ABB BALDOR RELIANCE

Customer information packet

EM3581T-BG

1HP, 1770RPM, 3PH, 60HZ, 143T, 0520M, TEFC, F1
Class - None
Division - Not Applicable

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Specifications

Enclosure	TEFC
Frame	143T
Frame Material	Iron
Frequency	60.00 Hz
Haz Area Class and Group	None
Haz Area Division	Not Applicable
Motor Letter Type	Three Phase
Output @ Frequency	1.000 HP @ 60 HZ
Phase	3
Synchronous Speed @ Frequency	1800 RPM @ 60 HZ
Voltage @ Frequency	230.0 V @ 60 HZ
	460.0 V @ 60 HZ
Agency Approvals	CSA EEV
	UR
	NEMA_PREMIUM
	NEMA PREMIUM
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
Current @ Voltage	1.600 A @ 460.0 V
	3.200 A @ 208.0 V
	3.200 A @ 230.0 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
Heater Indicator	No Heater

Part Detail

Revision	C
Type	AC
Mech. spec.	
Base	
Status	PRD/A
Elec. spec.	05WGX508
Layout	05LYH015
Eff. date	01-02-2026
CD Diagram	CD0005
Poles	04
Leads	9#18
Proprietary	False
Created date	10-28-2021

High Voltage Full Load Amps	1.6 a
Insulation Class	H
Inverter Code	Inverter Ready
KVA Code	N
Lifting Lugs	No Lifting Lugs
Locked Bearing Indicator	Locked Bearing
Motor Lead Termination	Flying Leads
Motor Standards	NEMA
Motor Type	0520M
Mounting Arrangement	F1
Number of Poles	4
Overall Length	12.54 IN
Power Factor	68
Product Family	General Purpose
Pulley Face Code	Standard
Rodent Screen	None
Service Factor	1.15
Shaft Diameter	0.875 IN
Shaft Ground Indicator	Shaft Grounding
Shaft Rotation	Reversible
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

NP3441LUA											
CAT.NO.	EM3581T-BG										
SPEC	05-0000-1053										
HP	1										
VOLTS	230/460										
AMPS	3.2/1.6										
RPM	1770										
FRAME	143T	**HZ**	60	**PH**	3						
SF	1.15	**CODE**	N	**DES**	B	**CLASS**	H				
NEMA NOM. EFF	85.5	**PF**	68								
RATING	40C AMB-CONT										
CC	010A										
ENCL	TEFC	**SER**									
DE	6205	**ODE**	6203								
VPWM INVERTER READY	SFA 3.5/1.75										
CT6-60H(10:1)VT3-60H(20:1											

AC Induction Motor Performance Data
Record # 75455
Typical performance - not guaranteed values

Winding: 05WGX122-R005	**Type:** 0518M	**Enclosure:** TEFC

Nameplate Data				**460 V, 60 Hz: High Voltage Connection**	
Rated Output (HP)			1	**Full Load Torque**	2.98 LB-FT
Volts			230/460	**Start Configuration**	direct on line
Full Load Amps			3/1.5	**Breakdown Torque**	12.7 LB-FT
R.P.M.			1760	**Pull-up Torque**	7.92 LB-FT
Hz	60	**Phase**	3	**Locked-rotor Torque**	8.7 LB-FT
NEMA Design Code	B	**KVA Code**	L	**Starting Current**	12.2 A
Service Factor (S.F.)			1.15	**No-load Current**	1.02 A
NEMA Nom. Eff.	85.5	**Power Factor**	71	**Line-line Res. @ 25ºC**	15.4 Ω
Rating - Duty			40C AMB-CONT	**Temp. Rise @ Rated Load**	29°C
S.F. Amps				**Temp. Rise @ S.F. Load**	34°C
				Locked-rotor Power Factor	54.1
				Rotor inertia	0.106 LB-FT2

Load Characteristics 460 V, 60 Hz, 1 HP

% of Rated Load	**25**	**50**	**75**	**100**	**125**	**150**	**S.F.**
Power Factor	30	48	61	70	76	80	74
Efficiency	72.1	82.1	85.1	85.9	85.5	84.7	85.7
Speed	1790	1781	1771	1760	1748	1736	1753
Line amperes	1.07	1.19	1.35	1.55	1.8	2.06	1.7

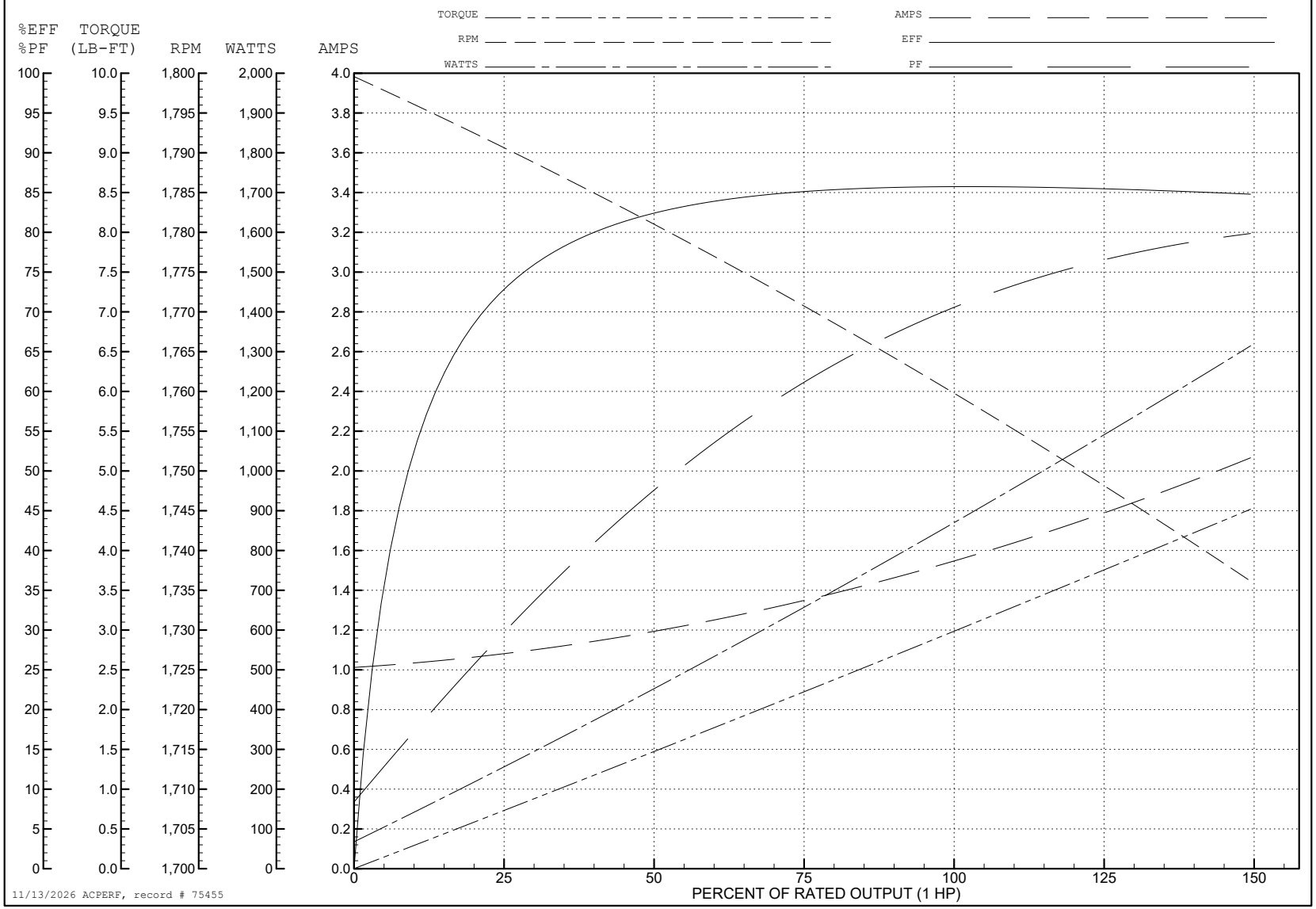
ABB Motors and Mechanical Inc.

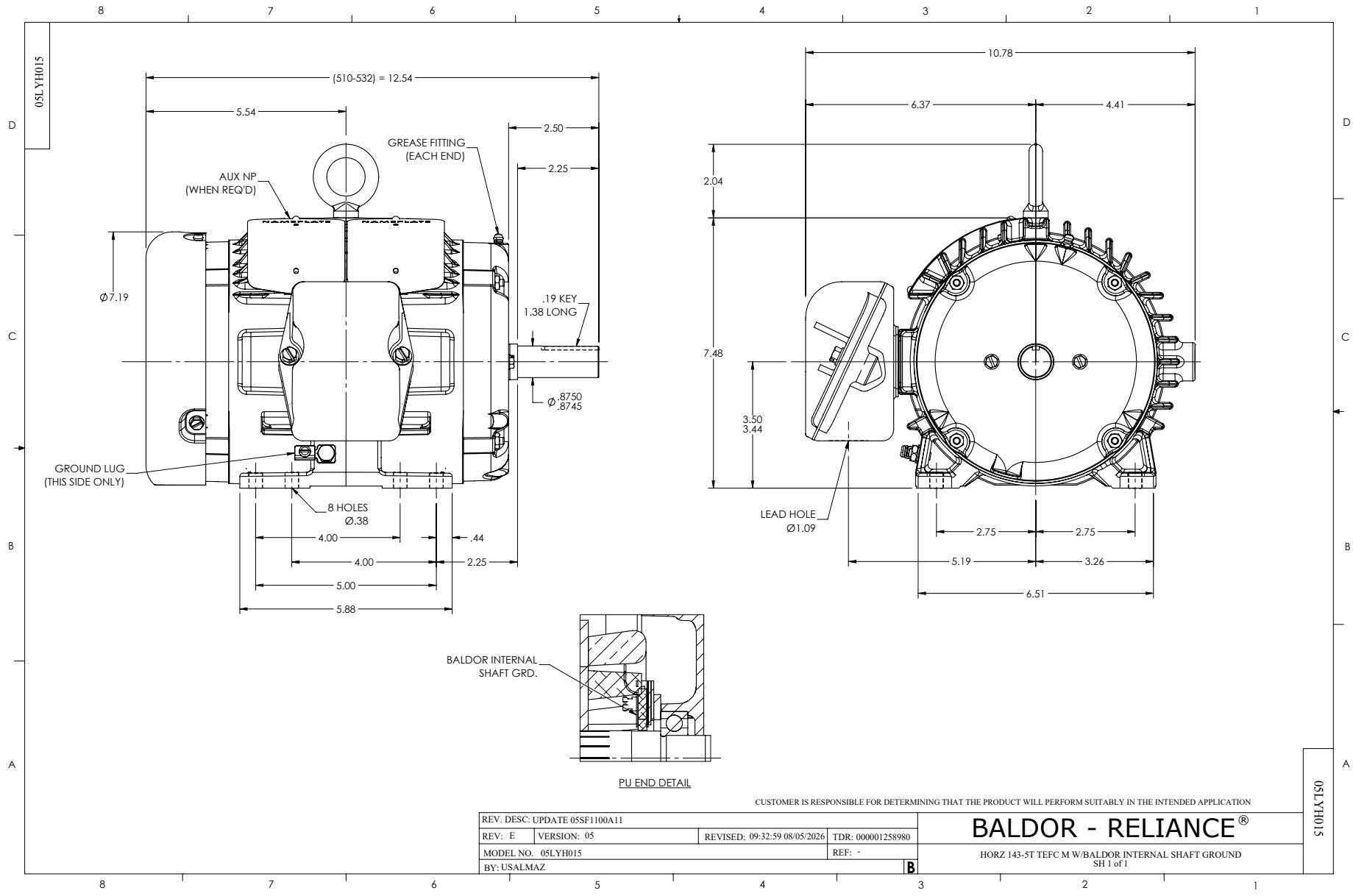
WINDING # 05WGX122

1 HP 3 PH 60 HZ 1760 RPM 460 V 0518M

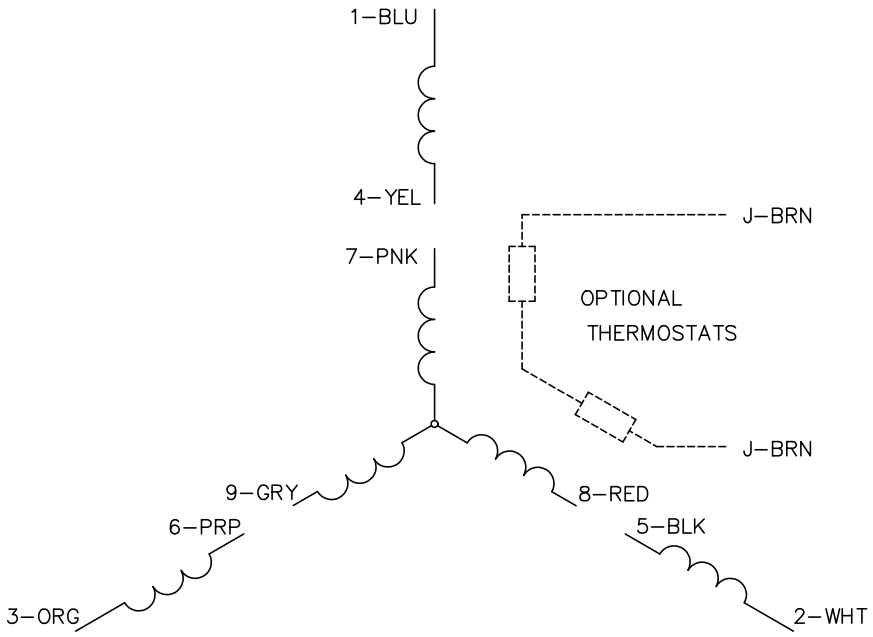
Typical performance - not guaranteed values.

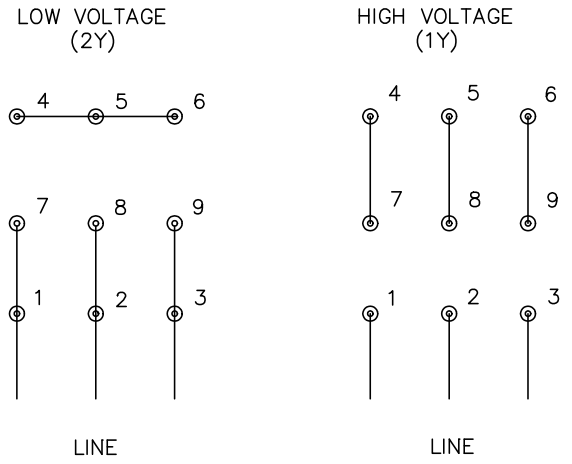
TORQUES(LB-FT): PO=12.7 PU=7.92 LR=8.7 LRA=12.2




05LYH015
(510-532) = 12.54
5.54
2.50
2.25
GREASE FITTING
(EACH END)
AUX NP
(WHEN REQ'D)
Ø7.19
.19 KEY
1.38 LONG
Ø .8750
.8745
GROUND LUG
(THIS SIDE ONLY)
8 HOLES
Ø.38
4.00
.44
4.00
2.25
5.00
5.88
10.78
6.37
4.41
2.04
7.48
3.50
3.44
LEAD HOLE
Ø1.09
2.75
2.75
5.19
3.26
6.51
BALDOR INTERNAL
SHAFT GRD.
PU END DETAIL
CUSTOMER IS RESPONSIBLE FOR DETERMINING THAT THE PRODUCT WILL PERFORM SUITABLY IN THE INTENDED APPLICATION
REV. DESC: UPDATE 05SF1100A11
REV: E
VERSION: 05
REVISED: 09:32:59 08/05/2026
TDR: 000001258980
MODEL NO. 05LYH015
REF: -
BY: USALMAZ
B
BALDOR - RELIANCE®
HORZ 143-5T TEFC M W/BALDOR INTERNAL SHAFT GROUND
SH 1 of 1
05LYH015

CD0005





NOTES:

1. INTERCHANGE ANY TWO LINE LEADS TO REVERSE ROTATION.
2. OPTIONAL THERMOSTATS ARE PROVIDED WHEN SPECIFIED.
3. ACTUAL NUMBER OF INTERNAL PARALLEL CIRCUITS MAY BE A MULTIPLE OF THOSE SHOWN ABOVE.
4. LEAD COLORS ARE OPTIONAL. LEADS MUST ALWAYS BE NUMBERED AS SHOWN.

CD0005

REV. DESC: REVISE TO SHOW OPTIONAL COLORS			BALDOR ELECTRIC Co.
REV. LTR: E	BY: JLP	REVISED: 01/19/99 10:15	TDR: 0171435
CD0005		FILE: AAA00005140	MDL: –
		MTL: –	3PH, DV, 9 LEADS