

BALDOR® • RELIANCE 

Product Information Packet

ECP4106T-5

20HP,3510RPM,3PH,60HZ,256T,0954M,TEFC,F1

Part Detail							
Revision:	S	Status:	PRD/A	Change #:		Proprietary:	No
Type:	AC	Elec. Spec:	09WGT123	CD Diagram:	CD0006	Mfg Plant:	
Mech. Spec:	09J371	Layout:	09LYJ371	Poles:	02	Created Date:	12-24-2014
Base:	RG	Eff. Date:	04-01-2020	Leads:	3#12		

Specs			
Catalog Number:	ECP4106T-5	Insulation Class:	F
Enclosure:	TEFC	Inverter Code:	Inverter Duty
Frame:	256T	KVA Code:	G
Frame Material:	Iron	Lifting Lugs:	Standard Lifting Lugs
Output @ Frequency:	20.000 HP @ 60 HZ	Locked Bearing Indicator:	Locked Bearing
Synchronous Speed @ Frequency:	3600 RPM @ 60 HZ	Motor Lead Quantity/Wire Size:	3 @ 12 AWG
Voltage @ Frequency:	575.0 V @ 60 HZ	Motor Lead Exit:	Ko Box
XP Class and Group:	Universal	Motor Lead Termination:	Flying Leads
XP Division:	Division II	Motor Type:	0954M
Agency Approvals:	CSA EEV	Mounting Arrangement:	F1
	UR	Power Factor:	91
	CSA	Product Family:	Super-E Chemical Processing
	CCSA US	Pulley End Bearing Type:	Ball
Auxillary Box:	No Auxillary Box	Pulley Face Code:	Standard
Auxillary Box Lead Termination:	None	Pulley Shaft Indicator:	Standard
Base Indicator:	Rigid	Rodent Screen:	None
Bearing Grease Type:	Polyrex EM (-20F +300F)	Shaft Extension Location:	Pulley End
Blower:	None	Shaft Ground Indicator:	No Shaft Grounding

Constant Torque Speed Range:	6	Shaft Rotation:	Reversible
Current @ Voltage:	17.900 A @ 575.0 V	Shaft Slinger Indicator:	Shaft Slinger
Design Code:	B	Speed Code:	Single Speed
Drip Cover:	No Drip Cover	Motor Standards:	NEMA
Duty Rating:	CONT	Starting Method:	Direct on line
Electrically Isolated Bearing:	Not Electrically Isolated	Thermal Device - Bearing:	None
Feedback Device:	NO FEEDBACK	Thermal Device - Winding:	None
Front Face Code:	Standard	Vibration Sensor Indicator:	No Vibration Sensor
Front Shaft Indicator:	None	Winding Thermal 1:	None
Heater Indicator:	No Heater	Winding Thermal 2:	None
		XP Temp Code:	T3

Nameplate NP3995ABBL														
CAT # ECP4106T-5				SER				CC 010A						
SPEC 09J371T123G1				RATING 40C AMB-CONT										
HZ	VOLTS			AMPS			RPM	HP	CODE	SF	DES	PF	NEMA NOM. EFF	
60	575			17.9			3510	20	G	1.15	B	91 %	91 %	
PH 3	CL F	MAX RPM 5400			MAX CORR KVAR 2.1			USABLE AT 208V						
IP 55	FR 256T			ENCL TEFC			DE BRG 6309			ODE BRG 6309				
GREASE POLYREX EM								MTR WT 310			LBS			
USABLE AT														
CL I DIV 2 GRPS A,B,C,D				CL I ZONE 2 GRPS				IIA,IIB,IIC			TEMP T 200 C			
1.0 SF ON PWM INVERTER				POWER				INV TEMP CL 200 C						
CHP 60-90	HZ 1.5:1			CT 6-60			HZ 10:1			VT 3-60			HZ 20:1	
SPACE HEATER LEADS H1-H2:														
V	A			W			TIE LIKE NUMBERS			TOGETHER			MAX SPACE HEATER TEMP	

Parts List		
Part Number	Description	Quantity
SA291597	SA 09J371T123G1	1.000 EA
RA277720	RA 09J371T123G1	1.000 EA
37FN3002C02	EXFN, PLASTIC, 6.00 OD, 1.503 ID	1.000 EA
09CB1002A12P	KOBX W/1.25 NPT LEAD HOLE & 2.38 MTG HOL	1.000 EA
09GS1010	GASKET, DWG, LEADWIRE SEPERATOR	1.000 EA
10XN2520K12	1/4-20 X.75 GRD 5	4.000 EA
HW1001A25	LOCKWASHER 1/4, ZINC PLT .493 OD, .255 I	4.000 EA
WD1000B16	T&B CX70TN OR L70P TERMINAL LUG	1.000 EA
10XN2520K08	1/4-20 X .50 GRADE #5, STL, ZINC PLATE	1.000 EA
HW1001A25	LOCKWASHER 1/4, ZINC PLT .493 OD, .255 I	1.000 EA
HA3400A39	STUD- 3/8-16 X 6.44 OAL HEX	4.000 EA
HW1001A38	LOCKWASHER 3/8, ZINC PLT .688 OD, .382 I	4.000 EA
HW4600B44	V-RING SLINGER 1.500 X 1.810 X .28 VITON	1.000 EA
HW4600B44	V-RING SLINGER 1.500 X 1.810 X .28 VITON	1.000 EA
HA4017A08	.125X3.50 GREASER EXTEN.	1.000 EA
HA4017A02	.125X2.50 GREASER EXTENS.F/S	1.000 EA
HW4019A01	PIPE COUPLING 1/8 NPT,STEEL,ZINC COATING	1.000 EA
HW4500A20	1/8NPT SL PIPE PLUG	1.000 EA
HW5100A11	W3917-042 WVY WSHR (WB)	1.000 EA
10XN2520K36	1/4-20 X 2.25" HX HD SCRWGRADE 5, ZINC P	4.000 EA
09FH1000P	FAN COVER, CAST W/EPOXY PRIMER	1.000 EA
09EP1118A38P	PUEP MACH,309 BRG,PLS GRSR,RLF,EPOXY PRI	1.000 EA
10XN3816K28	3/8-16 X 1.75 HEX HD CAP SCREW, GRADE 5	4.000 EA
HW1001A38	LOCKWASHER 3/8, ZINC PLT .688 OD, .382 I	4.000 EA

Parts List (continued)		
Part Number	Description	Quantity
HW4500A20	1/8NPT SL PIPE PLUG	1.000 EA
10XN2520K36	1/4-20 X 2.25" HX HD SCRWGRADE 5, ZINC P	4.000 EA
HW1001A38	LOCKWASHER 3/8, ZINC PLT .688 OD, .382 I	4.000 EA
XY3816A12	3/8-16 FINISHED NUT	4.000 EA
12CB1503P	CONDUIT BOX LID, CAST W/EPOXY PRIMER	1.000 EA
12GS1002	GASKET, CONDUIT BOX LID, NEOP	1.000 EA
10XN3118K16	5/16-18 X 1' GRADE #5, STL, ZINC PLATE	2.000 EA
HW1001A31	LOCKWASHER 5/16, ZINC PLT.591 OD, .319 I	2.000 EA
HW2501G25	KEY, 3/8 SQ X 2.875	1.000 EA
MJ5001A27	32220KN GRAY SEALER *MIN BUY 4 QTS=1GAL	0.031 QT
MJ5001A14	DYNAPRO SEALANT, CP MTR VC#2508050 (603	0.033 EA
09EP1118A37GP6	FREP MACH, 309 BRG. EPOXY PRIMER	1.000 EA
HW4500A17	317400 ALEMITE GREASE RELIEF	1.000 EA
HW4500A21	1618BALEMITE FITTING 825 UNIVERSAL	1.000 EA
HA4054	SHORT T-DRAIN FITTING, .125" N.P.T.	1.000 EA
HA4051A00	PLASTIC CAP FOR GREASE FITTING	1.000 EA
MJ1000A02	GREASE, MOBIL POLYREX EM - 124047	0.080 LB
HW4500A03	GREASE FITTING, .125 NPT 1610(ALEMITE) 8	1.000 EA
HW4500A17	317400 ALEMITE GREASE RELIEF	1.000 EA
HA4054	SHORT T-DRAIN FITTING, .125" N.P.T.	1.000 EA
HA4051A00	PLASTIC CAP FOR GREASE FITTING	1.000 EA
HW2500A25	WOODRUFF KEY USA #1008 #BLOW CARBON STEE	1.000 EA
51XB1214A20	12-14X1.25 HXWSSLD SERTYB	1.000 EA
MG1025N19	WILKOFAS, 778.50, RELIANCE BLUE-GREEN	0.050 GA

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MJ5002A01	SILICON RUBBER SEALANT, 732CL 10.3 OZ TU	0.025 EA
85XU0407S04	4X1/4 U DRIVE PIN STAINLESS	4.000 EA
LB1115N	LABEL,LIFTING DEVICE (ON ROLLS)	1.000 EA
NP3995ABBL	SS SUPER-E SD XEX CLI DIV2 UR CSA-C-US E	1.000 EA
40PA1005	PACKAGING GROUP, 09 STD	1.000 EA
MN416A01	TAG-INSTAL-MAINT no wire (1200/bx) 3/19	1.000 EA

AC Induction Motor Performance Data

Record # 47326 - Typical performance - not guaranteed values

Winding: 09WGT123-R001	Type: 0954M	Enclosure: TEFC
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Nameplate Data				575 V, 60 Hz: Single Voltage Motor	
Rated Output (HP)	20			Full Load Torque	30.1 LB-FT
Volts	575			Start Configuration	direct on line
Full Load Amps	17.9			Breakdown Torque	99 LB-FT
R.P.M.	3510			Pull-up Torque	33 LB-FT
Hz	60	Phase	3	Locked-rotor Torque	43 LB-FT
NEMA Design Code	B	KVA Code	G	Starting Current	113 A
Service Factor (S.F.)	1.15			No-load Current	3.75 A
NEMA Nom. Eff.	91	Power Factor	91	Line-line Res. @ 25°C	0.683 Ω
Rating - Duty	40C AMB-CONT			Temp. Rise @ Rated Load	68°C
S.F. Amps				Temp. Rise @ S.F. Load	86°C
				Locked-rotor Power Factor	26.7
				Rotor inertia	1.38 LB-FT ²

Load Characteristics 575 V, 60 Hz, 20 HP

% of Rated Load	25	50	75	100	125	150	S.F.
Power Factor	73	87	91	91	92	91	93
Efficiency	91.4	93.4	93	92.1	90.6	88.8	91.6
Speed	3579	3559	3537	3513	3484	3451	3520
Line amperes	5.87	9.39	13.3	17.9	22.7	27.8	20.3

Performance Graph at 575V, 60Hz, 20.0HP Typical performance - Not guaranteed values

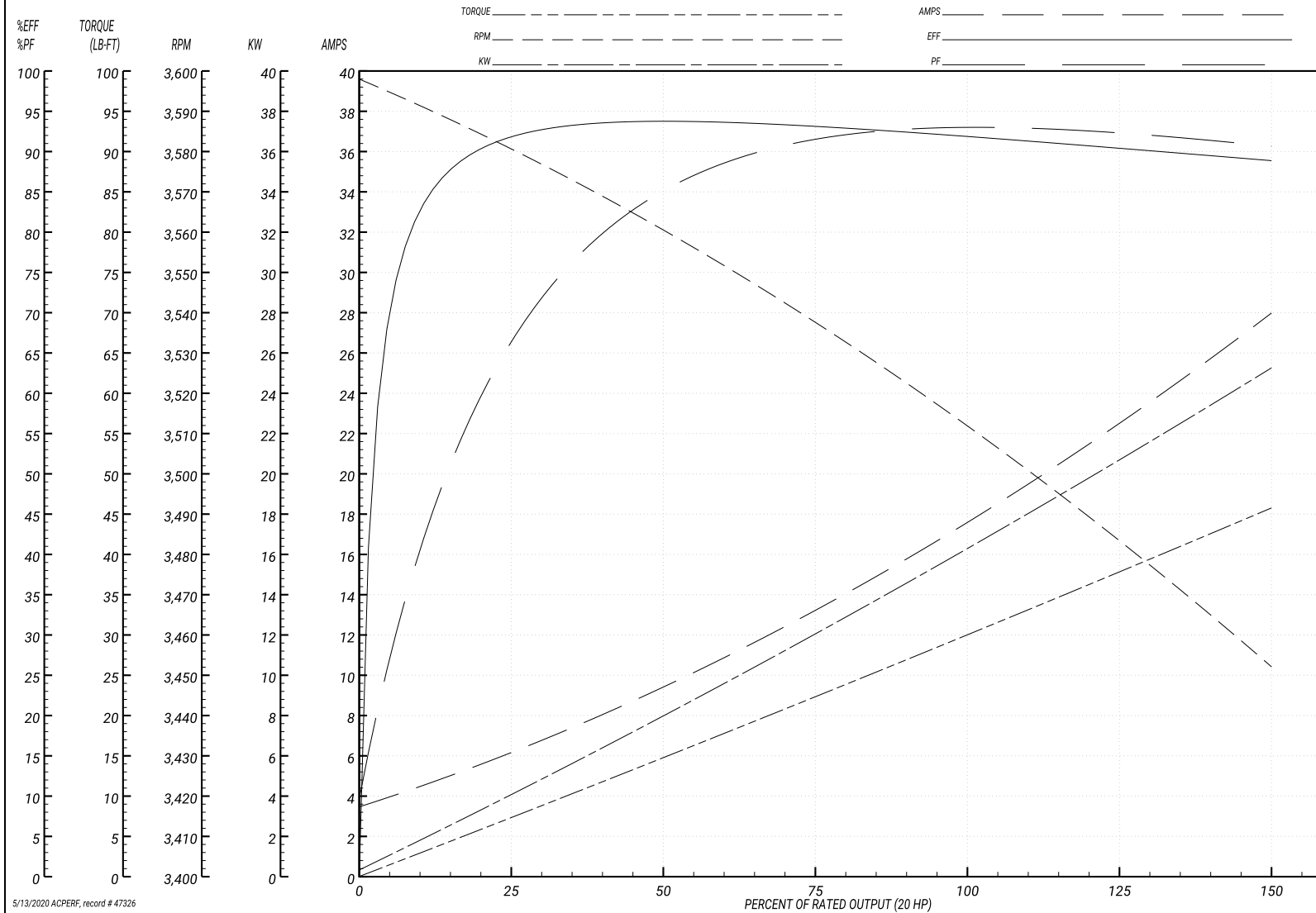
ABB Motors and Mechanical Inc.

WINDING # 09WGT123

Typical performance - not guaranteed values.

20 HP 3 PH 60 HZ 3510 RPM 575 V 0954M

TORQUES(LB-FT): PO=99 PU=33 LR=43 LRA=113



5/13/2020 ACPERF, record # 47326

AC Induction Motor Performance Data

Record # 50588 - Typical performance - not guaranteed values

Winding: 09WGT123-R001	Type: 0954M	Enclosure: TEFC
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Nameplate Data				460 V, 60 Hz: Single Voltage Motor	
Rated Output (HP)	20			Full Load Torque	30.5 LB-FT
Volts	575			Start Configuration	direct on line
Full Load Amps	17.9			Breakdown Torque	63.1 LB-FT
R.P.M.	3510			Pull-up Torque	21.1 LB-FT
Hz	60	Phase	3	Locked-rotor Torque	27.5 LB-FT
NEMA Design Code	B	KVA Code	G	Starting Current	90.4 A
Service Factor (S.F.)	1.15			No-load Current	3.02 A
NEMA Nom. Eff.	91	Power Factor	91	Line-line Res. @ 25°C	0.683 Ω
Rating - Duty	40C AMB-CONT			Temp. Rise @ Rated Load	95°C
S.F. Amps				Temp. Rise @ S.F. Load	130°C
				Locked-rotor Power Factor	26.7
				Rotor inertia	1.38 LB-FT ²

Load Characteristics 460 V, 60 Hz, 20 HP

% of Rated Load	25	50	75	100	125	150	S.F.
Power Factor	83	91	92	90	87	81	88
Efficiency	92.3	93.3	91.8	90	87.1	82.2	88.3
Speed	3569	3539	3505	3464	3408	3308	3430
Line amperes	6.32	11.2	16.7	23.2	30.9	42.6	27.8

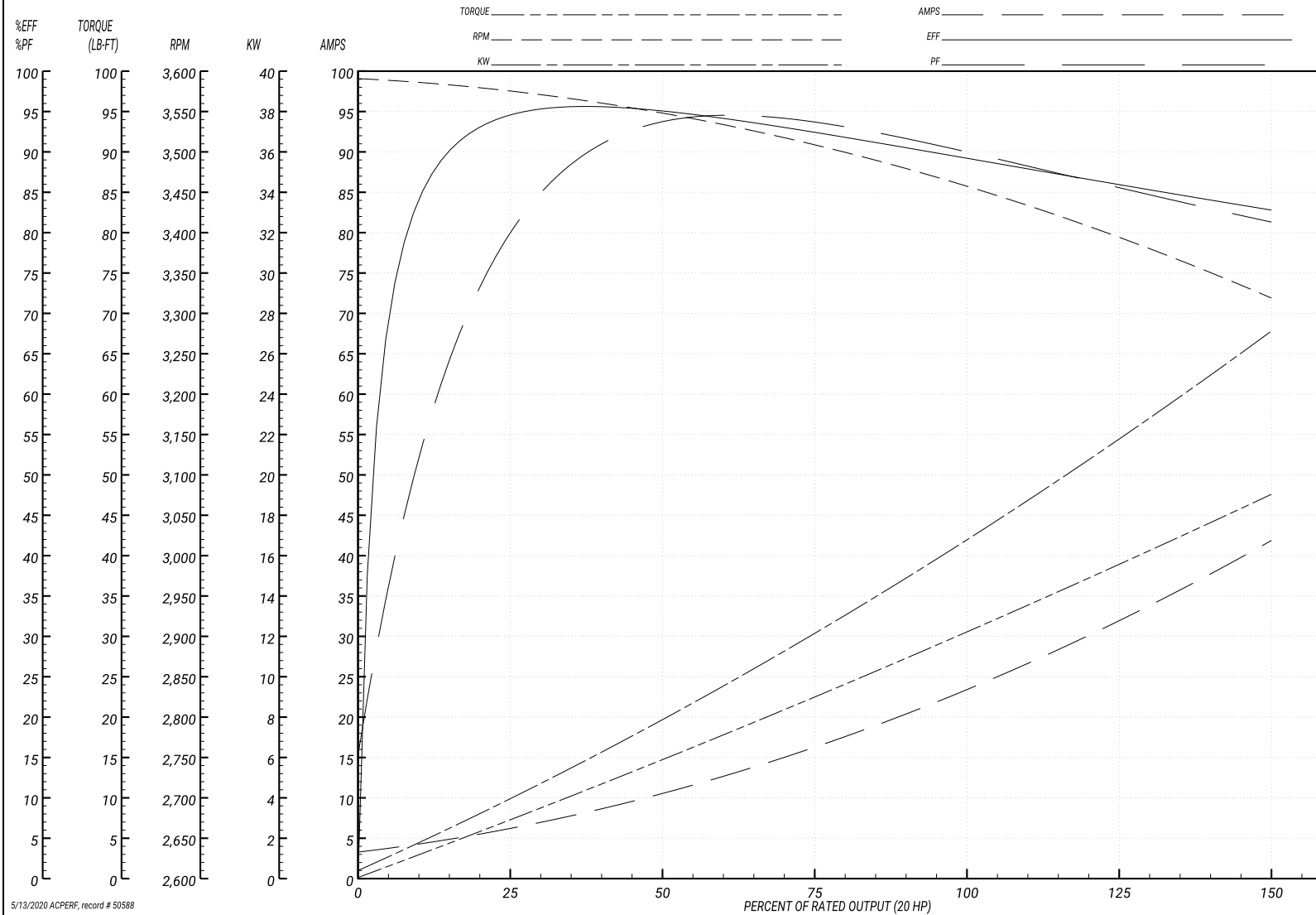
Performance Graph at 460V, 60Hz, 20.0HP Typical performance - Not guaranteed values

ABB Motors and Mechanical Inc.

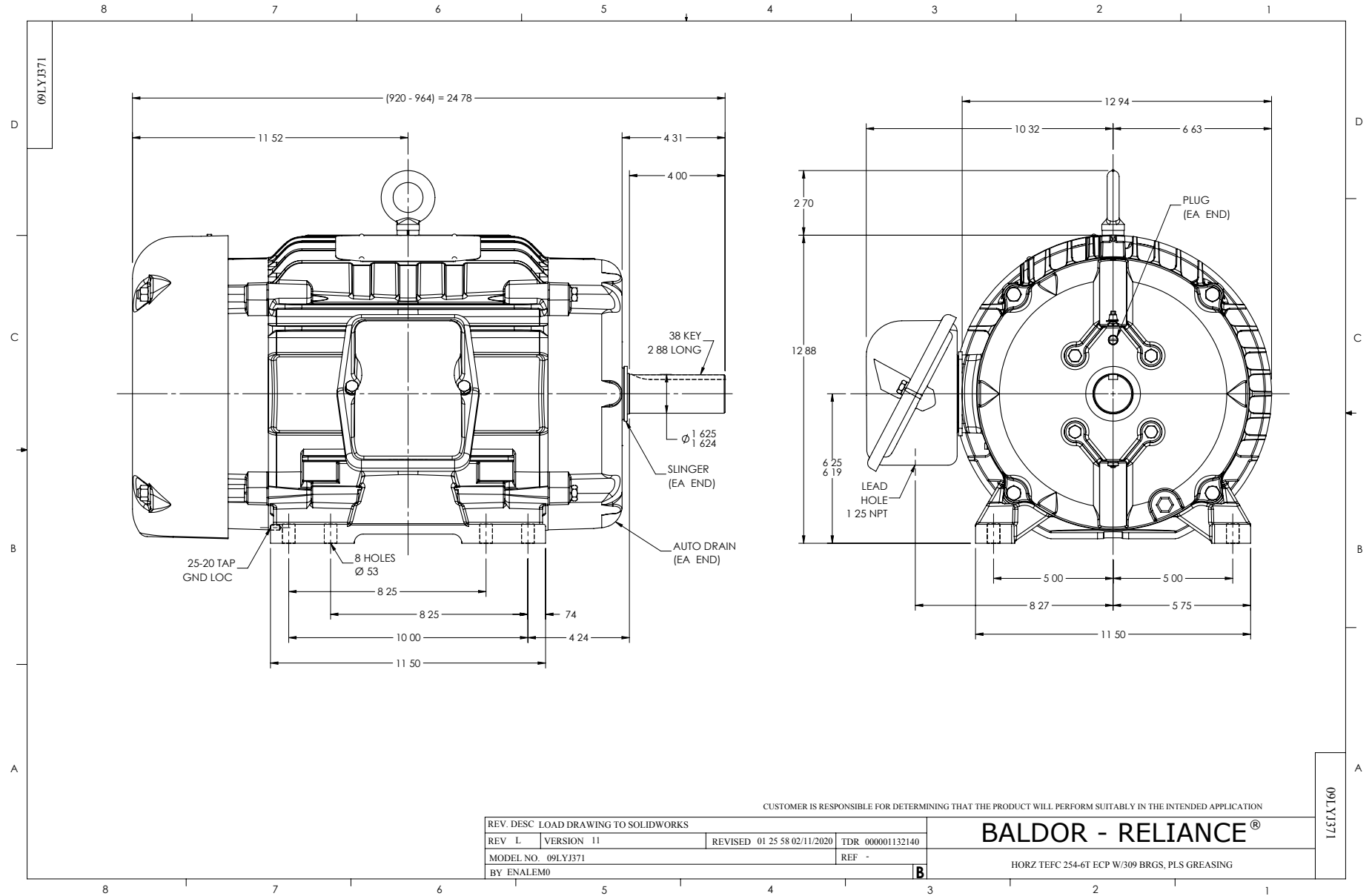
WINDING # 09WGT123

Typical performance - not guaranteed values.

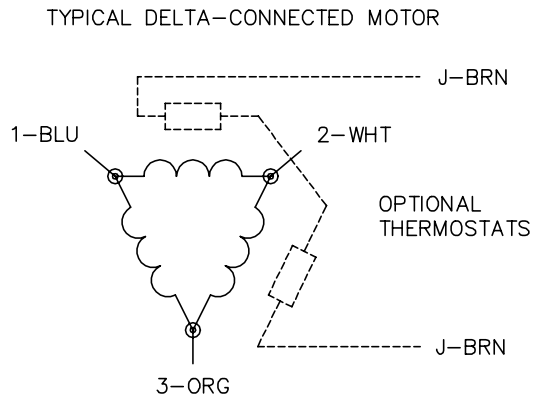
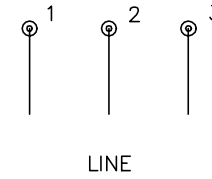
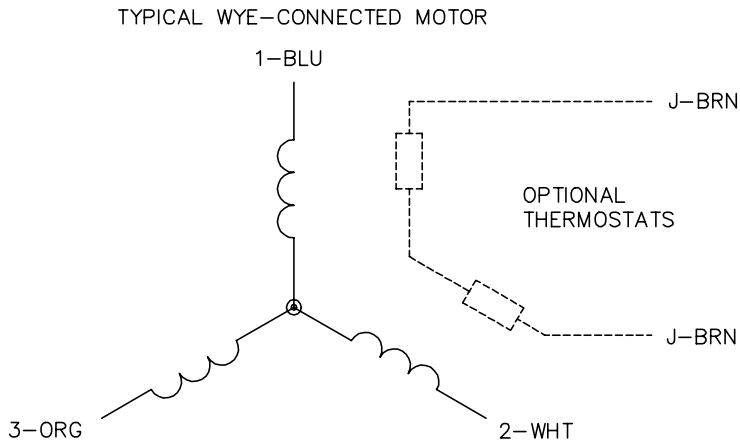
20 HP 3 PH 60 HZ 3510 RPM 460 V 0954M
 TORQUES(LB-FT): PO=63.1 PU=21.1 LR=27.5 LRA=90.4



5/13/2020 ACPERF, record # 50588



CD0006



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

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REV. LTR: E	VERSION: 01	TDR: 000001099922
FILE: \AAA\00005\141	REVISED: 10:24:49 02/19/2019	BY: ENBRIRO
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BALDOR - RELIANCE®

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

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