ABB BALDOR RELIANCE

Customer information packet

CEM4400T-5

100HP, 1785RPM, 3PH, 60HZ, 405TC, TEFC, F1
Class - None
Division - Not Applicable

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Specifications

Enclosure	TEFC
Frame	405TC
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	100.000 HP @ 60 HZ
Phase	3
Synchronous Speed @ Frequency	1800 RPM @ 60 HZ
Voltage @ Frequency	575.0 V @ 60 HZ
Agency Approvals	CCSAUSEEV
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
Heater Indicator	No Heater
High Voltage Full Load Amps	89.6 a
Insulation Class	F
Inverter Code	Inverter Ready
IP Rating	NONE
KVA Code	G
Lifting Lugs	Standard Lifting Lugs
Motor Lead Quantity/Wire Size	3 @ 2 AWG
Motor Standards	NEMA
Motor Type	A40064M

Part Detail

Revision	G
Type	AC
Mech. spec.	
Base	
Status	PRD/A
Elec. spec.	A40WG0665
Layout	611740-003-SH1
Eff. date	09-04-2024
CD Diagram	416820-036
Poles	04
Leads	3#2
Proprietary	False
Created date	08-08-2014

Mounting Arrangement	F1
Number of Poles	4
Overall Length	38.31 IN
Power Factor	87
Product Family	General Industrial
Pulley End Bearing Type	Ball
Pulley Face Code	C-Face
Service Factor	1.15
Shaft Diameter	2.875 IN
Shaft Ground Indicator	No Shaft Grounding
Shaft Rotation	Reversible
Shaft Slinger Indicator	No Slinger
Speed	1785 rpm
Speed Code	Single Speed
Starting Method	Direct on line
Thermal Device - Bearing	None
Thermal Device - Winding	None

Nameplate

NP2496L
MOBIL POLYREX EM

NP2349L												
SPEC NO.	A40-6213-0665	**CAT.NO.**	CEM4400T-5							**FRAME**	405TC	
HP	100	**VOLTS**	575	**PHASE**	3	**DESIGN**	B	**TYPE**	P			
RPM	1785	**AMPS**	89.6	**HZ**	60	**AMB**	40	**SF**	1.15			
DRIVE END BEARING	80BC03J30X	**DUTY**	CONT	**INSUL.CLASS**	F							
OPP D.E. BEARING	80BC03J30X	**ENCL**	TEFC	**CODE**	G							
SER.NO.		**POWER FACTOR**	87					**NEMA-NOM-EFFICIENCY**	95.4			
						MAX CORR KVAR	18	**GUARANTEED EFFICIENCY**	94.5			
						NEMA NOM/CSA QUOTED EFF						
										MOTOR WEIGHT		

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	1.15	B	G	TEFC

E/S	ROTOR	TEST S.O.	TEST DATE	STATOR RES.@25 °C OHMS (BETWEEN LINES)
496079	418142-33-RE	---	---	.0770

PERFORMANCE

LOAD	HP	AMPERES	RPM	% POWER FACTOR	% EFFICIENCY
NO LOAD	0	22.9	1800	5.49	0
1/4	25.0	31.3	1796	64.3	93.0
2/4	50.0	47.6	1792	82.5	95.4
3/4	75.0	67.7	1788	86.7	95.7
4/4	100	89.8	1783	87.4	95.4
5/4	125	113	1778	87.3	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	89.8

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

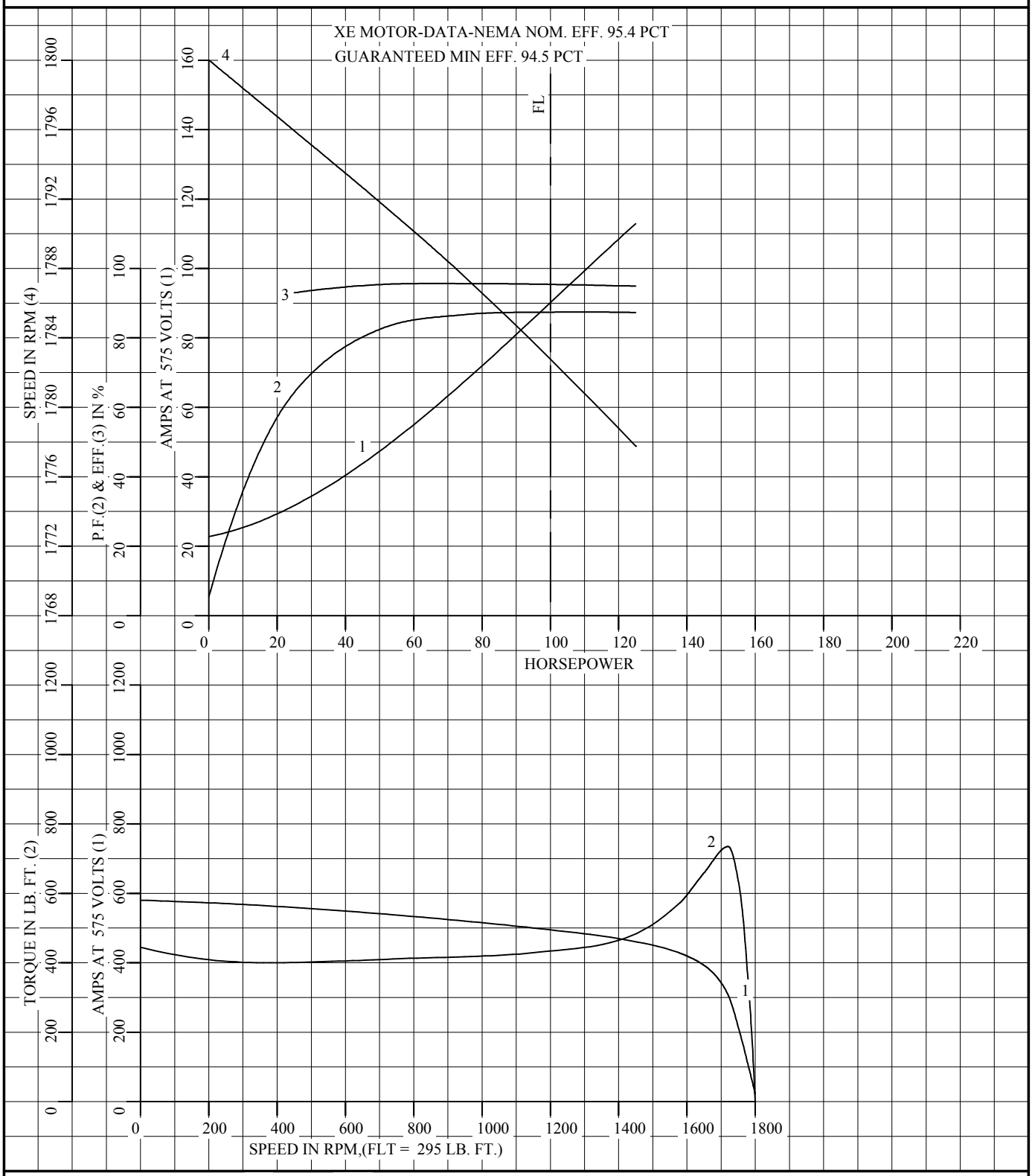
BALDOR
A MEMBER OF THE ABB GROUP

DR. BY J. P. TSAO
CK. BY W. L. SMITH
APP. BY W. L. SMITH
DATE 08/07/08

A-C MOTOR PERFORMANCE DATA

A40WG0665-R004
ISSUE DATE 06/21/19

REL S.O.	RPM 1785	S.F. 1.15	ROTOR 418142-33-RE
FRAME 405T	VOLTS 575	NEMA DESIGN B	TEST S.O. TYPICAL DATA
HP 100	AMPS 89.6	CODE LETTER G	TEST DATE ---
TYPE P	DUTY CONT	ENCLOSURE TEFC	STATOR RES.@ 25 °C .0770
PHASE/HERTZ 3/60	AMB °C/INSUL 40/F	E/S 496079	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
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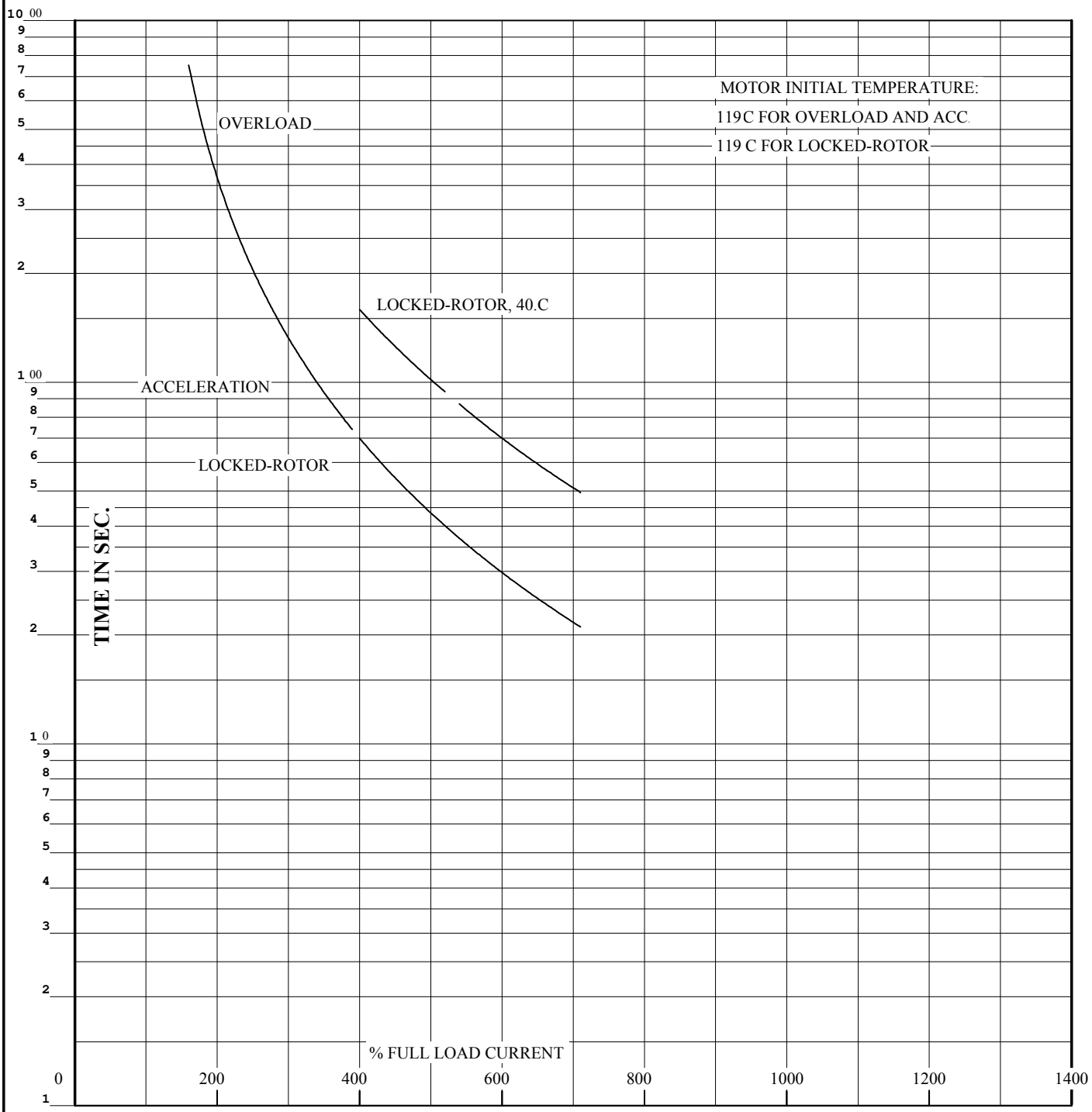
DR. BY	J. P. TSAO
CK. BY	W. L. SMITH
APP. BY	W. L. SMITH
DATE	08/07/08

A-C MOTOR PERFORMANCE CURVES

A40WG0665-R004

ISSUE DATE 06/21/19

REL. S.O.	RPM 1785	S.F. 1.15	ROTOR 418142-33-RE
FRAME 405T	VOLTS 575	NEMA DESIGN B	TEST S.O. TYPICAL DATA
HP 100	AMPS 89.6	CODE LETTER G	TEST DATE ---
TYPE P	DUTY CONT	ENCLOSURE TEFC	STATOR RES.@ 25 ℃.0770
PHASE/HERTZ 3/60	AMB ℃/INSUL 40/F	E/S 496079	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.**

BALDOR A MEMBER OF THE ABB GROUP

DR. BY	J. P. TSAO
CK. BY	W. L. SMITH
APP. BY	W. L. SMITH
DATE	08/07/08

A-C MOTOR PERFORMANCE CURVES A40WG0665-R004 ISSUE DATE 06/21/19

DUTY MASTER ALTERNATING CURRENT MOTORS

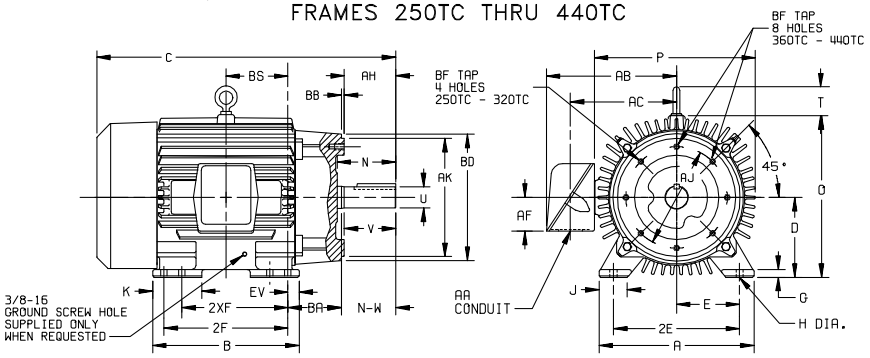
SQUIRREL-CAGE INDUCTION

ENCLOSURE: TOTALLY ENCLOSED

COOLING: FAN COOLED

MOUNTING: FOOT, NEMA "C" FACE

FRAMES 250TC THRU 440TC



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

FRAME	A	D(2)	E	G	H	J	K	EV	O	P	T	STEEL TERMINAL BOX AA	AB	AC	AF	BA	BB	BD	BF	MIN. TAP DEPTH	AJ	(6) AK
254TC-256TC	12.50	6.25	5.00	.75	.56	2.50	--	1.00	13.25	13.25	2.44	1-1/4	10.75	8.75	2.50	4.75	25	9.00	1/2-13	.75	7.25	8.500
284TC-286TSC	13.75	7.00	5.50	.75	.56	2.50	--	1.00	14.75	14.88	2.44	1-1/2	12.75	10.00	3.19	4.75	25	11.25	1/2-13	.75	9.00	10.500
324TC-326TSC	15.50	8.00	6.25	.88	.69	2.75	4.50	1.38	16.69	17.00	2.44	2	15.19	11.44	4.25	5.25	25	13.12	5/8-11	.94	11.00	12.500
364TC-365TSC	17.00	9.00	7.00	.88	.69	2.75	3.88	1.38	18.50	19.50	2.94	3	18.06	14.00	5.38	5.88	25	13.00	5/8-11	.94	11.00	12.500
404TC-405TSC	19.00	10.00	8.00	1.12	.81	3.25	4.62	1.13	21.31	22.50	2.94	3	19.31	15.25	5.38	6.62	25	13.12	5/8-11	.94	11.00	12.500
444TC-445TSC	21.00	11.00	9.00	1.12	.81	3.25	5.25	1.25	23.38	25.25	3.25	3	23.38	18.12	6.50	7.50	25	16.75	5/8-11	.94	14.00	16.000
(1)																						

FRAME SIZE	C	BS	B	2F	(4) 2XF	N	AH	SHAFT AND KEY N-W(7)	U(3)	V	SQ.	LGTH.	WEIGHT LBS. (5)
254TC	25.06	5.00	12.00	---	8.25	4.06	3.75	4.00	1.625	3.75	.375	2.88	315
256TC	25.06	5.00	12.00	10.00	---	4.06	3.75	4.00	1.625	3.75	.375	2.88	325
284TC	27.44	5.50	13.00	---	9.50	5.00	4.38	4.62	1.875	4.38	.500	3.25	445
284TSC	26.06	5.50	13.00	---	9.50	3.62	3.00	3.25	1.625	3.00	.375	1.88	445
286TC	27.44	5.50	13.00	11.00	---	5.00	4.38	4.62	1.875	4.38	.500	3.25	460
286TSC	26.06	5.50	13.00	11.00	---	3.62	3.00	3.25	1.625	3.00	.375	1.88	460
324TC	30.44	6.00	14.75	---	10.50	5.62	5.00	5.25	2.125	5.00	.500	3.88	555
324TSC	28.94	6.00	14.75	---	10.50	4.12	3.50	3.75	1.875	3.50	.500	2.00	555
326TC	30.44	6.00	14.75	12.00	---	5.62	5.00	5.25	2.125	5.00	.500	3.88	595
326TSC	28.94	6.00	14.75	12.00	---	4.12	3.50	3.75	1.875	3.50	.500	2.00	595
364TC	33.44	6.12	15.00	---	11.25	6.25	5.62	5.88	2.375	5.62	.625	4.25	815
364TSC	31.31	6.12	15.00	---	11.25	4.12	3.50	3.75	1.875	3.50	.500	2.00	809
365TC	33.44	6.12	15.00	12.25	---	6.25	5.62	5.88	2.375	5.62	.625	4.25	855
365TSC	31.31	6.12	15.00	12.25	---	4.12	3.50	3.75	1.875	3.50	.500	2.00	849
404TC	38.31	6.88	16.00	---	12.25	7.50	7.00	7.25	2.875	7.00	.750	5.62	1165
404TSC	35.31	6.88	16.00	---	12.25	4.50	4.00	4.25	2.125	4.00	.500	2.75	1156
405TC	38.31	6.88	16.00	13.75	---	7.50	7.00	7.25	2.875	7.00	.750	5.62	1205
405TSC	35.31	6.88	16.00	13.75	---	4.50	4.00	4.25	2.125	4.00	.500	2.75	1196
444TC	44.62	8.25	19.00	---	14.50	8.94	8.25	8.50	3.375	8.25	.875	6.88	1608
444TSC	40.88	8.25	19.00	---	14.50	5.19	4.50	4.75	2.375	4.50	.625	3.00	1592
445TC	44.62	8.25	19.00	16.50	---	8.94	8.25	8.50	3.375	8.25	.875	6.88	1798
445TSC	40.88	8.25	19.00	16.50	---	5.19	4.50	4.75	2.375	4.50	.625	3.00	1782
(1)													

(1) SPECIAL DIMENSIONS APPLYING TO THIS ORDER ON THIS LINE.

(2) "D" VARIES — 250TC – 320TC +.00, –.03; 360TC – 440TC +.00, –.06.

(3) "U" VARIES — UP TO 1.625 DIA. +.0000, –.0005; 1.625 AND LARGER +.000, –.001.

(4) ALL FRAMES HAVE EIGHT MOUNTING HOLES FOR DUAL MOUNTING.

(5) MOTOR WEIGHTS MAY VARY BY 15% DEPENDING UPON RATING.

(6) "AK" VARIES — 250TC – 280TC +.000, –.003; 320TC – 440TC +.000, –.005

(7) "N-W" VARIES +.00, –.25.

CONDUIT BOX LOCATED ON OPPOSITE SIDE WHEN F-2,W-1, W-4,W-5,W-7, OR C-1 MOUNTING IS SPECIFIED.

IF MOUNTING CLEARANCE DETAILS ARE REQUIRED, CONSULT FACTORY.

MAXIMUM PERMISSIBLE SHAFT RUNOUT WHEN MEASURED AT END OF STD. SHAFT EXTENSION IS .002 T.I.R. UP TO AND INCLUDING 1.625 DIA. AND .003 T.I.R. 1.625 DIA. TO 5 INCH DIA.

FACE RUNOUT AND ECCENTRICITY — 250TC – 280TC INCL. .004 MAX. T.I.R.; 320TC – 440TC INCL. .007 MAX. T.I.R.

FRAME–_____ TYPE–_____ CERTIFIED FOR– _____

ORDER–_____ ITEM–_____ HP–_____ RPM–_____ PH– _____ HZ _____VOLTS_____

RELIANCE SALES ORDER– _____ APPROVED BY–_____ DATE _____

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

Baldor • Dodge • Reliance

DIM SHEET 250TC THRU 440TC

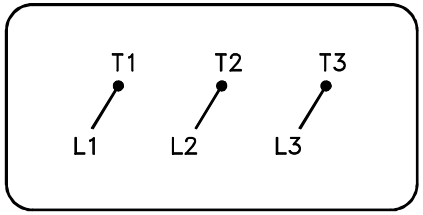
REV. DESC: REMOVEING TITLE BLOCK		TDR: 000000441900
REV. LTR: A	VERSION: 01	
FILE: \RAG\00003\380	REVISED: 09:15:38 08/28/2007	BY: RAGRXH
MTL: –		

611740-003-SH1

ABB BALDOR RELIANCE III
CUSTOMER INFORMATION PACKET
CEM4400T-5 - 100HP, 1785RPM, 3PH, 60HZ, 405TC, TEFC, F1
A40-6213-0665: 100HP,1785RPM,3PH,60HZ,405TC,A40064M,TEF

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