

ABB BALDOR RELIANCE III

Customer information packet

EM2334T

20HP, 1770RPM, 3PH, 60HZ, 256T, 0960M, TEFC, F1

Class - None

Division - Not Applicable

Specifications

Enclosure	TEFC
Frame	256T
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	20.000 HP @ 60 HZ
Phase	3
Synchronous Speed @ Frequency	1800 RPM @ 60 HZ
Voltage @ Frequency	460.0 V @ 60 HZ 230.0 V @ 60 HZ
Agency Approvals	CURUSEEV NEMA PREMIUM NEMA PREMIUM (OLD LOGO)
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	48.000 A @ 230.0 V 52.000 A @ 208.0 V 24.000 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	AG
Type	AC
Mech. spec.	09P11
Base	
Status	PRD/A
Elec. spec.	09WGT459
Layout	09LYP011
Eff. date	08-08-2025
CD Diagram	CD0180
Poles	04
Leads	9#10
Proprietary	False
Created date	06-28-2017

Heater Indicator	No Heater
High Voltage Full Load Amps	24.0 a
Insulation Class	F
Inverter Code	Inverter Duty
KVA Code	J
Lifting Lugs	Standard Lifting Lugs
Locked Bearing Indicator	Locked Bearing
Motor Lead Exit	Ko Box
Motor Lead Quantity/Wire Size	9 @ 10 AWG
Motor Lead Termination	Flying Leads
Motor Standards	NEMA
Motor Type	0960M
Mounting Arrangement	F1
Number of Poles	4
Overall Length	23.36 IN
Power Factor	83
Product Family	General Purpose
Pulley End Bearing Type	Ball
Pulley Face Code	Standard
Pulley Shaft Indicator	Standard
Rodent Screen	None
Service Factor	1.15
Shaft Diameter	1.625 IN
Shaft Extension Location	Pulley End
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

NP3441LUA									
CAT.NO.	EM2334T								
SPEC	09P011T459								
HP	20								
VOLTS	230/460								
AMPS	48/24								
RPM	1770								
FRAME	256T		HZ	60		PH	3		
SF	1.15	CODE	J	DES	A	CLASS	F		
NEMA NOM. EFF	93	PF	83						
RATING	40C AMB-CONT								
CC	010A								
ENCL	TEFC	SER							
DE	6309	ODE	6208						
VPWM INVERTER READY	SFA 54.4/27.2								
CT6-60H(10:1)VT3-60H(20:1									
	50HZ 20HP 190/380V 58/29A							SF1.0	

Parts List

Part number	Description	Quantity
SA340780	SA 09P011T459	1.000 ea
RA329156	RA 09P011T459	1.000 ea
09FN3001D01SP	EXTERNAL FAN, PLASTIC (COMES W/SCREW FRO	1.000 ea
HW1002A63	WASHER, 5/8 HI-COLLAR SPRLCKWASHER	1.000 ea
09CB3003	CB W/1.75" DIA LD HL - 37, 39, 307 & 309	1.000 ea
09GS1000	GASKET-CONDUIT BOX, 1/16 THICK LEXIDE	1.000 ea
51XW2520A12	.25-20 X .75, TAPTITE II, HEX WSHR SLTD	4.000 ea
09EP1101A136	PU ENDPLATE, MACH	1.000 ea
10XN3816K28	3/8-16 X 1.75 HEX HD CAP SCREW, GRADE 5	4.000 ea
WD1000B16	T&B CX70TN OR L70P TERMINAL LUG	1.000 ea
59XW2520G07	.25-20X.44,HEX SER WSHR,TAPTITE 2,GREEN	1.000 ea
HA3400A33	STUD- 3/8-16 X 4.96 HEX	4.000 ea
XY3816A12	3/8-16 FINISHED NUT W/SERRATIONS	4.000 ea
HW1001A38	LOCKWASHER 3/8, ZINC PLT .688 OD, .382 I	4.000 ea
HW5100A08	W3118-035 WVY WSHR (WB)	1.000 ea
HW4600B44	V-RING SLINGER 1.500 X 1.810 X .28 VITON	1.000 ea
10XN2520K36	1/4-20 X 2.25" HX HD SCRWGRADE 5, ZINC P	4.000 ea
HW1001A25	LOCKWASHER 1/4, ZINC PLT .493 OD, .255 I	4.000 ea
HW1001A38	LOCKWASHER 3/8, ZINC PLT .688 OD, .382 I	4.000 ea
09FH4000SP	309 FH - BLACK PRIMER	1.000 ea
HW1001A38	LOCKWASHER 3/8, ZINC PLT .688 OD, .382 I	4.000 ea
09CB3501SP	CONDUIT BOX LID FOR 09CB3001 & 09CB3002	1.000 ea
09GS1013SP	GS FOR 09CB3501, 12CB1500 & 12CB1503 LID	1.000 ea
51XW2520A12	.25-20 X .75, TAPTITE II, HEX WSHR SLTD	2.000 ea
HW2501G25	KEY, 3/8 SQ X 2.875	1.000 ea
09EP1100A208	ENDPLATE, MACH	1.000 ea
HA4051A00	PLASTIC CAP FOR GREASE FITTING	1.000 ea
HW4500A03	GREASE FITTING, .125 NPT 1610(ALEMITE) 8	1.000 ea
HW4500A17	317400 ALEMITE GREASE RELIEF	1.000 ea
HW4500A05	1669B ALEM/UNIV860 GR FTG X	1.000 ea
HW4500A17	317400 ALEMITE GREASE RELIEF	1.000 ea

HA4066A01	PUSH IN T-DRAIN FITTING (BLACK)	1.000 ea
MJ1000A02	GREASE, POLYREX EM EXXON	0.080 lb
HA4051A00	PLASTIC CAP FOR GREASE FITTING	1.000 ea
HA4066A01	PUSH IN T-DRAIN FITTING (BLACK)	1.000 ea
HW2500A25	WOODRUFF KEY USA #1008 #BLOW CARBON STEE	1.000 ea
MG1050Y01	CELEROL BALDOR GOLD *5 GALLON BUCKET*	0.050 ga
85XU0407S04	4X1/4 U DRIVE PIN STAINLESS	2.000 ea
LB1624	COMBINED WARNING LABEL, ISO/ANSI PICTOGR	1.000 ea
LC0181	CONNECTION LABEL	1.000 ea
NP3441LUA	AL SUPER-E VPWM INV RDY,UL EEV,NEMA PREM	1.000 ea
09PA1000	PACKAGING GROUP COMBINED PRINT	1.000 ea
MN416A01	TAG-INSTAL-MAINT no wire (2500 bx)11/25	1.000 ea
FE-0000013	ZRTG FE ASSEMBLY	1.000 ea
LD7020E09	LEAD SET, 10AWG, 9 LEAD, 20" LONG LEADS	1.000 ea
PE-0000003	ZRTG PE ASSEMBLY	1.000 ea

Accessories

Part number	Description	Multiplier
09-1309	C FACE KIT	A8

AC Induction Motor Performance Data

Record # 68075

Typical performance - not guaranteed values

Winding: 09WGT459-R011			Type: 0960M		Enclosure: TEFC	
Nameplate Data			460 V, 60 Hz: High Voltage Connection			
Rated Output (HP)		20	Full Load Torque		59.27 LB-FT	
Volts		230/460	Start Configuration		direct on line	
Full Load Amps		48/24	Breakdown Torque		232 LB-FT	
R.P.M.		1770	Pull-up Torque		126 LB-FT	
Hz	60	Phase	3	Locked-rotor Torque		141 LB-FT
NEMA Design Code		A	KVA Code		J	
Service Factor (S.F.)		1.15	No-load Current		10.4 A	
NEMA Nom. Eff.		93	Power Factor		83	
Rating - Duty		40C AMB-CONT		Temp. Rise @ Rated Load		58°C
S.F. Amps				Temp. Rise @ S.F. Load		70°C
				Locked-rotor Power Factor		26.5

Load Characteristics 460 V, 60 Hz, 20 HP

% of Rated Load	25	50	75	100	125	150	S.F.
Power Factor	45	67	78	83	86	87	85
Efficiency	89.2	93	93.7	93.6	93.1	92.4	93.3
Speed	1793.2	1786.4	1779.1	1771.9	1763.7	1755.3	1767
Line amperes	11.8	15	19.2	24	29.3	34.9	27.2

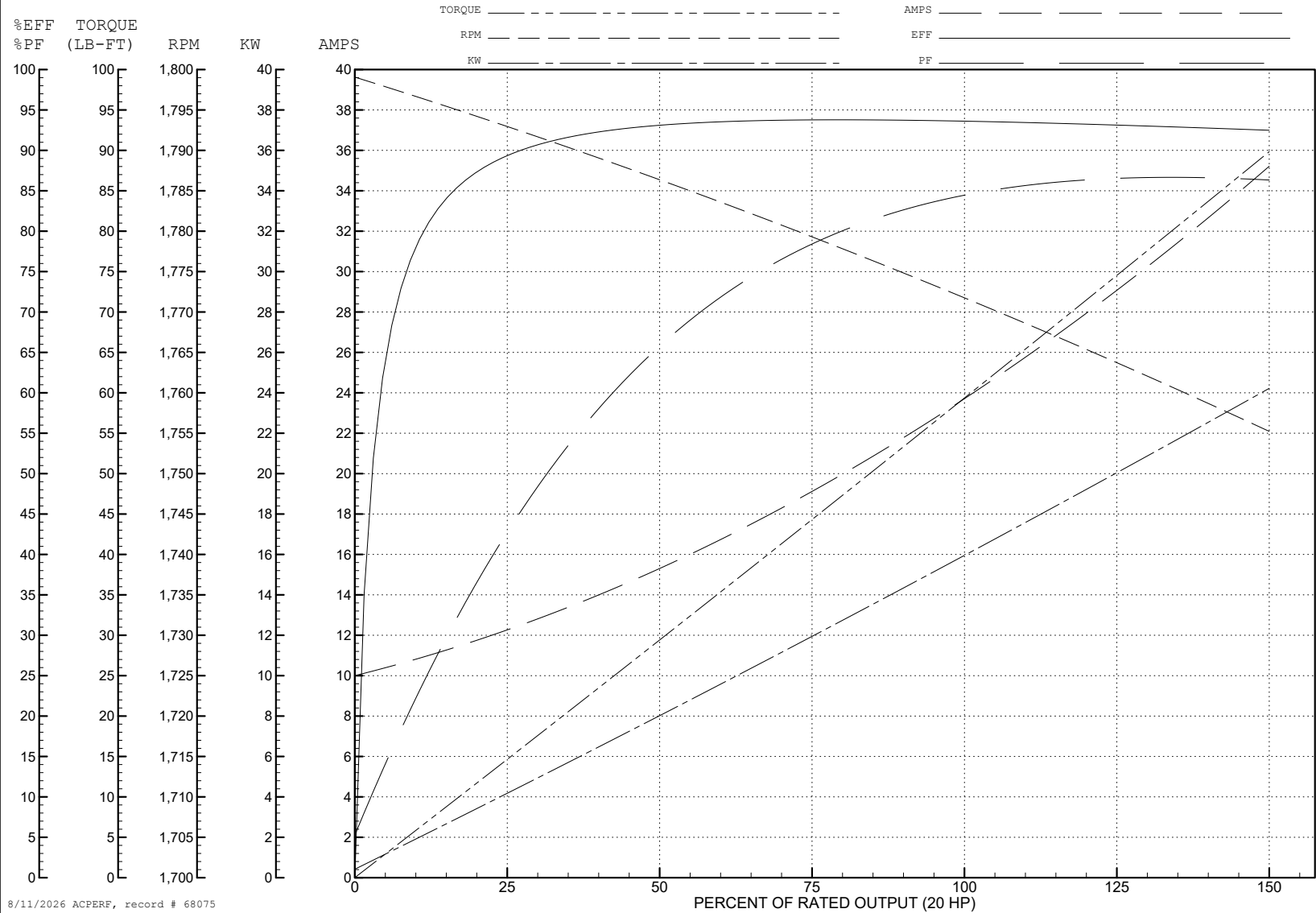
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WINDING # 09WGT459

Typical performance - not guaranteed values.

20 HP 3 PH 60 HZ 1770 RPM 460 V 0960M

TORQUES (LB-FT): PO=232 PU=126 LR=141 LRA=198



AC Induction Motor Performance Data

Record # 114686

Typical performance - not guaranteed values

Winding: 09WGT459-RXXX			Type: 0960M		Enclosure: TEFC	
Nameplate Data				400 V, 60 Hz: High Voltage Connection		
Rated Output (HP)		15		Full Load Torque		44.44 LB-FT
Volts		200/400		Start Configuration		direct on line
Full Load Amps		40.6/20.3		Breakdown Torque		172 LB-FT
R.P.M.		1770		Pull-up Torque		91 LB-FT
Hz	60	Phase	3	Locked-rotor Torque		102 LB-FT
NEMA Design Code		A	KVA Code	Starting Current		168 A
Service Factor (S.F.)		1.15		No-load Current		7.96 A
NEMA Nom. Eff.		92.4	Power Factor	Line-line Res. @ 25°C		0.332 Ω
Rating - Duty		50C AMB-CONT		Temp. Rise @ Rated Load		43°C
S.F. Amps				Temp. Rise @ S.F. Load		51°C
				Locked-rotor Power Factor		27
				Rotor inertia		2.65 lb-ft²

Load Characteristics 400 V, 60 Hz, 15 HP

% of Rated Load	25	50	75	100	125	150	S.F.
Power Factor	49	70	80	85	87	88	86
Efficiency	88.6	92.6	93.5	93.5	93	92.4	93.2
Speed	1793	1787	1779	1772	1764	1756	1767
Line amperes	9.41	12.38	16.14	20.34	24.94	29.8	23.1

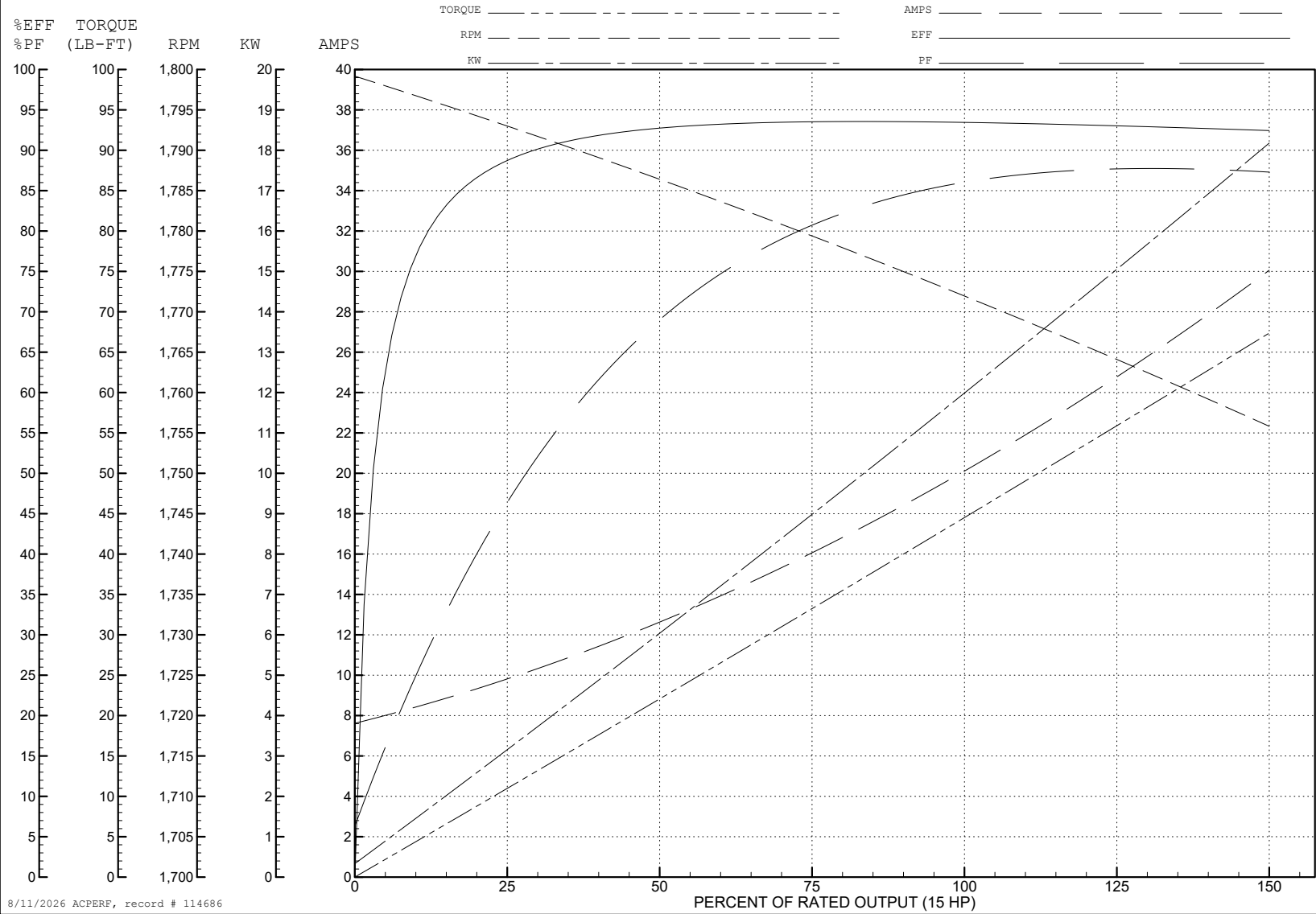
ABB Motors and Mechanical Inc.

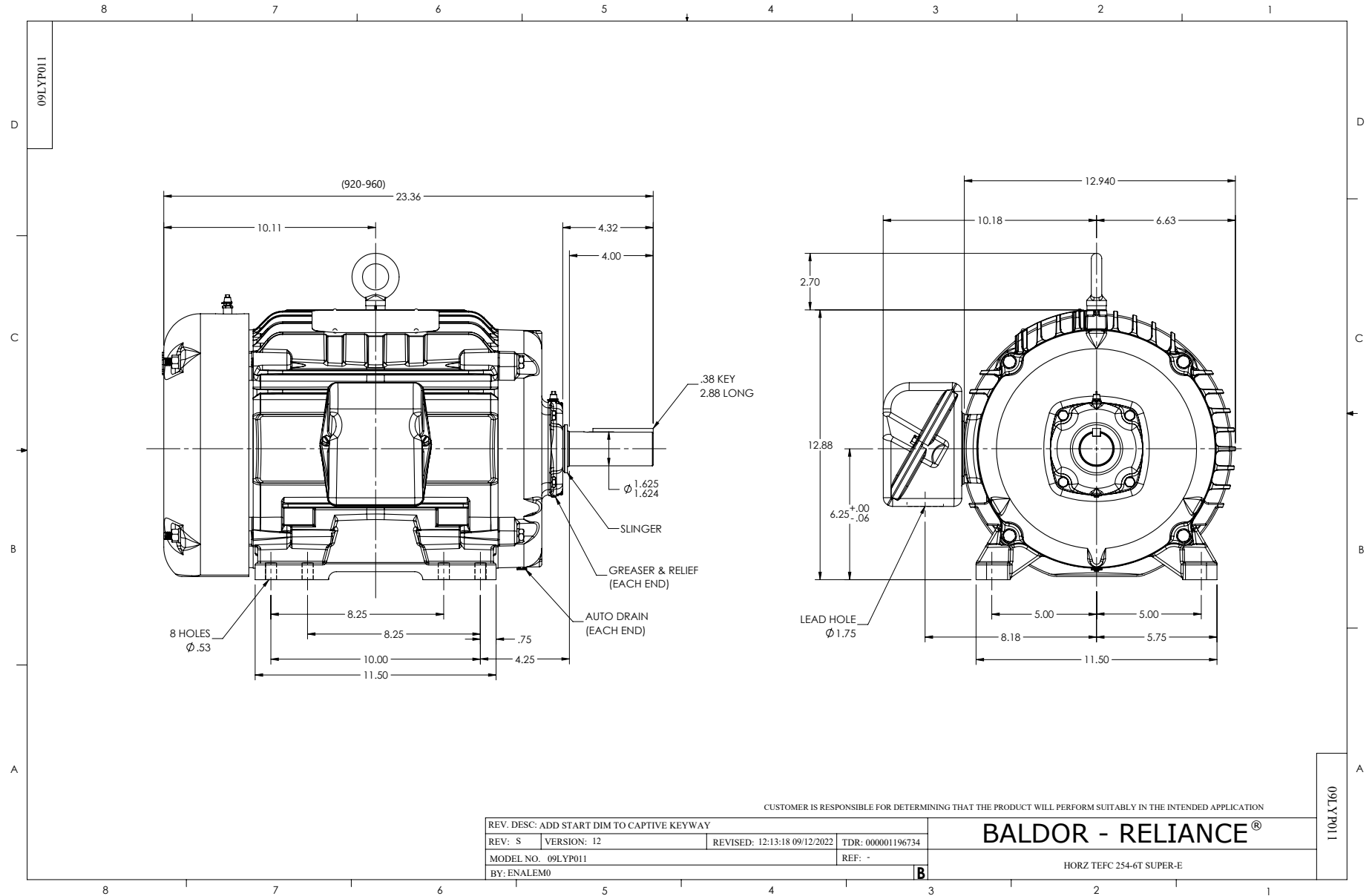
WINDING # 09WGT459

Typical performance - not guaranteed values.

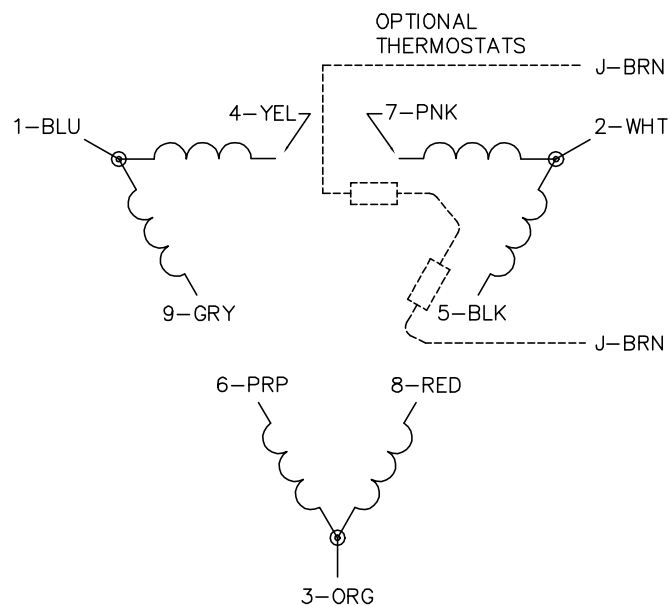
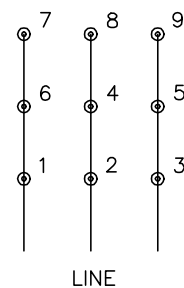
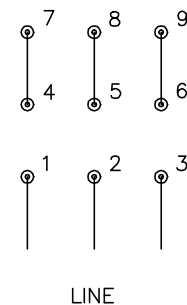
15 HP 3 PH 60 HZ 1770 RPM 400 V 0960M

TORQUES (LB-FT): PO=172 PU=91 LR=102 LRA=168





CD0180


 LOW VOLTAGE
(2D)

 HIGH VOLTAGE
(1D)

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.

CD0180

REV. DESC: ADD CLASS CONN00000007

REV. LTR: D

VERSION: 01

TDR: 000001099922

FILE: \AAA\00005\148

REVISED: 10: 25: 29 02/19/2019

BY: ENBRIRO

MTL: -


BALDOR - RELIANCE®

3PH, DV, 9 LEADS, DELTA CONNECTION

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