

ABB BALDOR RELIANCE III

Customer information packet

ECP4112T-4

20HP, 880RPM, 3PH, 60HZ, 324T, 1256M, TEFC, F1

Class - CLI GP A,B,C,D

Division - Division II

Specifications

Enclosure	TEFC
Frame	324T
Frame Material	Iron
Frequency	60.00 Hz
Haz Area Class and Group	CL I GP A,B,C,D
Haz Area Division	Division II
Motor Letter Type	Three Phase
Output @ Frequency	20.000 HP @ 60 HZ
Phase	3
Synchronous Speed @ Frequency	900 RPM @ 60 HZ
Voltage @ Frequency	460.0 V @ 60 HZ
Agency Approvals	CCSA US CSA EEV NEMA PREMIUM NEMA_PREMIUM 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
Constant Torque Speed Range	6
Current @ Voltage	30.000 A @ 460.0 V
Design Code	B
Drip Cover	No Drip Cover
Duty Rating	CONT
Efficiency @ 100% Load	90.2 %
Electrically Isolated Bearing	Not Electrically Isolated
Feedback Device	NO FEEDBACK
Front Shaft Indicator	None
Haz Area Temp Code	T3

Part Detail

Revision	E
Type	AC
Mech. spec.	12F904
Base	
Status	PRD/A
Elec. spec.	12WGZ305
Layout	12LYF904
Eff. date	10-16-2025
CD Diagram	CD0006
Poles	08
Leads	3#10 Y
Proprietary	False
Created date	04-18-2023

Heater Indicator	No Heater
High Voltage Full Load Amps	30.0 a
Insulation Class	F
Inverter Code	Inverter Duty
KVA Code	G
Lifting Lugs	Standard Lifting Lugs
Locked Bearing Indicator	Locked Bearing
Max Speed	1350 rpm
Motor Lead Quantity/Wire Size	3 @ 10 AWG
Motor Lead Termination	Flying Leads
Motor Standards	NEMA
Motor Type	1256M
Mounting Arrangement	F1
Number of Poles	8
Overall Length	30.66 IN
Power Factor	68
Product Family	Super-E Chemical Processing
Pulley End Bearing Type	Ball
Pulley Face Code	Standard
Pulley Shaft Indicator	Standard
Rodent Screen	None
Service Factor	1.15
Shaft Diameter	2.125 IN
Shaft Ground Indicator	No Shaft Grounding
Shaft Rotation	Reversible
Shaft Slinger Indicator	Shaft Slinger
Speed	880 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
NP3241

CAT.NO.	ECP4112T-4			P/N					ENCLOSURE	TEFC			
SPEC.	12F904Z305		CC	010A	FRAME	324T		S/N					
HP	20			CLASS	F	HZ	60	DES	B				
RPM	880			RPM MAX	1350		PH	3	KVA-CODE	G			
VOLT	460			MOTOR WEIGHT			578						
AMP	30			SER.F.	1.15	PF	68	ODE BRG	6312	DE BRG	6312		
RATING	40C AMB-CONT			NEMA-NOM-EFF			90.2		GREASE	POLYREX EM			
						INV.TYPE		PWM					
TEMP CODE	T3	INVERTER-TEMP-CODE			200								
TEMP =	200	C HP FR	60	C HP TO	90								
CT HZ FROM	6	CT HZ TO		60									
HTR-VOLTS		HTR-AMPS		HTR-WATTS		MAX. SPACE HEATER TEMP.				VT HZ FROM	3	VT HZ TO	60

AC Induction Motor Performance Data

Record # 93210

Typical performance - not guaranteed values

Winding: 12WGZ305-R001			Type: 1256M		Enclosure: TEFC		
Nameplate Data			460 V, 60 Hz: Single Voltage Motor				
Rated Output (HP)		20	Full Load Torque		118 LB-FT		
Volts		460	Start Configuration		direct on line		
Full Load Amps		30	Breakdown Torque		280 LB-FT		
R.P.M.		880	Pull-up Torque		156 LB-FT		
Hz	60	Phase	3	Locked-rotor Torque		165 LB-FT	
NEMA Design Code		B	KVA Code	G	Starting Current		141 A
Service Factor (S.F.)		1.15	No-load Current		17.47 A		
NEMA Nom. Eff.		90.2	Power Factor	68	Line-line Res. @ 25°C		0.372 Ω
Rating - Duty		40C AMB-CONT		Temp. Rise @ Rated Load		56°C	
S.F. Amps				Temp. Rise @ S.F. Load		68°C	
				Locked-rotor Power Factor		34.1	
				Rotor inertia		7.46 lb-ft²	

Load Characteristics 460 V, 60 Hz, 20 HP

% of Rated Load	25	50	75	100	125	150	S.F.
Power Factor	30	49	61	68	71	73	68
Efficiency	85.2	90.3	91.2	90.8	90.1	88.7	90.4
Speed	894	890	885	881	875	868	878
Line amperes	18.33	20.95	25.08	30.16	36.37	43.44	34.9

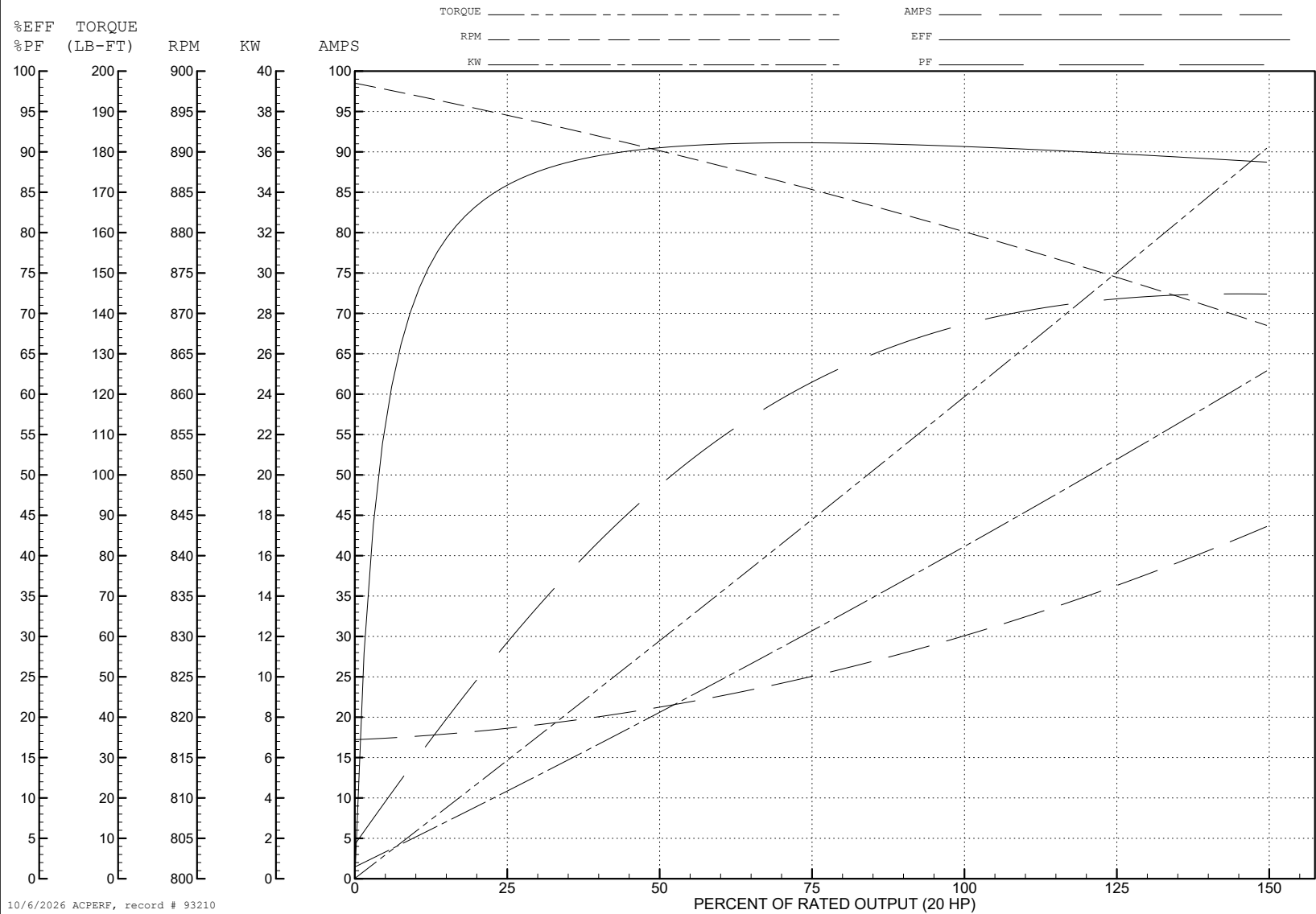
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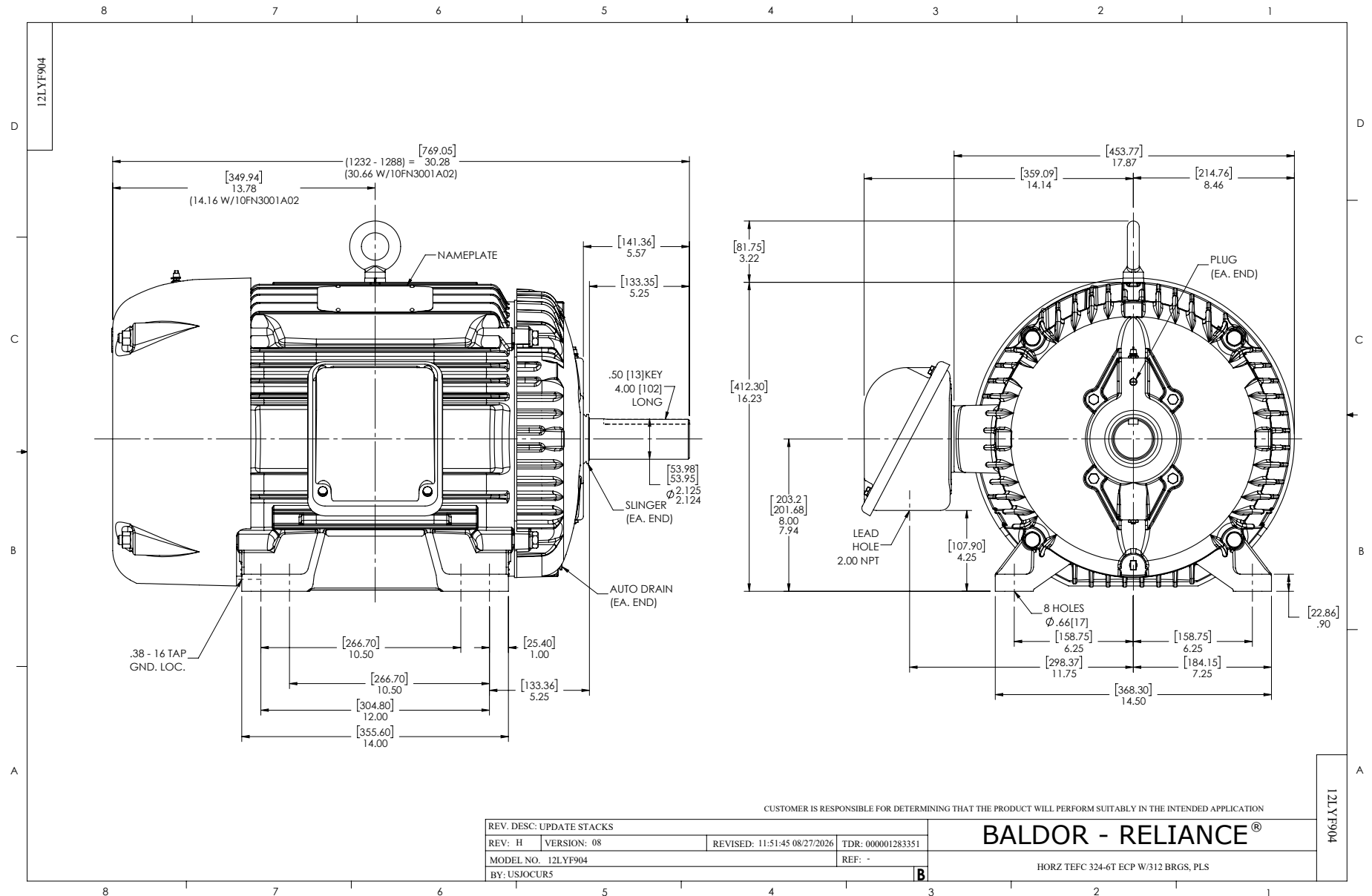
WINDING # 12WGZ305

Typical performance - not guaranteed values.

20 HP 3 PH 60 HZ 880 RPM 460 V 1256M

TORQUES (LB-FT): PO=280 PU=156 LR=165 LRA=141





CD0006

TYPICAL WYE-CONNECTED MOTOR

1-BLU

J-BRN

OPTIONAL THERMOSTATS

J-BRN

3-ORG

2-WHT

TYPICAL DELTA-CONNECTED MOTOR

1-BLU

J-BRN

2-WHT

OPTIONAL THERMOSTATS

J-BRN

3-ORG

1

2

3

LINE

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			BALDOR - RELIANCE® 3PH, SV, 3 LEADS, WYE OR DELTA CONNECTED SH 1 of 1
REV. LTR: E	VERSION: 01	TDR: 000001099922	
FILE: \AAA\00005\141	REVISED: 10: 24: 49 02/19/2019	BY: ENBRIRO	
MTL: —			

12WGZ271: Electrical Design

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