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.**					

Parts List

Part number	Description	Quantity
SA408889	SA 05E811X565G1	1.000 ea
RA400436	RA 05E811X565G1	1.000 ea
35FN3002A05SP	EXFN, PLASTIC, 6.376 OD, .638 ID	1.000 ea
HW3201A05	3/8-16 EYEBOLT	1.000 ea
06CB1001A01G	CONDUIT BOX, MACH GRAY	1.000 ea
RM1016	LEAD SEPARATOR GASKET - 305/306 C.P.MOTO	1.000 ea
51XW2520A12	SCREW, HEX SER SLT HD, ZN, 1/4-20 X .75	2.000 ea
11XW1032G06	10-32 X .38, TAPTITE II, HEX WSHR SLTD U	1.000 ea
HW3001B01	BRASS CUP WASHER, FOR #10 SCREW	1.000 ea
10XN2520S06	1/4 20X3/8 HX HD CAP S.S.	2.000 ea
WD1000B16	T&B CX70TN OR L70P TERMINAL LUG	1.000 ea
51XN1032A20	10-32 X 1 1/4 HX WS SL SR	2.000 ea
05EP1100A02G	FREP TEFC 205,GRSR,RLF,DRAIN FITTING,INP	1.000 ea
HW4601B22	INPRO SEAL, 205 BRG, MINI66	1.000 ea
HW4500A01	1641B(ALEMITE)400 UNIV, GREASE FITT	1.000 ea
HA4051A00	PLASTIC CAP FOR GREASE FITTING	1.000 ea
HW4500A17	317400 ALEMITE GREASE RELIEF	1.000 ea
HA4010A01	T-DRAIN PLUG,416 S.S.,W/ 1/4-28 THD & .0	1.000 ea
HW5100A05	WVY WSHR F/205 & 304 BRGS	1.000 ea
05EP1100A01G	PUEP ENCL 205,BRG RET,GRSR,RLF,DRAIN FIT	1.000 ea
HW4601B22	INPRO SEAL, 205 BRG, MINI66	1.000 ea
HW4500A01	1641B(ALEMITE)400 UNIV, GREASE FITT	1.000 ea
HA4051A00	PLASTIC CAP FOR GREASE FITTING	1.000 ea
HW4500A17	317400 ALEMITE GREASE RELIEF	1.000 ea
HA4010A01	T-DRAIN PLUG,416 S.S.,W/ 1/4-28 THD & .0	1.000 ea
51XN1032A20	10-32 X 1 1/4 HX WS SL SR	2.000 ea
HA3100A37	THRUBOLT 10-32 X 8.500	4.000 ea
XY1032A02	10-32 HEX NUT DIRECTIONAL SERRATION	4.000 ea
35FH1000A19G	35FH1000A19 W/GRAY FLUIDIZ	1.000 ea
10XN2520A16	1/4-20 X 1 HEX HEAD CAP SCR, ZINC PLATED	3.000 ea
HW1001A25	LOCKWASHER 1/4, ZINC PLT .493 OD, .255 I	3.000 ea

WD4100A03	DE-750 HEYCO PLUG 62MP0750 MICRO PLASTIC	1.000 ea
06CB1503A01G	LIPPED CONDUIT BOX LID, MACH GRAY EPOXY	1.000 ea
06GS1009	GASKET, KOBX LID, 1/8" THICK BLACK NEOPR	1.000 ea
MJ5001A14	DYNAPRO SEALANT, CP MTR VC#2508050 (603	0.010 ea
HW2501D13	KEY, 3/16 SQ X 1.375	1.000 ea
HA7000A01	KEY RETAINER 7/8" DIA SHAFT	1.000 ea
MJ5001A27	32220KN GRAY SEALER *MIN BUY 4 QTS=1GAL	0.001 qt
MJ1000A73	INPRO P-80 ASSEMBLY LUB./ 1 QT. CONTAINE	0.001 qt
85XU0407S04	4X1/4 U DRIVE PIN STAINLESS	4.000 ea
LB1002N	LABEL,MARINE DUTY (ON ROLLS)	1.000 ea
LB1624	COMBINED WARNING LABEL, ISO/ANSI PICTOGR	1.000 ea
LT0019A00	MOTOR NO-LOAD PERFORMANCE DATA SHEET	1.000 ea
WD1000D21	TRM,T&B #B71M,RING,18-14,.25,NON-INSL	3.000 ea
MJ1000A02	GREASE, POLYREX EM EXXON	0.050 lb
51XB1214A16	12-14X1.00 HXWSSLD SERTYB	1.000 ea
MG1025N19	WILKOFAST, 778.50, RELIANCE BLUE-GREEN 8	0.022 ga
LC0006	CONNECTION LABEL	1.000 ea
LB1449	DIV-2/NEC WARNING LABEL	1.000 ea
NP4328	SS IEEE841-2021 DIV-2 UL EEV CSA-C US	1.000 ea
NP3186	SS IEEE841 INV AUX DATA INFORMATION	1.000 ea
36PA1000	PKG GRP, PRINT PK1016A08	1.000 ea
MN416A01	TAG-INSTAL-MAINT no wire (2500 bx)11/25	1.000 ea
10XN2520A12	1/4-20 X 3/4 HEX HEAD CAP	2.000 ea
HW1001A25	LOCKWASHER 1/4, ZINC PLT .493 OD, .255 I	2.000 ea
FE-0000002	ZRTG FE ASSEMBLY	1.000 ea

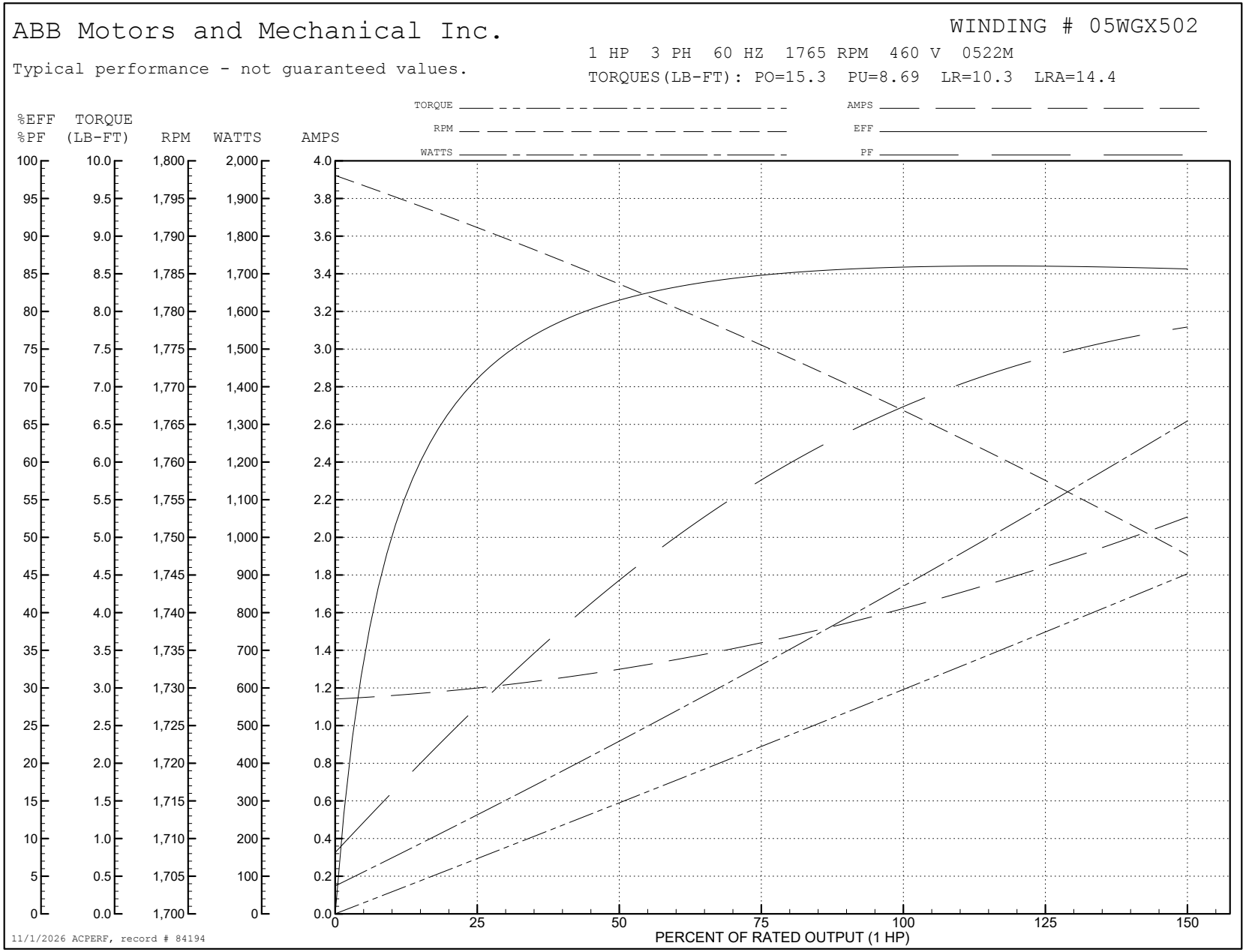
AC Induction Motor Performance Data
Record # 84194
Typical performance - not guaranteed values

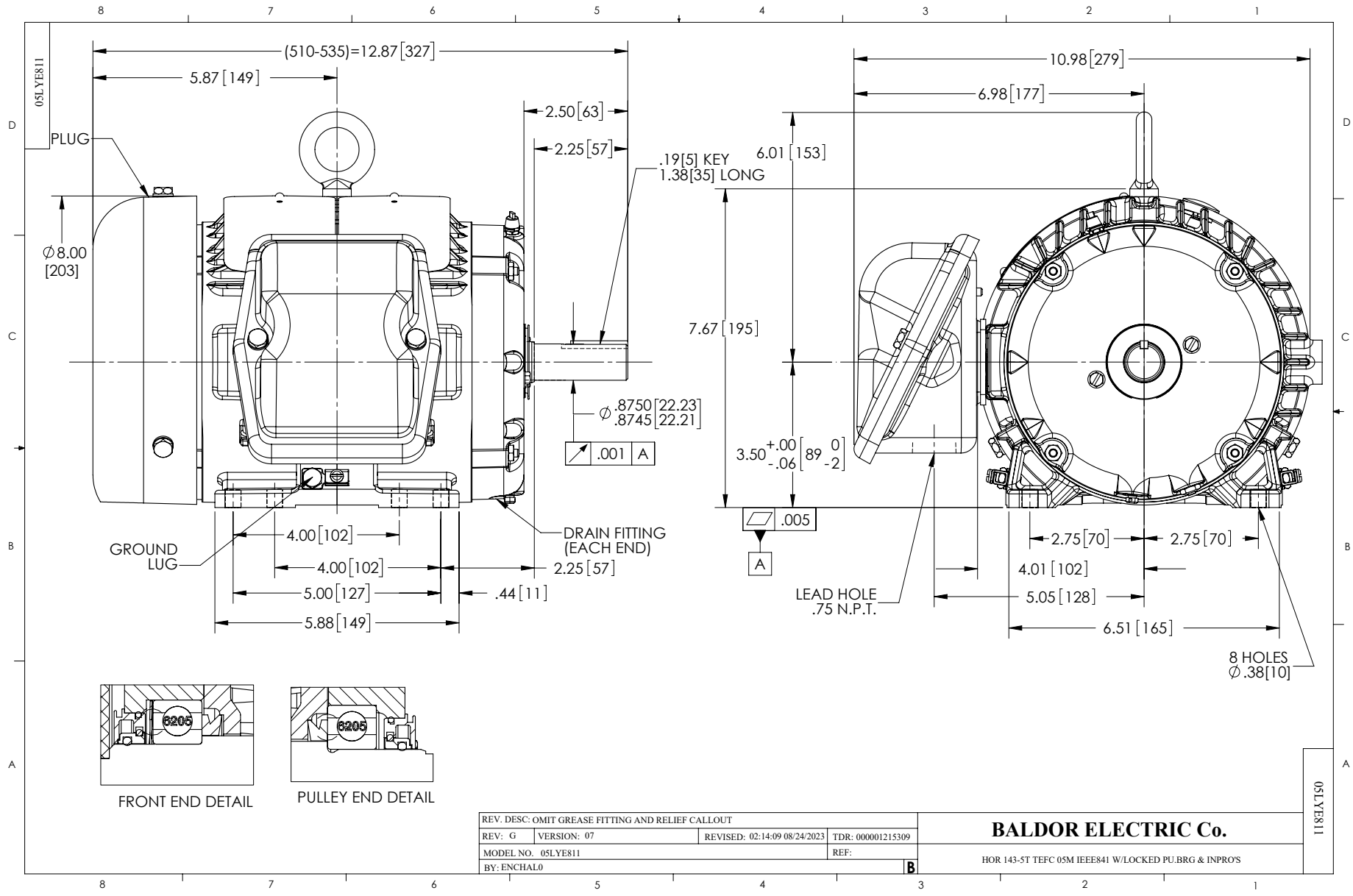
Winding: 05WGX502-R001	**Type:** 0522M	**Enclosure:** TEFC

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

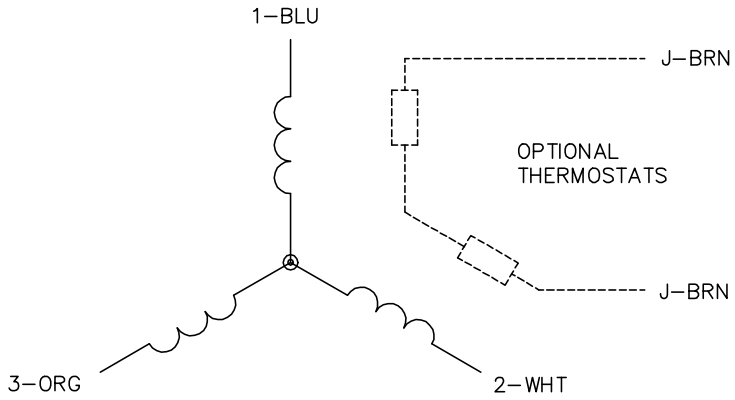
% of Rated Load	**25**	**50**	**75**	**100**	**125**	**150**	**S.F.**
Power Factor	28	45	58	67	74	78	71
Efficiency	70.5	81.4	84.7	85.9	86	85.5	86
Speed	1791.4	1783.5	1775.5	1766.9	1757.8	1747.6	1761
Line amperes	1.19	1.29	1.44	1.63	1.85	2.1	1.76

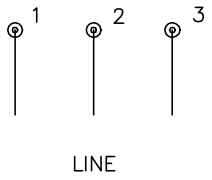

ABB Motors and Mechanical Inc.
WINDING # 05WGX502
1 HP 3 PH 60 HZ 1765 RPM 460 V 0522M
Typical performance - not guaranteed values.
TORQUES(LB-FT): PO=15.3 PU=8.69 LR=10.3 LRA=14.4
TORQUE
RPM
WATTS
AMPS
EFF
PF
%EFF %PF
TORQUE (LB-FT)
RPM
WATTS
AMPS
PERCENT OF RATED OUTPUT (1 HP)
11/1/2026 ACPERF, record # 84194


05LYE811
(510-535)=12.87[327]
5.87[149]
2.50[63]
2.25[57]
PLUG
.19[5] KEY
1.38[35] LONG
Ø8.00
[203]
Ø.8750[22.23]
.8745[22.21]
.001 A
4.00[102]
GROUND
LUG
4.00[102]
2.25[57]
5.00[127]
.44[11]
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

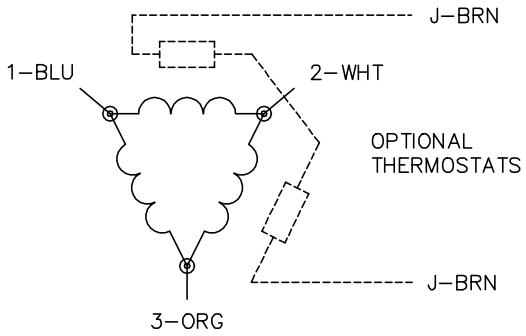
CD0006

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