

**BALDOR® • RELIANCE** 

**Product Information Packet**

**EM4106T-5**

**20HP,3520RPM,3PH,60HZ,256T,0936M,TEFC,F1**

Part Detail							
Revision:	AB	Status:	PRD/A	Change #:		Proprietary:	No
Type:	AC	Elec. Spec:	09WGZ699	CD Diagram:	CD0006	Mfg Plant:	
Mech. Spec:	09P11	Layout:	09LYP011	Poles:	02	Created Date:	08-08-2016
Base:	RG	Eff. Date:	05-05-2021	Leads:	3#12		

Specs			
Catalog Number:	EM4106T-5	Insulation Class:	F
Enclosure:	TEFC	Inverter Code:	Inverter Ready
Frame:	256T	KVA Code:	H
Frame Material:	Iron	Lifting Lugs:	Standard Lifting Lugs
Motor Letter Type:	Three Phase	Locked Bearing Indicator:	Locked Bearing
Output @ Frequency:	20.000 HP @ 60 HZ	Motor Lead Quantity/Wire Size:	3 @ 12 AWG
Synchronous Speed @ Frequency:	3600 RPM @ 60 HZ	Motor Lead Exit:	Ko Box
Voltage @ Frequency:	575.0 V @ 60 HZ	Motor Lead Termination:	Flying Leads
XP Class and Group:	None	Motor Type:	0936M
XP Division:	Not Applicable	Mounting Arrangement:	F1
Agency Approvals:	CSA	Power Factor:	88
	CSA EEV	Product Family:	General Purpose
	UR	Pulley End Bearing Type:	Ball
Auxillary Box:	No Auxillary Box	Pulley Face Code:	Standard
Auxillary Box Lead Termination:	None	Pulley Shaft Indicator:	Standard
Base Indicator:	Rigid	Rodent Screen:	None
Bearing Grease Type:	Polyrex EM (-20F +300F)	Shaft Extension Location:	Pulley End
Blower:	None	Shaft Ground Indicator:	No Shaft Grounding

<b>Current @ Voltage:</b>	18.000 A @ 575.0 V	<b>Shaft Rotation:</b>	Reversible
<b>Design Code:</b>	A	<b>Shaft Slinger Indicator:</b>	Shaft Slinger
<b>Drip Cover:</b>	No Drip Cover	<b>Speed Code:</b>	Single Speed
<b>Duty Rating:</b>	CONT	<b>Motor Standards:</b>	NEMA
<b>Electrically Isolated Bearing:</b>	Not Electrically Isolated	<b>Starting Method:</b>	Direct on line
<b>Feedback Device:</b>	NO FEEDBACK	<b>Thermal Device - Bearing:</b>	None
<b>Front Face Code:</b>	Standard	<b>Thermal Device - Winding:</b>	None
<b>Front Shaft Indicator:</b>	None	<b>Vibration Sensor Indicator:</b>	No Vibration Sensor
<b>Heater Indicator:</b>	No Heater	<b>Winding Thermal 1:</b>	None
		<b>Winding Thermal 2:</b>	None

<b>Nameplate NP3441L</b>										
<b>CAT.NO.</b>	EM4106T-5									
<b>SPEC.</b>	09P011Z699									
<b>HP</b>	20									
<b>VOLTS</b>	575									
<b>AMP</b>	18									
<b>RPM</b>	3520									
<b>FRAME</b>	256T			<b>HZ</b>	60				<b>PH</b>	3
<b>SER.F.</b>	1.15		<b>CODE</b>	H		<b>DES</b>	A		<b>CL</b>	F
<b>NEMA-NOM-EFF</b>	91		<b>PF</b>	88						
<b>RATING</b>	40C AMB-CONT									
<b>CC</b>	010A					<b>USABLE AT 208V</b>				
<b>DE</b>	6309			<b>ODE</b>	6208					
<b>ENCL</b>	TEFC		<b>SN</b>							
<b>VPWM INVERTER READY</b>										
CT6-60H(10:1)VT3-60H(20:1)										

Parts List		
Part Number	Description	Quantity
SA325296	SA 09P011Z699	1.000 EA
RA313160	RA 09P011Z699	1.000 EA
37FN3002C02	EXFN, PLASTIC, 6.00 OD, 1.503 ID	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
09GS1000SP	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
HW4600B44	V-RING SLINGER 1.500 X 1.810 X .28 VITON	1.000 EA
XY3816A12	3/8-16 FINISHED NUT	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
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

Parts List (continued)		
Part Number	Description	Quantity
HW2501G25	KEY, 3/8 SQ X 2.875	1.000 EA
LB1115N	LABEL,LIFTING DEVICE (ON ROLLS)	1.000 EA
09EP1100A208	ENDPLATE, MACH	1.000 EA
HA4051A00	PLASTIC CAP FOR GREASE FITTING	1.000 EA
HW4500A05	1669B ALEM/UNIV860 GR FTG X	1.000 EA
HW4500A03	GREASE FITTING, .125 NPT 1610(ALEMITE) 8	1.000 EA
HW4500A17	317400 ALEMITE GREASE RELIEF	1.000 EA
HA4066A01	PUSH IN T-DRAIN FITTING (BLACK)	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
HW2500A25	WOODRUFF KEY USA #1008 #BLOW CARBON STEE	1.000 EA
MG1000Y03	MUNSELL 2.53Y 6.70/ 4.60, GLOSS 20,	0.050 GA
85XU0407S04	4X1/4 U DRIVE PIN STAINLESS	2.000 EA
LB1119N	WARNING LABEL	1.000 EA
LC0006	CONNECTION LABEL	1.000 EA
NP3441L	ALUM SUPER-E VPWM INVERTER READY UL	1.000 EA
09PA1000	PACKAGING GROUP COMBINED PRINT	1.000 EA
MN416A01	TAG-INSTAL-MAINT no wire (2200bx) 4/22	1.000 EA
LD7020D03	LEAD SET, 12AWG, 3 LEAD, 20" LONG LEADS	1.000 EA
PE-0000003	ZRTG PE ASSEMBLY	1.000 EA
FE-0000013	ZRTG FE ASSEMBLY	1.000 EA

<b>Accessories</b>		
<b>Part Number</b>	<b>Description</b>	<b>Multiplier</b>
09-1309	C FACE KIT	A8

**AC Induction Motor Performance Data**

Record # 33069

Typical performance - not guaranteed values

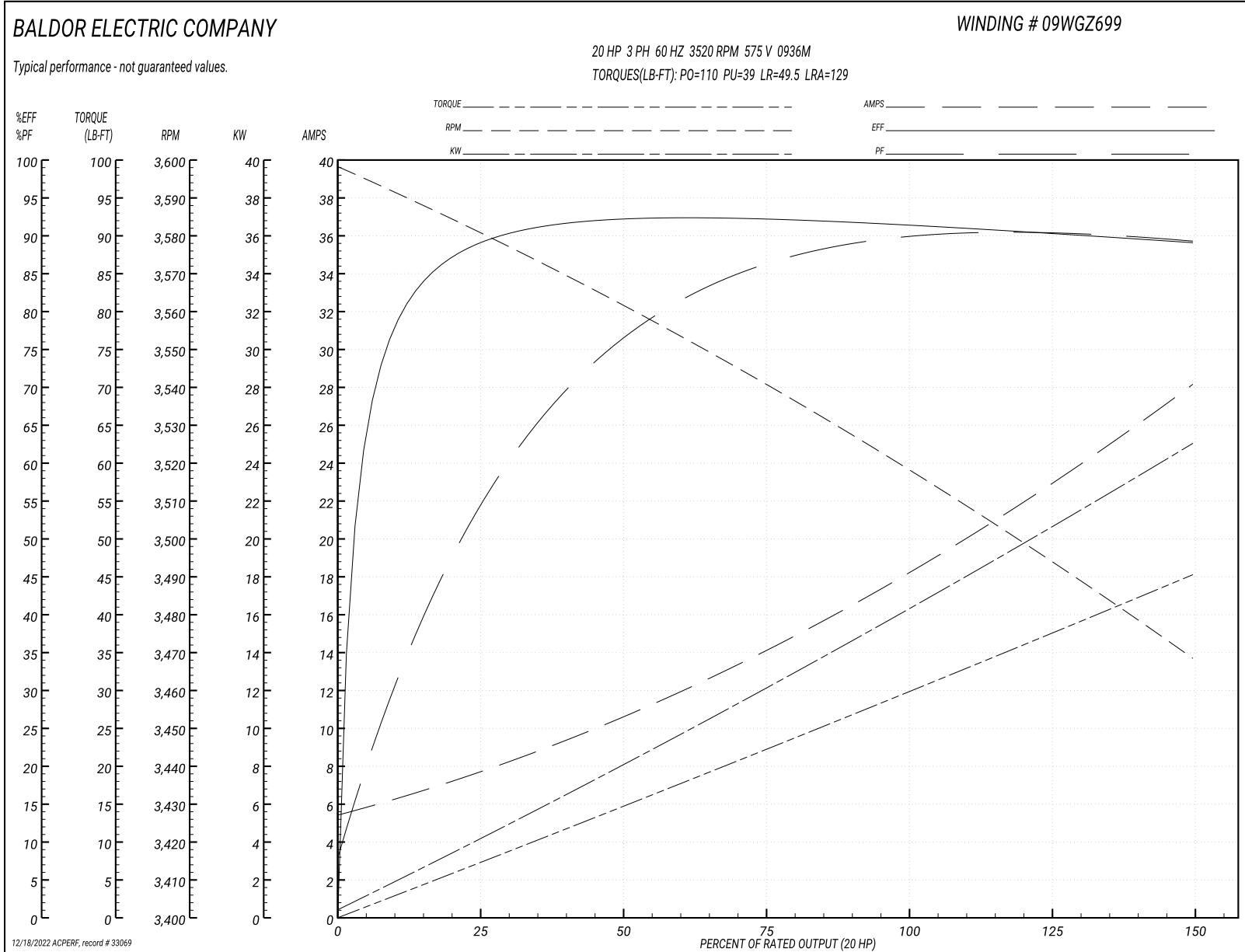
Winding: 09WGZ699-R001			Type: 0936M			Enclosure: TEFC		
<b>Nameplate Data</b>				<b>575 V, 60 Hz: Single Voltage Motor</b>				
Rated Output (HP)	20		Full Load Torque	29.7 LB-FT				
Volts	575		Start Configuration	direct on line				
Full Load Amps	18		Breakdown Torque	110 LB-FT				
R.P.M.	3520		Pull-up Torque	39 LB-FT				
Hz	60 Phase	3	Locked-rotor Torque	49.5 LB-FT				
NEMA Design Code	A KVA Code	H	Starting Current	129 A				
Service Factor (S.F.)	1.15		No-load Current	5.75 A				
NEMA Nom. Eff.	91 Power Factor	88	Line-line Res. @ 25°C	0.732 Ω				
Rating - Duty	40C AMB-CONT		Temp. Rise @ Rated Load	78°C				
S.F. Amps			Temp. Rise @ S.F. Load	98°C				
			Locked-rotor Power Factor	29.5				
			Rotor inertia	0.92 lb-ft <sup>2</sup>				

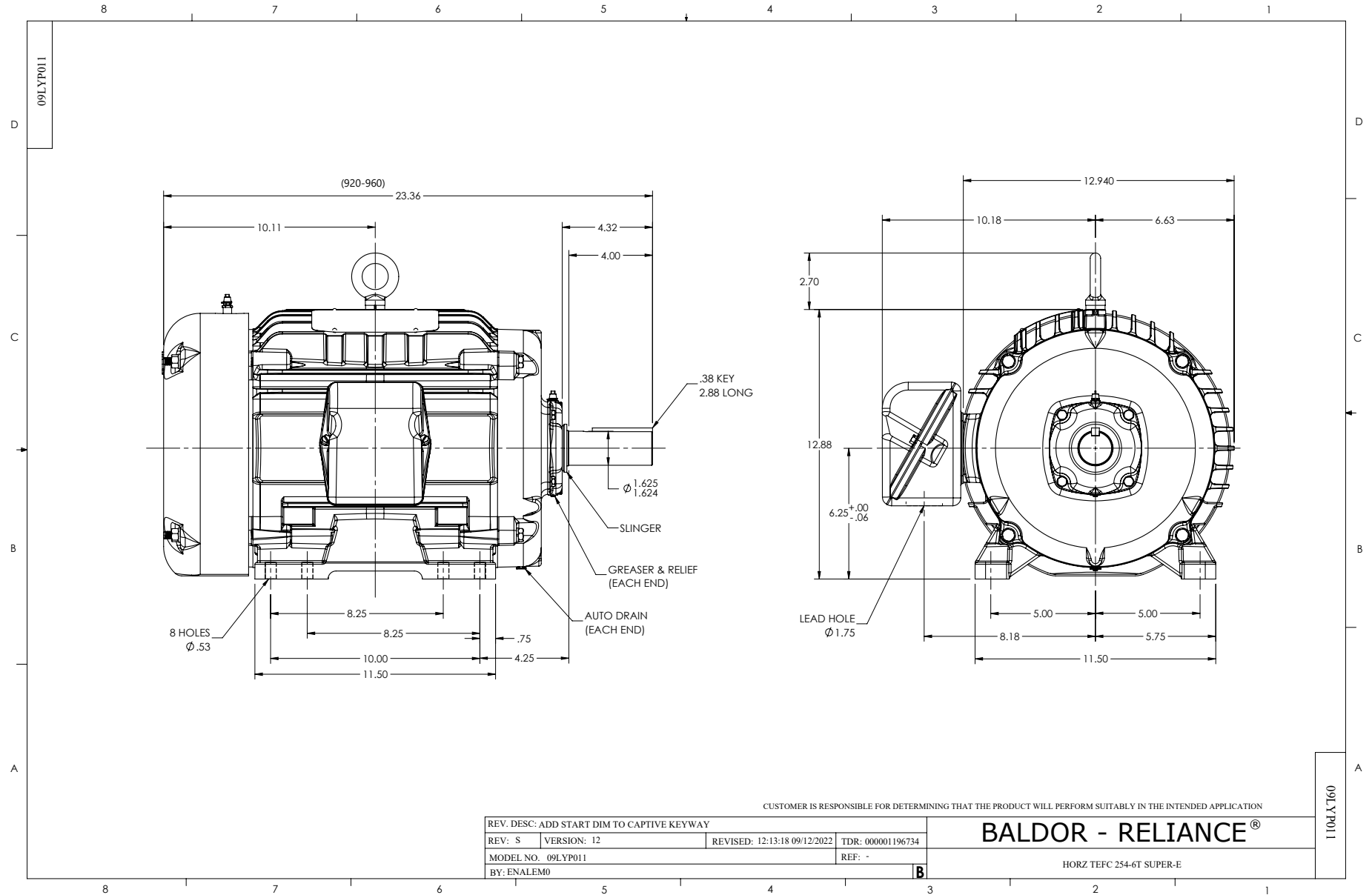
**Load Characteristics 575 V, 60 Hz, 20 HP**

% of Rated Load	25	50	75	100	125	150	S.F.
Power Factor	58	78	86	88	90	90	89
Efficiency	88.4	91.9	92.2	91.7	90.3	89	90.9
Speed	3580	3562	3541	3519	3495	3468	3505
Line amperes	7.21	10.4	14.2	18.4	22.9	28	21.1

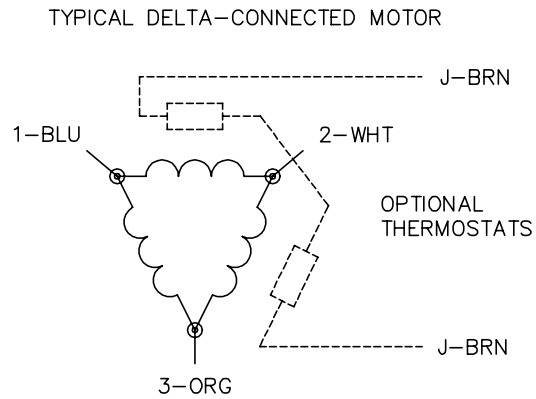
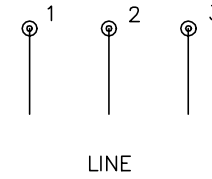
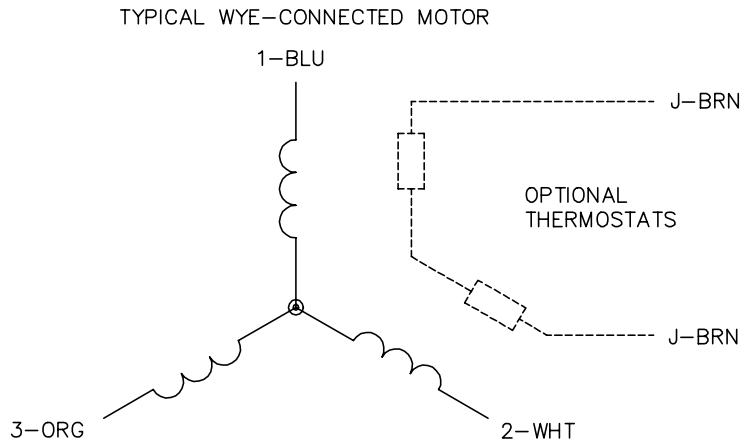


Performance Graph at 575V, 60Hz, 20.0HP Typical performance - Not guaranteed values





CD0006



NOTES:

1. THREE LEAD MOTOR MAY BE EITHER WYE CONNECTED OR DELTA CONNECTED.
2. INTERCHANGE ANY TWO LINE LEADS TO REVERSE ROTATION.
3. OPTIONAL THERMOSTATS ARE PROVIDED WHEN SPECIFIED.
4. ACTUAL NUMBER OF INTERNAL PARALLEL CIRCUITS MAY VARY.
5. LEAD COLORS ARE OPTIONAL. LEADS MUST BE NUMBERED AS SHOWN.

CD0006

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**BALDOR - RELIANCE®**

3PH, SV, 3 LEADS, WYE OR DELTA CONNECTED

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