ABB BALDOR RELIANCE

Customer information packet

ECP4109T-4

40HP, 3540RPM, 3PH, 60HZ, 324TS, 1244M, TEFC, F
Class - CLI GP A,B,C,D
Division - Division II

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Specifications

Enclosure	TEFC
Frame	324TS
Frame Material	Iron
Frequency	60.00 Hz
Haz Area Class and Group	CLI GP A,B,C,D
Haz Area Division	Division II
Motor Letter Type	Three Phase
Output @ Frequency	40.000 HP @ 60 HZ
Phase	3
Synchronous Speed @ Frequency	3600 RPM @ 60 HZ
Voltage @ Frequency	460.0 V @ 60 HZ
Agency Approvals	CSA EEV
	NEMA PREMIUM
	NEMA_PREMIUM
	UR
	CCSA US
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	46.000 A @ 460.0 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

Part Detail

Revision	Q
Type	AC
Mech. spec.	12G154
Base	
Status	PRD/A
Elec. spec.	12WGY192
Layout	12LYG154
Eff. date	11-03-2025
CD Diagram	CD0006
Poles	02
Leads	3#8
Proprietary	False
Created date	01-27-2015

Haz Area Temp Code	T3
Heater Indicator	No Heater
High Voltage Full Load Amps	46.0 a
Insulation Class	F
Inverter Code	Inverter Duty
KVA Code	H
Lifting Lugs	Standard Lifting Lugs
Locked Bearing Indicator	Locked Bearing
Max Speed	5400 rpm
Motor Lead Exit	Ko Box
Motor Lead Quantity/Wire Size	3 @ 8 AWG
Motor Lead Termination	Flying Leads
Motor Standards	NEMA
Motor Type	1244M
Mounting Arrangement	F1
Number of Poles	2
Overall Length	29.15 IN
Power Factor	88
Product Family	Super-E Chemical Processing
Pulley End Bearing Type	Ball
Pulley Face Code	Standard
Pulley Shaft Indicator	Standard
Rodent Screen	None
RoHS Status	ROHS NON-COMPLIANT
Service Factor	1.15
Shaft Diameter	1.875 IN
Shaft Extension Location	Pulley End
Shaft Ground Indicator	No Shaft Grounding
Shaft Rotation	Reversible
Shaft Slinger Indicator	Shaft Slinger
Speed	3540 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.	ECP4109T-4			**P/N**				**ENCLOSURE**	TEFC				
SPEC.	12G154Y192G2	**CC**	010A	**FRAME**	324TS			**S/N**					
HP	40			**CLASS**	F	**HZ**	60	**DES**	A				
RPM	3540			**RPM MAX**	5400			**PH**	3	**KVA-CODE**	H		
VOLT	460					**MOTOR WEIGHT**	635						
AMP	46			**SER.F.**	1.15	**PF**	88			**ODE BRG**	6312	**DE BRG**	6312
RATING	40C AMB-CONT					**NEMA-NOM-EFF**	93			**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

Accessories

Part number	Description	Multiplier
12-1105ECP	C FACE KIT (C-FACE SWAP FOR ECP MOTOR)	A8

AC Induction Motor Performance Data
Record # 47241
Typical performance - not guaranteed values

Winding: 12WGY192-R006	**Type:** 1244M	**Enclosure:** TEFC

Nameplate Data				**460 V, 60 Hz: Single Voltage Motor**	
Rated Output (HP)			40	**Full Load Torque**	59.3 LB-FT
Volts			460	**Start Configuration**	direct on line
Full Load Amps			46	**Breakdown Torque**	235 LB-FT
R.P.M.			3540	**Pull-up Torque**	84.3 LB-FT
Hz	60	**Phase**	3	**Locked-rotor Torque**	100 LB-FT
NEMA Design Code	A	**KVA Code**	H	**Starting Current**	352 A
Service Factor (S.F.)			1.15	**No-load Current**	15.5 A
NEMA Nom. Eff.	93	**Power Factor**	88	**Line-line Res. @ 25ºC**	0.13313 Ω
Rating - Duty			40C AMB-CONT	**Temp. Rise @ Rated Load**	67°C
S.F. Amps				**Temp. Rise @ S.F. Load**	80°C
				Rotor inertia	3.44 LB-FT2

Load Characteristics 460 V, 60 Hz, 40 HP

% of Rated Load	**25**	**50**	**75**	**100**	**125**	**150**	**S.F.**
Power Factor	57	76	84	88	89	89	89
Efficiency	88	92.2	93.2	93.3	93	92.4	93.1
Speed	3585.6	3575.4	3564.2	3553.6	3540.6	3527.7	3546
Line amperes	19.4	27.1	36.3	46.3	57.3	68.5	52.9

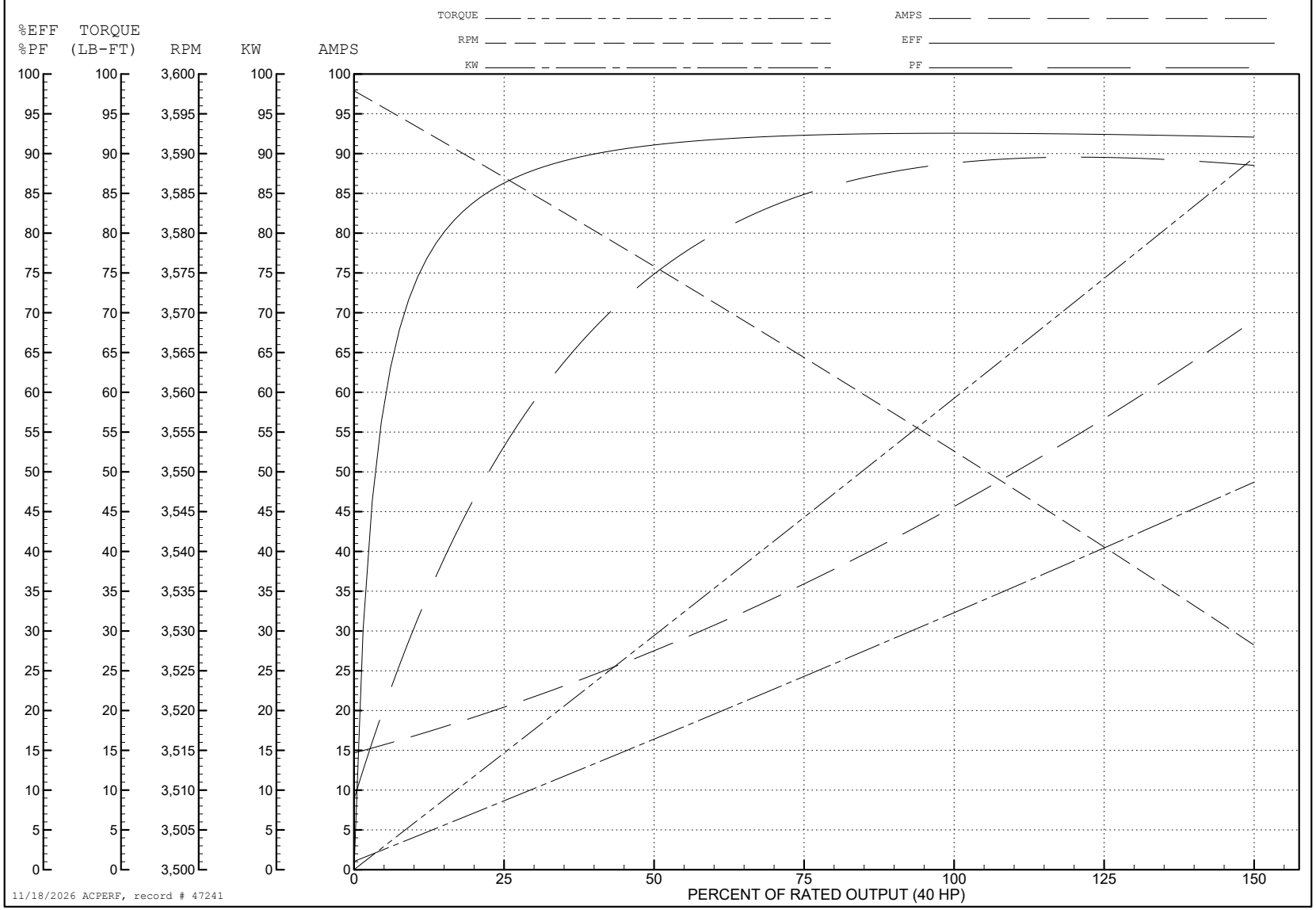
ABB Motors and Mechanical Inc.

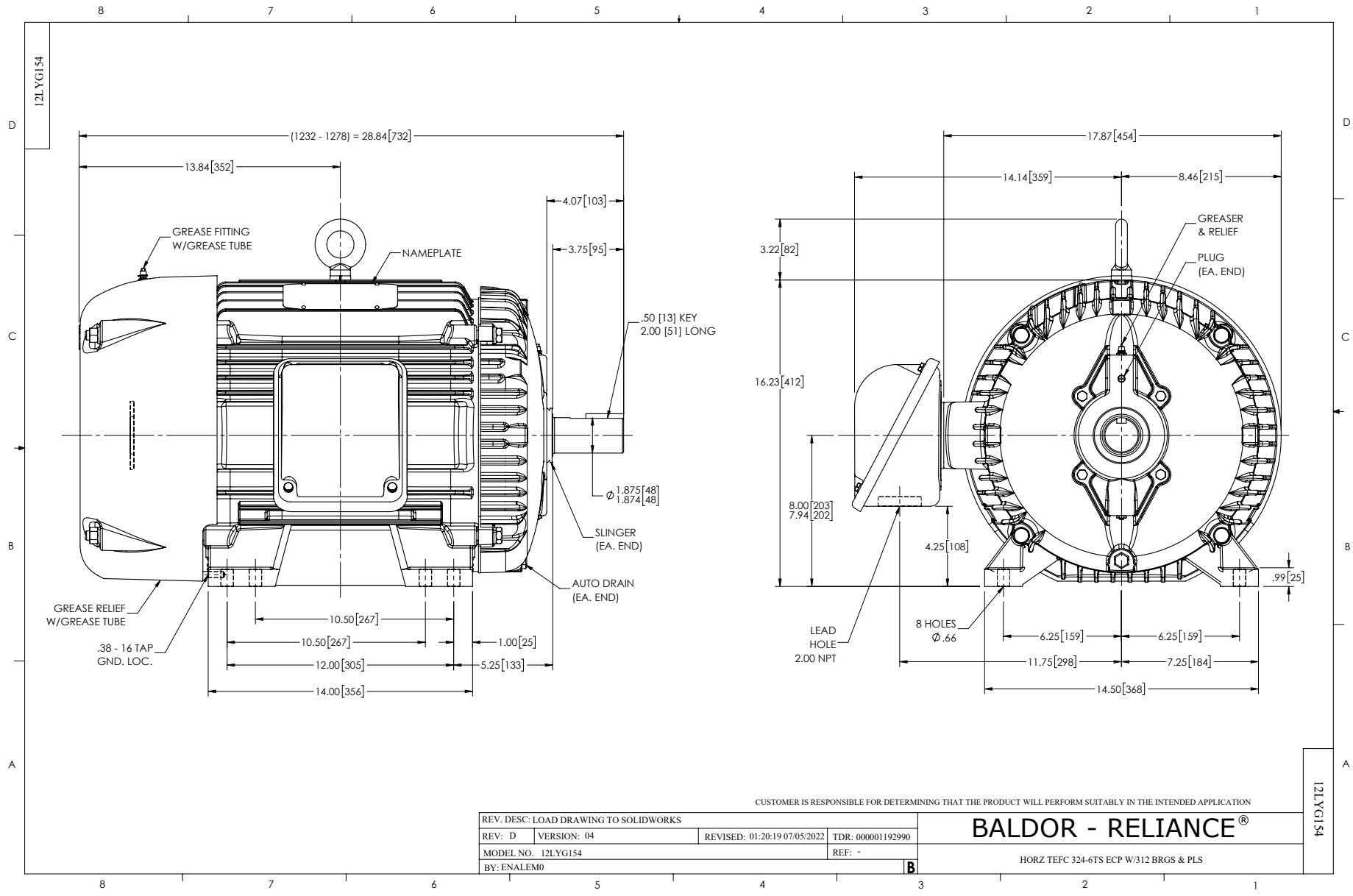
WINDING # 12WGY192

40 HP 3 PH 60 HZ 3540 RPM 460 V 1244M

Typical performance - not guaranteed values.

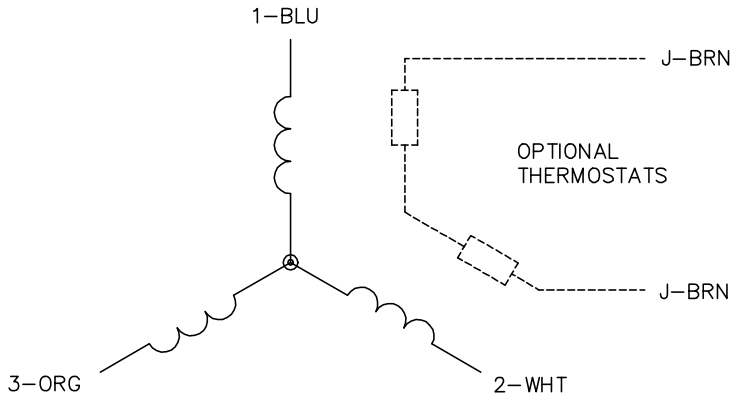
TORQUES(LB-FT): PO=235 PU=84.3 LR=100 LRA=352

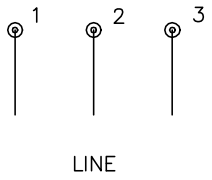



12LYG154
(1232 - 1278) = 28.84[732]
13.84[352]
4.07[103]
3.75[95]
GREASE FITTING
W/GREASE TUBE
NAMEPLATE
.50 [13] KEY
2.00 [51] LONG
Ø 1.875[48]
1.874[48]
SLINGER
(EA. END)
AUTO DRAIN
(EA. END)
GREASE RELIEF
W/GREASE TUBE
.38 - 16 TAP
GND. LOC.
10.50[267]
10.50[267]
1.00[25]
12.00[305]
5.25[133]
14.00[356]
17.87[454]
14.14[359]
8.46[215]
GREASER
& RELIEF
PLUG
(EA. END)
3.22[82]
16.23[412]
8.00[203]
7.94[202]
4.25[108]
.99[25]
LEAD
HOLE
2.00 NPT
8 HOLES
Ø.66
6.25[159]
6.25[159]
11.75[298]
7.25[184]
14.50[368]
CUSTOMER IS RESPONSIBLE FOR DETERMINING THAT THE PRODUCT WILL PERFORM SUITABLY IN THE INTENDED APPLICATION
REV. DESC: LOAD DRAWING TO SOLIDWORKS
REV: D
VERSION: 04
REVISED: 01:20:19 07/05/2022
TDR: 000001192990
MODEL NO. 12LYG154
REF: -
BY: ENALEM0
B
BALDOR - RELIANCE®
HORZ TEFC 324-6TS ECP W/312 BRGS & PLS
12LYG154

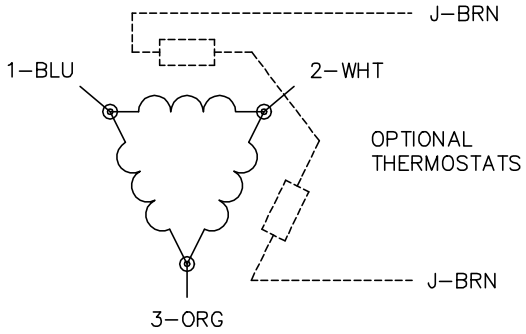
CD0006

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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