

**BALDOR • RELIANCE**

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# Customer information packet

## HBAO4106T

20 AOHP, 3520RPM, 3PH, 60HZ, 256T, 0936M, TEAO

Class - None

Division - Not Applicable

## Specifications

Enclosure	TEAO
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	460.0 V @ 60 HZ 230.0 V @ 60 HZ
Agency Approvals	CURUSEEV NEMA PREMIUM WEEE
Ambient Temperature	40 °C
Auxillary Box	No Auxillary Box
Auxillary Box Lead Termination	None
Base Indicator	Rigid
Bearing Grease Type	Polyrex EM (-20F +300F)
Blower	None
Current @ Voltage	46.000 A @ 230.0 V 50.000 A @ 208.0 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	Electrically Isolated Bearings
Feedback Device	NO FEEDBACK
Front Shaft Indicator	None
Heater Indicator	No Heater

## Part detail

Revision	J
Type	AC
Mech. spec.	09T117
Base	
Status	PRD/A
Elec. spec.	09WGZ601
Layout	09LYT117
Eff. date	11-14-2023
CD Diagram	CD0005
Poles	02
Leads	9#12
Proprietary	False
Created date	01-05-2022

High Voltage Full Load Amps	23.0 a
Insulation Class	H
Inverter Code	Inverter Ready
KVA Code	H
Lifting Lugs	Standard Lifting Lugs
Locked Bearing Indicator	Locked Bearing
Max Speed	5400 rpm
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	20.75 IN
Power Factor	89
Product Family	General Purpose
Pulley End Bearing Type	Ball
Pulley Face Code	Standard
Pulley Shaft Indicator	Standard
Rodent Screen	None
RoHS Status	ROHS COMPLIANT
Service Factor	1.15
Shaft Diameter	1.625 IN
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 2	None

**Nameplate**

**NP4312A01M01L**

<b>CAT #</b>	HBAO4106T					<b>SER #</b>						<b>CC</b>		<b>WGT</b>	229	<b>LBS</b>	
<b>SPEC</b>	09T117Z601G1					<b>RATING</b>	40C AMB-CONT										
<b>HZ</b>	<b>VOLTS</b>		<b>AMPS</b>		<b>RPM</b>	<b>HP</b>	<b>SF</b>	<b>NEMA NOM. EFF</b>									
60	230/460		46/23				3520	20AO	1.15	91							
<b>PH</b>	3	<b>CL</b>	H	<b>CODE</b>	H	<b>DES</b>	A	<b>ENCL</b>	TEAO	<b>IP</b>	54	<b>PF</b>	89	%	AIR OVER		
<b>DE BRG</b>	6309					<b>ODE BRG</b>	6208					<b>FRAME</b>	256T				
<b>INV TYPE:</b>	<b>VPWM</b>		<b>SL HZ</b>	1.33	<b>CHP</b>	60	<b>TO</b>	90	1.5:1								
<b>WK2</b>	0.92		<b>LB FT2</b>	<b>MAX RPM</b>	5400	<b>CT</b>	6	<b>TO</b>	60	10:1							
14.2/7.1					<b>VT</b>	3	<b>TO</b>	60	20:1								
SFA 43/26.5																	

**YR:**

**AC Induction Motor Performance Data**

Record # 36290

Typical performance - not guaranteed values

Winding: 09WGZ601-R024		Type: 0936M	Enclosure: TEFC	
<b>Nameplate Data</b>			<b>460 V, 60 Hz: High Voltage Connection</b>	
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	Locked-rotor Torque	49.6 LB-FT	
NEMA Design Code	B KVA Code	Starting Current	161 A	
Service Factor (S.F.)	1.15	No-load Current	7.17 A	
NEMA Nom. Eff.	91 Power Factor	Line-line Res. @ 25°C	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	
		Rotor inertia	0.92 LB-FT <sup>2</sup>	

**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

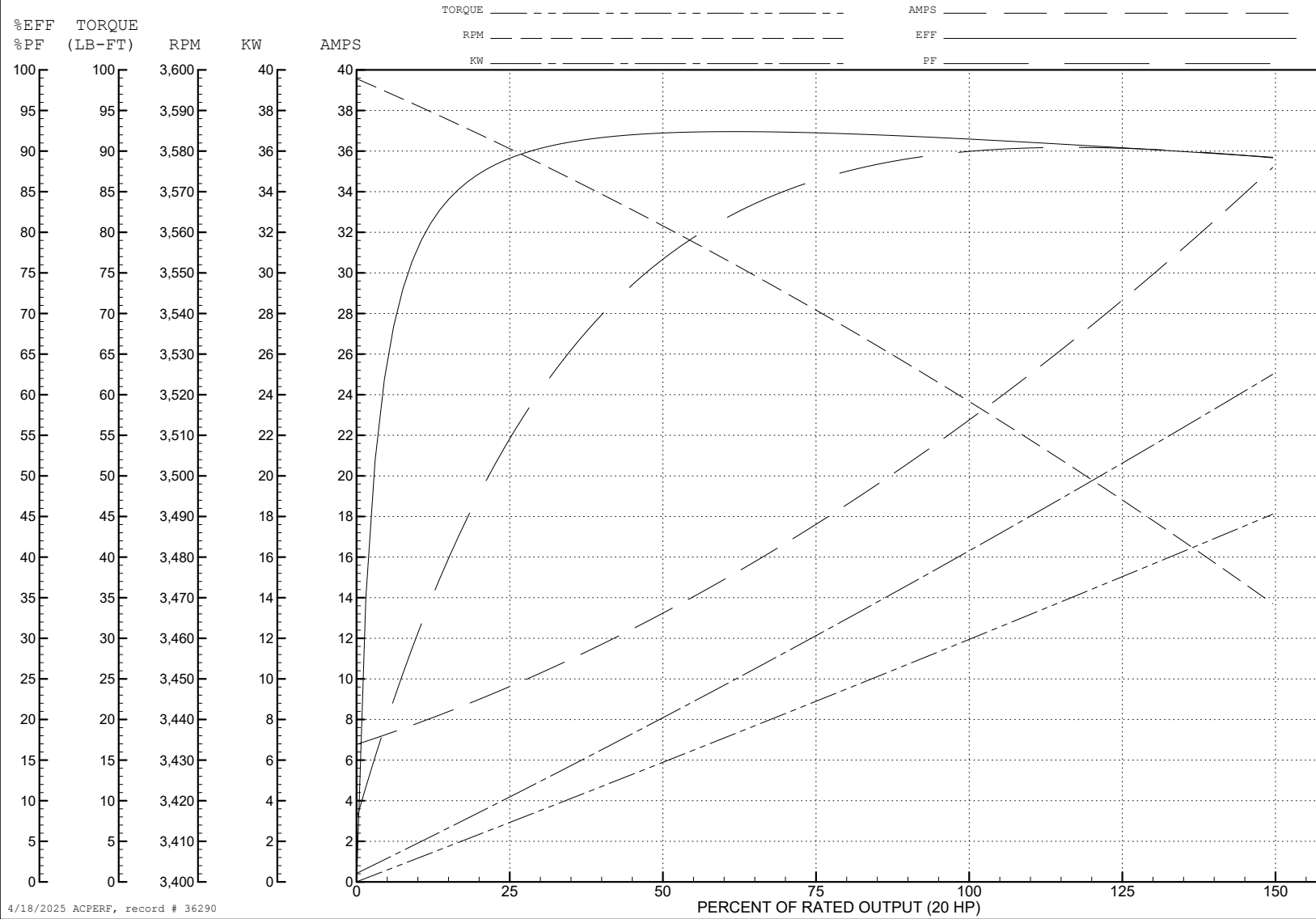
ABB Motors and Mechanical Inc.

WINDING # 09WGZ601

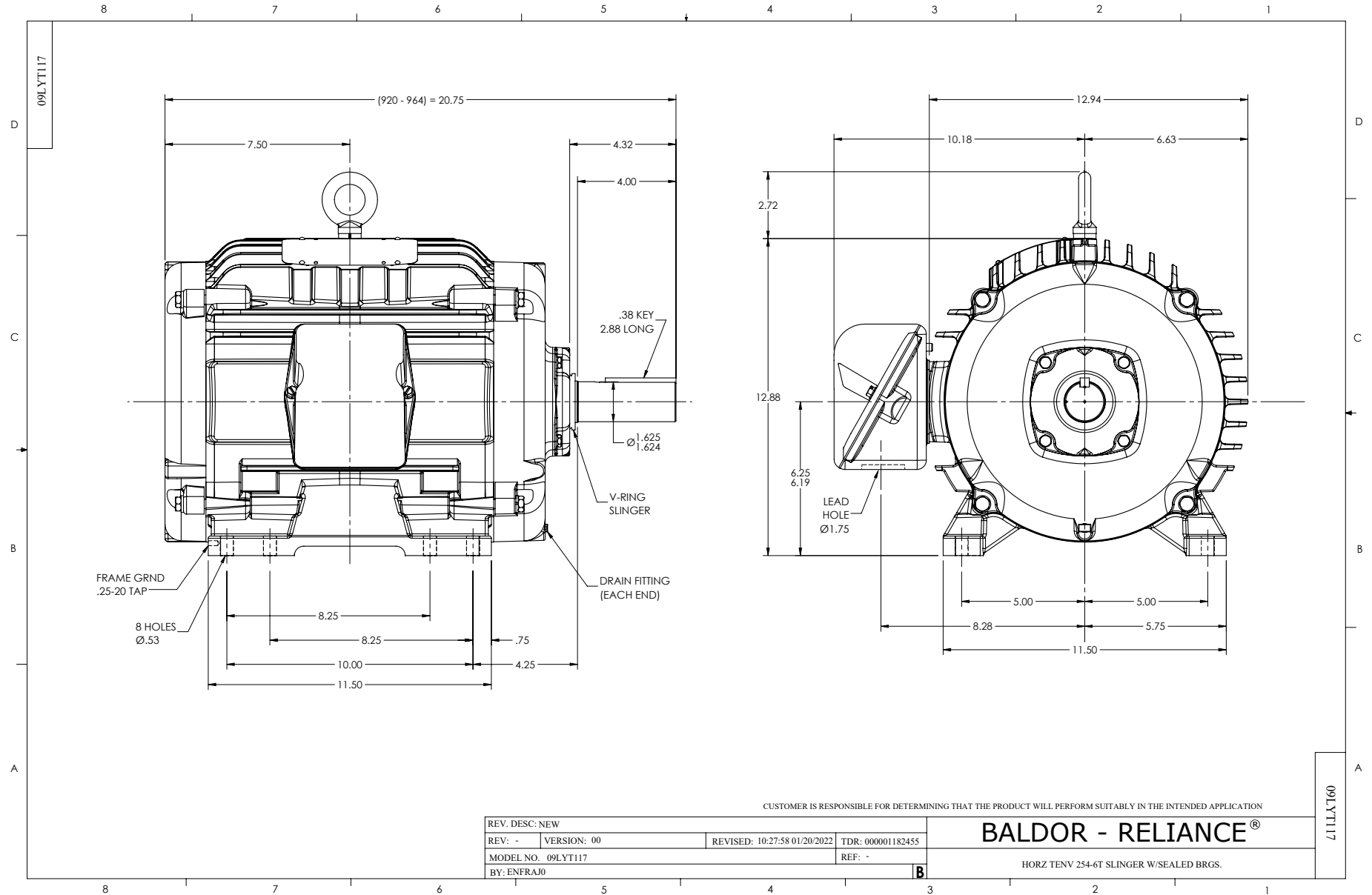
Typical performance - not guaranteed values.

20 HP 3 PH 60 HZ 3520 RPM 460 V 0936M

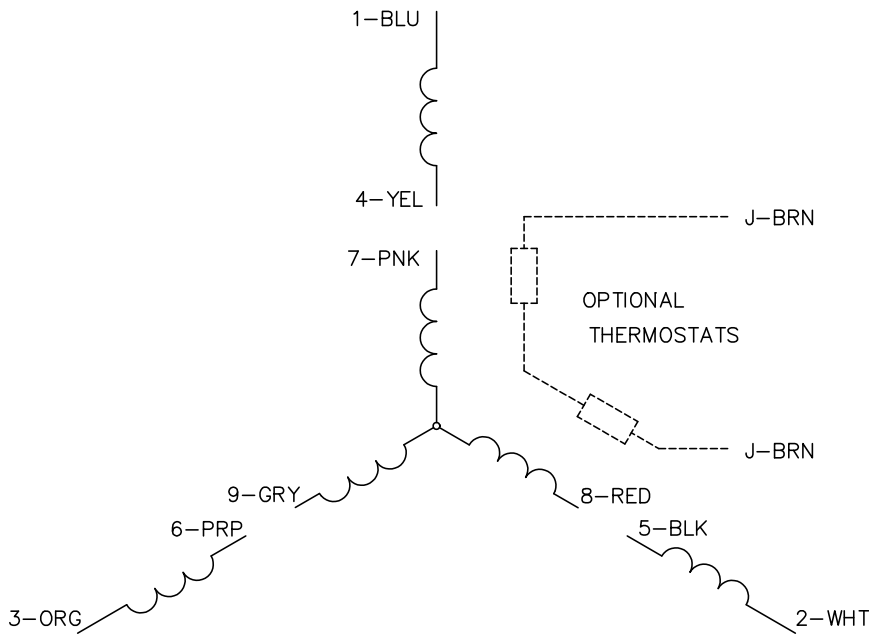
TORQUES (LB-FT): PO=111 PU=39.1 LR=49.6 LRA=161



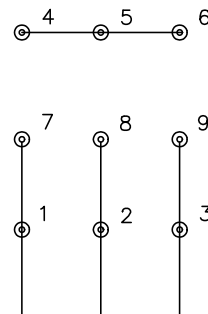
4/18/2025 ACPERF, record # 36290



CD0005

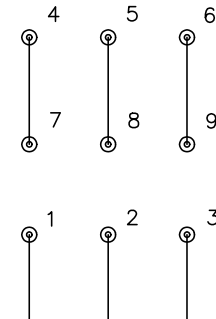


LOW VOLTAGE  
(2Y)



LINE

HIGH VOLTAGE  
(1Y)



LINE

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			
REV. LTR: E	BY: JLP	REVISED: 01/19/99 10:15	TDR: 0171435
S00000		FILE: AAA00005140	MDL: -
		MTL: -	

**BALDOR ELECTRIC Co.**

3PH, DV, 9 LEADS