ABB BALDOR RELIANCE

Customer information packet

ECS100T1H1DB4

1HP, 1800RPM, 3PH, 60HZ, 143TC, 3516B, TEFC, F1
Class - None
Division - Not Applicable

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Specifications

Enclosure	TEFC
Frame	143TC
Frame Material	Steel
Frequency	60.00 Hz
Haz Area Class and Group	None
Haz Area Division	Not Applicable
Motor Letter Type	Brushless Wound Field PM Rotor
Output @ Frequency	1.000 HP @ 60 HZ
Phase	3
Synchronous Speed @ Frequency	1800 RPM @ 60 HZ
Voltage @ Frequency	230.0 V @ 60 HZ
Agency Approvals	BLUETOOTH CULUS WEEE
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
Constant Torque Speed Range	6
Current @ Voltage	2.500 A @ 230.0 V
Design Code	-
Drip Cover	No Drip Cover
Duty Rating	CONT
Efficiency @ 100% Load	91.0 %
Electrically Isolated Bearing	Not Electrically Isolated
Feedback Device	NO FEEDBACK
Heater Indicator	No Heater
High Voltage Full Load Amps	2.5 a
Insulation Class	F
Inverter Code	03

Part Detail

Revision	A
Type	AC
Mech. spec.	35E5291
Base	
Status	PRD/A
Elec. spec.	35WGG932
Layout	35LYE5291
Eff. date	06-16-2025
CD Diagram	CD0006B03
Poles	04
Leads	3#18
Proprietary	False
Created date	01-23-2025

KVA Code	-
Lifting Lugs	No Lifting Lugs
Locked Bearing Indicator	Locked Bearing
Motor Lead Quantity/Wire Size	3 @ 18 AWG
Motor Lead Termination	Flying Leads
Motor Standards	NEMA
Motor Type	3516B
Mounting Arrangement	F1
Number of Poles	4
Overall Length	13.38 IN
Power Factor	98
Product Family	General Purpose
Pulley Face Code	C-Face
Rodent Screen	None
Service Factor	1.00
Shaft Diameter	0.875 IN
Shaft Ground Indicator	Shaft Grounding
Shaft Rotation	Reversible
Speed	1800 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

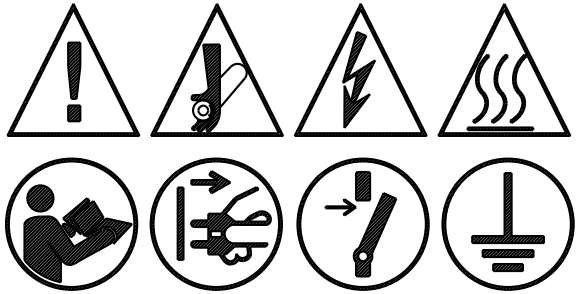
BALDOR·RELIANCE

EC-Titanium™

CAT. NO.	ECS100T1H1DB4							
SPEC.	35E5291G932G3					YR	***	
FRAME	143TC		ENCL.	TEFC		IP	54	
HP	1	RATING	40C AMB-CONT					
NOM. EFF.	91.0		PF	98		SF	1.00	
VOLTS	230			FLA	2.5			
RPM	1800		RPM MAX	3000				
HZ	60		PH.	3	CLASS	F		
BEMF (V)	135			Rs (Ω)	4.9			
Ld (mH)	30.8			Lq (mH)	135			
INV TYP	VPWM	CHP	60 TO 133 HZ					
	CT	6 TO 60 HZ		VT	6 TO 60 HZ			
MATCHED INV	EC11A3P2							
BEARING	DE	6205		ODE	6203			
SERIAL#	***							

ELECTRONICALLY PROTECTED MOTOR
FOR INDUSTRIAL USE

FERRITE ASSISTED
SYNCHRONOUS RELUCTANCE MOTOR
FOR INVERTER USE ONLY



PERMANENT MAGNET MOTOR. WHEN SHAFT IS ROTATED, VOLTAGE WILL BE GENERATED AT THE MOTOR TERMINALS.
MOTEUR Á AIMANT PERMANENT. LORSQUE L'ARBRE TOURNE, UNE TENSION SERA GÉNÉRÉE AUX BORNES DU MOTEUR.

BALDOR-RELIANCE
SHAFT GROUNDING BRUSH INSTALLED

c UL us LISTED
E46145

ABB MOTORS AND MECHANICAL INC.
5711 R.S. BOREHAM JR. ST., FORT SMITH, AR. MFG IN U.S.A.

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EC-Titanium™

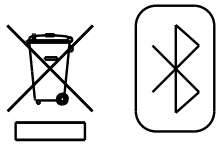
PART NO.	EC11A3P2				
U1	120	PH	1	HZ	60
I1 MAX	9.6	W/EXT. CHOKE			9.0
SERIAL #	***				



POWER DOWN FOR
5 MINUTES BEFORE
REMOVING COVER

METTRE HORS TENSION
PENDANT 5 MINUTES
AVANT DE RETIRER LE
COUVERCLE

ABB MOTORS AND MECHANICAL
INC. FORT SMITH, AR.
MFG. IN U.S.A.



Volts	120	Max RPM	4000	Conn Diag.	CD0006B03	Leads	3
Amps	2.4	Max Amps		Cs Diagram	CS1127	BEMF	135
HP	1	VFD#	ECIN1A3P2			LD	29.3
RPM	1800	S.F.	1.00			LQ	136
Phase/Hz	3/60	Rating	40C AMB-CONT			Rs	4.8894 Meas. L-L

60034-2-3 Motor Performance at Standardized Operating Points

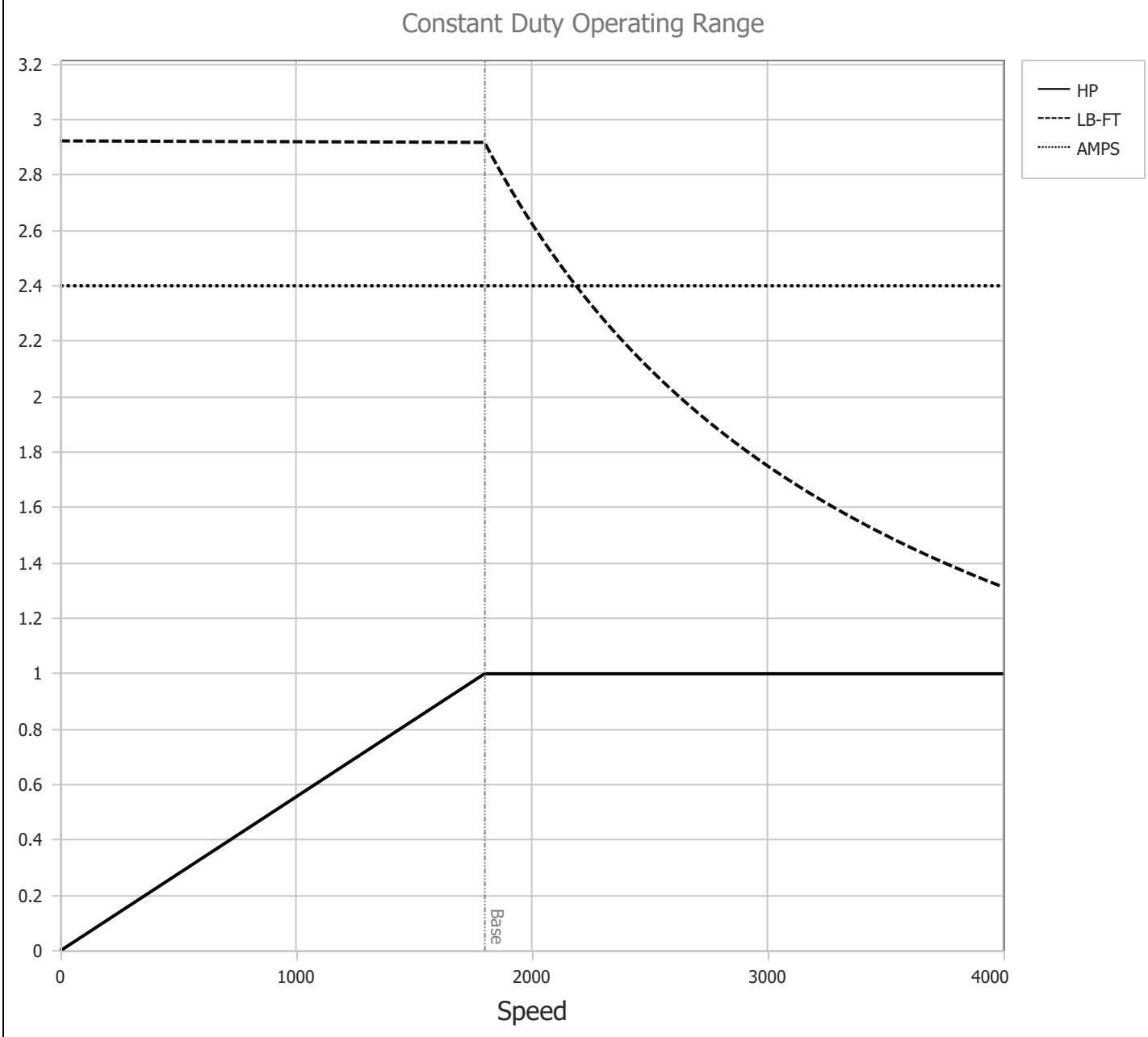
	RPM	% Speed	LB-FT	% Torque	HP	Efficiency	Loss (% FL)	Watts Loss (W)
P1	1618	90%	2.9	100%	0.9	89.8	10.17%	77
P2	900	50%	2.9	100%	0.5	85.4	8.48%	64
P3	450	25%	2.9	100%	0.2	78.7	6.68%	50
P4	1620	90%	1.5	50%	0.5	89.3	5.36%	40
P5	900	50%	1.5	50%	0.2	87.3	3.61%	27
P6	900	50%	0.7	25%	0.1	86.0	2.03%	15
P7	450	25%	0.7	25%	0.1	83.2	1.24%	9

61800-9-2 PDS Performance at Reference Operating Points

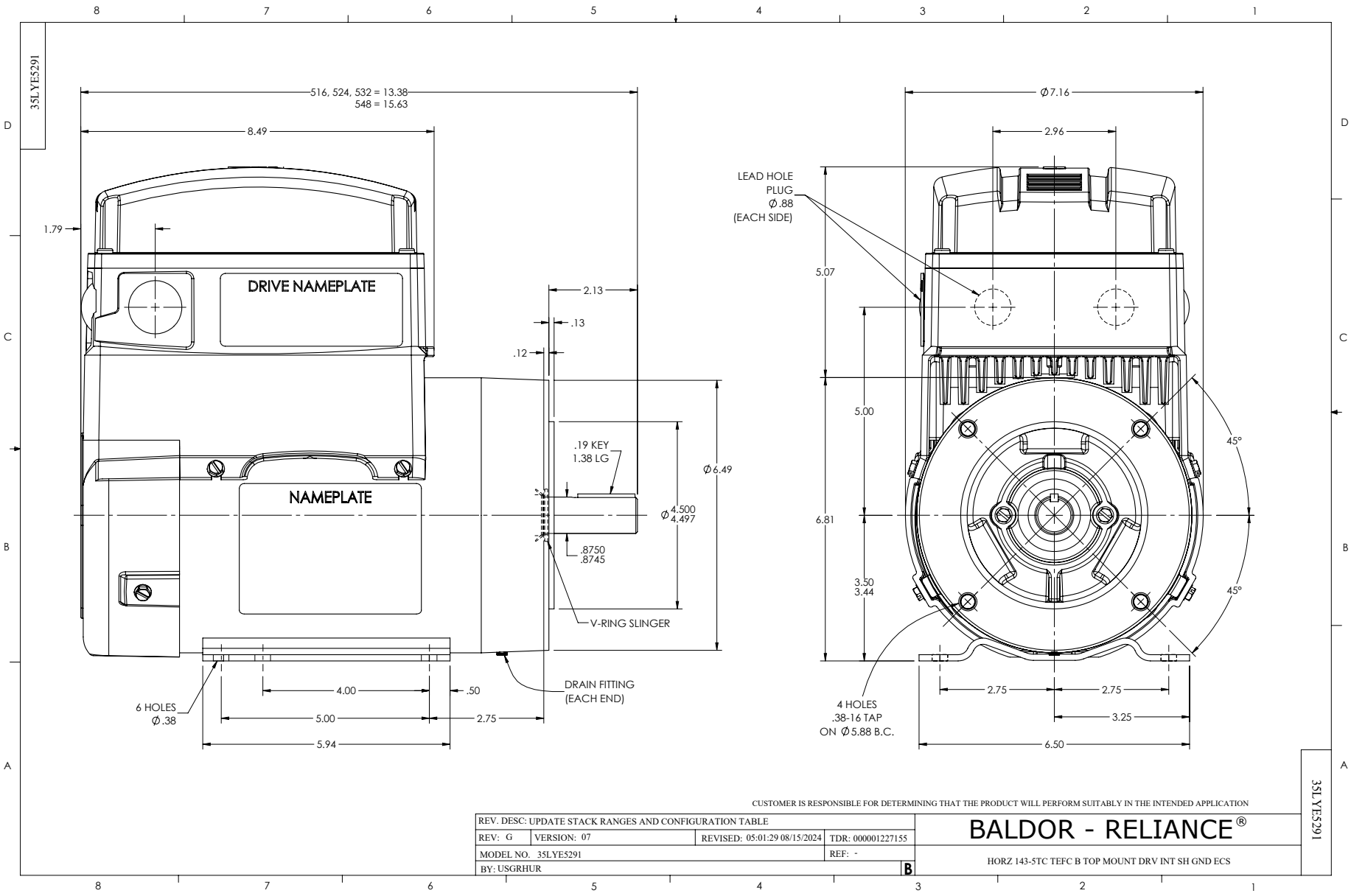
	RPM	% Speed	LB-FT	% Torque	HP	System Efficiency	Loss (% FL)	Watts Loss (W)
P1	1801	100%	2.9	100%	1.0	86.8	15.08%	114
P2	900	50%	2.9	100%	0.5	81.0	11.57%	87
P3	299	17%	2.9	100%	0.2	65.1	8.79%	66
P4	1799	100%	1.5	50%	0.5	85.7	8.23%	62
P5	900	50%	1.5	50%	0.2	82.0	5.43%	41
P6	300	17%	1.5	50%	0.1	67.1	4.03%	30
P7	900	50%	0.7	25%	0.1	78.9	3.32%	25
P8	300	17%	0.7	25%	0.0	64.6	2.25%	17

Points not taken in certified order.

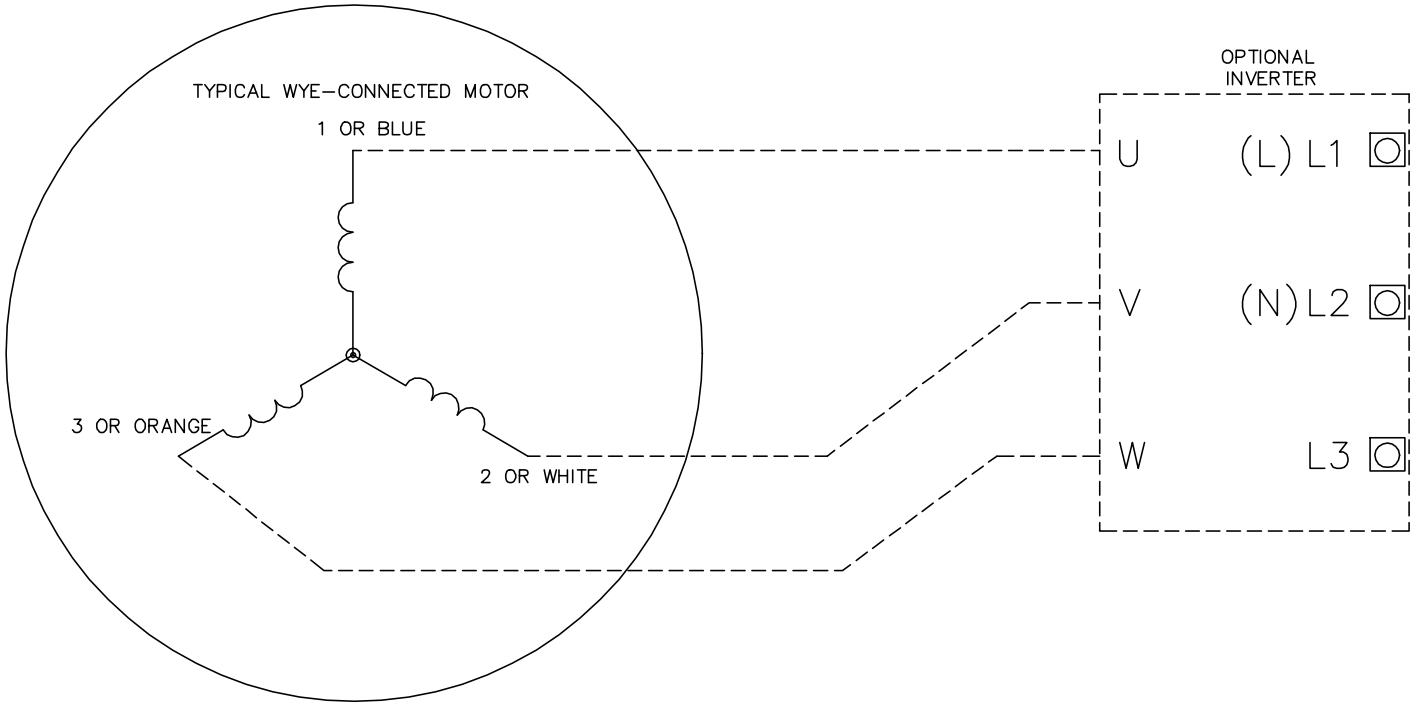
Volts	120	Max RPM	4000	Conn Diag.	CD0006B03	Leads	3
Amps	2.4	Max Amps		Cs Diagram	CS1127	BEMF	135
HP	1	VFD #	ECIN1A3P2			LD	29.3
RPM	1800	S.F.	1.00			LQ	136
Phase/Hz	3/60	Rating	40C AMB-CONT			Rs	4.8894 Meas L-L



BALDOR • RELIANCE	DR By: R & D CK By: USBIBAK APP By: USWEQUA1 Date: 12/07/2024	**AC MOTOR PERFORMANCE CURVES**	**35WGG932** 35-0000-1616 *Test - 111671*


35LYE5291
516, 524, 532 = 13.38
548 = 15.63
8.49
1.79
DRIVE NAMEPLATE
NAMEPLATE
2.13
.13
.12
.19 KEY
1.38 LG
Ø 6.49
Ø 4.500
4.497
.8750
.8745
V-RING SLINGER
DRAIN FITTING
(EACH END)
6 HOLES
Ø .38
4.00
.50
5.00
2.75
5.94
Ø 7.16
2.96
LEAD HOLE
PLUG
Ø .88
(EACH SIDE)
5.07
5.00
6.81
3.50
3.44
45°
45°
4 HOLES
.38-16 TAP
ON Ø 5.88 B.C.
2.75
2.75
3.25
6.50
CUSTOMER IS RESPONSIBLE FOR DETERMINING THAT THE PRODUCT WILL PERFORM SUITABLY IN THE INTENDED APPLICATION
REV. DESC: UPDATE STACK RANGES AND CONFIGURATION TABLE
REV: G
VERSION: 07
REVISED: 05:01:29 08/15/2024
TDR: 000001227155
MODEL NO. 35LYE5291
REF: -
BY: USGRHUR
B
BALDOR - RELIANCE®
HORZ 143-5TC TEFC B TOP MOUNT DRV INT SH GND ECS
35LYE5291

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

SH 1 of 1