

ABB BALDOR RELIANCE III

Customer information packet

VLECP2334T

20HP, 1770RPM, 3PH, 60HZ, 256LP, 0960M, TEFC, F

Class - None

Division - Not Applicable

Specifications

Enclosure	TEFC
Frame	256LP
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	230.0 V @ 60 HZ 460.0 V @ 60 HZ
Agency Approvals	CSA CSA EEV UR
Ambient Temperature	40 °C
Auxiliary Box	NO AUXILLARY BOX
Auxiliary Box Lead Termination	None
Base Indicator	No Mounting
Bearing Grease Type	Polyrex EM (-20F +300F)
Blower	None
Constant Torque Speed Range	1.0
Current @ Voltage	52.000 A @ 208.0 V 48.000 A @ 230.0 V 24.000 A @ 460.0 V
Design Code	A
Drip Cover	Drip Cover
Duty Rating	CONT
Efficiency @ 100% Load	93.0 %
Electrically Isolated Bearing	Not Electrically Isolated
Feedback Device	NO FEEDBACK
Front Face Code	Standard

Part Detail

Revision	Q
Type	AC
Mech. spec.	09T01
Base	
Status	PRD/A
Elec. spec.	09WGT459
Layout	09LYT001
Eff. date	02-01-2024
CD Diagram	CD0180
Poles	04
Leads	9#10
Proprietary	False
Created date	11-29-2017

Front Shaft Indicator	None
Haz Area Temp Code	T3C
Heater Indicator	No Heater
High Voltage Full Load Amps	24.0 a
Insulation Class	F
Inverter Code	Inverter Duty
KVA Code	J
Lifting Lugs	Vertical Lifting Lugs
Locked Bearing Indicator	Locked Bearing
Max Speed	2700 rpm
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	25.73 IN
Power Factor	83
Product Family	Super-E Chemical Processing
Pulley End Bearing Type	Thrust
Pulley Face Code	P-Base
Pulley Shaft Indicator	P-Base Groove & Key
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
NP3241

CAT.NO.	VLECP2334T			P/N					ENCLOSURE	TEFC			
SPEC.	09T001T459G1		CC	010A	FRAME	256LP		S/N					
HP	20			CLASS	F	HZ	60	DES	A				
RPM	1770			RPM MAX	2700		PH	3	KVA-CODE	J			
VOLT	230/460			MOTOR WEIGHT			303						
AMP	48/24			SER.F.	1.15		PF	83	ODE BRG	6208	DE BRG	QJ213	
RATING	40C AMB-CONT			NEMA-NOM-EFF			93		GREASE	POLYREX EM			
							INV.TYPE		PWM				
TEMP CODE	T3C	INVERTER-TEMP-CODE			180								
TEMP =	160	C HP FR	60	C HP TO	90								
CT HZ FROM	1.0		CT HZ TO	60									
HTR-VOLTS		HTR-AMPS		HTR-WATTS		MAX. SPACE HEATER TEMP.				VT HZ FROM	O	VT HZ TO	60

Parts List

Part number	Description	Quantity
SA348379	SA 09T001T459G1	1.000 ea
RA336937	RA 09T001T459G1	1.000 ea
09FN3001D01SP	EXTERNAL FAN, PLASTIC (COMES W/SCREW FRO	1.000 ea
09CB1002A13P	KOBX W/1.50 NPT LEAD HL,2.38 MTG HL PATT	1.000 ea
09GS1010	GASKET, DWG, LEADWIRE SEPERATOR	1.000 ea
51XW2520A12	.25-20 X .75, TAPTITE II, HEX WSHR SLTD	4.000 ea
HW1001A25	LOCKWASHER 1/4, ZINC PLT .493 OD, .255 I	4.000 ea
HA3400A33	STUD- 3/8-16 X 4.96 HEX	4.000 ea
WD1000B16	T&B CX70TN OR L70P TERMINAL LUG	1.000 ea
10XN2520K06	1/4-20 X 3/8" HX HD SCREWGRADE 5, ZINC P	1.000 ea
HW1001A25	LOCKWASHER 1/4, ZINC PLT .493 OD, .255 I	1.000 ea
HW1001A38	LOCKWASHER 3/8, ZINC PLT .688 OD, .382 I	4.000 ea
HW4600B44	V-RING SLINGER 1.500 X 1.810 X .28 VITON	1.000 ea
HW5100A08	W3118-035 WVY WSHR (WB)	1.000 ea
HW4600B43	V-RING SLINGER 2.875 X 3.355 X .35 VITON	1.000 ea
10XN2520K28	1/4-20 X 1.75" HX HD SCRWGRADE 5, ZINC P	2.000 ea
10XN3118K56	5/16-18 X 3.50" HEX HD, GRADE 5	4.000 ea
09EP1505A02P	PULLEY ENDPLATE, MACH W/EPOXY PRIMER	1.000 ea
10XN3816K24	3/8-16 X 1.50 HEX HD CAP SCREW, GRADE 5	4.000 ea
HW1001A38	LOCKWASHER 3/8, ZINC PLT .688 OD, .382 I	4.000 ea
HW4600B42	V-RING SLINGER 2.375 X 3.070 X .28 VITON	1.000 ea
09FH1000A11P	FAN COVER, MACH P-BASE W/EPOXY PRIMER	1.000 ea
HW1001A38	LOCKWASHER 3/8, ZINC PLT .688 OD, .382 I	4.000 ea
XY3816A12	3/8-16 FINISHED NUT W/SERRATIONS	4.000 ea
HA6387P	EYE BRACKET PRIMED	2.000 ea
10XN3816K20	3/8-16 X 1.25 HEX HD CAP GRADE 5	4.000 ea
HW1001A38	LOCKWASHER 3/8, ZINC PLT .688 OD, .382 I	4.000 ea
XY3816A12	3/8-16 FINISHED NUT W/SERRATIONS	4.000 ea
09FH1500A01P	DRIP COVER, MACH W/EPOXY PRIMER	1.000 ea
10XN2520K30	STD.25X20 THD HEX HD CAP SCREW, GRADE 5	4.000 ea
HW1000A25	1/4 SAE FLAT WASHER (FS)	4.000 ea

12CB1503P	CONDUIT BOX LID, CAST W/EPOXY PRIMER	1.000 ea
12GS1002	GASKET, CONDUIT BOX LID, NEOP	1.000 ea
MJ5001A14	DYNAPRO SEALANT, CP MTR VC#2508050 (603	0.001 ea
LB1002N	LABEL,MARINE DUTY (ON ROLLS)	1.000 ea
10XN3118K18	5/16-18X1-1/8 HEX HD GR5	2.000 ea
HW1001A31	LOCKWASHER 5/16, ZINC PLT.591 OD, .319 I	2.000 ea
HW2501G18	SQUARE STEEL KEY .375 X 2.00 LONG	1.000 ea
MJ5001A27	32220KN GRAY SEALER *MIN BUY 4 QTS=1GAL	0.031 qt
MJ5001A14	DYNAPRO SEALANT, CP MTR VC#2508050 (603	0.023 ea
LB1182	WARNING LABEL FOR MOTORS WITH EYENUTS	2.000 ea
PK6014	STEEL STRAP FOR 309-312 BASELESS MOTORS	4.000 ea
19XW3118A08	.31-18 X .50 HEX WASHER HEAD TAPTITE II	4.000 ea
09EP1100A28LP5	FRONT ENDPLATE, MACH W/BLACK EPOXY PRIM	1.000 ea
HW4500A05	1669B ALEM/UNIV860 GR FTG X	1.000 ea
HW4500A17	317400 ALEMITE GREASE RELIEF	1.000 ea
HA4051A00	PLASTIC CAP FOR GREASE FITTING	1.000 ea
MJ1000A02	GREASE, POLYREX EM EXXON	0.080 lb
HW4500A03	GREASE FITTING, .125 NPT 1610(ALEMITE) 8	1.000 ea
HW4500A17	317400 ALEMITE GREASE RELIEF	1.000 ea
HA4051A00	PLASTIC CAP FOR GREASE FITTING	1.000 ea
HW2500A25	WOODRUFF KEY USA #1008 #BLOW CARBON STEE	1.000 ea
MG1025N19	WILKOFAS, 778.50, RELIANCE BLUE-GREEN 8	0.050 ga
85XU0407S04	4X1/4 U DRIVE PIN STAINLESS	4.000 ea
LB1624	COMBINED WARNING LABEL, ISO/ANSI PICTOGR	1.000 ea
LC0181	CONNECTION LABEL	1.000 ea
NP3241	SS SUPER-E INV UL CSA-EEV PREM CC	1.000 ea
18PA1014	PKG. GRP., 09-10 VERTICAL MOUNT	1.000 ea
LB1449	DIV-2/NEC WARNING LABEL	1.000 ea
MN416A01	TAG-INSTAL-MAINT no wire (2500 bx)11/25	1.000 ea
LD7020E09	LEAD SET, 10AWG, 9 LEAD, 20" LONG LEADS	1.000 ea

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	Starting Current		198 A	
Service Factor (S.F.)		1.15	No-load Current		10.4 A			
NEMA Nom. Eff.		93	Power Factor		83	Line-line Res. @ 25°C		0.33814 Ω
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

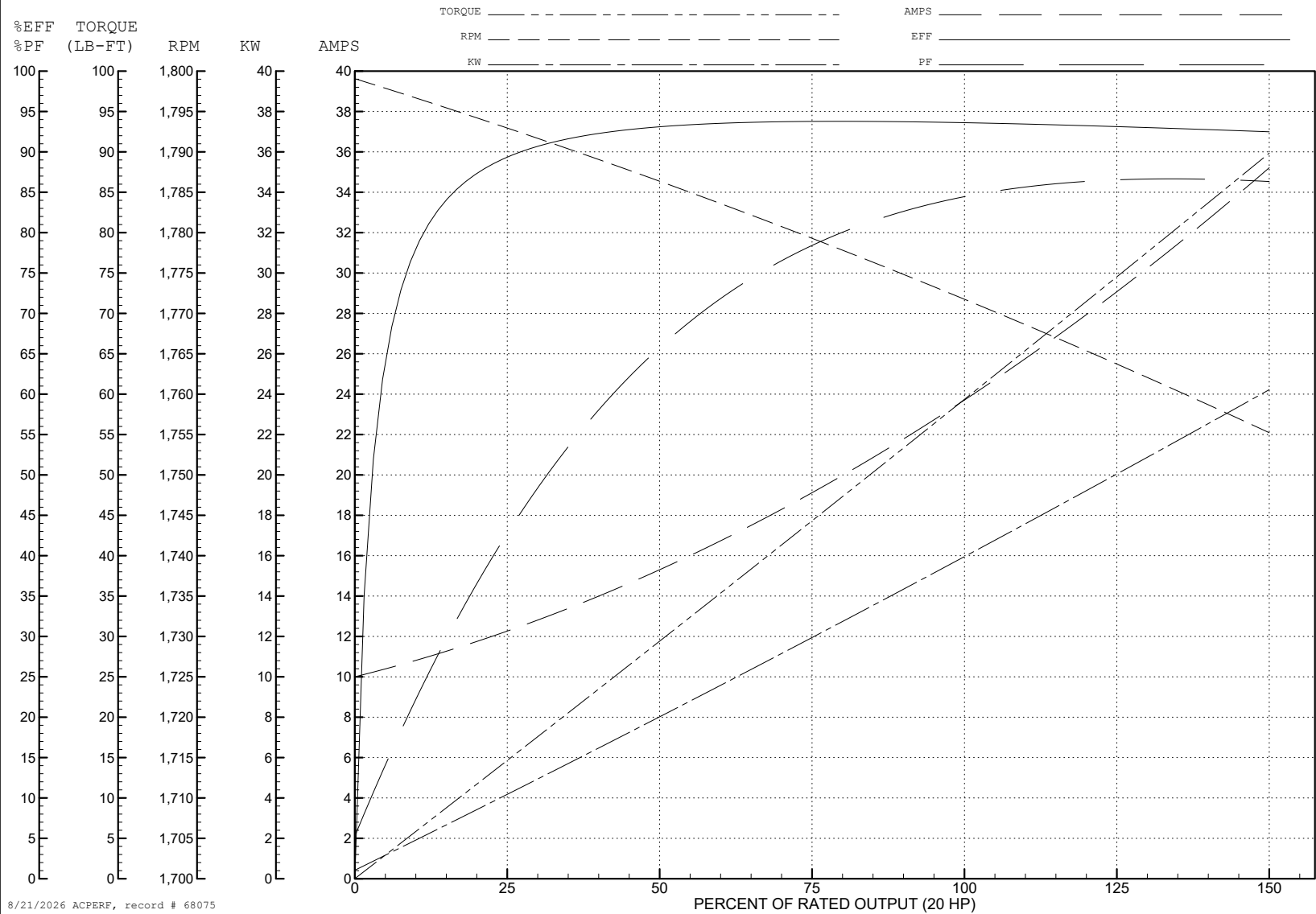
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WINDING # 09WGT459

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

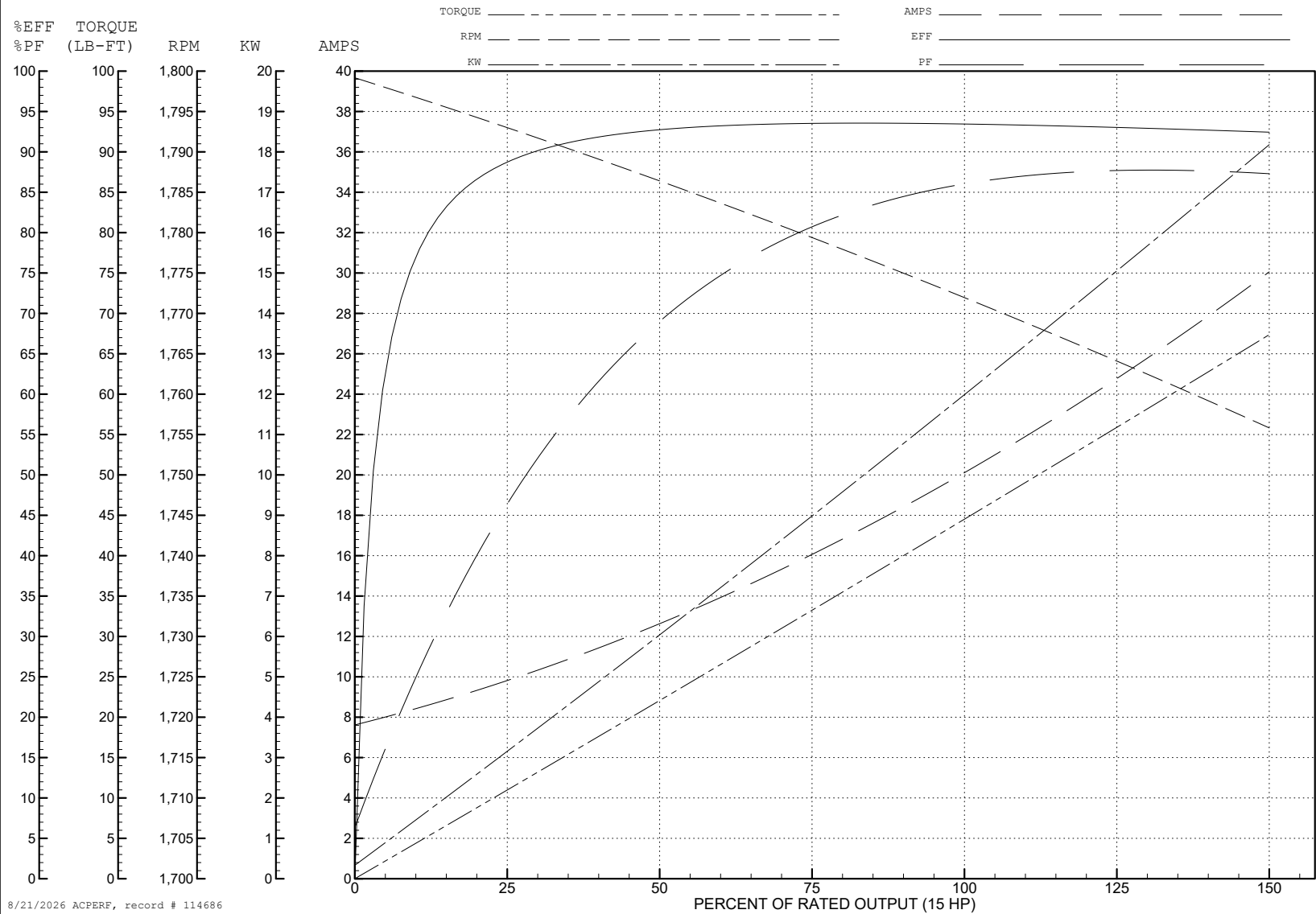
ABB Motors and Mechanical Inc.

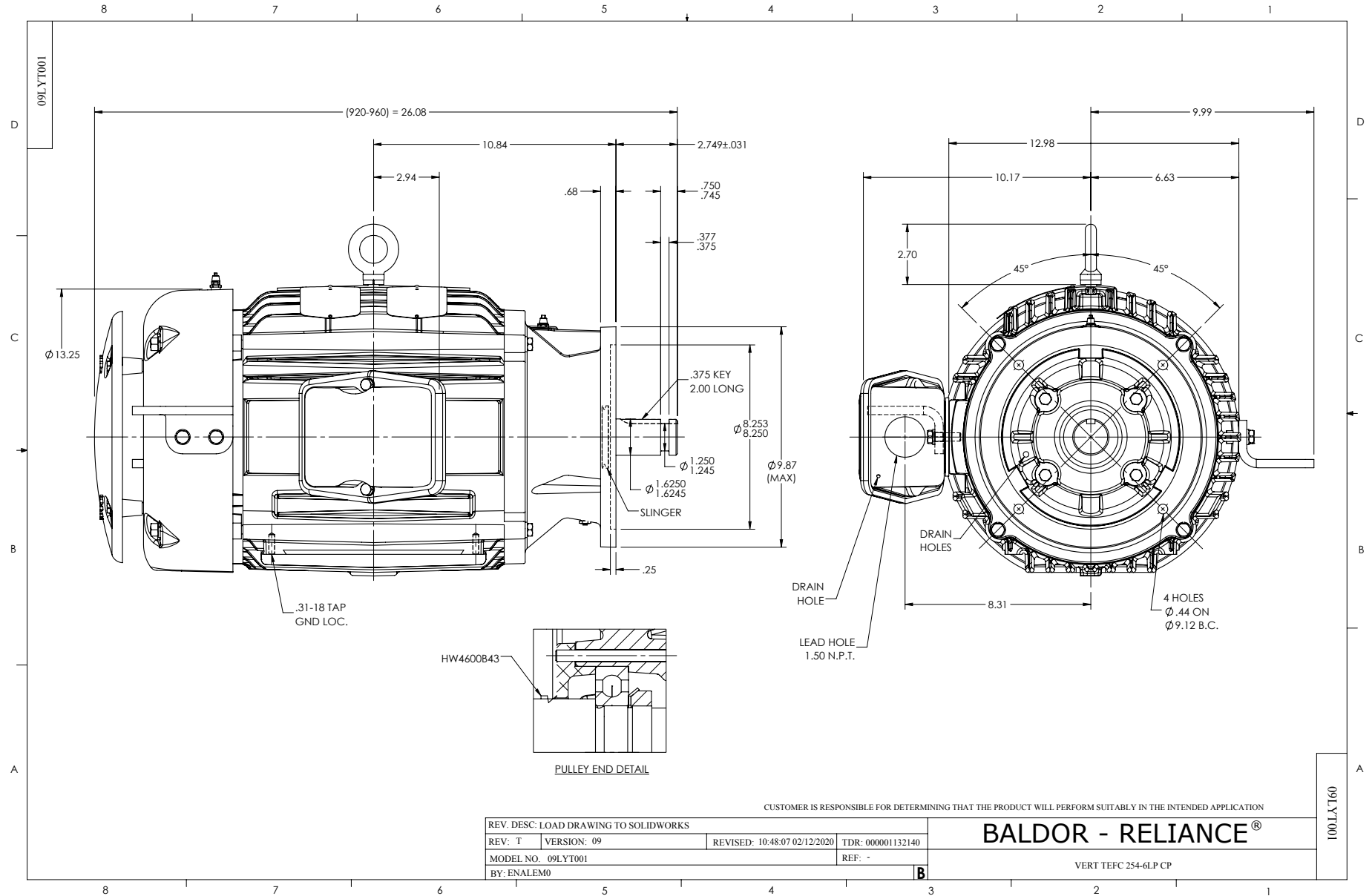
WINDING # 09WGT459

Typical performance - not guaranteed values.

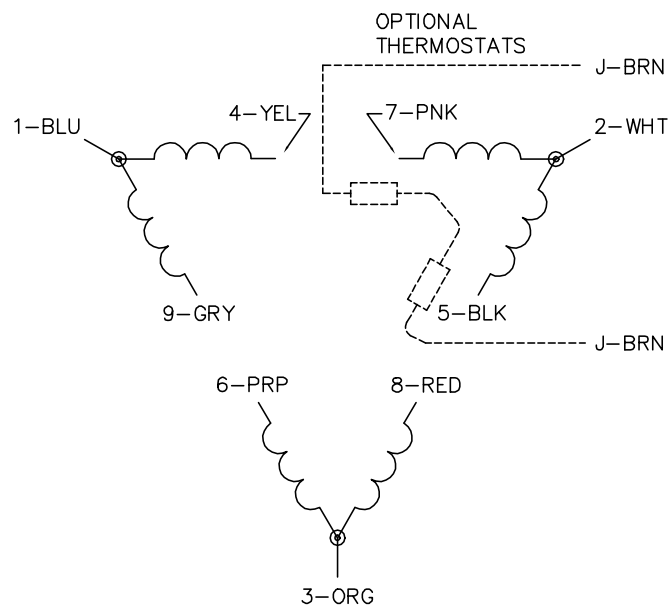
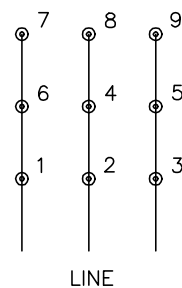
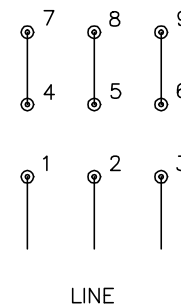
15 HP 3 PH 60 HZ 1770 RPM 400 V 0960M

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.

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

SH 1 of 1

CD0180