

ABB BALDOR RELIANCE III

Customer information packet

FDEM4400T

100HP, 1785RPM, 3PH, 60HZ, 405T, A40064M, TEFC

Class - None

Division - Not Applicable

Specifications

Enclosure	TEFC
Frame	405T
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	230.0 V @ 60 HZ 460.0 V @ 60 HZ
Agency Approvals	CSA EEV CCSA US
Ambient Temperature	40 °C
Auxiliary Box	NO AUXILLARY BOX
Base Indicator	Rigid
Bearing Grease Type	Polyrex EM (-20F +300F)
Current @ Voltage	224.000 A @ 230.0 V 112.000 A @ 460.0 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	112.0 a
Insulation Class	F
Inverter Code	Inverter Ready
KVA Code	G
Lifting Lugs	Standard Lifting Lugs
Motor Lead Quantity/Wire Size	3 @ 2 AWG

Part Detail

Revision	J
Type	AC
Mech. spec.	
Base	
Status	PRD/A
Elec. spec.	A40WG0251
Layout	617429-012
Eff. date	11-01-2021
CD Diagram	416820-002
Poles	04
Leads	3#2,6#4
Proprietary	False
Created date	02-27-2014

Motor Standards	NEMA
Motor Type	A40064M
Mounting Arrangement	F1
Number of Poles	4
Overall Length	38.04 IN
Power Factor	87
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	1785 rpm
Speed Code	Single Speed
Starting Method	Direct on line
Thermal Device - Bearing	None
Thermal Device - Winding	None

Nameplate

NP3159L													
SPEC NO.	A40-4964-0251			CAT.NO.		FDEM4400T				FRAME	405T		
HP	100	VOLTS	230/460		PHASE	3	DESIGN	B	TYPE	P			
RPM	1785	AMPS	224/112		HZ	60	AMB	40	SF	1.15			
DRIVE END BEARING	80BC03JGG30A		DUTY	CONT	INSUL.CLASS			F					
OPP D.E. BEARING	80BC03JGG30A		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								

Parts List

Part number	Description	Quantity
SA278005	SA A40-4964-0251	1.000 ea
RA264551	RA A40-4964-0251	1.000 ea
000613006PU	N/P (RELEASE QTY 10,000) UL CSA LABEL	1.000 ea
000692000VD	LABEL WARNING	1.000 ea
000692000FF	N/P	1.000 ea
NP3159L	SUPER-E FARM DUTY, SS, CC, CSA-C US,	1.000 ea
421948032	LABEL, MYLAR	1.000 ea
412118006A	DRAIN	2.000 ea
032018008CK	HHCS 3/8-16X1L PLATED	4.000 ea
032018020EK	HHCS 5/8-11X2-1/2 PLTD.	4.000 ea
032018024CK	HHCS 3/8-16X3 PLTD.	3.000 ea
034000014AB	WSH ID.406 OD.812 TH.065	4.000 ea
034180012DA	KEY 1X4X1/4X1-1/2 L	1.000 ea
034530056BB	P/NIP 1/4X7 SCHED 40	1.000 ea
034631002AB	BUSH 1/4 TO 1/8 PLTD.	1.000 ea
034692005AA	P PLUG 3/4"BLK.	1.000 ea
034690001AB	1/8" NPT SQHDPLG	1.000 ea
078548001R	FAN KB 234/150 (84) 400	1.000 ea
083198101A	G400 STD FAN COVER MACHINING	1.000 ea
089412501A	BRKT FTMT G400 FIN MACH 6316 89412500WCA	1.000 ea
410700000DA	WAVY SPRING WASHER	1.000 ea
415072001B	CLAMP	1.000 ea
032018020EK	HHCS 5/8-11X2-1/2 PLTD.	4.000 ea
032018024CK	HHCS 3/8-16X3 PLTD.	3.000 ea
034690002AB	PPLG 1/4" PLTD.	1.000 ea
089412501B	G400 MACHD 6316 FT MNT BRKT LIP SEAL	1.000 ea
032018005AK	HHCS 1/4-20X5/8 PLATED	4.000 ea
032018008CK	HHCS 3/8-16X1L PLATED	4.000 ea
043292000AJ	GASK 320-400	1.000 ea
077176000L	C/BOX, PAINTED 440	1.000 ea
077176001A	CBOX Cover 360-400	1.000 ea

402731001A	GASK 360-440	1.000 ea
406099000A	PLUG - FAN COVER 320-440	1.000 ea
415000115H	T/LUG #2AWG-4/0AWG	1.000 ea
033775004EA	DRSCR #6-1/4 304 S.S.	2.000 ea
034180044JA	KEY 3/4X3/4X5-1/2 L	1.000 ea
032018005DL	1/2-13 X 5/8 SILICON BRONZE HHCS	1.000 ea
PK5004A02	WOOD BASE 40X32 WITH STACKED 2X4 RUNNER	1.000 ea
415028001AA	SEAL - 400 (FOR C-FACE & D-FLANGE BRKT)	1.000 ea
423709011C	WASHER	3.000 ea
415045002B	SLGR	1.000 ea
000692000CY	N/P	1.000 ea
034690001AB	1/8" NPT SQHDPLG	1.000 ea
MG1025C02	WILKOFASST SG, 787.105, TAN	0.375 ga
004824015A	GREASE POLYREX EM	1.000 lb

REL. S.O.	FRAME	HP	TYPE	PHASE/ HERTZ	RPM	VOLTS
	405T	100	P	3/60	1785	230/460
AMPS	DUTY	AMB °C/ INSUL.	S.F.	NEMA DESIGN	CODE LETTER	ENCL.
224/112	CONT	40/F	1.15	B	G	TEFC
E/S	ROTOR	TEST S.O.	TEST DATE	STATOR RES. @25 °C OHMS (BETWEEN LINES)		
596956	418142-33-RE	---	---	.0123/.0492		
PERFORMANCE						
LOAD	HP	AMPERES	RPM	% POWER FACTOR	% EFFICIENCY	
NO LOAD	0	28.6	1800	5.49	0	
1/4	25.0	39.2	1796	64.3	93.0	
2/4	50.0	59.5	1792	82.5	95.4	
3/4	75.0	84.6	1788	86.7	95.7	
4/4	100	112	1783	87.4	95.4	
5/4	125	141	1778	87.3	94.9	
SPEED TORQUE						
	RPM	TORQUE % FULL LOAD	TORQUE LB.-FT.	AMPERES		
LOCKED ROTOR	0	151	445	725		
PULL UP	360	136	400	706		
BREAKDOWN	1721	250	735	382		
FULL LOAD	1783	100	295	112		
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 MOTOR-DATA-NEMA NOM. EFF. 95.4 PCT GUARANTEED MIN EFF. 95.0 PCT						
		DR. BY J. J. HARRISON CK. BY W. L. SMITH APP. BY W. L. SMITH DATE 07/26/04				
		A-C MOTOR PERFORMANCE DATA				
		A40WG0251-R001 ISSUE DATE 12/15/10				

FRAME 405T

VOLTS 230/460

NEMA DESIGN B

TEST S.O. TYPICAL DATA

HP 100

AMPS 224/112

CODE LETTER G

TEST DATE ---

TYPE P

DUTY CONT

ENCLOSURE TEFC

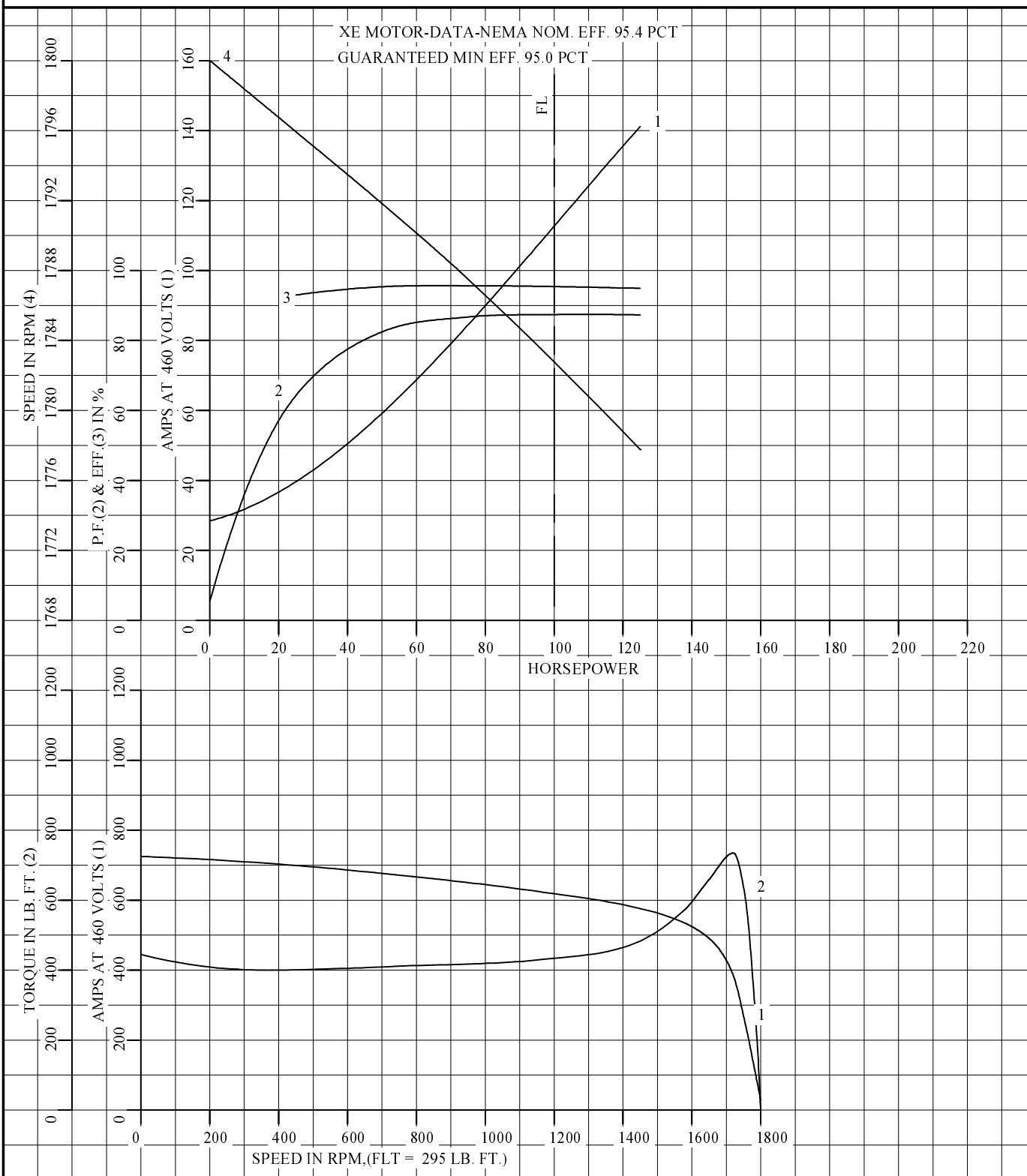
STATOR RES. @ 25 °C .0123/.0492

PHASE/HERTZ 3/60

AMB °C/INSUL 40/F

E/S 596956

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 J J HARRISON
CK. BY W L SMITH
APP. BY W L SMITH
DATE 07/26/04

**A-C MOTOR
PERFORMANCE
CURVES** A40WG0251-R001
ISSUE DATE 12/15/10

REL. S.O.

RPM 1785

S.F. 1.15

ROTOR 418142-33-RE

FRAME 405T

VOLTS 230/460

NEMA DESIGN B

TEST S.O. TYPICAL DATA

HP 100

AMPS 224/112

CODE LETTER G

TEST DATE ---

TYPE P

DUTY CONT

ENCLOSURE TEFC

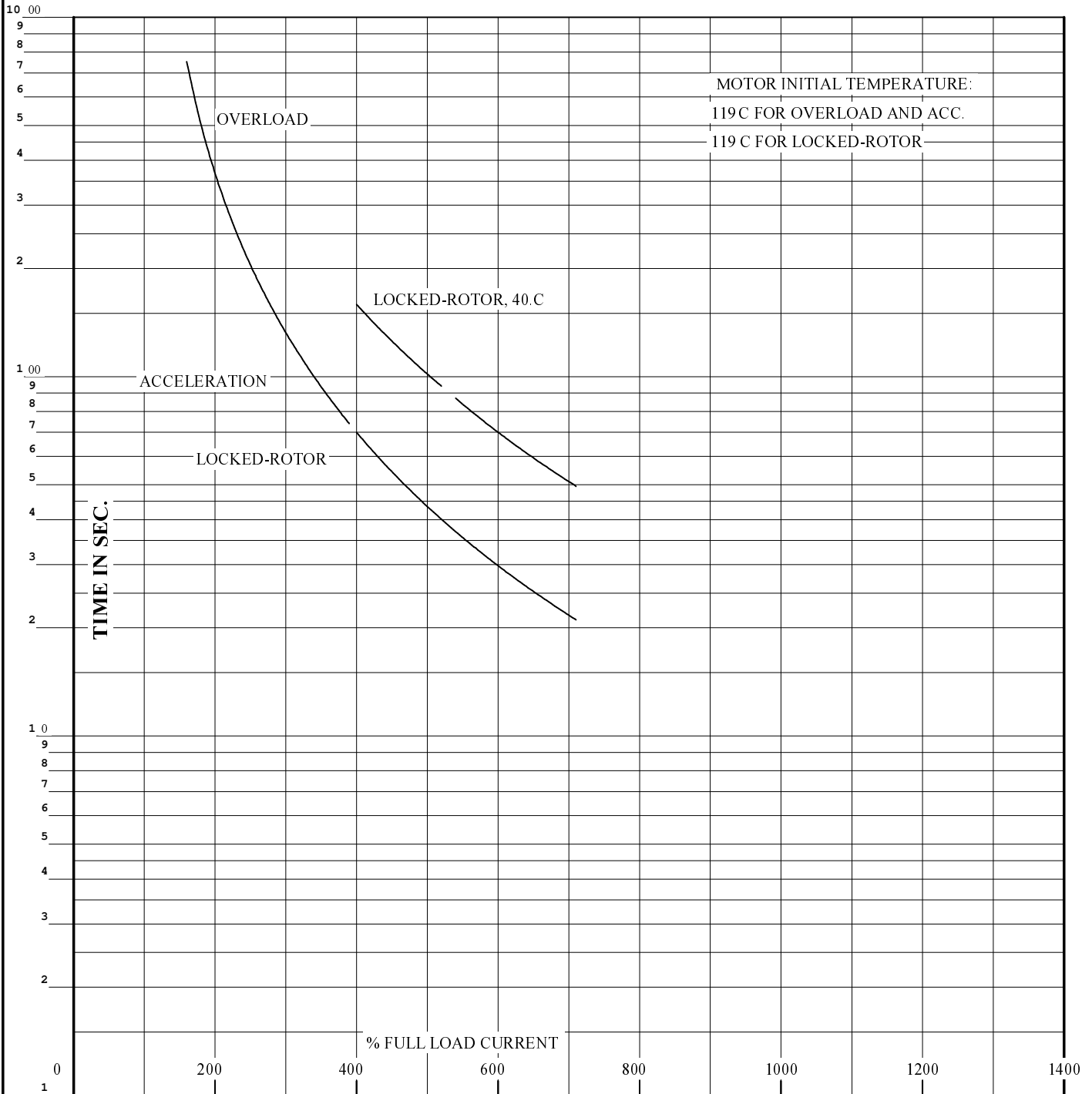
STATOR RES. @ 25 °C .0123/.0492

PHASE/HERTZ 3/60

AMB °C/INSUL 40/F

E/S 596956

OHMS (BETWEEN LINES)



THERMAL LIMIT CURVE

REMARKS:

XE MOTOR-DATA-NEMA NOM. EFF. 95.4 PCT

GUARANTEED MIN EFF. 95.0 PCT

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

BALDOR

DR. BY J.J. HARRISON
CK. BY W. L. SMITH
APP. BY W. L. SMITH
DATE 07/26/04

**A-C MOTOR
PERFORMANCE CURVES**
A40WG0251-R001
ISSUE DATE 12/15/10

DUTY MASTER ALTERNATING CURRENT MOTORS

SQUIRREL-CAGE INDUCTION

ENCLOSURE: TOTALLY ENCLOSED

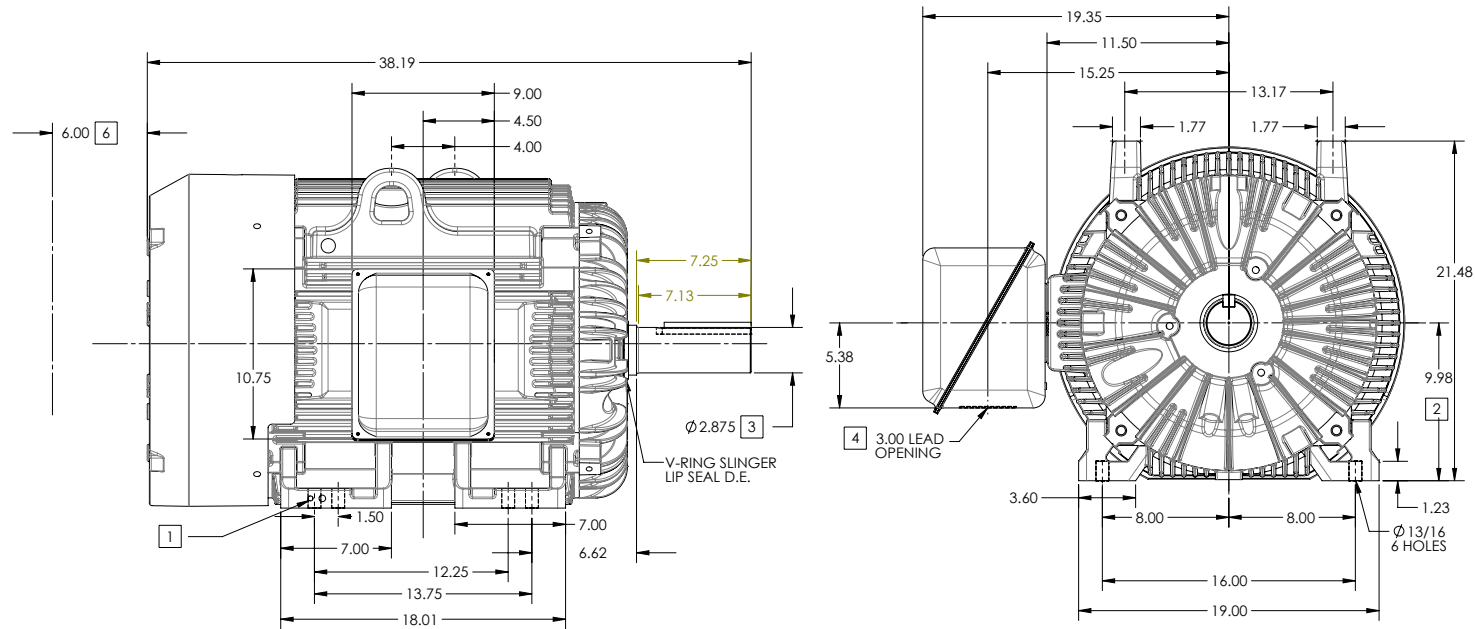
FRAME G405T ABOVE NEMA RATINGS

COOLING: FAN COOLED

MOUNTING: FOOT

INCLUDES 404T FRAME MOUNTING HOLES

STANDARD INDUSTRIAL 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. 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 ENCROACH ON AIR INLET

CONDUIT BOX LOCATED ON OPPOSITE SIDE WHEN F-1.
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.

[5] WEIGHT (LBS): 1350

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

210*62*119

REV. DESC: NEW ISSUE			
REV: -	VERSION: 00	REVISED: 04/05/02 03/14/2014	TDR: 000000841378
MODEL NO. 617429-012		REF:	
BY: RAGGDM	Material:		

BALDOR

G405T/404T STD - FOOTED - STD ENCL F1 LIPSEAL/V-SLG D.E.

617429-012

DUTY MASTER ALTERNATING CURRENT MOTORS

SQUIRREL-CAGE INDUCTION

ENCLOSURE: TOTALLY ENCLOSED

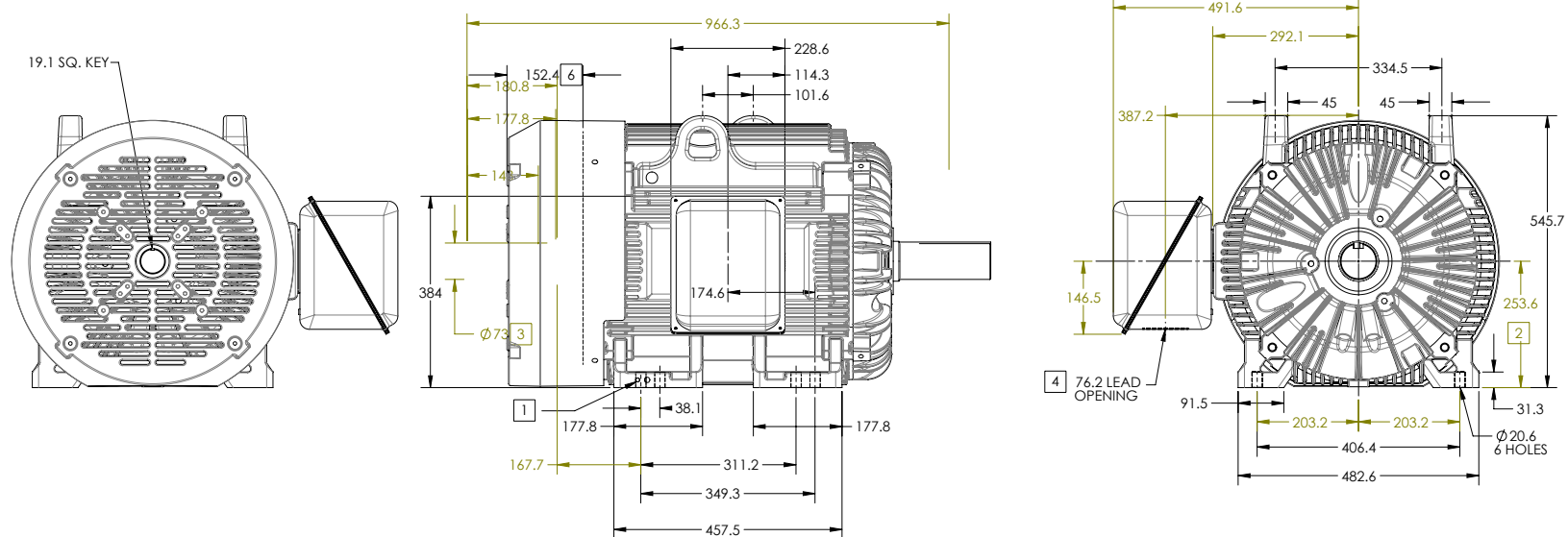
FRAME G405T ABOVE NEMA RATINGS

COOLING: FAN COOLED

MOUNTING: FOOT

INCLUDES 404T FRAME MOUNTING HOLES

STANDARD INDUSTRIAL 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 ENCROACH ON AIR INLET

CONDUIT BOX LOCATED ON OPPOSITE SIDE WHEN F-1.
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): 620

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

710*62*119

REV. DESC: NEW ISSUE	VERSION: 00	REVISED: 04/05/02 03/14/2014	TDR: 000000841378
MODEL NO. 617429-012	REF:		
BY: RAGGDM	Material:		

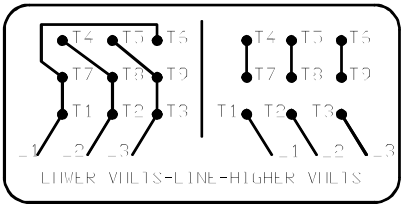
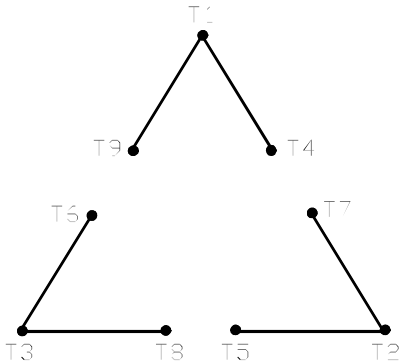
BALDOR

G405T/404T STD - FOOTED - STD ENCL F1 LIPSEAL/V-SLG D.E.

617429-012

416820-002

A-C MOTOR
CONNECTION DIAGRAM
STANDARD 9 LEAD DELTA-CONNECTED



(N.P. 1575-B)

REV. DESC: FONT CHANGE FOR PDF SEARCHABLE		
REV. LTR: A	VERSION: 01	TDR: 000001009382
FILE: \MGA\00000\661	REVISED: 02:46:19 02/13/2020	BY: MGHMTT
MTL: —		

BALDOR - RELIANCE®

CONN DIAG — STANDARD 9 LEAD, DELTA-CONNECTED
SH 1 of 1

416820-002