

# ABB BALDOR RELIANCE III

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## Customer information packet

### IDVSM2334T

20HP, 1770RPM, 3PH, 60HZ, 256TC, 0960M, TEFC, F

Class - None

Division - Not Applicable

**Specifications**

<b>Enclosure</b>	TEFC
<b>Frame</b>	256TC
<b>Frame Material</b>	Iron
<b>Frequency</b>	60.00 Hz
<b>Haz Area Class and Group</b>	None
<b>Haz Area Division</b>	Not Applicable
<b>Motor Letter Type</b>	Three Phase
<b>Output @ Frequency</b>	20.000 HP @ 60 HZ
<b>Phase</b>	3
<b>Synchronous Speed @ Frequency</b>	1800 RPM @ 60 HZ
<b>Voltage @ Frequency</b>	230.0 V @ 60 HZ 460.0 V @ 60 HZ
<b>Agency Approvals</b>	CSA UR
<b>Ambient Temperature</b>	40 °C
<b>Auxiliary Box</b>	NO AUXILLARY BOX
<b>Auxiliary Box Lead Termination</b>	None
<b>Base Indicator</b>	Rigid
<b>Bearing Grease Type</b>	Polyrex EM (-20F +300F)
<b>Blower</b>	None
<b>Current @ Voltage</b>	52.000 A @ 208.0 V 48.000 A @ 230.0 V 24.000 A @ 460.0 V
<b>Design Code</b>	A
<b>Drip Cover</b>	No Drip Cover
<b>Duty Rating</b>	CONT
<b>Efficiency @ 100% Load</b>	93.0 %
<b>Electrically Isolated Bearing</b>	Not Electrically Isolated
<b>Feedback Device</b>	NO FEEDBACK
<b>Front Face Code</b>	Standard
<b>Front Shaft Indicator</b>	None
<b>Heater Indicator</b>	No Heater

**Part Detail**

<b>Revision</b>	P
<b>Type</b>	AC
<b>Mech. spec.</b>	09K146
<b>Base</b>	
<b>Status</b>	PRD/A
<b>Elec. spec.</b>	09WGT459
<b>Layout</b>	09LYK146
<b>Eff. date</b>	08-28-2025
<b>CD Diagram</b>	CD0180
<b>Poles</b>	04
<b>Leads</b>	9#10
<b>Proprietary</b>	False
<b>Created date</b>	11-27-2017

High Voltage Full Load Amps	24.0 a
Insulation Class	F
Inverter Code	Inverter Duty
KVA Code	J
Lifting Lugs	Standard Lifting Lugs
Locked Bearing Indicator	Locked Bearing
Max Speed	2700 rpm
Motor Lead Exit	Ko Box
Motor Lead Quantity/Wire Size	9 @ 10 AWG
Motor Lead Termination	Flying Leads
Motor Standards	NEMA
Motor Type	0960M
Mounting Arrangement	F1
Number of Poles	4
Overall Length	26.71 IN
Power Factor	83
Product Family	General Purpose
Pulley End Bearing Type	Ball
Pulley Face Code	C-Face
Pulley Shaft Indicator	Standard
Rodent Screen	None
Service Factor	1.00
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	1770 rpm
Speed Code	Single Speed
Starting Method	Direct on line
Thermal Device - Bearing	None
Thermal Device - Winding	Normally Closed Thermostat
Vibration Sensor Indicator	No Vibration Sensor
Winding Thermal 1	None

**Winding Thermal 2**

**None**

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**Nameplate**

<b>NP3302L</b>			
<b>CAT NO</b>	IDVSM2334T		
<b>SPEC.</b>	09K146T459G1		
<b>FRAME</b>	256TC	<b>HP</b>	20 TE
<b>VOLTS</b>	230/460		
<b>MAG CUR</b>	20.8/10.4	<b>FLA</b>	48/24
<b>RPM</b>	1770	<b>RPM MAX</b>	2700
<b>HZ</b>	60	<b>PH</b>	3 <b>CLASS</b> F
<b>SER.F.</b>	1.00	<b>SL HZ</b>	1
<b>NEMA-NOM-EFF</b>	93	<b>WK2</b>	2.62
<b>RATING</b>	40C AMB-CONT		
<b>DE BRG</b>	6309	<b>ODE BRG</b>	6208
<b>CC</b>	010A <b>SN</b>		
	1.5:1 CHP PWM		
	1000:1 CT, 1000:1 VT		

<b>ABB BALDOR/460</b> <b>RELIANCE III</b> 40/24		<b>CUSTOMER INFORMATION PACKET</b>		MAX SAFE RPM <b>2700</b>	WYE CONN. EQ. CKT. OHMS PER PHASE (BASE RATING, 20C)		
HP	20 HP	IDVSM2334T - 20HP, 1770RPM, 3	Base Volt	460	R1	0.167	X1 0.876
BASE SPEED	1772		NL AMPS	10.40	R2	0.159	X2 1.160
PHASE/HZ	3/60		Slips(HZ)	0.94			XM 30.000
			WK2 ( )	0.000			

### Rated Full Load Data

	RPM	HP	Torque	Volts	Freq-Hz	Amps
Base Speed	1771.9	20.0	59.3	460	60	24.0
Max Speed	2657	20.0	39.5	460	90	23.1
Min Speed	0	0.0	59.3	17.91	0.94	24.0

### Load Performance at Base Speed

	RPM	HP	Torque	Volts	Freq-Hz	Amps
No Load	1798.9	0.0	0.0	460	60	10.4
1/4	1793.2	5.0	14.7	460	60	11.8
1/2	1786.4	10.0	29.4	460	60	15.0
3/4	1779.1	15.0	44.3	460	60	19.2
Full Load	1771.9	20.0	59.3	460	60	24.0
O/L	1741	40.1	121.0	460	60	48.7

Blower Data	Volts	Ph/Hz	FL Amps	LR Amps	Frame	CFM

Remarks: Calculated Data  
Vector PWM Inverter Duty



DR BY USBRRANI  
CK BY  
APP BY USBRRANI  
DATE 11/27/2017

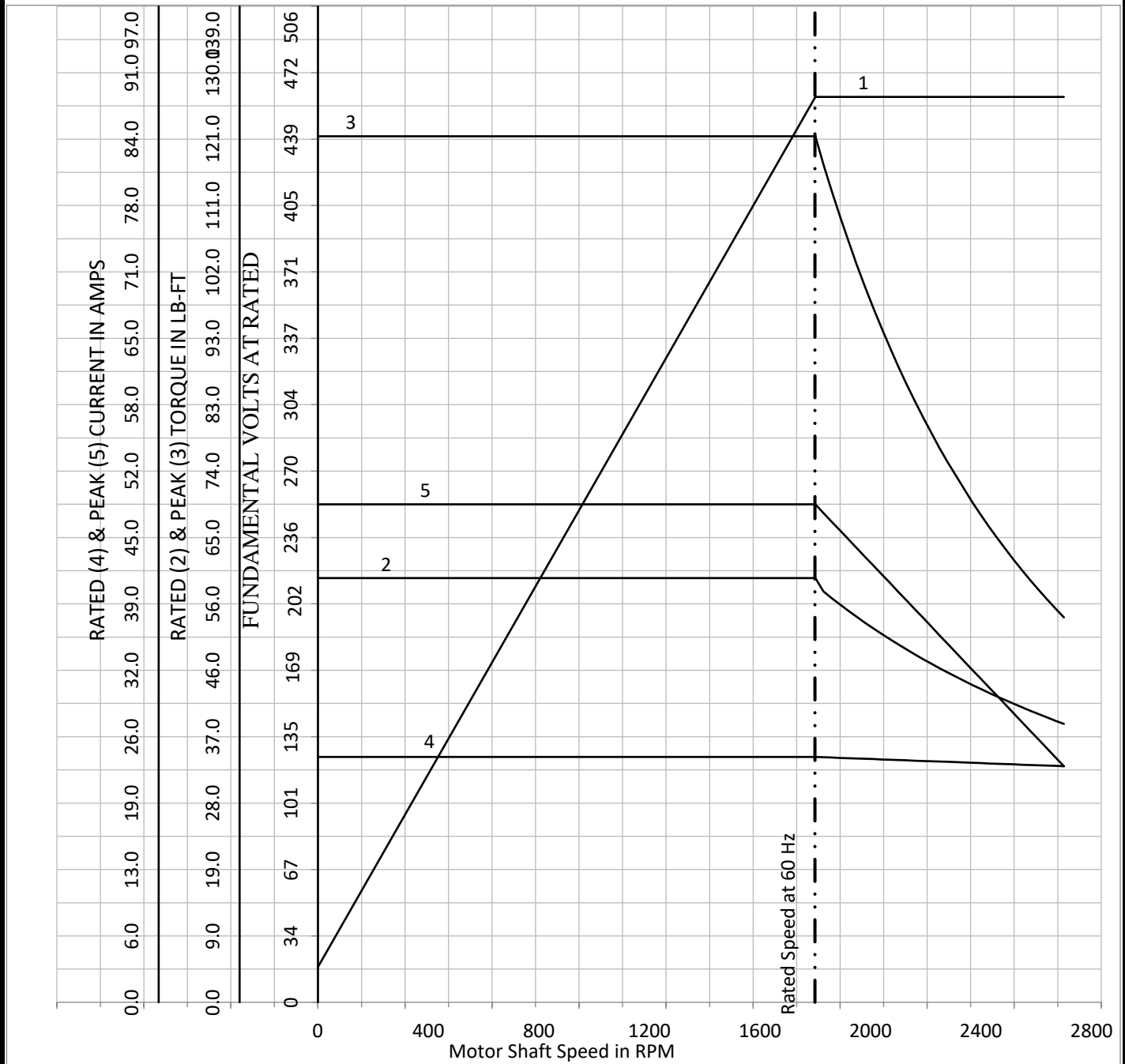
**A-C MOTOR PERFORMANCE CURVES**  
**09WGT459**  
Record: 67965

MAX SAFE RPM 2700  
 Base Volt 460  
 NL AMPS 10.40  
 Slips(HZ) 0.94  
 WK2 ( ) 0.000

WYE CONN EQ CKT OHMS PER PHASE (BASE RATING, 20C)  
 R1 0.167 X1 0.876  
 R2 0.159 X2 1.160  
 XM 30.000

HP 20 HP  
 BASE SPEED 1771.90002  
 PHASE/HZ 3/60

Vector PWM Inverter Duty  
 Variable Speed AC Motor Curves



Calculated Data

Data Valid For Nameplate Speed Range only



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 CK BY  
 APP BY USBRRAN1  
 DATE 11/27/2017

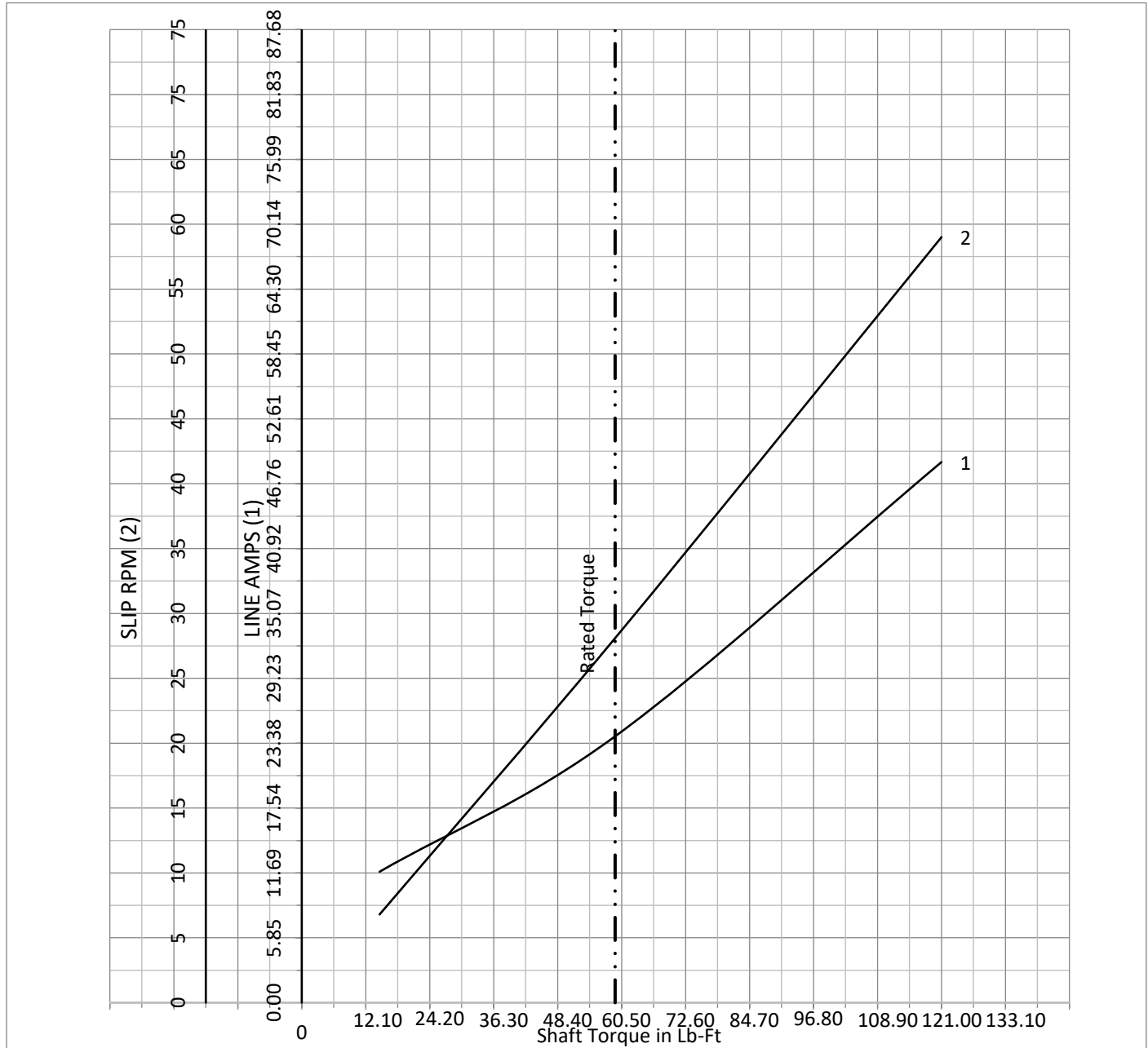
**A-C MOTOR PERFORMANCE CURVES**  
**09WGT459**  
 Record: 67965

MAX SAFE RPM	2700
Base Volt	460
NL AMPS	10.40
Slips(HZ)	0.94
WK2 ( )	0.000

WYE CONN EQ CKT OHMS PER PHASE (BASE RATING, 20C)			
R1	0.167	X1	0.876
R2	0.159	X2	1.160
		XM	30.000

HP 20 HP  
 BASE SPEED 1771.900024  
 PHASE/HZ 3/60

Vector PWM Inverter Duty  
 Variable Speed AC Motor Curves

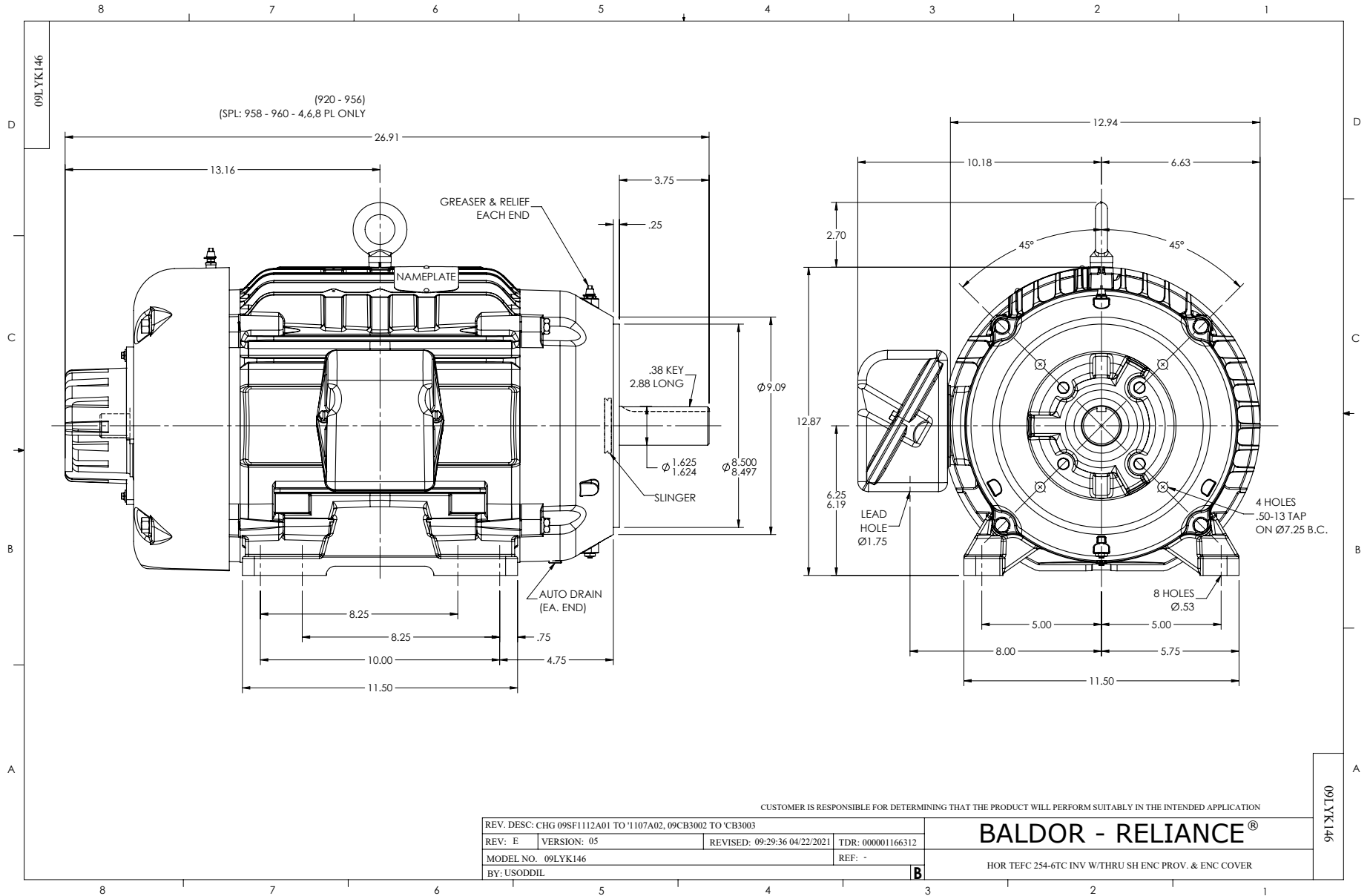


Calculated Data  
 Data Valid For Nameplate Speed Range only

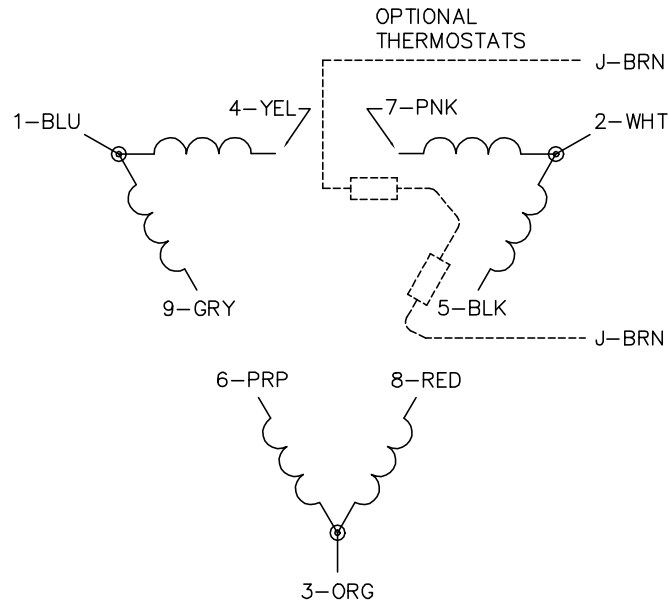


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 APP BY USBRRANI  
 DATE 11/27/2017

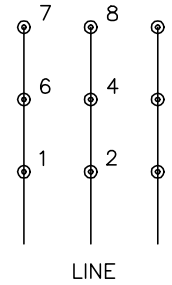
**A-C MOTOR PERFORMANCE CURVES**  
**09WGT459**  
 Record: 67965



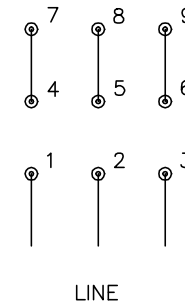
CD0180



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

REV. DESC: ADD CLASS CONN00000007		
REV. LTR: D	VERSION: 01	TDR: 000001099922
FILE: \AAA\00005\148	REVISED: 10: 25: 29 02/19/2019	BY: ENBRIRO
MTL: -	© □	

**BALDOR - RELIANCE®**

3PH, DV, 9 LEADS, DELTA CONNECTION

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