

**BALDOR • RELIANCE**

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# Customer information packet

## EM2539T-BG

40HP, 1770RPM, 3PH, 60HZ, 324T, 4064M, OPSB, F1

## Specifications

Enclosure	OPSB
Frame	324T
Frame Material	Steel
Frequency	60.00 Hz
Motor Letter Type	Three Phase
Output @ Frequency	40.000 HP @ 60 HZ
Phase	3
Synchronous Speed @ Frequency	1800 RPM @ 60 HZ
Voltage @ Frequency	230.0 V @ 60 HZ 460.0 V @ 60 HZ
Agency Approvals	CSA CSA EEV UR
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	98.000 A @ 230.0 V 99.000 A @ 208.0 V 49.000 A @ 460.0 V
Design Code	A
Drip Cover	No Drip Cover
Duty Rating	CONT
Efficiency @ 100% Load	94.1 %
Electrically Isolated Bearing	Not Electrically Isolated
Feedback Device	NO FEEDBACK
Front Face Code	Standard
Front Shaft Indicator	None
Heater Indicator	No Heater
High Voltage Full Load Amps	49.0 a

## Part detail

Revision	Q
Type	AC
Mech. spec.	40E331
Base	
Status	PRD/A
Elec. spec.	40WGX166
Layout	40LYE331
Eff. date	06-27-2024
CD Diagram	CD0005
Poles	04
Leads	9#8
Proprietary	False
Created date	10-08-2013

<b>Insulation Class</b>	H
<b>Inverter Code</b>	Inverter Ready
<b>KVA Code</b>	H
<b>Lifting Lugs</b>	Standard Lifting Lugs
<b>Locked Bearing Indicator</b>	No Locked Bearing
<b>Motor Lead Exit</b>	Ko Box
<b>Motor Lead Quantity/Wire Size</b>	9 @ 8 AWG
<b>Motor Lead Termination</b>	Flying Leads
<b>Motor Standards</b>	NEMA
<b>Motor Type</b>	4064M
<b>Mounting Arrangement</b>	F1
<b>Number of Poles</b>	4
<b>Overall Length</b>	27.19 IN
<b>Power Factor</b>	82
<b>Product Family</b>	General Purpose
<b>Pulley End Bearing Type</b>	Ball
<b>Pulley Face Code</b>	Standard
<b>Pulley Shaft Indicator</b>	Standard
<b>Rodent Screen</b>	None
<b>Service Factor</b>	1.15
<b>Shaft Diameter</b>	2.125 IN
<b>Shaft Extension Location</b>	Pulley End
<b>Shaft Ground Indicator</b>	Shaft Grounding
<b>Shaft Rotation</b>	Reversible
<b>Shaft Slinger Indicator</b>	No Slinger
<b>Speed</b>	1770 rpm
<b>Speed Code</b>	Single Speed
<b>Starting Method</b>	Direct on line
<b>Thermal Device - Bearing</b>	None
<b>Thermal Device - Winding</b>	None
<b>Vibration Sensor Indicator</b>	No Vibration Sensor
<b>Winding Thermal 1</b>	None
<b>Winding Thermal 2</b>	None

**Nameplate**

**NP3554LUA**

<b>CAT.NO.</b>	EM2539T-BG	<b>P/N</b>		<b>ENCL</b>	OPSB
<b>SPEC.</b>	40E331X166G1	<b>CC</b>	010A	<b>FRAME</b>	324T
<b>HP</b>	40	<b>CLASS</b>	H	<b>HZ</b>	60
<b>RPM</b>	1770	<b>PH</b>	3	<b>DES</b>	A
<b>VOLTS</b>	230/460	<b>CODE</b>	H	<b>ODE BRG</b>	6309
<b>AMPS</b>	98/49	<b>DE BRG</b>			6312
<b>RATING</b>	40C AMB-CONT	<b>NEMA-NOM-EFF</b>	94.1	<b>GREASE</b>	POLYREX EM
<b>PF</b>	82	<b>SER.F.</b>	1.15	<b>CT30-60(2:1) VT3-60(20:1)</b>	
<b>USABLE AT</b>	50HZ 40HP 190/380V 114/57A		SF1.0		
<b>HTR-VOLTS</b>	<b>HTR-AMPS</b>	<b>MAX. SPACE HEATER TEMP.</b>			

**AC Induction Motor Performance Data**

Record # 35574

Typical performance - not guaranteed values

<b>Winding: 40WGX166-R003</b>		<b>Type: 4064M</b>		<b>Enclosure: OPSB</b>	
<b>Nameplate Data</b>			<b>460 V, 60 Hz: High Voltage Connection</b>		
<b>Rated Output (HP)</b>	40		<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>	98/49		<b>Breakdown Torque</b>	427 LB-FT	
<b>R.P.M.</b>	1770		<b>Pull-up Torque</b>	187 LB-FT	
<b>Hz</b>	<b>60 Phase</b>	3	<b>Locked-rotor Torque</b>	246 LB-FT	
<b>NEMA Design Code</b>	<b>A KVA Code</b>	H	<b>Starting Current</b>	330 A	
<b>Service Factor (S.F.)</b>	1.15		<b>No-load Current</b>	21.1 A	
<b>NEMA Nom. Eff.</b>	<b>94.1 Power Factor</b>	82	<b>Line-line Res. @ 25°C</b>	0.16236 Ω	
<b>Rating - Duty</b>	40C AMB-CONT		<b>Temp. Rise @ Rated Load</b>	41°C	
<b>S.F. Amps</b>			<b>Temp. Rise @ S.F. Load</b>	51°C	
			<b>Locked-rotor Power Factor</b>	32	
			<b>Rotor inertia</b>	5.09 LB-FT <sup>2</sup>	

**Load Characteristics 460 V, 60 Hz, 40 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>	43	65	76	82	85	85	84
<b>Efficiency</b>	91.1	94	94.5	94.2	93.6	92.8	93.8
<b>Speed</b>	1792.4	1785	1777.8	1770.2	1762.1	1752.8	1765
<b>Line amperes</b>	24.1	30.7	39.2	48.7	59.3	71.3	55.1

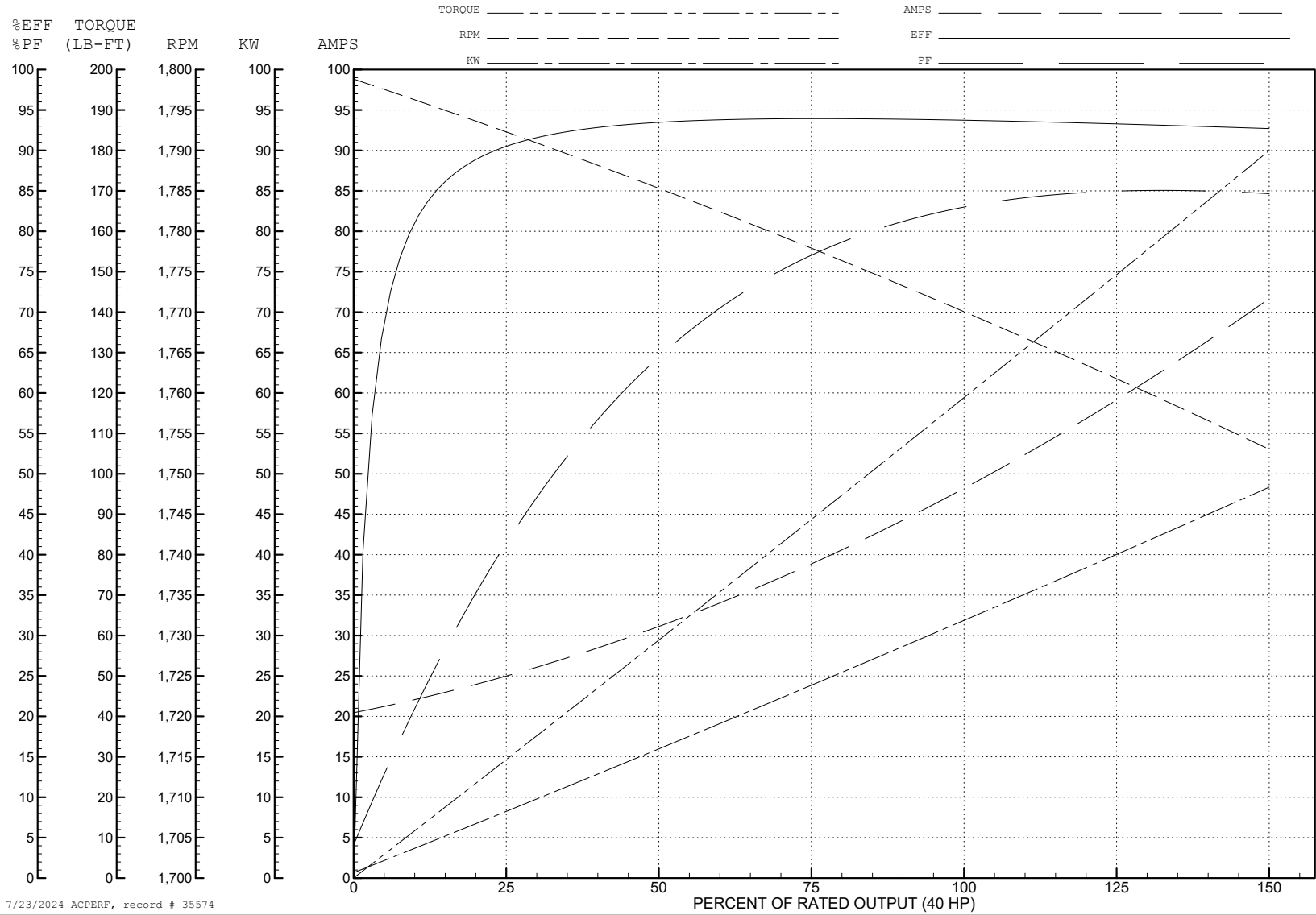
ABB Motors and Mechanical Inc.

WINDING # 40WGx166

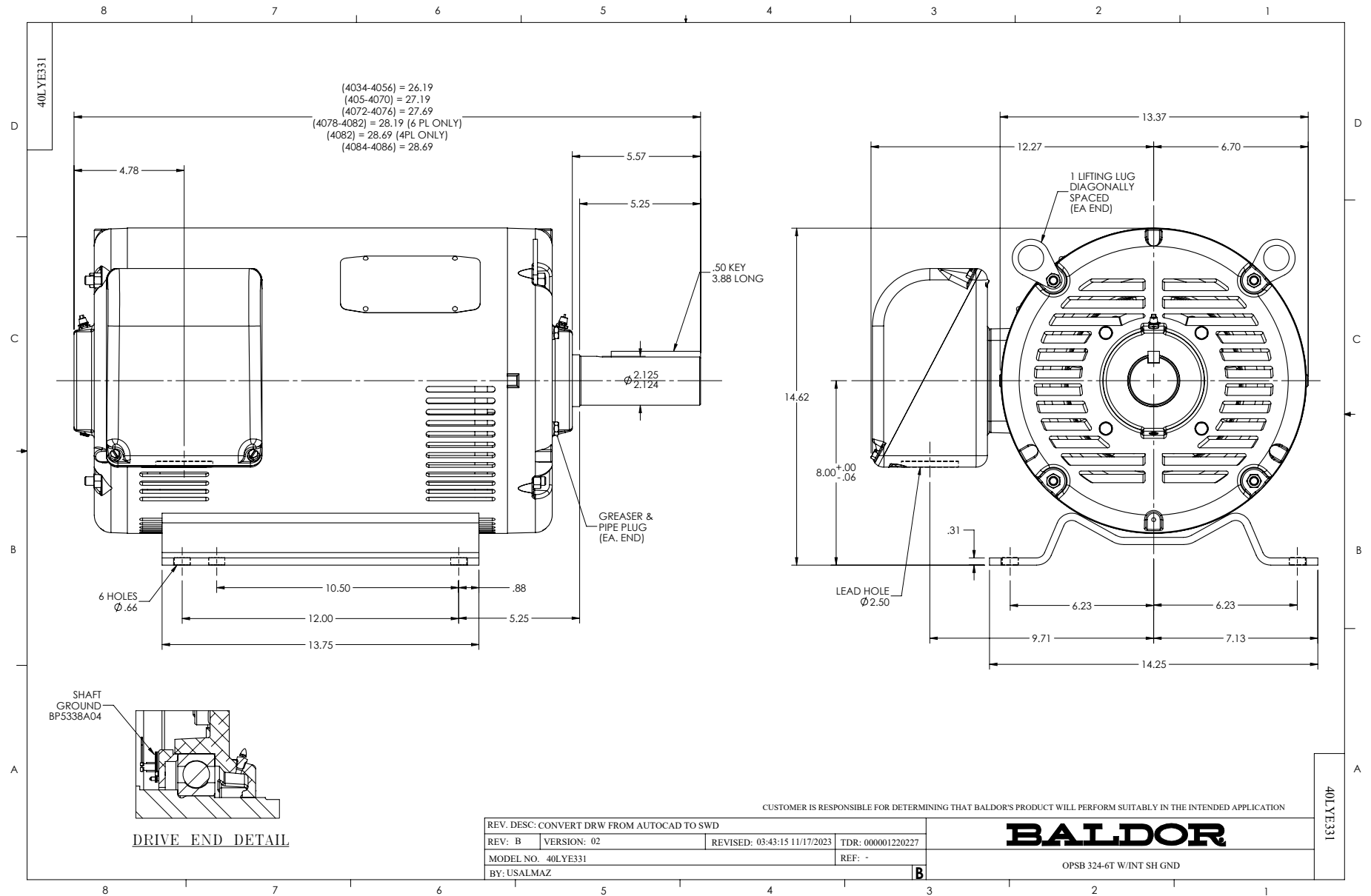
40 HP 3 PH 60 HZ 1770 RPM 460 V 4064M

Typical performance - not guaranteed values.

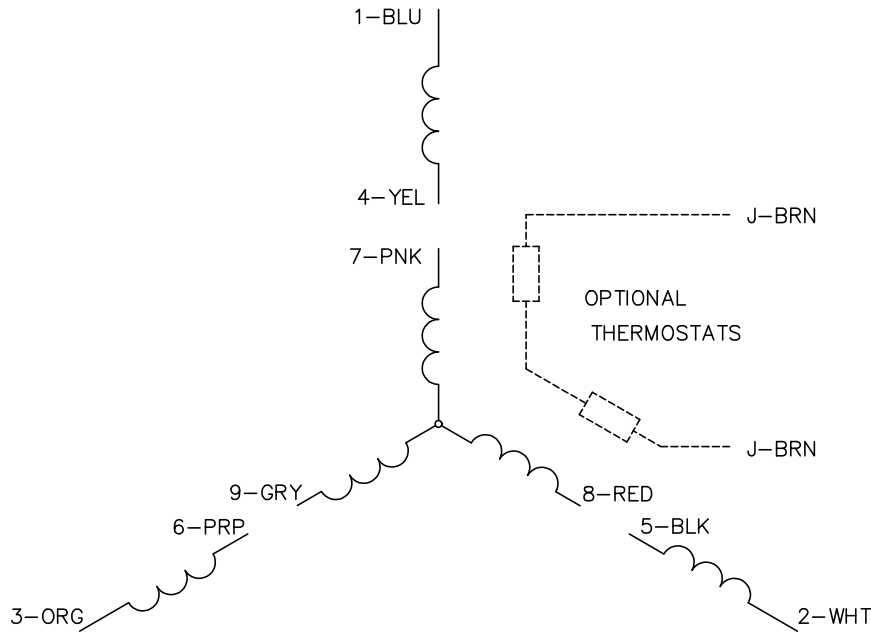
TORQUES (LB-FT): PO=427 PU=187 LR=246 LRA=330



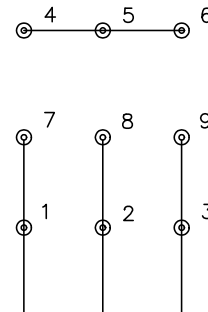
7/23/2024 ACPERF, record # 35574



CD0005

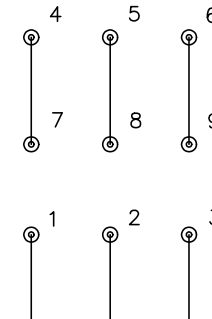


LOW VOLTAGE  
(2Y)



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