PER PROD MGM

REV: C | VERSION: 03 | REVISED: 07-27-31 07/14/2022 | TDR: 000001193529

MODEL NO. 604989-501

BY: USBUFA

**BALDOR**

E449TS PROT F-1 FT MTO - 24 X 20 X 12 FABRICATED STEEL BOX

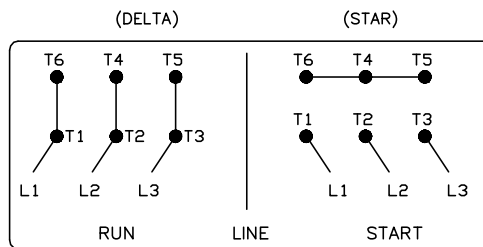
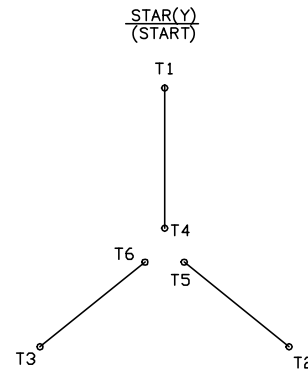
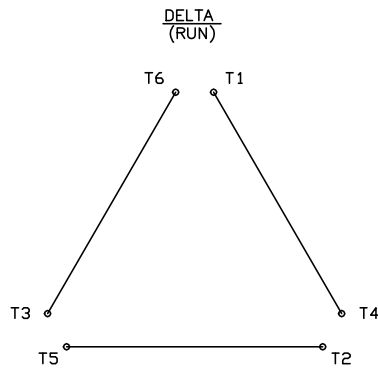
105-686F09

416820-008

# A-C MOTOR CONNECTION DIAGRAM

STANDARD 6 LEAD

Y START - DELTA RUN



< N. P. 1767-DC >

REV. DESC: ADDED T4 TO Y CONNECT DIAGRAM

REV. LTR: D

VERSION: 04

TDR: 00000847713

FILE: \RAG\00001\808

REVISED: 10: 41: 26 04/08/2014

BY: RAGJSS1

MTL: -



**BALDOR**

CONNECT DIAGRAM STD 6 LEAD Y START DELTA RUN

SH 1 of 1

416820-008