ABB BALDOR RELIANCE

Customer information packet

EM4106T

20HP, 3520RPM, 3PH, 60HZ, 256T, 0936M, TEFC, F1
Class - None
Division - Not Applicable

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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	3600 RPM @ 60 HZ
Voltage @ Frequency	230.0 V @ 60 HZ
	460.0 V @ 60 HZ
Agency Approvals	NEMA PREMIUM (OLD LOGO)
	CURUSEEV
	NEMA PREMIUM
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	50.000 A @ 208.0 V
	46.000 A @ 230.0 V
	23.000 A @ 460.0 V
Design Code	A
Drip Cover	No Drip Cover
Duty Rating	CONT
Efficiency @ 100% Load	91.0 %
Electrically Isolated Bearing	Not Electrically Isolated
Feedback Device	NO FEEDBACK
Front Face Code	Standard
Front Shaft Indicator	None

Part Detail

Revision	BF
Type	AC
Mech. spec.	09P11
Base	
Status	PRD/A
Elec. spec.	M-09WG-Z601
Layout	09LYP011
Eff. date	06-29-2026
CD Diagram	CD0005
Poles	02
Leads	9#10,0#0,0#0
Proprietary	False
Created date	06-09-2010

Heater Indicator	No Heater
High Voltage Full Load Amps	23.0 a
Insulation Class	F
Inverter Code	Inverter Ready
KVA Code	H
Lifting Lugs	Standard Lifting Lugs
Locked Bearing Indicator	Locked Bearing
Motor Lead Exit	Ko Box
Motor Lead Quantity/Wire Size	9 @ 12 AWG
Motor Lead Termination	Flying Leads
Motor Standards	NEMA
Motor Type	0936M
Mounting Arrangement	F1
Number of Poles	2
Overall Length	23.36 IN
Power Factor	89
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	3520 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 1 Location	00
Winding Thermal 2	None
Winding Thermal 2 Location	00

Nameplate

NP3441LUA										
CAT.NO.	EM4106T									
SPEC	09P011Z601									
HP	20									
VOLTS	230/460									
AMPS	46/23									
RPM	3520									
FRAME	256T	**HZ**	60	**PH**	3					
SF	1.15	**CODE**	H	**DES**	A	**CLASS**	F			
NEMA NOM. EFF	91	**PF**	89							
RATING	40C AMB-CONT									
CC	010A									
ENCL	TEFC	**SER**								
DE	6309	**ODE**	6208							
VPWM INVERTER READY	SFA 52/26									
CT6-60H(10:1)VT3-60H(20:1										
	50Hz 20HP 190/380V 56/28A									SF1.0

Parts List

Part number	Description	Quantity
SA198113	SA 09P011Z601	1.000 ea
RA185480	RA 09P011Z601	1.000 ea
37FN3002C02	EXFN, PLASTIC, 6.00 OD, 1.503 ID	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
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
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
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
MN416A01	TAG-INSTAL-MAINT no wire (2500 bx)11/25	1.000 ea
HW3201A01	1/2-13 EYEBOLT	1.000 ea
HW1002A63	WASHER, 5/8 HI-COLLAR SPRLCKWASHER	1.000 ea
HA4051A00	PLASTIC CAP FOR GREASE FITTING	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

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
09EP1100A208	ENDPLATE, MACH	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
MG1050Y01	CELEROL BALDOR GOLD *5 GALLON BUCKET*	0.050 ga
85XU0407S04	4X1/4 U DRIVE PIN STAINLESS	2.000 ea
NP3441LUA	AL SUPER-E VPWM INV RDY,UL EEV,NEMA PREM	1.000 ea
09PA1000	PACKAGING GROUP COMBINED PRINT	1.000 ea
PE-0000003	ZRTG PE ASSEMBLY	1.000 ea
FE-0000013	ZRTG FE ASSEMBLY	1.000 ea
LD7020E09	LEAD SET, 10AWG, 9 LEAD, 20" LONG LEADS	1.000 ea
LB1624	COMBINED WARNING LABEL, ISO/ANSI PICTOGR	1.000 ea
LC0005E01	SPL CONN.DIA./WARN.LABEL(LC0005/LB1119)	1.000 ea

Accessories

Part number	Description	Multiplier
09-1309	C FACE KIT	A8

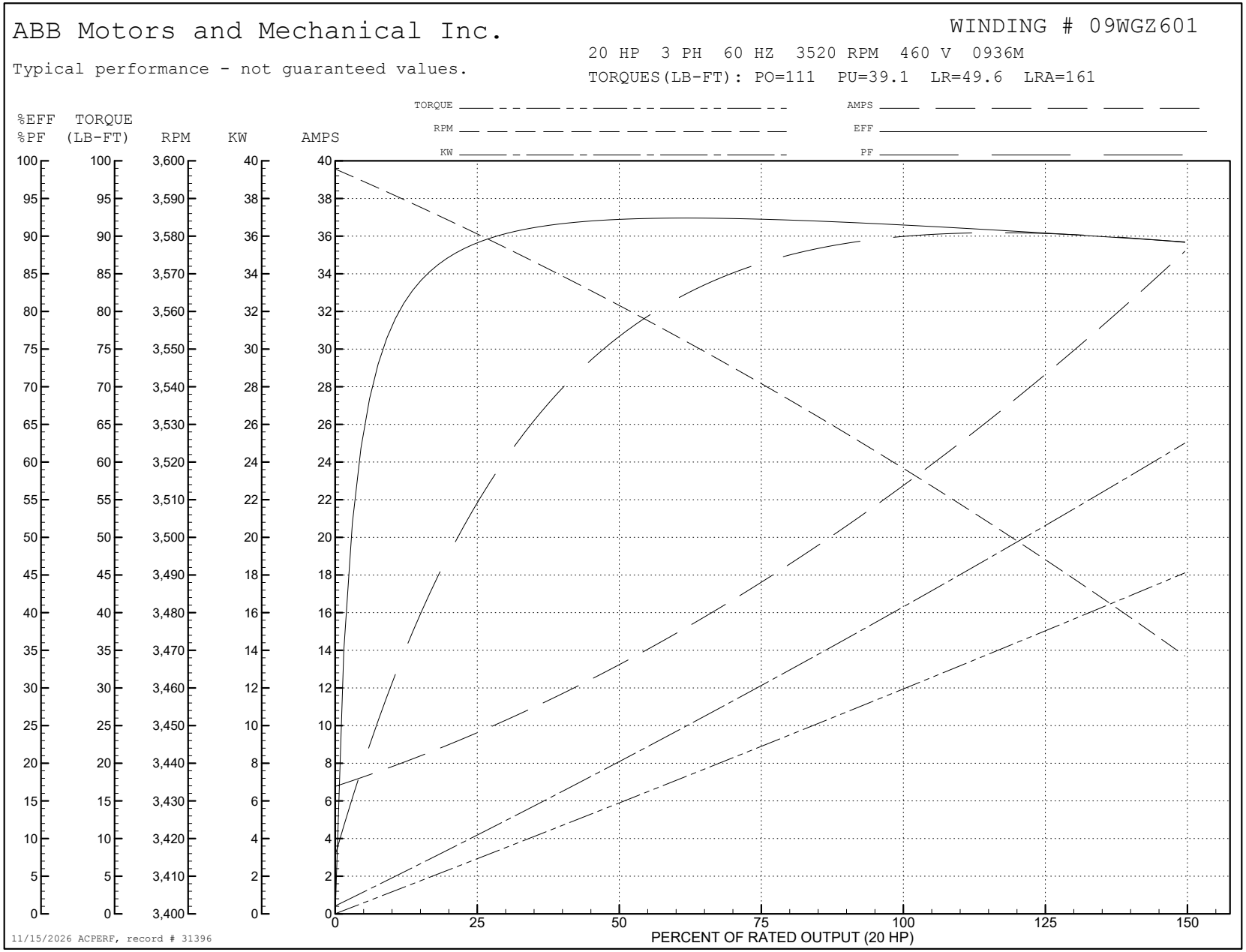
AC Induction Motor Performance Data
Record # 31396
Typical performance - not guaranteed values

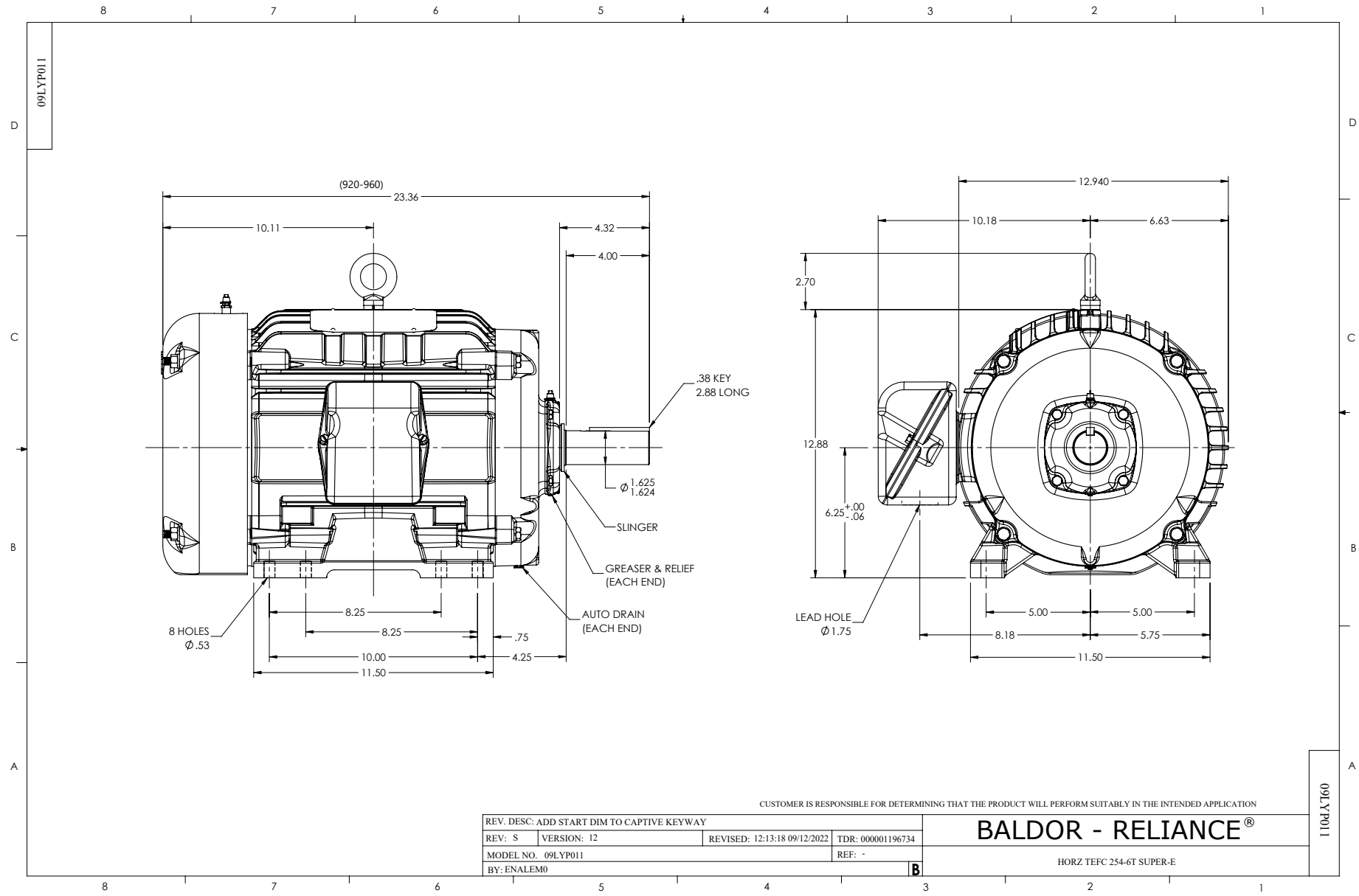
Winding: 09WGZ601-R001	**Type:** 0936M	**Enclosure:** TEFC

Nameplate Data				**460 V, 60 Hz: High Voltage Connection**	
Rated Output (HP)			20	**Full Load Torque**	29.6 LB-FT
Volts			230/460	**Start Configuration**	direct on line
Full Load Amps			46/23	**Breakdown Torque**	111 LB-FT
R.P.M.			3520	**Pull-up Torque**	39.1 LB-FT
Hz	60	**Phase**	3	**Locked-rotor Torque**	49.6 LB-FT
NEMA Design Code	A	**KVA Code**	H	**Starting Current**	161 A
Service Factor (S.F.)			1.15	**No-load Current**	7.17 A
NEMA Nom. Eff.	91	**Power Factor**	89	**Line-line Res. @ 25ºC**	0.47592 Ω
Rating - Duty			40C AMB-CONT	**Temp. Rise @ Rated Load**	76°C
S.F. Amps				**Temp. Rise @ S.F. Load**	95°C
				Locked-rotor Power Factor	29.4
				Rotor inertia	0.92 lb-ft²

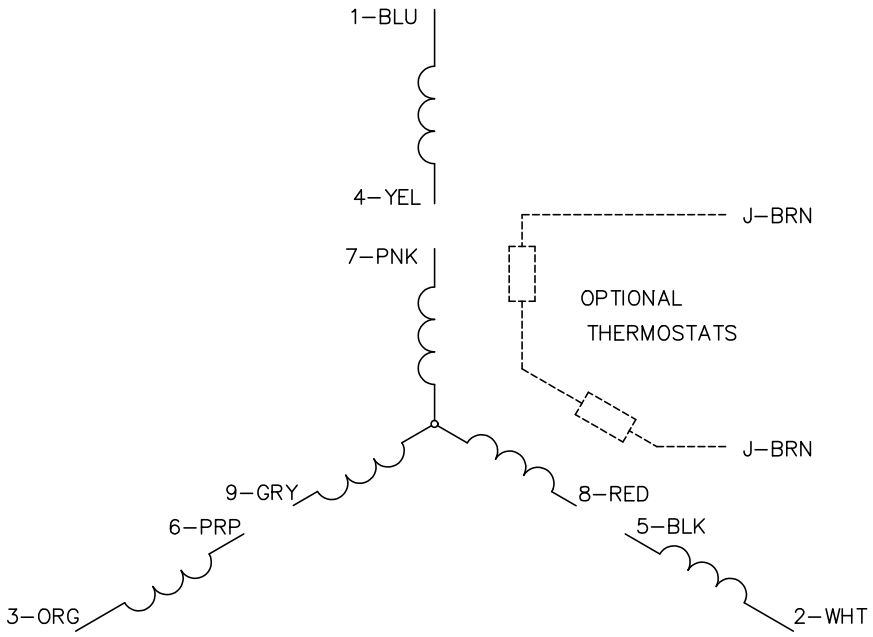
Load Characteristics 460 V, 60 Hz, 20 HP

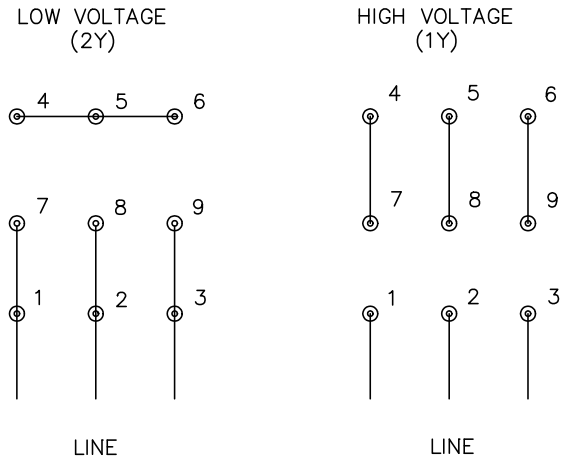
% of Rated Load	**25**	**50**	**75**	**100**	**125**	**150**	**S.F.**
Power Factor	58	78	86	89	90	90	90
Efficiency	88.9	92.2	92.4	91.7	90.7	89.2	91.1
Speed	3579.6	3561.5	3541.3	3519.5	3495.4	3467.8	3505
Line amperes	9	13	17.7	22.9	28.6	35	26.3


ABB Motors and Mechanical Inc.
WINDING # 09WGZ601
Typical performance - not guaranteed values.
20 HP 3 PH 60 HZ 3520 RPM 460 V 0936M
TORQUES(LB-FT): PO=111 PU=39.1 LR=49.6 LRA=161
TORQUE
RPM
KW
AMPS
EFF
PF
%EFF %PF
TORQUE (LB-FT)
RPM
KW
AMPS
PERCENT OF RATED OUTPUT (20 HP)
11/15/2026 ACPERF, record # 31396


09LYP011
(920-960)
23.36
10.11
4.32
4.00
.38 KEY
2.88 LONG
Ø 1.625
1.624
SLINGER
GREASER & RELIEF
(EACH END)
AUTO DRAIN
(EACH END)
8 HOLES
Ø .53
8.25
8.25
.75
10.00
4.25
11.50
12.940
10.18
6.63
2.70
12.88
6.25 +.00 -.06
LEAD HOLE
Ø 1.75
5.00
5.00
8.18
5.75
11.50
CUSTOMER IS RESPONSIBLE FOR DETERMINING THAT THE PRODUCT WILL PERFORM SUITABLY IN THE INTENDED APPLICATION
REV. DESC: ADD START DIM TO CAPTIVE KEYWAY
REV: S
VERSION: 12
REVISED: 12:13:18 09/12/2022
TDR: 000001196734
MODEL NO. 09LYP011
REF: -
BY: ENALEM0
B
BALDOR - RELIANCE®
HORZ TEFC 254-6T SUPER-E
09LYP011

CD0005





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.

CD0005

REV. DESC: REVISE TO SHOW OPTIONAL COLORS			BALDOR ELECTRIC Co.
REV. LTR: E	BY: JLP	REVISED: 01/19/99 10:15	TDR: 0171435
CD0005		FILE: AAA00005140	MDL: –
		MTL: –	3PH, DV, 9 LEADS