

ABB BALDOR RELIANCE III

Customer information packet

VDRX25244T

20HP, 1770//1470RPM, 3PH, 60/50HZ, 256TC, XPF

Class - CLI GP C,D

Division - Division I

Specifications

Enclosure	XPFC
Frame	256TC
Frame Material	Iron
Frequency	50.00 Hz 60.00 Hz
Haz Area Class and Group	CLI GP C,D
Haz Area Division	Division I
Motor Letter Type	Three Phase
Output @ Frequency	15.000 HP @ 50 HZ 20.000 HP @ 60 HZ
Phase	3
Synchronous Speed @ Frequency	1800 RPM @ 60 HZ
Voltage @ Frequency	380.0 V @ 50 HZ 230.0 V @ 60 HZ 190.0 V @ 50 HZ 460.0 V @ 60 HZ
Agency Approvals	CSA EEV UL
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	6
Current @ Voltage	52.000 A @ 208.0 V 48.000 A @ 230.0 V 44.000 A @ 190.0 V 24.000 A @ 460.0 V 22.000 A @ 380.0 V
Design Code	A
Drip Cover	No Drip Cover

Part Detail

Revision	K
Type	AC
Mech. spec.	
Base	
Status	PRD/A
Elec. spec.	09WGT459
Layout	09LYF525
Eff. date	02-14-2024
CD Diagram	CD0180
Poles	04
Leads	9#10
Proprietary	False
Created date	06-06-2019

Duty Rating	CONT
Efficiency @ 100% Load	93.0 %
Electrically Isolated Bearing	Not Electrically Isolated
Feedback Device	NO FEEDBACK
Haz Area Temp Code	T3C
Heater Indicator	No Heater
High Voltage Full Load Amps	22.0 a
Insulation Class	F
Inverter Code	Inverter Duty
IP Rating	NONE
KVA Code	J
Lifting Lugs	Standard Lifting Lugs
Locked Bearing Indicator	Locked Bearing
Max Speed	2700 rpm
Motor Lead Termination	Flying Leads
Motor Standards	NEMA
Motor Type	0960M
Mounting Arrangement	F1
Number of Poles	4
Overall Length	26.00 IN
Power Factor	83
Product Family	Hazardous Location Motor
Pulley Face Code	C-Face
Rodent Screen	None
RoHS Status	ROHS NON-COMPLIANT
Service Factor	1.00
Shaft Diameter	1.625 IN
Shaft Ground Indicator	No Shaft Grounding
Shaft Rotation	Reversible
Speed	1770 rpm
Speed Code	Single Speed
Starting Method	Direct on line
Thermal Device - Bearing	None
Thermal Device - Winding	Normally Closed Thermostat

Vibration Sensor Indicator	No Vibration Sensor
Winding Thermal 1	None
Winding Thermal 2	None

Nameplate

NP1401XPSLEV											
NO.						CC	010A				
S/N						TEMP CODE	T3C				
SPEC.	09-0000-1467					INV.TYPE	PWM				
CAT.NO.	VDRX25244T					C HP FR	60	C HP TO	90		
HP	20//15					CT HZ FROM	6	CT HZ TO	60		
VOLTS	230/460//190/380					VT HZ FROM	6	VT HZ TO	60		
AMPS	48/24//44/22					MAG CUR	20.8/10.4				
RPM	1770//1470					MX RPM	2700				
HZ	60//50	PH	3	CL	F	NOM.EFF.	93				
SER.F.	1.00	DES	A	SL HZ	1	WK2	2.62				
FRAME	256TC	RATING		40C AMB-CONT							
	55C AMB @ 1.0 SF, 60C RISE										
	1.15SF ON SINEWAVE					NEMA MG-1 PT.5,IP55					

Parts List

Part number	Description	Quantity
SA370410	SA 09-0000-1467	1.000 ea
RA360060	RA 09-0000-1467	1.000 ea
LB1624	COMBINED WARNING LABEL, ISO/ANSI PICTOGR	1.000 ea
LC0181	CONNECTION LABEL	1.000 ea
NP1401XPSLEV	SS XP INV UL CSA-EEV CC CL-I GP-C&D	1.000 ea
85XU0407S04	4X1/4 U DRIVE PIN STAINLESS	2.000 ea
85XU0407S04	4X1/4 U DRIVE PIN STAINLESS	4.000 ea
MN416A01	TAG-INSTAL-MAINT no wire (2500 bx)11/25	1.000 ea
LB1081Z	ALUM XP CAUTION LABEL (ZK PLANT ONLY-	1.000 ea
HW3201A01	1/2-13 EYEBOLT	1.000 ea
HW1002A63	WASHER, 5/8 HI-COLLAR SPRICKWASHER	1.000 ea
HA1025A03	FELT WSH 2.1875 OD X 1.170 ID X .25 #321	8.000 ea
09FH1004A48P	FAN COVER, MACH, W/GRSR, RLF & DRN HOLE	1.000 ea
HW1001A25	LOCKWASHER 1/4, ZINC PLT .493 OD, .255 I	3.000 ea
10XN2520K14	1/4-20 X .88 HEX GRD 5 (20001)	3.000 ea
LD7020E09	LEAD SET, 10AWG, 9 LEAD, 20" LONG LEADS	1.000 ea
37FN3002B02	EXFN, PLASTIC, 7.50 OD, 1.503 ID	1.000 ea
HW2500A25	WOODRUFF KEY USA #1008 #BLOW CARBON STEE	1.000 ea
MJ1000A02	GREASE, POLYREX EM EXXON	0.080 lb
09EP1700A65PP15	FR ENDPLATE, MACH, XPFC W/DRN HW4505A02	1.000 ea
10XN3816K28	3/8-16 X 1.75 HEX HD CAP SCREW, GRADE 5	4.000 ea
HW1001A38	LOCKWASHER 3/8, ZINC PLT .688 OD, .382 I	4.000 ea
HA2065A03	ALUM SLINGER 208 BRGS DRILL RIG MOTOR	1.000 ea
80XN1032J07	10-32 X 7/16 SET SCREW, HEX SOC, CUP PT	2.000 ea
80XN1032J07	10-32 X 7/16 SET SCREW, HEX SOC, CUP PT	1.000 ea
HW5100A08	W3118-035 WVY WSHR (WB)	1.000 ea
HA4017A03	.125 X 1.75 GREASE EXT (F/S)	1.000 ea
HA4017A08	.125 X 3.50 LGTH GREASER EXTEN.	1.000 ea
HW4019A01	PIPE COUPLING 1/8 NPT,STEEL,ZINC COATING	1.000 ea
HA4051A00	PLASTIC CAP FOR GREASE FITTING	1.000 ea
HW4500A21	1618BALEMITE FITTING 825 UNIVERSAL	1.000 ea

HW4500A17	317400 ALEMITE GREASE RELIEF	1.000 ea
HW4505A02	BREATHER/DRAIN-EXP PROOF-.250-18 PTF AIS	1.000 ea
HW3023E06	.125 X .625 SPIRAL SPRING PIN	1.000 ea
09EP1708A19P	PUEP, MACH W/METAL SLINGER & HW4505A02 W	1.000 ea
HW1001A38	LOCKWASHER 3/8, ZINC PLT .688 OD, .382 I	4.000 ea
10XN3816K28	3/8-16 X 1.75 HEX HD CAP SCREW, GRADE 5	4.000 ea
HA2066A01	ALUM SLINGER 309 BRG DRILL RIG MOTOR	1.000 ea
10XN2520K36	1/4-20 X 2.25" HX HD SCRWGRADE 5, ZINC P	4.000 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
HW4505A02	BREATHER/DRAIN-EXP PROOF-.250-18 PTF AIS	1.000 ea
HW3023E06	.125 X .625 SPIRAL SPRING PIN	1.000 ea
09CB1003A01P	KOBX, MACH 1.25 NPT GROUP C MTRS PRIMED	1.000 ea
10XN3118K24	5/16-18 X 1.50" HEX HD, GRADE 5	4.000 ea
HW1001A31	LOCKWASHER 5/16, ZINC PLT.591 OD, .319 I	4.000 ea
WD1000B25	GND LUG, BURNDY L125HP OR T&B L125HP-BB	1.000 ea
10XN3118K12	5/16-18 X .75 GRADE 5, ZINC PLATED	1.000 ea
HW1001A31	LOCKWASHER 5/16, ZINC PLT.591 OD, .319 I	1.000 ea
09CB1502A01P	CONDUIT BOX LID MACH. GROUP C MTRS W/EP	1.000 ea
84XN5013J24	1/2-13 X 1-1/2 HEX SOCKET HD CAP SCREW	6.000 ea
HW1001A50	LOCKWASHER 1/2, ZINC PLT,.879 OD, .509 I	6.000 ea
MG1025G29	WILKOFAS, 789.229, DARK CHARCOAL GRAY	0.070 ga
PK6014	STEEL STRAP FOR 309-312 BASELESS MOTORS	4.000 ea
40PA1017	PACKAGING GROUP, 09 VERT LARGE FLANGE	1.000 ea
19XW3118A08	.31-18 X .50 HEX WASHER HEAD TAPTITE II	4.000 ea
HW2501G25	KEY, 3/8 SQ X 2.875	1.000 ea
MJ5000A09	EFI KIT #1578 (400 ML CARTRIDGE OF EFI	0.200 ea
MJ5001A27	32220KN GRAY SEALER *MIN BUY 4 QTS=1GAL	0.001 qt

AC Induction Motor Performance Data

Record # 68068

Typical performance - not guaranteed values

Winding: 09WGT459-R009			Type: 0960M		Enclosure: XPFC			
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	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	
					Locked-rotor Power Factor		26.5	

Load Characteristics 460 V, 60 Hz, 20 HP

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

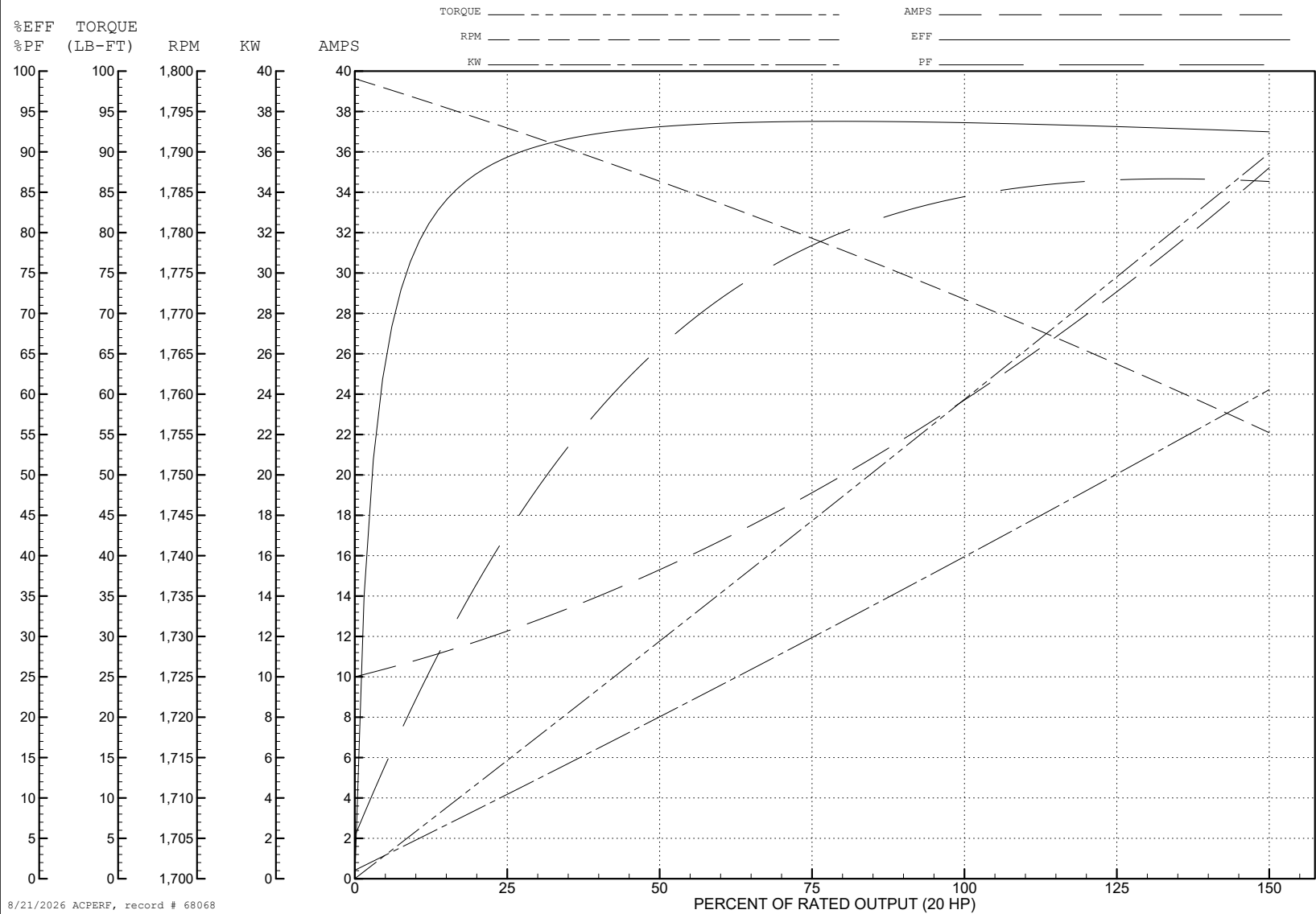
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WINDING # 09WGT459

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 # 75710

Typical performance - not guaranteed values

Winding: 09WGT459-R033				Type: 0960M		Enclosure: XPFC	
Nameplate Data				380 V, 50 Hz: High Voltage Connection			
Rated Output (HP)		20//15		Full Load Torque		53.39 LB-FT	
Volts		230/460//190/380		Start Configuration		direct on line	
Full Load Amps		48/24//44/22		Breakdown Torque		224 LB-FT	
R.P.M.		1770//1470		Pull-up Torque		130 LB-FT	
Hz	60//50	Phase	3	Locked-rotor Torque		146 LB-FT	
NEMA Design Code		A	KVA Code	J	Starting Current		193 A
Service Factor (S.F.)		1		No-load Current		10.15 A	
NEMA Nom. Eff.		93	Power Factor	83	Line-line Res. @ 25°C		0.332 Ω
Rating - Duty		40C AMB-CONT		Temp. Rise @ Rated Load		50°C	
				Locked-rotor Power Factor		29.8	
				Rotor inertia		2.65 lb-ft²	

Load Characteristics 380 V, 50 Hz, 15 HP

% of Rated Load	25	50	75	100	125	150
Power Factor	43	65	77	83	85	87
Efficiency	89.1	92.8	93.5	93.4	92.8	92.1
Speed	1494	1488	1481	1475	1467	1460
Line amperes	11.28	14	17.72	21.99	26.74	31.76

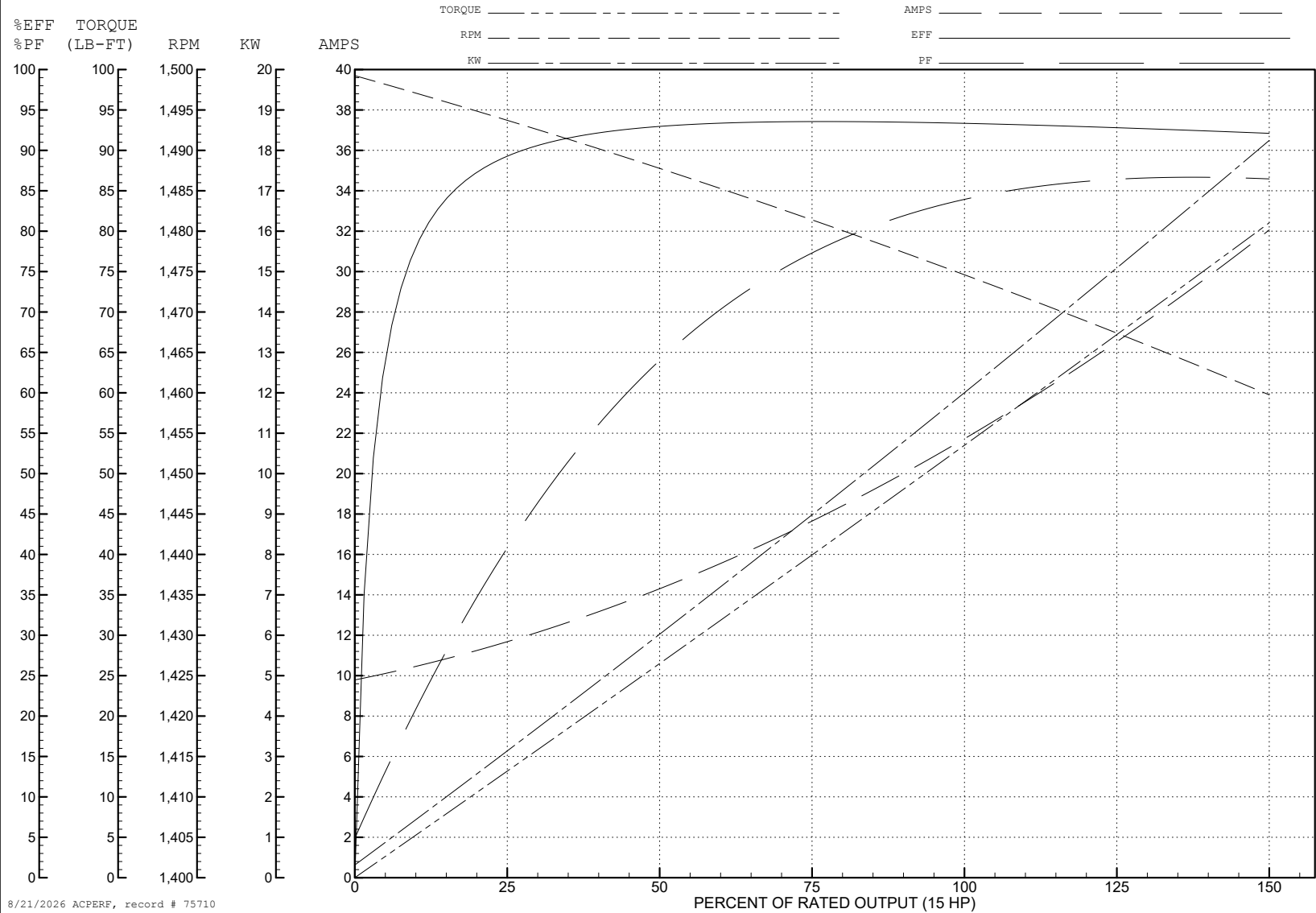
ABB Motors and Mechanical Inc.

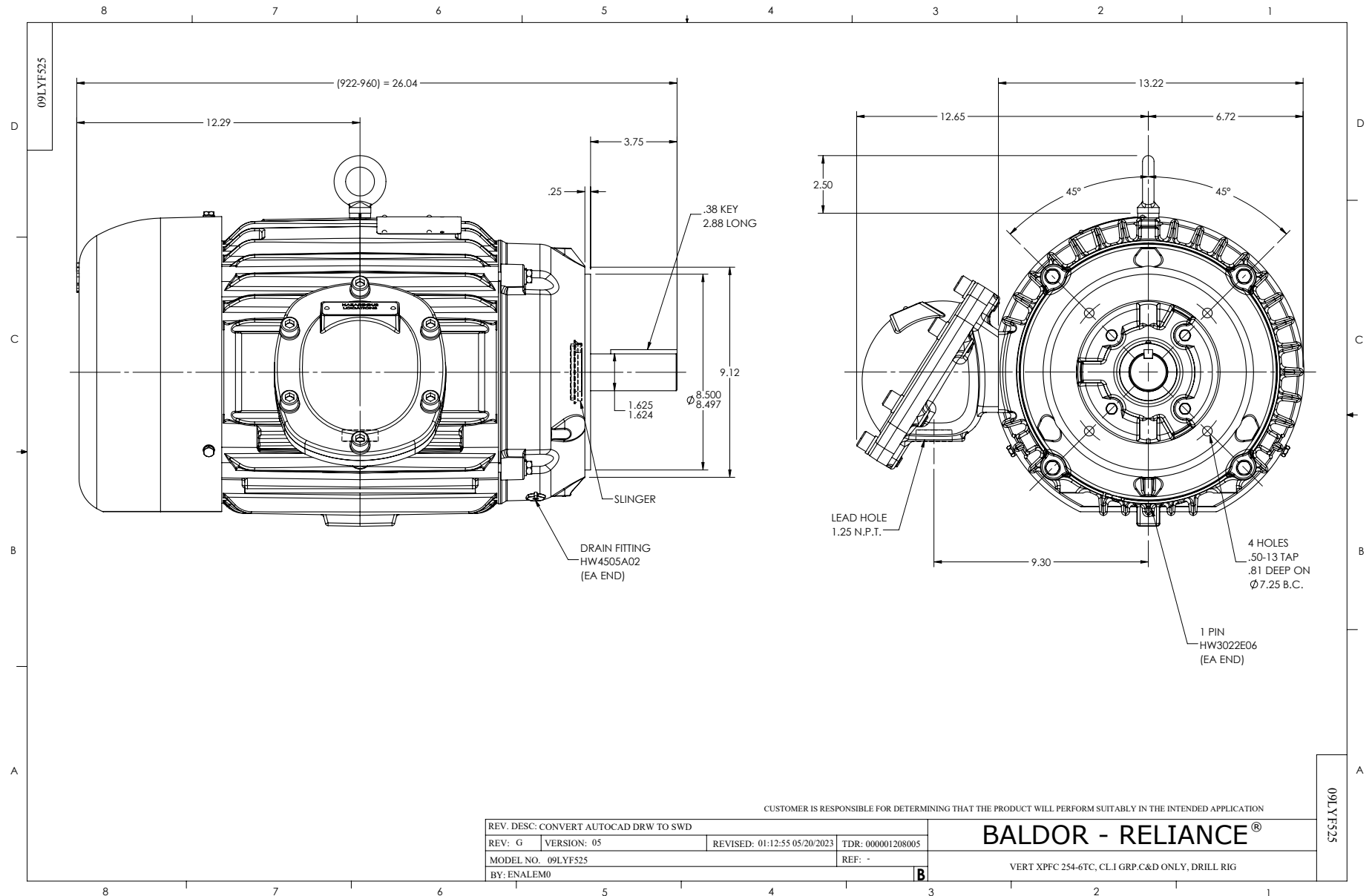
WINDING # 09WGT459

Typical performance - not guaranteed values.

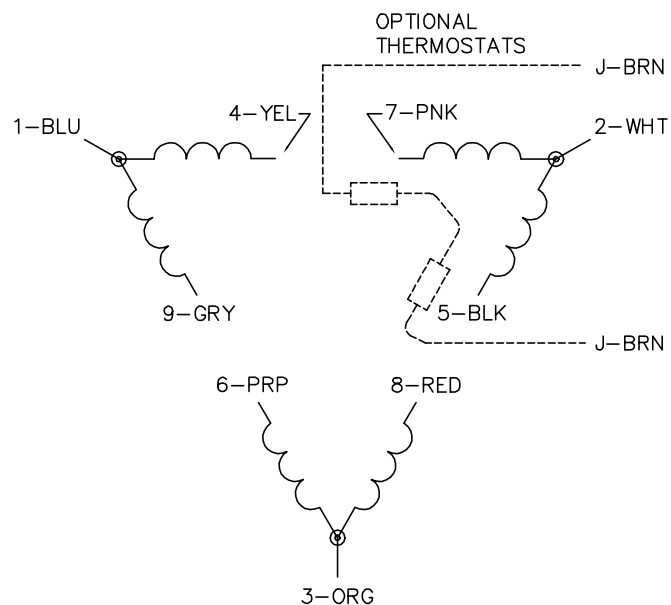
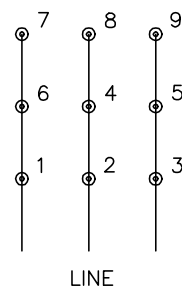
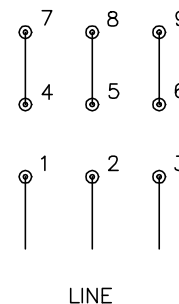
15 HP 3 PH 50 HZ 1475 RPM 380 V 0960M

TORQUES (LB-FT): PO=224 PU=130 LR=146 LRA=193





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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