ABB BALDOR RELIANCE

Customer information packet

ECP83581T-4

1HP, 1770RPM, 3PH, 60HZ, 143T, 0520M, TEFC, F1
Class - CLI GP A,B,C,D
Division - Division II

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Specifications

Enclosure	TEFC
Frame	143T
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	1.000 HP @ 60 HZ
Phase	3
Synchronous Speed @ Frequency	1800 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	1.2
Current @ Voltage	1.600 A @ 460.0 V
Design Code	B
Drip Cover	No Drip Cover
Duty Rating	CONT
Efficiency @ 100% Load	85.5 %
Electrically Isolated Bearing	Not Electrically Isolated
Feedback Device	NO FEEDBACK
Front Shaft Indicator	None
Haz Area Temp Code	T4

Part Detail

Revision	E
Type	AC
Mech. spec.	05E811
Base	
Status	PRD/A
Elec. spec.	05WGX565
Layout	05LYE811
Eff. date	10-01-2025
CD Diagram	CD0006
Poles	04
Leads	3#18
Proprietary	False
Created date	03-11-2022

Heater Indicator	No Heater
High Voltage Full Load Amps	1.6 a
Insulation Class	F
Inverter Code	Inverter Ready
KVA Code	N
Lifting Lugs	Standard Lifting Lugs
Locked Bearing Indicator	Locked Bearing
Max Speed	2700 rpm
Motor Lead Quantity/Wire Size	3 @ 18 AWG
Motor Lead Termination	Flying Leads
Motor Standards	NEMA
Motor Type	0520M
Mounting Arrangement	F1
Number of Poles	4
Overall Length	12.88 IN
Power Factor	68
Product Family	Chem Process S/P 32-8 IEEE 841
Pulley End Bearing Type	Ball
Pulley Face Code	Standard
Pulley Shaft Indicator	Standard
Rodent Screen	None
Service Factor	1.15
Shaft Diameter	0.875 IN
Shaft Ground Indicator	No Shaft Grounding
Shaft Rotation	Reversible
Shaft Slinger Indicator	Shaft Slinger
Speed	1770 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

NP4328									
CAT.NO.	ECP83581T-4								
SPEC.	05E811X565G1								
HP	1 TE			**IP**	56				
VOLTS	460								
AMPS	1.6								
R.P.M.	1770								
FRAME	143T	**HZ**	60			**PH**	3		
SER.F.	1.15	**CODE**	N	**DES.**	B		**CLASS**	F	
RATING	40C AMB-CONT								
SN									
DE	6205	**ODE**	6205						
NEMA NOM. EFF.	85.5	**P.F.**	68						
GUAR. MIN. EFF.	82.5	**CC**	010A						
T. CODE	T4	**TEMP=**	135						

NP3186							
SPEC.	05E811X565G1						
ABMA DE BRG	25BC02X30X						
ABMA ODE BRG	25BC02X30X						
GREASE	POLYREX EM						
MOTOR WEIGHT	68	**ROTOR BARS**	27	**STATOR BARS**	36		
MAX. R.P.M.	2700	**MAX. KVAR**	0.52				
	SFA 1.75						
INV.TYPE	PWM						
T=	135						
CHP	60	**TO**	90				
CT	1.2	**TO**	60				
VT	0-	**TO**	60				
HTR-VOLTS		**HTR-AMPS**					
HTR-WATTS		**MAX. SPACE HEATER TEMP.**					

AC Induction Motor Performance Data
Record # 84194
Typical performance - not guaranteed values

Winding: 05WGX502-R001	**Type:** 0522M	**Enclosure:** TEFC

Nameplate Data				**460 V, 60 Hz: Single Voltage Motor**	
Rated Output (HP)			1	**Full Load Torque**	2.978 LB-FT
Volts			460	**Start Configuration**	direct on line
Full Load Amps			1.63	**Breakdown Torque**	15.3 LB-FT
R.P.M.			1765	**Pull-up Torque**	8.69 LB-FT
Hz	60	**Phase**	3	**Locked-rotor Torque**	10.3 LB-FT
NEMA Design Code	B	**KVA Code**	N	**Starting Current**	14.4 A
Service Factor (S.F.)			1.15	**No-load Current**	1.15 A
NEMA Nom. Eff.	85.5	**Power Factor**	67	**Line-line Res. @ 25ºC**	14.884 Ω
Rating - Duty			40C AMB-CONT	**Temp. Rise @ Rated Load**	30°C
S.F. Amps				**Temp. Rise @ S.F. Load**	34°C
				Locked-rotor Power Factor	54.9

Load Characteristics 460 V, 60 Hz, 1 HP

% of Rated Load	**25**	**50**	**75**	**100**	**125**	**150**	**S.F.**
Power Factor	28	45	58	67	74	78	71
Efficiency	70.5	81.4	84.7	85.9	86	85.5	86
Speed	1791.4	1783.5	1775.5	1766.9	1757.8	1747.6	1761
Line amperes	1.19	1.29	1.44	1.63	1.85	2.1	1.76

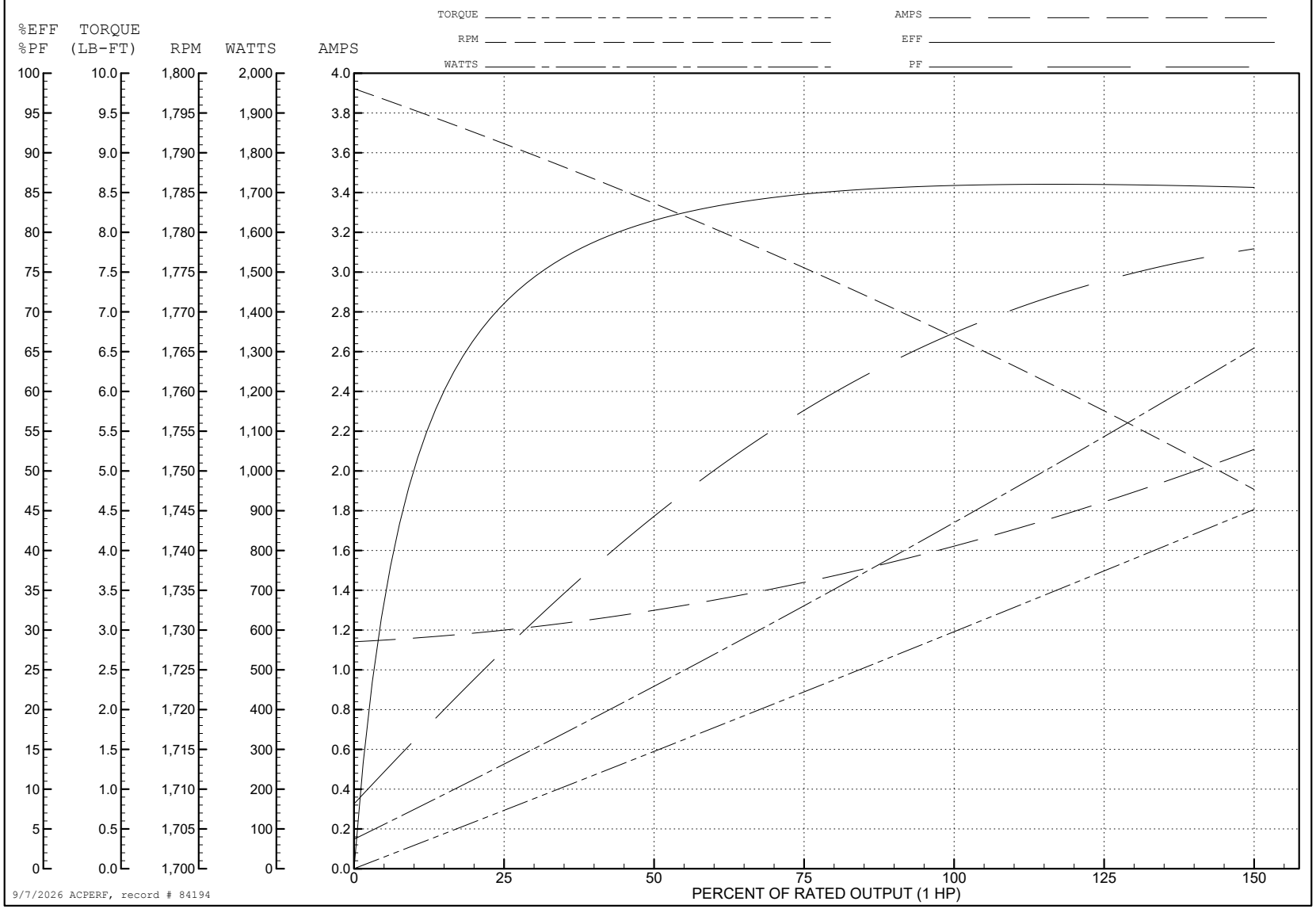
ABB Motors and Mechanical Inc.

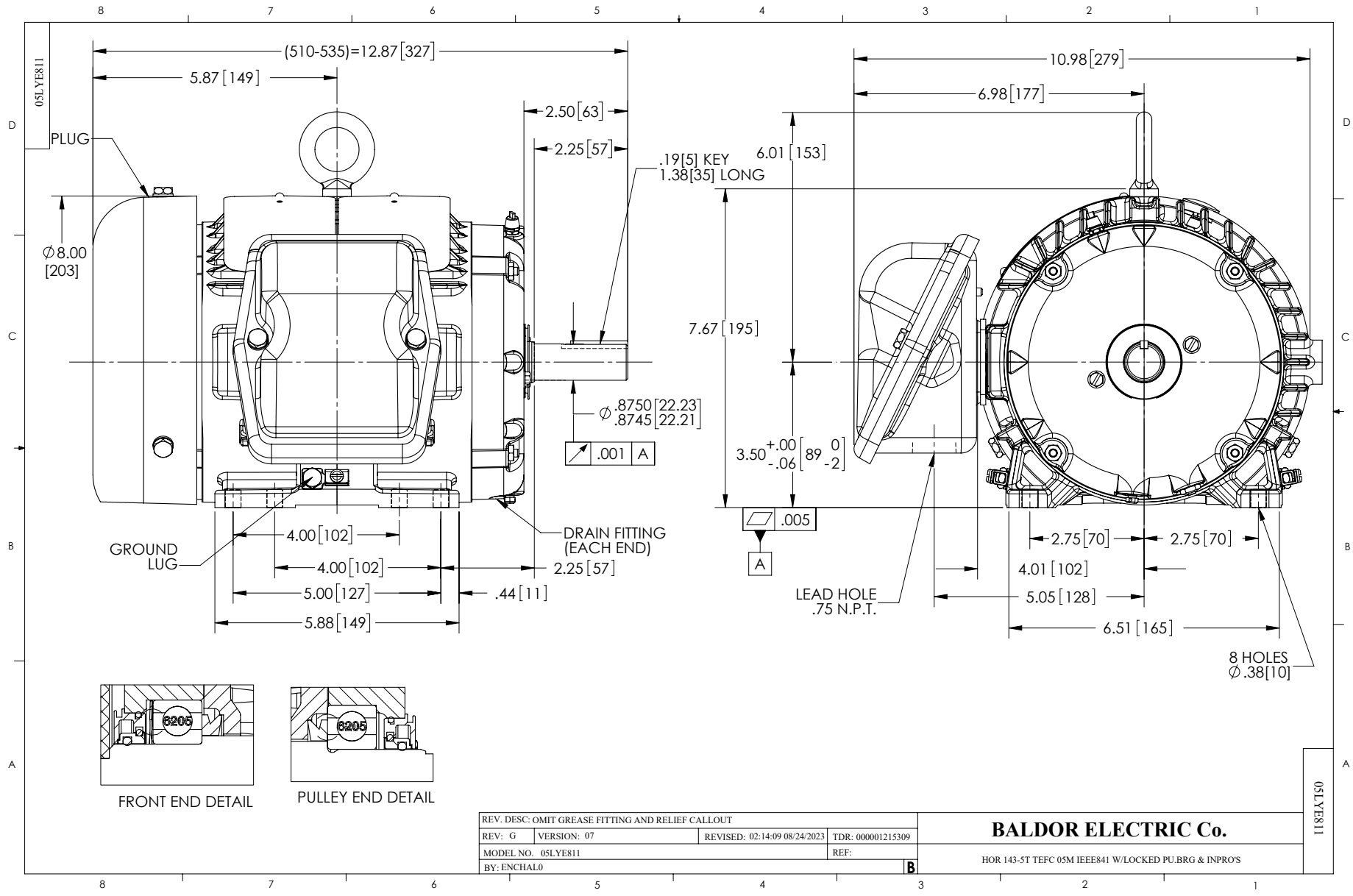
WINDING # 05WGX502

1 HP 3 PH 60 HZ 1765 RPM 460 V 0522M

Typical performance - not guaranteed values.

TORQUES(LB-FT): PO=15.3 PU=8.69 LR=10.3 LRA=14.4




05LYE811
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2.50[63]
2.25[57]
PLUG
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1.38[35] LONG
Ø8.00
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Ø.8750[22.23]
.8745[22.21]
.001 A
4.00[102]
GROUND
LUG
4.00[102]
2.25[57]
5.00[127]
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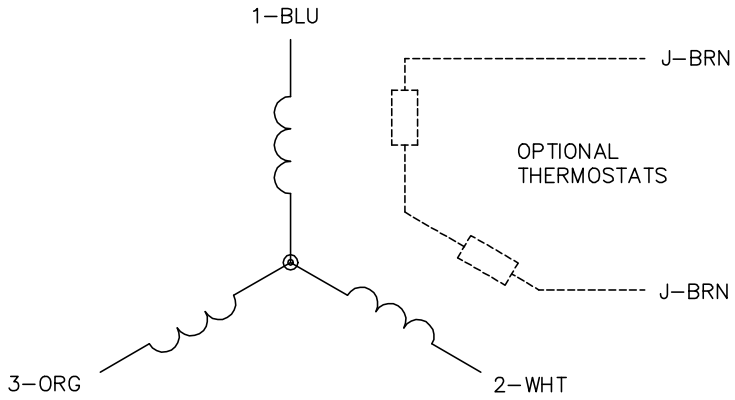
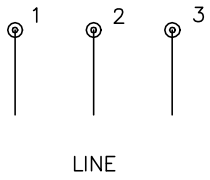
5.88[149]
DRAIN FITTING
(EACH END)
10.98[279]
6.98[177]
6.01[153]
7.67[195]
3.50 +.00 -.06 [89 0 -2]
.005
A
LEAD HOLE
.75 N.P.T.
2.75[70]
2.75[70]
4.01[102]
5.05[128]
6.51[165]
8 HOLES
Ø.38[10]
6205
FRONT END DETAIL
6205
PULLEY END DETAIL
REV. DESC: OMIT GREASE FITTING AND RELIEF CALLOUT
REV: G
VERSION: 07
REVISED: 02:14:09 08/24/2023
TDR: 000001215309
MODEL NO. 05LYE811
REF:
BY: ENCHAL0
B
BALDOR ELECTRIC Co.
HOR 143-5T TEFC 05M IEEE841 W/LOCKED PU.BRG & INPRO'S
05LYE811

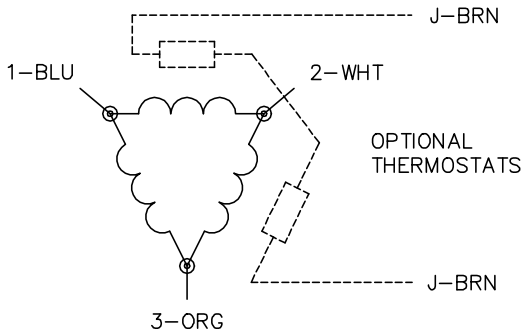
CD0006

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

SH 1 of 1