ABB BALDOR RELIANCE

Customer information packet

EM2515T-5BG

20HP, 1765RPM, 3PH, 60HZ, 256T, 3948M, OPSB, F1
Class -
Division - Not Applicable

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Specifications

Enclosure	OPSB
Frame	256T
Frame Material	Steel
Frequency	60.00 Hz
Haz Area Division	Not Applicable
Motor Letter Type	Three Phase
Output @ Frequency	20.000 HP @ 60 HZ
Phase	3
Synchronous Speed @ Frequency	1800 RPM @ 60 HZ
Voltage @ Frequency	575.0 V @ 60 HZ
Agency Approvals	CSA
	CSA EEV
	UR
Ambient Temperature	40 °C
Auxiliary Box	NO AUXILLARY BOX
Auxiliary Box Lead Termination	None
Base Indicator	Rigid
Bearing Grease Type	Polyrex EM (-20F +300F)
Blower	None
Current @ Voltage	19.100 A @ 575.0 V
Design Code	A
Drip Cover	No Drip Cover
Duty Rating	CONT
Efficiency @ 100% Load	93.0 %
Electrically Isolated Bearing	Not Electrically Isolated
Feedback Device	NO FEEDBACK
Front Face Code	Standard
Front Shaft Indicator	None
Heater Indicator	No Heater
High Voltage Full Load Amps	19.1 a
Insulation Class	H
Inverter Code	Inverter Ready

Part Detail

Revision	R
Type	AC
Mech. spec.	39E531
Base	
Status	PRD/A
Elec. spec.	39WGX995
Layout	39LYE531
Eff. date	06-11-2024
CD Diagram	CD0006
Poles	04
Leads	3#12
Proprietary	False
Created date	09-08-2016

KVA Code	G
Lifting Lugs	Standard Lifting Lugs
Locked Bearing Indicator	No Locked Bearing
Motor Lead Exit	Ko Box
Motor Lead Quantity/Wire Size	3 @ 12 AWG
Motor Lead Termination	Flying Leads
Motor Standards	NEMA
Motor Type	3948M
Mounting Arrangement	F1
Number of Poles	4
Overall Length	23.19 IN
Power Factor	85
Product Family	General Purpose
Pulley End Bearing Type	Ball
Pulley Face Code	Standard
Pulley Shaft Indicator	Standard
Rodent Screen	None
Service Factor	1.15
Shaft Diameter	1.625 IN
Shaft Extension Location	Pulley End
Shaft Ground Indicator	Shaft Grounding
Shaft Rotation	Reversible
Shaft Slinger Indicator	No Slinger
Speed	1765 rpm
Speed Code	Single Speed
Starting Method	Direct on line
Thermal Device - Bearing	None
Thermal Device - Winding	None
Vibration Sensor Indicator	No Vibration Sensor
Winding Thermal 1	None
Winding Thermal 2	None

Nameplate

NP3553L									
CAT.NO.	EM2515T-5BG								
SPEC	39E531X995G1								
HP	20								
VOLTS	575								
AMPS	19.1								
RPM	1765								
FRAME	256T		**HZ**	60			**PH**	3	
SF	1.15	**CODE**	G	**DES**	A	**CLASS**		H	
NEMA NOM. EFF	93	**PF**	85						
RATING	40C AMB-CONT								
CC	010A								
ENCL	OPSB	**SER**							
DE	6309		**ODE**	6208					
VPWM INVERTER READY									
CT30-60(2:1) VT3-60(20:1)									

AC Induction Motor Performance Data
Record # 59144
Typical performance - not guaranteed values

Winding: 39WGX995-R002	**Type:** 3948M	**Enclosure:** OPSB

Nameplate Data				**575 V, 60 Hz: Single Voltage Motor**	
Rated Output (HP)			20	**Full Load Torque**	59.7 LB-FT
Volts			575	**Start Configuration**	direct on line
Full Load Amps			19.1	**Breakdown Torque**	189 LB-FT
R.P.M.			1765	**Pull-up Torque**	78.9 LB-FT
Hz	60	**Phase**	3	**Locked-rotor Torque**	113 LB-FT
NEMA Design Code	A	**KVA Code**	G	**Starting Current**	126 A
Service Factor (S.F.)			1.15	**No-load Current**	7.18 A
NEMA Nom. Eff.	93	**Power Factor**	85	**Line-line Res. @ 25ºC**	0.711 Ω
Rating - Duty			40C AMB-CONT	**Temp. Rise @ Rated Load**	37°C
S.F. Amps				**Temp. Rise @ S.F. Load**	46°C
				Locked-rotor Power Factor	33.3
				Rotor inertia	2.1 LB-FT2

Load Characteristics 575 V, 60 Hz, 20 HP

% of Rated Load	**25**	**50**	**75**	**100**	**125**	**150**	**S.F.**
Power Factor	49	72	81	85	86	87	86
Efficiency	90.2	93.1	93.4	93.1	92.1	91	92.5
Speed	1792	1785	1776	1768	1758	1747	1762
Line amperes	8.49	11.3	14.9	19.1	23.6	28.5	21.8

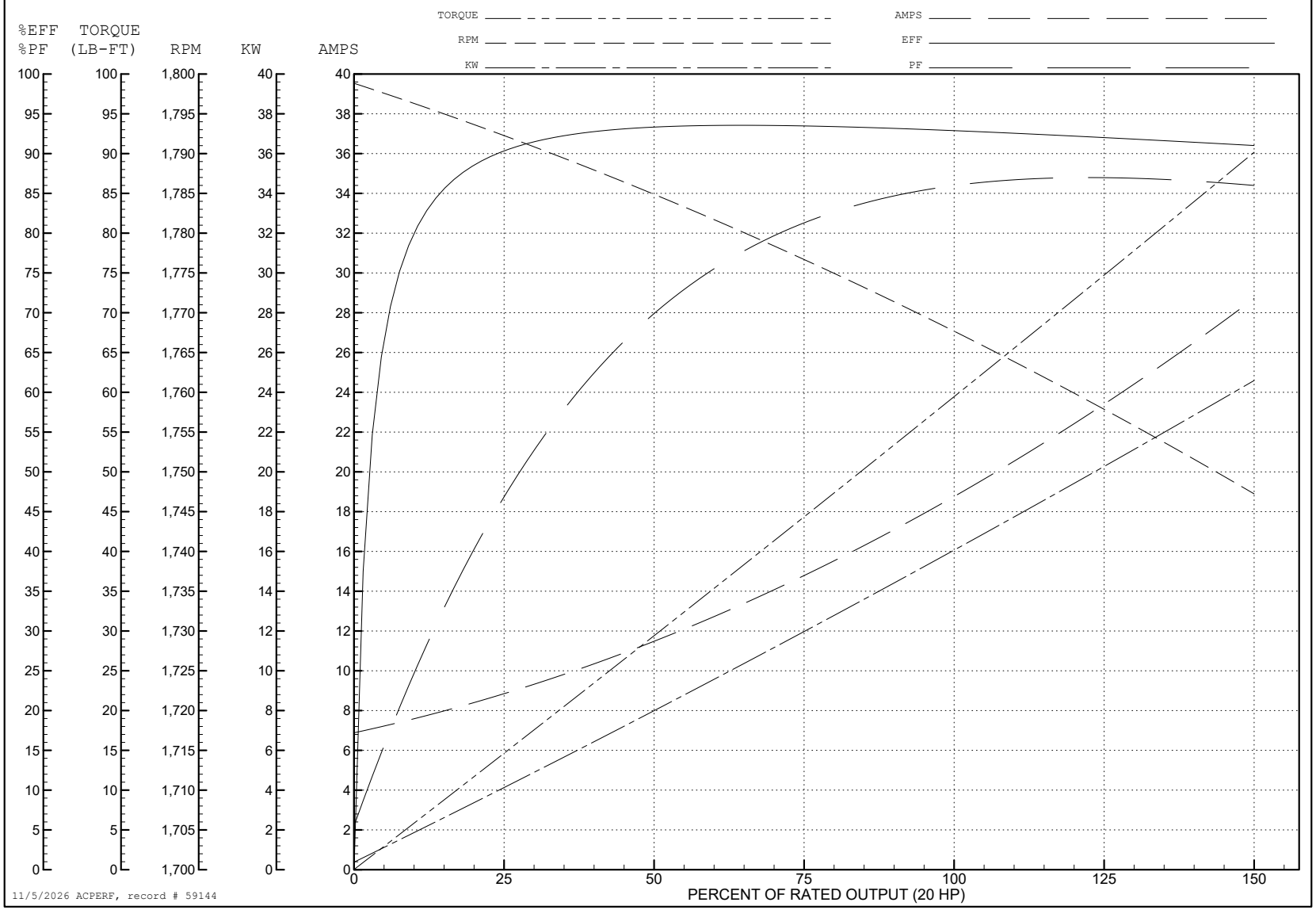
ABB Motors and Mechanical Inc.

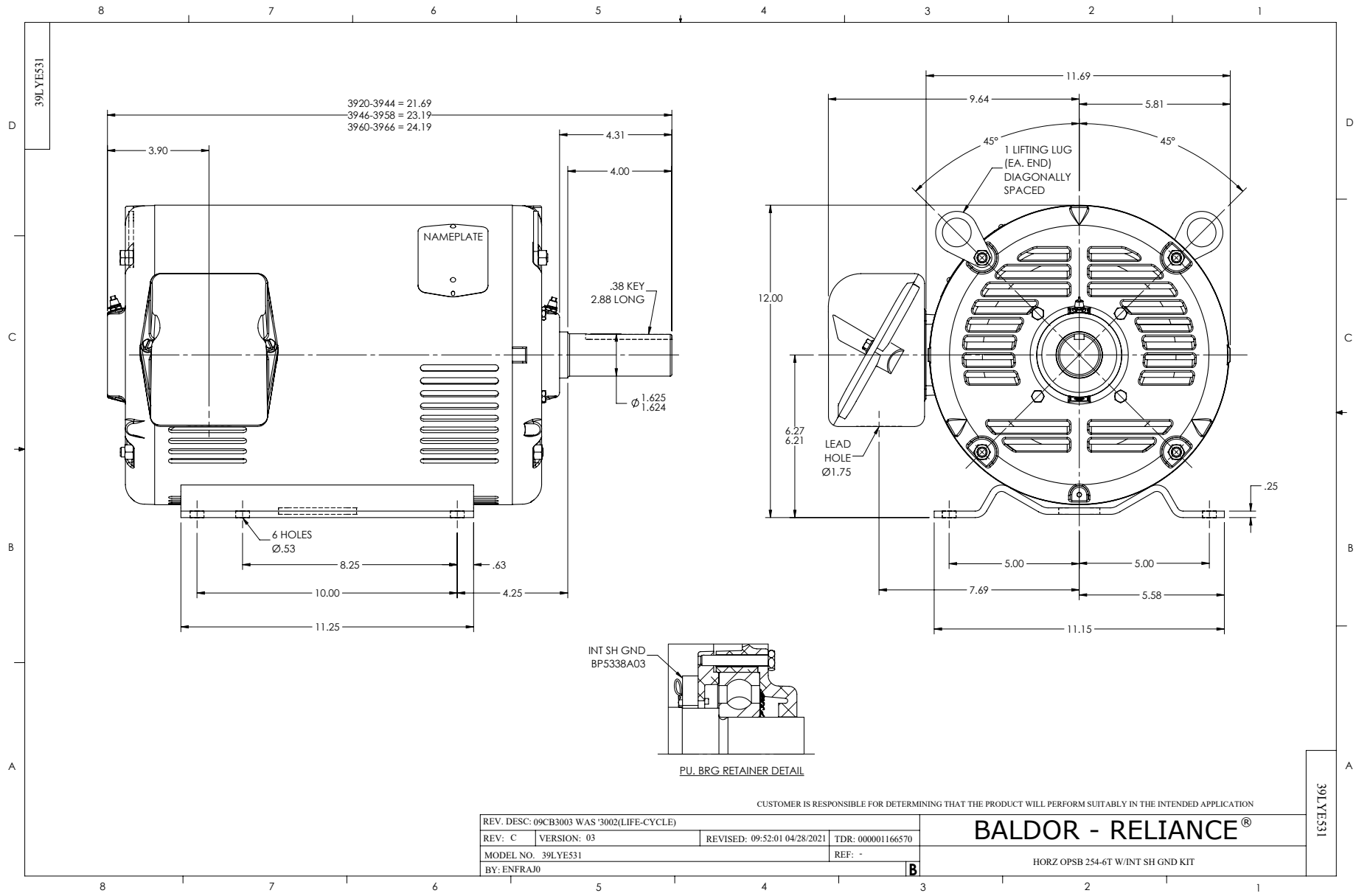
WINDING # 39WGX995

20 HP 3 PH 60 HZ 1765 RPM 575 V 3948M

Typical performance - not guaranteed values.

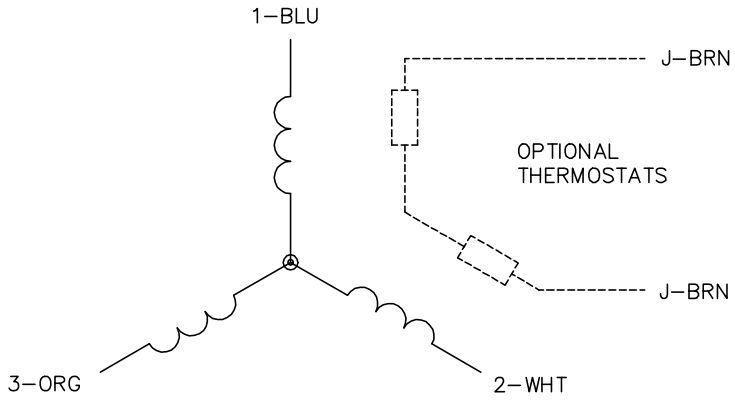
TORQUES(LB-FT): PO=189 PU=78.9 LR=113 LRA=126

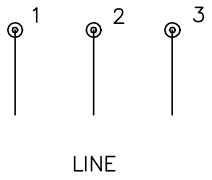



39LYE531
3920-3944 = 21.69
3946-3958 = 23.19
3960-3966 = 24.19
3.90
4.31
4.00
NAMEPLATE
.38 KEY
2.88 LONG
Ø 1.625
1.624
6 HOLES
Ø.53
8.25
.63
10.00
4.25
11.25
11.69
9.64
5.81
45°
45°
1 LIFTING LUG
(EA. END)
DIAGONALLY
SPACED
12.00
6.27
6.21
LEAD
HOLE
Ø1.75
.25
5.00
5.00
7.69
5.58
11.15
INT SH GND
BP5338A03
PU. BRG RETAINER DETAIL
CUSTOMER IS RESPONSIBLE FOR DETERMINING THAT THE PRODUCT WILL PERFORM SUITABLY IN THE INTENDED APPLICATION
REV. DESC: 09CB3003 WAS '3002(LIFE-CYCLE)
REV: C
VERSION: 03
REVISED: 09:52:01 04/28/2021
TDR: 000001166570
MODEL NO. 39LYE531
REF: -
BY: ENFRAJ0
B
BALDOR - RELIANCE®
HORZ OPSB 254-6T W/INT SH GND KIT
39LYE531

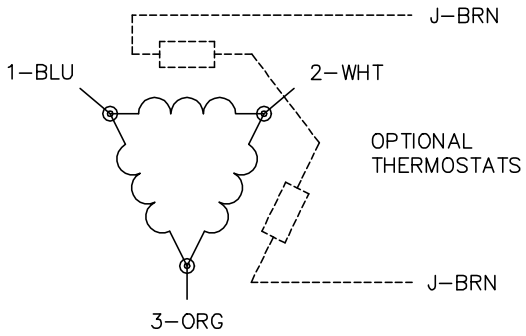
CD0006

TYPICAL WYE–CONNECTED MOTOR





TYPICAL DELTA–CONNECTED MOTOR



NOTES:

1. THREE LEAD MOTOR MAY BE EITHER WYE CONNECTED OR DELTA CONNECTED.
2. INTERCHANGE ANY TWO LINE LEADS TO REVERSE ROTATION.
3. OPTIONAL THERMOSTATS ARE PROVIDED WHEN SPECIFIED.
4. ACTUAL NUMBER OF INTERNAL PARALLEL CIRCUITS MAY VARY.
5. LEAD COLORS ARE OPTIONAL. LEADS MUST BE NUMBERED AS SHOWN.

CD0006

REV. DESC: ADD CLASS CONN00000007		
REV. LTR: E	VERSION: 01	TDR: 000001099922
FILE: \AAA\00005\141	REVISED: 10:24:49 02/19/2019	BY: ENBRIR0
MTL: –		

BALDOR - RELIANCE®

3PH, SV, 3 LEADS, WYE OR DELTA CONNECTED

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