ABB BALDOR RELIANCE

Customer information packet

ECS100T4H3DF4

3HP, 1800RPM, 3PH, 60HZ, 145T, 3532B, TEFC, F1
Class - None
Division - Not Applicable

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Specifications

Enclosure	TEFC
Frame	145T
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	3.000 HP @ 60 HZ
Phase	3
Synchronous Speed @ Frequency	1800 RPM @ 60 HZ
Voltage @ Frequency	460.0 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	3.500 A @ 460.0 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	3.5 a
Insulation Class	F
Inverter Code	03

Part Detail

Revision	D
Type	AC
Mech. spec.	35E5209
Base	
Status	PRD/A
Elec. spec.	35WGG943
Layout	35LYE5209
Eff. date	06-16-2025
CD Diagram	CD0006B03
Poles	04
Leads	3#16
Proprietary	False
Created date	05-06-2024

KVA Code	-
Lifting Lugs	No Lifting Lugs
Locked Bearing Indicator	Locked Bearing
Motor Lead Quantity/Wire Size	3 @ 116 AWG
Motor Lead Termination	Flying Leads
Motor Standards	NEMA
Motor Type	3532B
Mounting Arrangement	F1
Number of Poles	4
Overall Length	14.26 IN
Power Factor	97
Product Family	General Purpose
Pulley Face Code	Standard
Rodent Screen	None
Service Factor	1.15
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

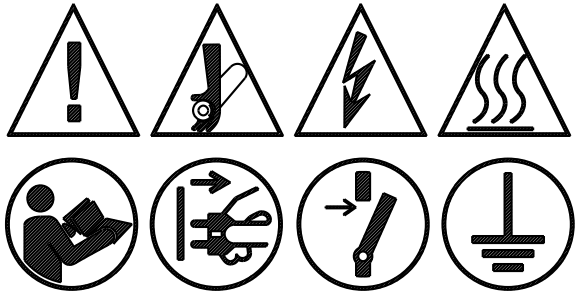
BALDOR·RELIANCE

EC-Titanium™

CAT. NO.	ECS100T4H3DF4						
SPEC.	35E5209G943G1				YR	***	
FRAME	145T		ENCL.	TEFC	IP	54	
HP	3	RATING	40C AMB-CONT				
NOM. EFF.	91.0	PF	97	SF	1.15		
VOLTS	460		FLA	3.5			
RPM	1800	RPM MAX	4000				
HZ	60	PH.	3	CLASS	F		
BEMF (V)	267		Rs (Ω)	6.72			
Ld (mH)	57.9		Lq (mH)	218.0			
INV TYP	VPWM	CHP	60 TO 133 HZ				
	CT	6 TO 60 HZ	VT	6 TO 60 HZ			
MATCHED INV	EC14A4P1						
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™

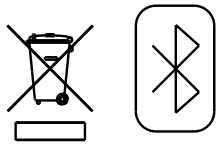
PART NO.	EC14A4P1				
U1	480	PH	3	HZ	60
I1 MAX	4.8	W/EXT. CHOKE			4.5
SERIAL #	***				



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	460	Max RPM	3000	Conn Diag.	CD0006B03	Leads	3
Amps	3.7	Max Amps		Cs Diagram	CS1126	BEMF	172
HP	3	VFD#	ECI4A4P1			LD	51
RPM	1800	S.F.	1.00			LQ	177
Phase/Hz	3/60	Rating	40C AMB CONT			Rs	3.8460 Meas. L-L

60034-2-3 Motor Performance at Standardized Operating Points

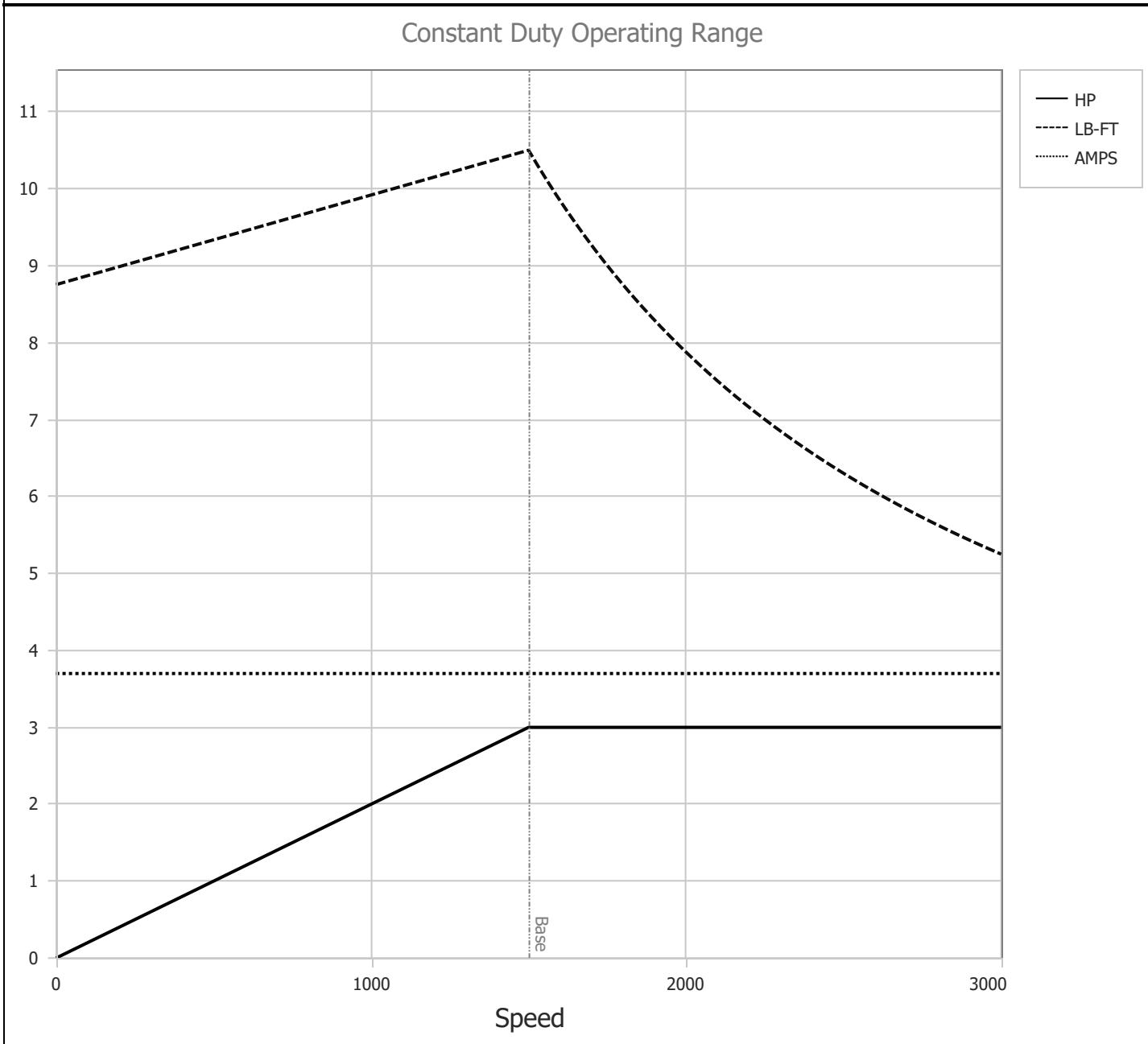
	RPM	% Speed	LB-FT	% Torque	HP	Efficiency	Loss (% FL)	Watts Loss (W)
P1	1627	90%	8.8	100%	2.7	91.3	8.59%	194
P2	904	50%	8.8	100%	1.5	89.3	6.00%	136
P3	452	25%	8.8	100%	0.8	83.4	4.94%	112
P4	1628	90%	4.4	50%	1.4	91.8	3.99%	90
P5	904	50%	4.4	50%	0.8	89.9	2.80%	63
P6	904	50%	2.2	25%	0.4	87.9	1.70%	39
P7	452	25%	2.2	25%	0.2	83.7	1.21%	27

61800-9-2 PDS Performance at Reference Operating Points

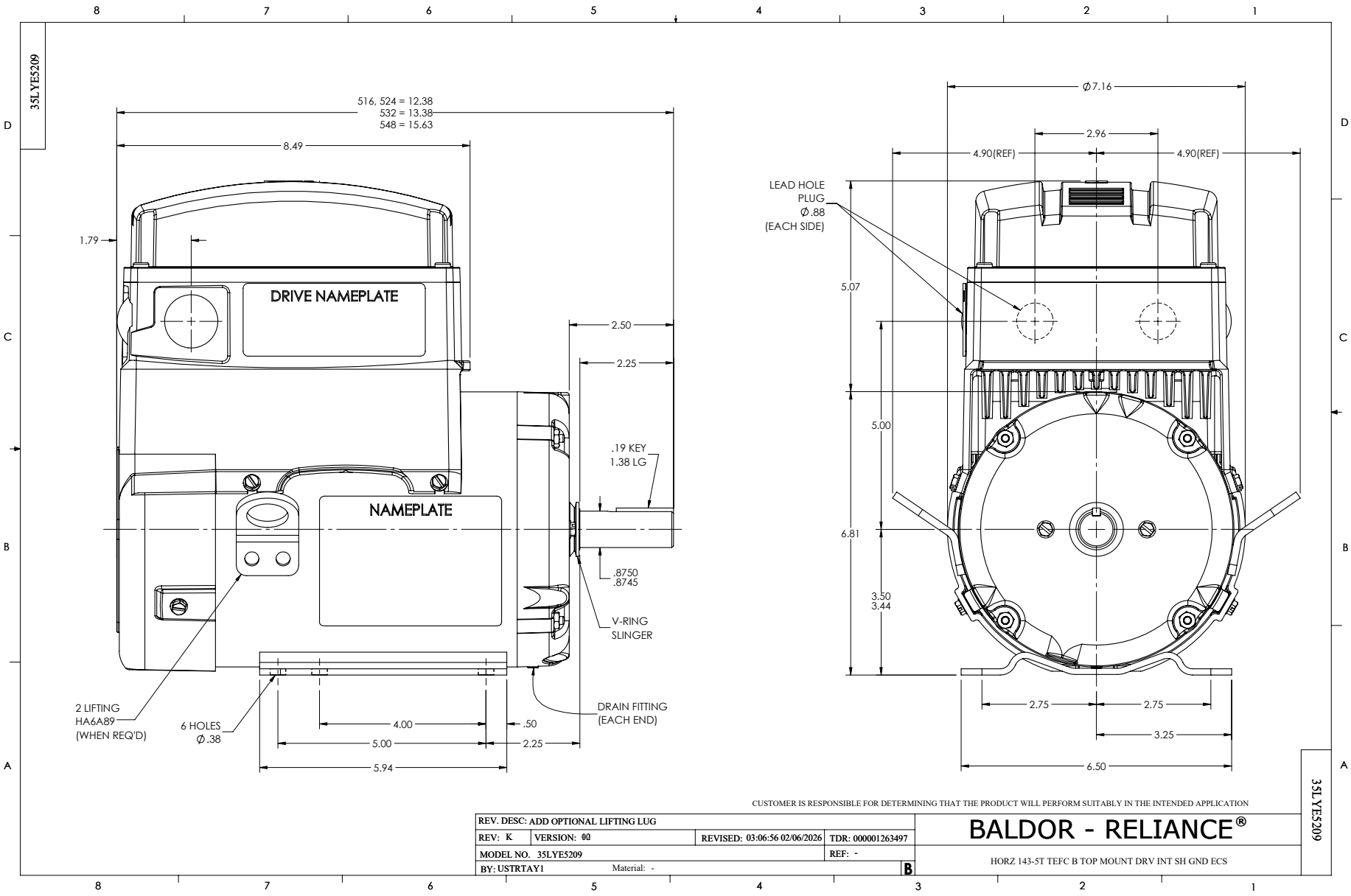
	RPM	% Speed	LB-FT	% Torque	HP	System Efficiency	Loss (% FL)	Watts Loss (W)
P1	1804	100%	8.8	100%	3.0	89.8	11.23%	254
P2	904	50%	8.8	100%	1.5	84.8	8.87%	201
P3	301	17%	8.8	100%	0.5	69.2	7.37%	167
P4	1809	100%	4.4	50%	1.5	88.5	6.44%	146
P5	904	50%	4.4	50%	0.8	84.1	4.70%	106
P6	301	17%	4.4	50%	0.3	68.2	3.86%	87
P7	904	50%	2.2	25%	0.4	80.2	3.06%	69
P8	301	17%	2.2	25%	0.1	62.6	2.46%	56

Points not taken in certified order.

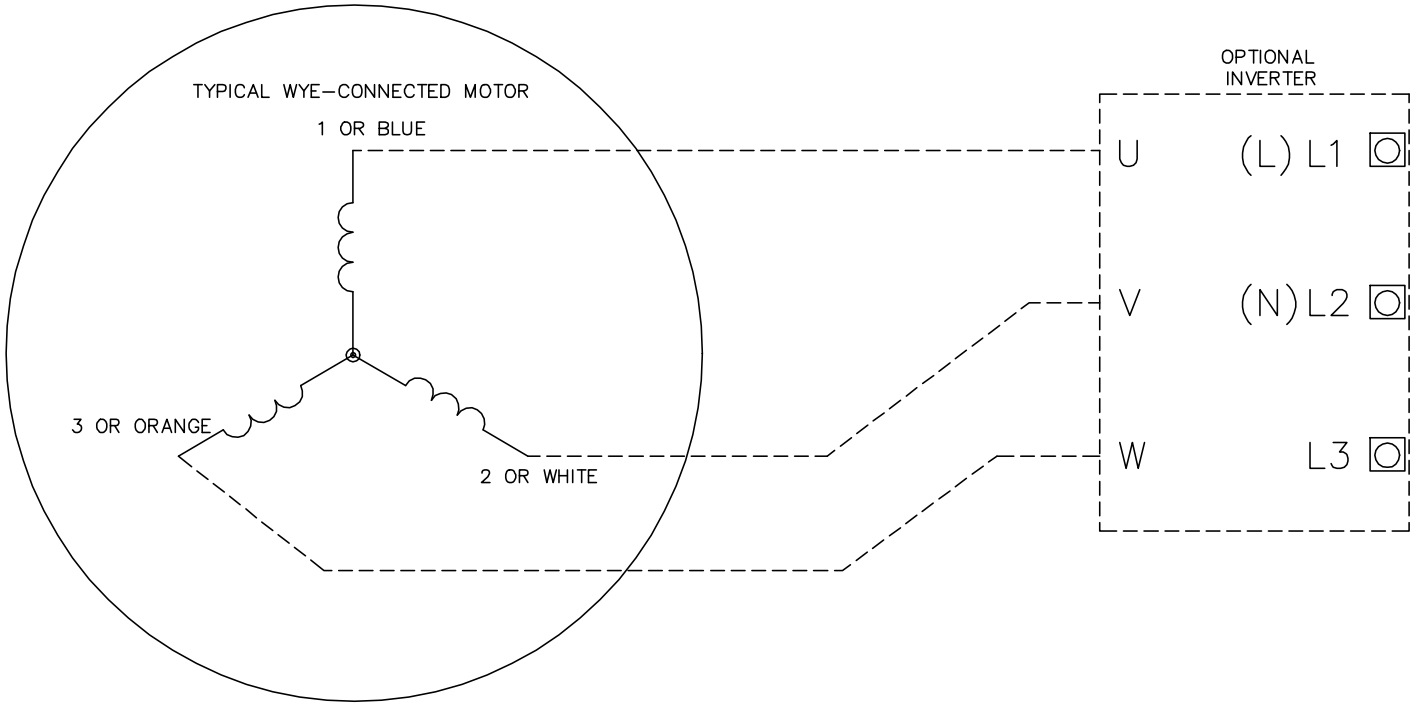
Volts	460	Max RPM	3000	Conn Diag.	CD0006B03	Leads	3
Amps	3.7	Max Amps		Cs Diagram	CS1126	BEMF	172
HP	3	VFD #	ECI4A4P1			LD	51
RPM	1800	S.F.	1.00			LQ	177
Phase/Hz	3/60	Rating	40C AMB CONT			Rs	3.8460 Meas L-L



BALDOR • RELIANCE	DR By: R & D CK By: USBIBAK APP By: USJAROB1 Date: 01/09/2025	**AC MOTOR PERFORMANCE CURVES**	**36WGA0025** 36-0000-3655 *Test - 111781*


35LYE5209
516, 524 = 12.38
532 = 13.38
548 = 15.63
8.49
1.79
DRIVE NAMEPLATE
NAMEPLATE
2.50
2.25
.19 KEY
1.38 LG
.8750
.8745
V-RING
SLINGER
2 LIFTING
HA6A89
(WHEN REQ'D)
6 HOLES
Ø .38
4.00
.50
5.00
2.25
5.94
DRAIN FITTING
(EACH END)
Ø7.16
2.96
4.90(REF)
4.90(REF)
LEAD HOLE
PLUG
Ø .88
(EACH SIDE)
5.07
5.00
6.81
3.50
3.44
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: ADD OPTIONAL LIFTING LUG
REV: K
VERSION: 00
REVISED: 03:06:56 02/06/2026
TDR: 000001263497
MODEL NO. 35LYE5209
REF: -
BY: USTRTAY1
Material: -
B
BALDOR - RELIANCE®
HORZ 143-5T TEFC B TOP MOUNT DRV INT SH GND ECS
35LYE5209

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