

# **ABB BALDOR RELIANCE III**

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## **Customer information packet**

ECS101T2K1P5DF4

1.5KW, 1500RPM, 3PH, 50HZ, D90S, 3524B, TEFC, B

Class - None

Division - Not Applicable

**Specifications**

<b>Enclosure</b>	TEFC
<b>Frame</b>	D90S
<b>Frame Material</b>	Steel
<b>Frequency</b>	50.00 Hz
<b>Haz Area Class and Group</b>	None
<b>Haz Area Division</b>	Not Applicable
<b>Motor Letter Type</b>	Brushless Wound Field PM Rotor
<b>Output @ Frequency</b>	1.500 KW @ 50 HZ
<b>Phase</b>	3
<b>Synchronous Speed @ Frequency</b>	1500 RPM @ 50 HZ
<b>Voltage @ Frequency</b>	230.0 V @ 50 HZ
<b>Agency Approvals</b>	CE CULUS UKCA WEEE
<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>Constant Torque Speed Range</b>	5
<b>Current @ Voltage</b>	3.400 A @ 230.0 V
<b>Design Code</b>	-
<b>Drip Cover</b>	No Drip Cover
<b>Duty Rating</b>	CONT
<b>Efficiency @ 100% Load</b>	90.6 %
<b>Electrically Isolated Bearing</b>	Not Electrically Isolated
<b>Feedback Device</b>	NO FEEDBACK
<b>Frame Prefix</b>	D
<b>Heater Indicator</b>	No Heater
<b>High Voltage Full Load Amps</b>	3.4 a

**Part Detail**

<b>Revision</b>	C
<b>Type</b>	AC
<b>Mech. spec.</b>	35EE436
<b>Base</b>	
<b>Status</b>	PRD/A
<b>Elec. spec.</b>	35WGG964
<b>Layout</b>	35LYEE436
<b>Eff. date</b>	11-22-2024
<b>CD Diagram</b>	CD0006B03
<b>Poles</b>	04
<b>Leads</b>	3#16 13" LONG LEADS Y
<b>Proprietary</b>	False
<b>Created date</b>	04-16-2024

<b>Insulation Class</b>	F
<b>Inverter Code</b>	03
<b>KVA Code</b>	-
<b>Lifting Lugs</b>	No Lifting Lugs
<b>Locked Bearing Indicator</b>	Locked Bearing
<b>Motor Lead Quantity/Wire Size</b>	3 @ 16 AWG
<b>Motor Lead Termination</b>	Flying Leads
<b>Motor Standards</b>	NEMA
<b>Motor Type</b>	3524B
<b>Mounting Arrangement</b>	B3
<b>Number of Poles</b>	4
<b>Overall Length</b>	12.04 IN
<b>Power Factor</b>	93
<b>Product Family</b>	General Purpose
<b>Pulley Face Code</b>	Standard
<b>Rodent Screen</b>	None
<b>Service Factor</b>	1.00
<b>Shaft Diameter</b>	0.945 IN
<b>Shaft Ground Indicator</b>	Shaft Grounding
<b>Shaft Rotation</b>	Reversible
<b>Speed</b>	1500 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**

<b>NP3968B01A01</b>									
<b>CAT.NO.</b>	ECS101T2K1P5DF4								
<b>SPEC.</b>	35EE436G964G1			<b>YR</b>					
<b>FRAME</b>	D90S	<b>IP</b>	55	<b>WT.</b>	45				
<b>KW</b>	1.5	<b>HZ</b>	50	<b>PH</b>	3	<b>DUTY-IPM</b>	CONT		
<b>INS CL</b>	F	<b>CLASS RISE</b>			<b>AMB-C</b>	40			
<b>EFF. CL</b>	IE5	<b>EFF</b>	90.6	<b>COSφ</b>	93				
<b>VOLTS</b>	230		<b>FLA</b>	3.4					
<b>1/MIN</b>	1500			<b>1/MIN MAX</b>	3000				
<b>BEMF (V)</b>	123			<b>RS (OHMS)</b>	2.94				
<b>LD (MH)</b>	22.1			<b>LQ (MH)</b>	97.1				
<b>VPWM</b>	<b>CP =</b>	50		<b>TO</b>	133				
<b>CT</b>	5	<b>TO</b>	50	<b>VT</b>	5	<b>TO</b>	50		
<b>MATCHED INV</b>	ECIN2A7P0								
<b>DE</b>	6205		<b>ODE</b>	6203					
<b>SERIAL #</b>									

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**NP3978A00**

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<b>PART NO.</b>	ECIN2A7P0				
<b>U1</b>	240	<b>PH</b>	3	<b>HZ</b>	50
<b>I1</b>	5.3	<b>W/EXT. CHOKE</b>			5.1
<b>SERIAL #</b>					

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Volts	240	Max RPM	4000	Conn Diag.	CD0006B03	Leads	3
Amps	4.8	Max Amps		Cs Diagram	CS1127	BEMF	148
KW	1.5	VFD#	ECIN2A7P0			LD	22.1
RPM	1500	S.F.	1.00			LQ	97.1
Phase/Hz	3/50	Rating	40C AMB-CONT			Rs	2.9430 Meas. L-L

**60034-2-3 Motor Performance at Standardized Operating Points**

	RPM	% Speed	LB-FT	% Torque	KW	Efficiency	Loss (% FL)	Watts Loss (W)
P1	1350	90%	7.0	100%	1.3	89.4	10.66%	160
P2	748	50%	7.0	100%	0.7	85.3	8.58%	129
P3	363	25%	7.0	100%	0.4	76.5	7.40%	111
P4	1351	90%	3.5	50%	0.7	90.6	4.68%	70
P5	748	50%	3.5	50%	0.4	88.7	3.17%	48
P6	748	50%	1.8	25%	0.2	89.2	1.50%	23
P7	363	25%	1.7	25%	0.1	84.6	1.10%	16

**61800-9-2 PDS Performance at Reference Operating Points**

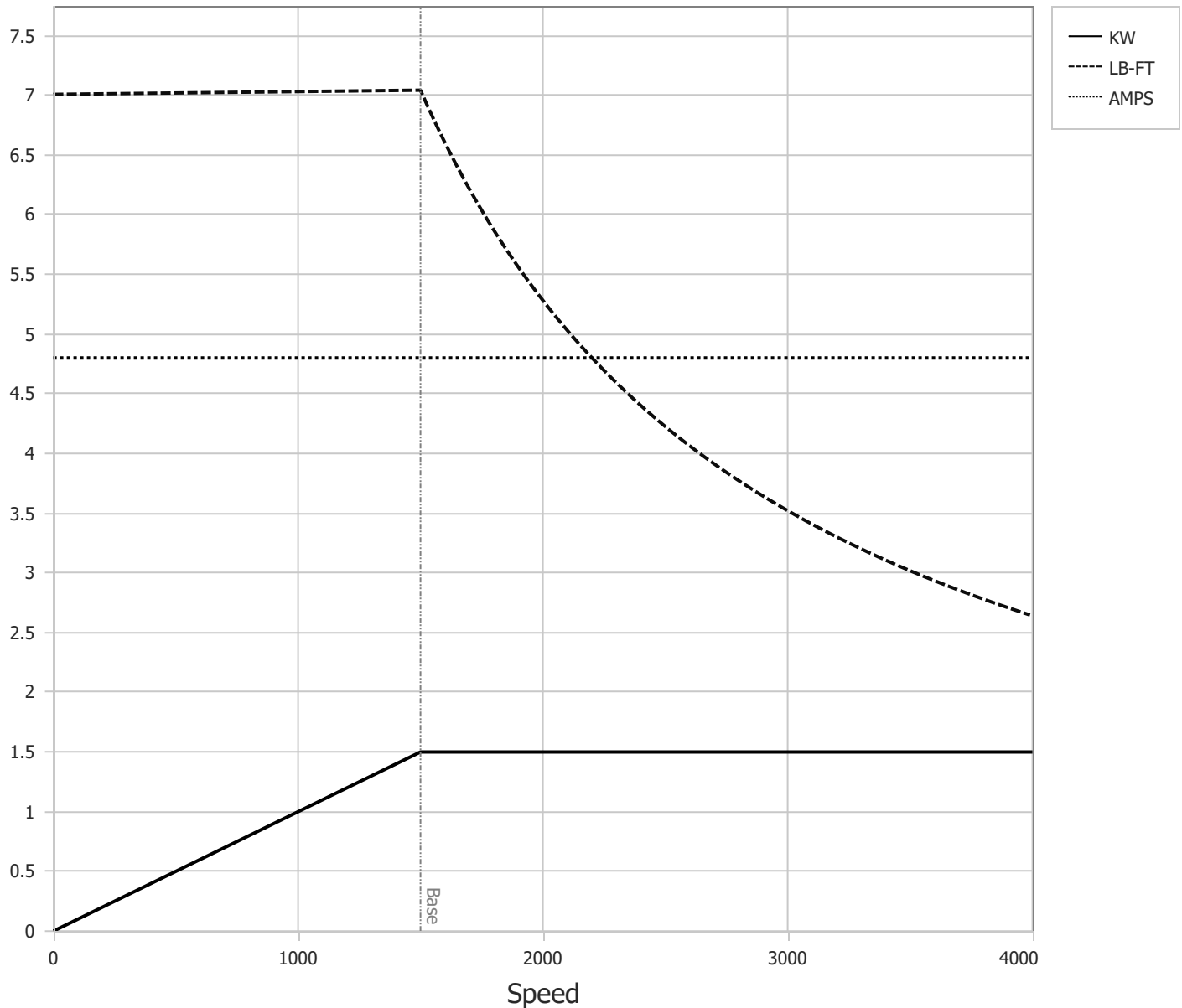
	RPM	% Speed	LB-FT	% Torque	KW	System Efficiency	Loss (% FL)	Watts Loss (W)
P1	1504	100%	7.0	100%	1.5	87.6	14.07%	211
P2	748	50%	7.0	100%	0.7	81.1	11.56%	173
P3	242	17%	7.0	100%	0.2	62.2	9.78%	147
P4	1500	100%	3.5	50%	0.7	88.2	6.63%	99
P5	748	50%	3.5	50%	0.4	83.9	4.74%	71
P6	242	17%	3.5	50%	0.1	67.0	3.96%	59
P7	748	50%	1.8	25%	0.2	83.3	2.50%	37
P8	242	17%	1.8	25%	0.1	67.9	1.90%	29

Points not taken in certified order.

<b>BALDOR • RELIANCE</b>	DR By: <u>R &amp; D</u>	<b>AC MOTOR PERFORMANCE CURVES</b>	<b>35WGG964</b> 35E5209G964G1 Test - 110926
	CK By: <u>USTOSAN</u>		
	APP By: <u>USJAROB1</u>		
	Date: <u>07/10/2024</u>		

Volts	240	Max RPM	4000	Conn Diag.	CD0006B03	Leads	3
Amps	4.8	Max Amps		Cs Diagram	CS1127	BEMF	148
KW	1.5	VFD #	ECIN2A7P0			LD	22.1
RPM	1500	S.F.	1.00			LQ	97.1
Phase/Hz	3/50	Rating	40C AMB-CONT			Rs	2.9430 Meas L-L

Constant Duty Operating Range

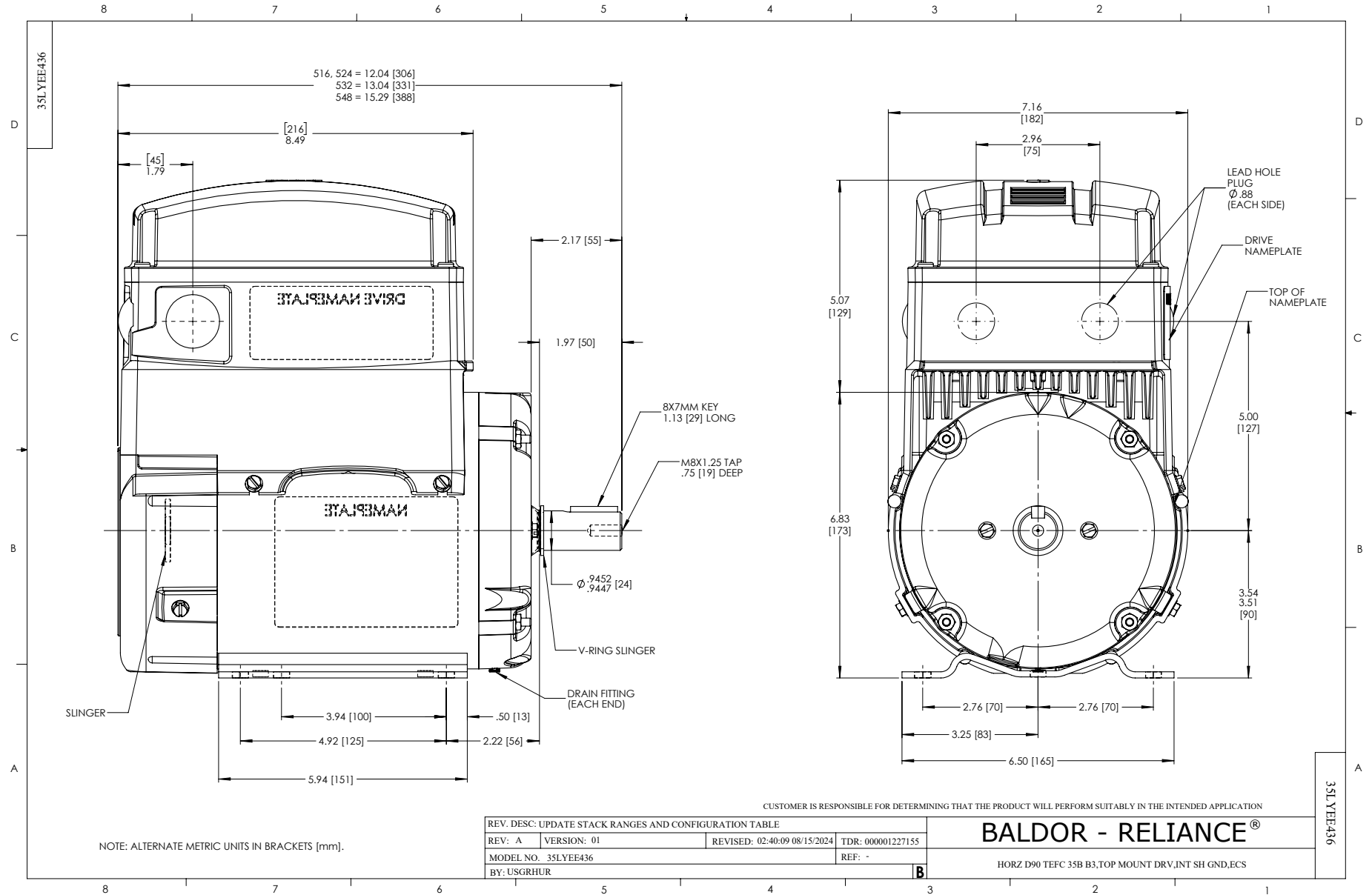


**BALDOR • RELIANCE**

DR By: R & D  
 CK By: USTOSAN  
 APP By: USJAROB1  
 Date: 07/10/2024

**AC MOTOR  
PERFORMANCE  
CURVES**

**35WGG964**  
 35E5209G964G1  
 Test - 110926



CD0006B03



**NOTES:**

1. INTERCHANGE ANY TWO LINE LEADS TO REVERSE ROTATION.
2. ACTUAL NUMBER OF INTERNAL PARALLEL CIRCUITS MAY VARY.

CD0006B03

REV. DESC: CHANGE LEAD COLORS TO BLUE WHITE ORANGE		
REV. LTR: A	VERSION: 01	TDR: 000001158598
FILE: \AAA\00252\917	REVISED: 11:01:03 01/19/2021	BY: ENMARSO
MTL: -	© □	

**BALDOR - RELIANCE®**

3PH, SV, 3 LEADS, WYE CONNECTED, ECS

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