

**BALDOR® • RELIANCE** 

**Product Information Packet**

**EM4112T**

**20HP,880RPM,3PH,60HZ,324T,1252M,TEFC,F1**

Part Detail							
Revision:	K	Status:	PRD/A	Change #:		Proprietary:	No
Type:	AC	Elec. Spec:	12WGY615	CD Diagram:	CD0180	Mfg Plant:	
Mech. Spec:	12C51	Layout:	12LYC051	Poles:	08	Created Date:	04-07-2015
Base:	RG	Eff. Date:	06-28-2021	Leads:	9#10		

Specs			
Catalog Number:	EM4112T	Insulation Class:	F
Enclosure:	TEFC	Inverter Code:	Inverter Ready
Frame:	324T	IP Rating:	NONE
Frame Material:	Iron	KVA Code:	H
Output @ Frequency:	20.000 HP @ 60 HZ	Lifting Lugs:	Standard Lifting Lugs
Synchronous Speed @ Frequency:	900 RPM @ 60 HZ	Locked Bearing Indicator:	Locked Bearing
Voltage @ Frequency:	460.0 V @ 60 HZ	Motor Lead Quantity/Wire Size:	9 @ 10 AWG
	230.0 V @ 60 HZ	Motor Lead Exit:	Ko Box
XP Class and Group:	None	Motor Lead Termination:	Flying Leads
XP Division:	Not Applicable	Motor Type:	1252M
Agency Approvals:	UR	Mounting Arrangement:	F1
	CSA EEV	Power Factor:	60
	CSA	Product Family:	General Purpose
Auxillary Box:	No Auxillary Box	Pulley End Bearing Type:	Ball
Auxillary Box Lead Termination:	None	Pulley Face Code:	Standard
Base Indicator:	Rigid	Pulley Shaft Indicator:	Standard
Bearing Grease Type:	Polyrex EM (-20F +300F)	Rodent Screen:	None
Blower:	None	Shaft Extension Location:	Pulley End

<b>Current @ Voltage:</b>	35.000 A @ 460.0 V	<b>Shaft Ground Indicator:</b>	No Shaft Grounding
	66.000 A @ 208.0 V	<b>Shaft Rotation:</b>	Reversible
	70.000 A @ 230.0 V	<b>Shaft Slinger Indicator:</b>	Shaft Slinger
<b>Design Code:</b>	B	<b>Speed Code:</b>	Single Speed
<b>Drip Cover:</b>	No Drip Cover	<b>Motor Standards:</b>	NEMA
<b>Duty Rating:</b>	CONT	<b>Starting Method:</b>	Direct on line
<b>Electrically Isolated Bearing:</b>	Not Electrically Isolated	<b>Thermal Device - Bearing:</b>	None
<b>Feedback Device:</b>	NO FEEDBACK	<b>Thermal Device - Winding:</b>	None
<b>Front Face Code:</b>	Standard	<b>Vibration Sensor Indicator:</b>	No Vibration Sensor
<b>Front Shaft Indicator:</b>	None	<b>Winding Thermal 1:</b>	None
<b>Heater Indicator:</b>	No Heater	<b>Winding Thermal 2:</b>	None

Nameplate NP2138L												
CAT.NO.	EM4112T			P/N				ENCLOSURE	TEFC			
SPEC.	12C051Y615G1		CC	010A		FRAME	324T		S/N			
HP	20			CLASS	F		HZ	60				
RPM	880			PH	3		DES	B				
VOLT	230/460				KVA-CODE	H		ODE BRG	6311		DE BRG	6312
AMP	70/35			USABLE AT 208V	66							
RATING	40C AMB-CONT			GREASE	POLYREX EM							
NEMA-NOM-EFF	90.2	PF	60	SER.F.	1.15							
HTR-VOLTS			HTR-AMPS									

Parts List		
Part Number	Description	Quantity
SA296443	SA 12C051Y615G1	1.000 EA
RA282483	RA 12C051Y615G1	1.000 EA
10CB3001	CONDUIT BOX CAST W/2.500 LEAD HOLE	1.000 EA
09GS1000SP	GASKET-CONDUIT BOX, 1/16 THICK LEXIDE	1.000 EA
10XN3118K12	5/16-18 X .75 GRADE 5, ZINC PLATED	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
19XW3118G08	.31-18X.50,HEX WSHR HD,TAPTITE 2,GREEN	1.000 EA
HA3400A13	STUD, 1/2-13 X 7" WELKER	4.000 EA
HW1001A50	LOCKWASHER 1/2, ZINC PLT.,.879 OD, .509 I	4.000 EA
HW5100A13	W4627-047 WVY WSHER	1.000 EA
10XN3118K40	5/16-18 X 2.25" HEX HD, GRADE 5	2.000 EA
HW1001A31	LOCKWASHER 5/16, ZINC PLT.591 OD, .319 I	2.000 EA
12EP1106A01	PU ENDPLATE, MACH	1.000 EA
HW4600B41	V-RING SLINGER 2.125 X 2.880 X 0.280	1.000 EA
10XN5013K28	1/2-13 X 1.75 HEX HEAD MACH SCREW,GRAD	4.000 EA
HW1001A50	LOCKWASHER 1/2, ZINC PLT.,.879 OD, .509 I	4.000 EA
10XN3118K40	5/16-18 X 2.50" HEX HD, GRADE 5	4.000 EA
HW1001A31	LOCKWASHER 5/16, ZINC PLT.591 OD, .319 I	4.000 EA
12FH1002SP	FAN COVER, CAST	1.000 EA
HW1001A50	LOCKWASHER 1/2, ZINC PLT.,.879 OD, .509 I	4.000 EA
XY5013A12	NUT,1/2-13,HEX,STEEL,ZINCPLATED	4.000 EA
10CB3500SP	CONDUIT BOX LID, CAST	1.000 EA
10GS1000SP	GASKET, CONDUIT BOX LID	1.000 EA

Parts List (continued)		
Part Number	Description	Quantity
51XW2520A12	.25-20 X .75, TAPTITE II, HEX WSHR SLTD	4.000 EA
HW2501H33	KEY, 1/2 SQ X 3.875	1.000 EA
LB1115N	LABEL,LIFTING DEVICE (ON ROLLS)	1.000 EA
12EP1107A05	FR ENDPLATE, MACH	1.000 EA
HW4500A21	1618BALEMITE FITTING 825 UNIVERSAL	1.000 EA
HA4017A01	1/8 X 4 GREASE EXT (F/S)	1.000 EA
HW4500A17	317400 ALEMITE GREASE RELIEF	1.000 EA
HA4054	SHORT T-DRAIN FITTING, .125" N.P.T.	1.000 EA
HA4051A00	PLASTIC CAP FOR GREASE FITTING	1.000 EA
MJ1000A02	GREASE, MOBIL POLYREX EM - 124047	0.200 LB
HW4500A03	GREASE FITTING, .125 NPT 1610(ALEMITE) 8	1.000 EA
HW4500A17	317400 ALEMITE GREASE RELIEF	1.000 EA
HA4054	SHORT T-DRAIN FITTING, .125" N.P.T.	1.000 EA
HA4051A00	PLASTIC CAP FOR GREASE FITTING	1.000 EA
09FN3001B03SP	EXTERNAL FAN, PLASTIC (COMES W/SCREW FRO	1.000 EA
HW2500A25	WOODRUFF KEY USA #1008 #BLOW CARBON STEE	1.000 EA
MG1000Y03	MUNSELL 2.53Y 6.70/ 4.60, GLOSS 20,	0.080 GA
85XU0407S04	4X1/4 U DRIVE PIN STAINLESS	4.000 EA
LB1119N	WARNING LABEL	1.000 EA
LC0181	CONNECTION LABEL	1.000 EA
NP2138L	ALUM SUPER-E UL CSA-EEV PREM CC (300	1.000 EA
12PA1000	PACKAGING GROUP PRINT PK1024A07	1.000 EA
MN416A01	TAG-INSTAL-MAINT no wire (2100/bx) 4/22	1.000 EA
PE-0000013	ZRTG PE ASSEMBLY	1.000 EA

FE-000022	ZRTG FE ASSEMBLY	1.000 EA
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**AC Induction Motor Performance Data**

Record # 53038

Typical performance - not guaranteed values

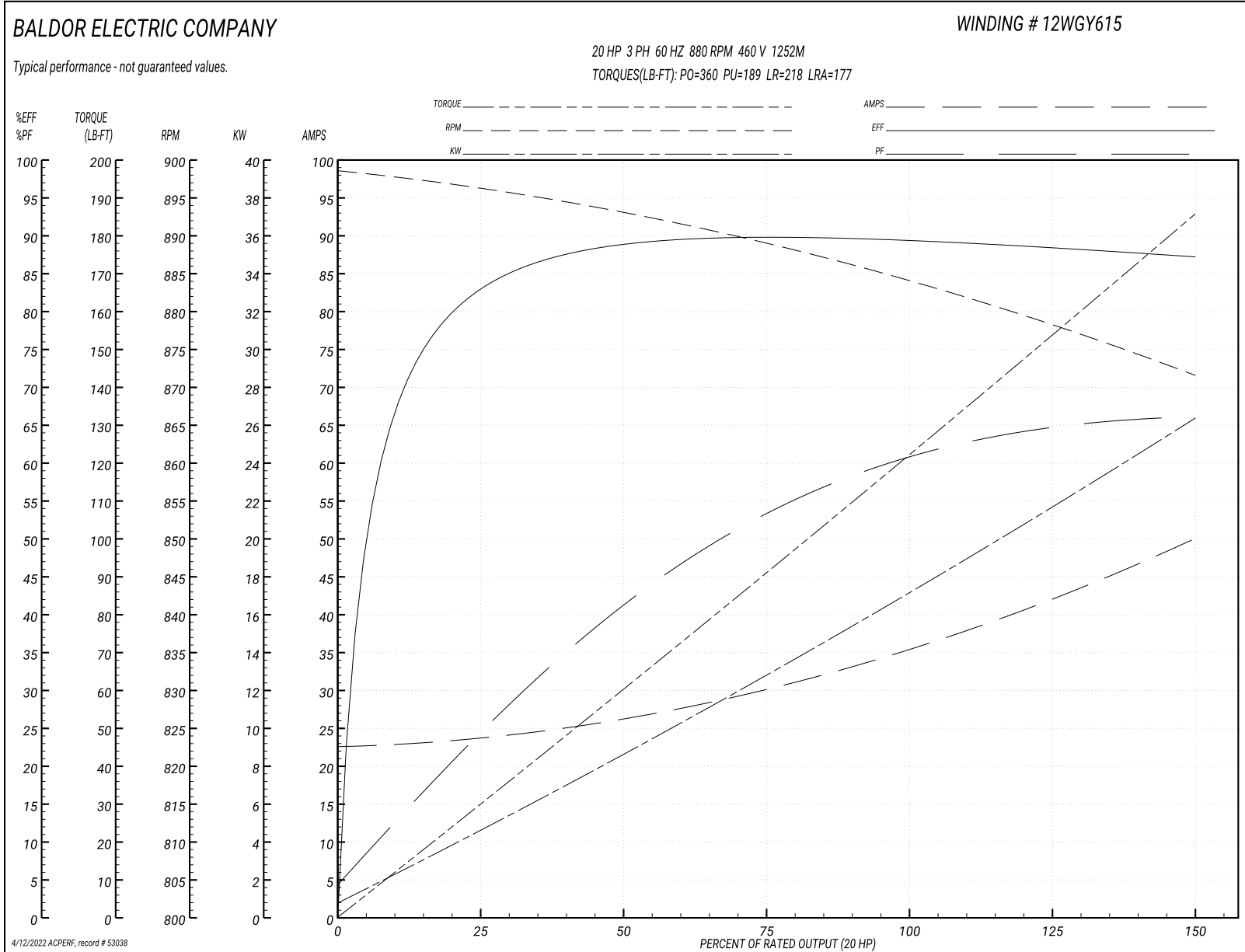
<b>Winding: 12WGY615-R007</b>		<b>Type: 1252M</b>		<b>Enclosure: TEFC</b>	
<b>Nameplate Data</b>			<b>460 V, 60 Hz: High Voltage Connection</b>		
<b>Rated Output (HP)</b>	20	<b>Full Load Torque</b>	119 LB-FT		
<b>Volts</b>	230/460	<b>Start Configuration</b>	direct on line		
<b>Full Load Amps</b>	70/35	<b>Breakdown Torque</b>	360 LB-FT		
<b>R.P.M.</b>	880	<b>Pull-up Torque</b>	189 LB-FT		
<b>Hz</b>	60 <b>Phase</b>	3	<b>Locked-rotor Torque</b>	218 LB-FT	
<b>NEMA Design Code</b>	<b>B KVA Code</b>	H	<b>Starting Current</b>	177 A	
<b>Service Factor (S.F.)</b>	1.15	<b>No-load Current</b>	22.7 A		
<b>NEMA Nom. Eff.</b>	90.2	<b>Power Factor</b>	60	<b>Line-line Res. @ 25°C</b>	0.397 Ω
<b>Rating - Duty</b>	40C AMB-CONT		<b>Temp. Rise @ Rated Load</b>	58°C	
<b>S.F. Amps</b>			<b>Temp. Rise @ S.F. Load</b>	68°C	
			<b>Locked-rotor Power Factor</b>	37.5	
			<b>Rotor inertia</b>	9.9 LB-FT <sup>2</sup>	

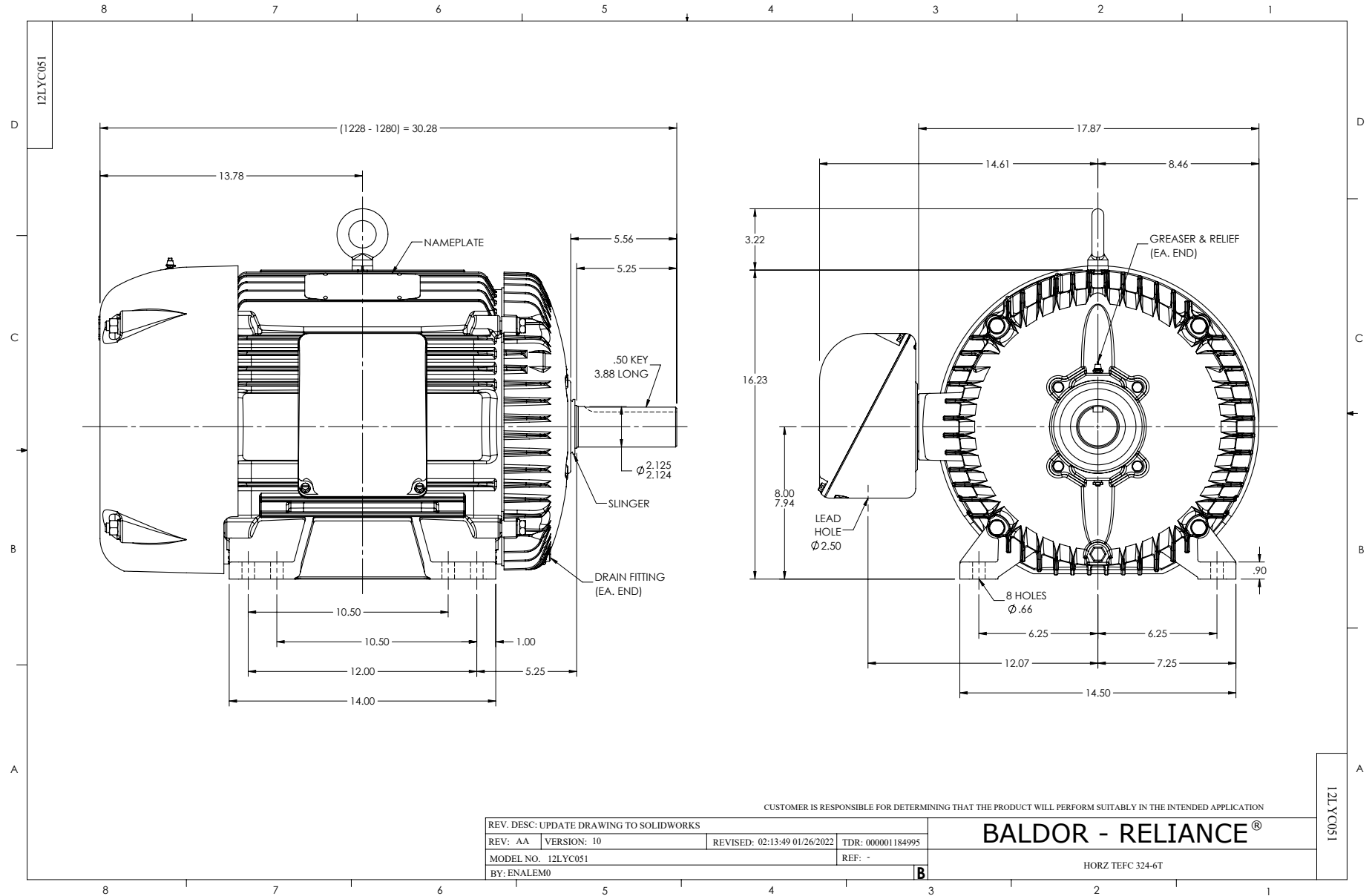
**Load Characteristics 460 V, 60 Hz, 20 HP**

<b>% of Rated Load</b>	<b>25</b>	<b>50</b>	<b>75</b>	<b>100</b>	<b>125</b>	<b>150</b>	<b>S.F.</b>
<b>Power Factor</b>	25	41	52	60	65	66	63
<b>Efficiency</b>	81.2	87.7	89.5	90.2	88.9	87	89.5
<b>Speed</b>	896	893	889	885	880	871	882
<b>Line amperes</b>	23.4	26.1	30	34.9	40.7	50.2	38.4

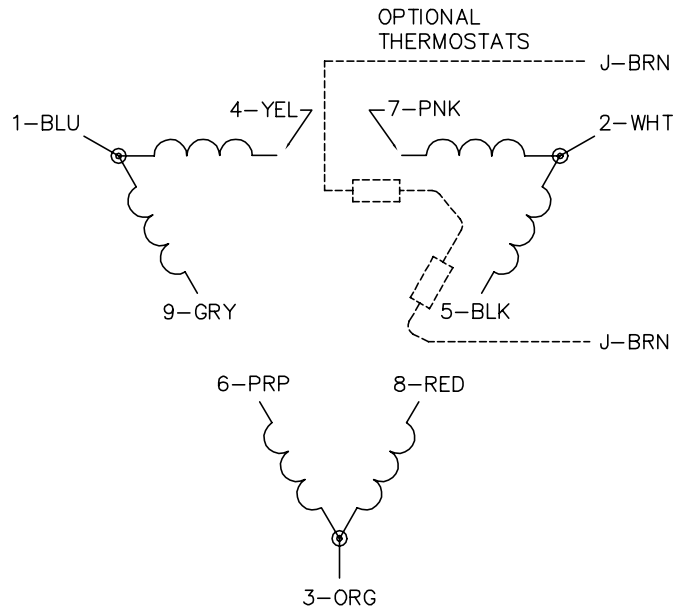


Performance Graph at 460V, 60Hz, 20.0HP Typical performance - Not guaranteed values

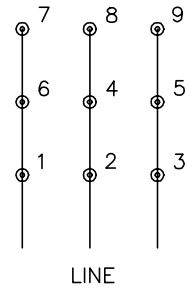




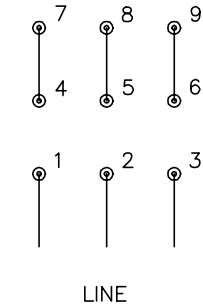
CD0180



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

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**BALDOR - RELIANCE®**

3PH, DV, 9 LEADS, DELTA CONNECTION

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