ABB BALDOR RELIANCE

Customer information packet

ECS100T4H7EC4

7.5HP, 1800RPM, 3PH, 60HZ, 184TC, 3648B, TEFC
Class - None
Division - Not Applicable

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Specifications

Enclosure	TEFC
Frame	184TC
Frame Material	Steel
Frequency	60.00 Hz
Haz Area Class and Group	None
Haz Area Division	Not Applicable
Motor Letter Type	Three Phase
Output @ Frequency	7.500 HP @ 60 HZ
Phase	3
Synchronous Speed @ Frequency	1800 RPM @ 60 HZ
Voltage @ Frequency	460.0 V @ 60 HZ
Agency Approvals	UL
	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	8.800 A @ 460.0 V
Drip Cover	No Drip Cover
Duty Rating	CONT
Efficiency @ 100% Load	94.0 %
Electrically Isolated Bearing	Not Electrically Isolated
Feedback Device	NO FEEDBACK
Heater Indicator	No Heater
High Voltage Full Load Amps	8.8 a
Insulation Class	F
Inverter Code	Inverter Duty
IP Rating	NONE
Lifting Lugs	Standard Lifting Lugs

Part Detail

Revision	K
Type	AC
Mech. spec.	
Base	
Status	PRD/A
Elec. spec.	36WGA0026
Layout	36LYT270
Eff. date	06-16-2025
CD Diagram	CD0006B03
Poles	04
Leads	3#14 19" LONG LEADS
Proprietary	False
Created date	09-28-2020

Locked Bearing Indicator	Locked Bearing
Motor Lead Termination	Flying Leads
Motor Standards	NEMA
Motor Type	3648B
Mounting Arrangement	F1
Number of Poles	4
Overall Length	18.21 IN
Power Factor	94
Product Family	General Purpose
Pulley Face Code	C-Face
Rodent Screen	None
Service Factor	1.00
Shaft Diameter	1.125 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

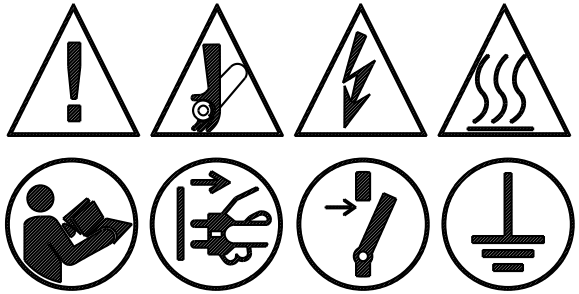
BALDOR·RELIANCE

EC-Titanium™

CAT. NO.	ECS100T4H7EC4						
SPEC.	36-0001720				YR	***	
FRAME	184TC		ENCL.	TEFC	IP	54	
HP	7.5	RATING	40C AMB-CONT				
NOM. EFF.	94.0	PF	94	SF	1.0		
VOLTS	460		FLA	8.8			
RPM	1800		RPM MAX	4000			
HZ	60		PH.	3	CLASS	F	
BEMF (V)	212		Rs (Ω)	1.30			
Ld (mH)	25.0		Lq (mH)	91.6			
INV TYP	VPWM	CHP	60 TO 133 HZ				
	CT	6 TO 60 HZ	VT	1 TO 133 HZ			
MATCHED INV	EC14A9P5						
BEARING	DE	6206	ODE	6205			
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.

BALDOR·RELIANCE

EC-Titanium™

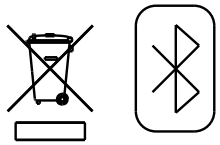
PART NO.	EC14A9P5				
U1	480	PH	3	HZ	60
I1 MAX	10.0	W/EXT. CHOKE			8.4
SERIAL #	***				



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	4000	Conn Diag.	CD0006	Leads	3
Amps	9.0	Max Amps		Cs Diagram	CS1126	BEMF	212
HP	7.5	VFD#	ECI4A9P5			LD	25
RPM	1800	S.F.	1.00			LQ	91.6
Phase/Hz	3/60	Rating	40C AMB			Rs	1.3196 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	1620	90%	21.9	100%	6.8	92.4	7.39%	418
P2	901	50%	21.9	100%	3.8	90.5	5.23%	296
P3	451	25%	22.0	100%	1.9	85.2	4.31%	244
P4	1623	90%	10.9	50%	3.4	92.9	3.43%	194
P5	902	50%	10.9	50%	1.9	90.9	2.48%	140
P6	902	50%	5.5	25%	0.9	89.3	1.49%	84
P7	451	25%	5.5	25%	0.5	85.1	1.08%	61

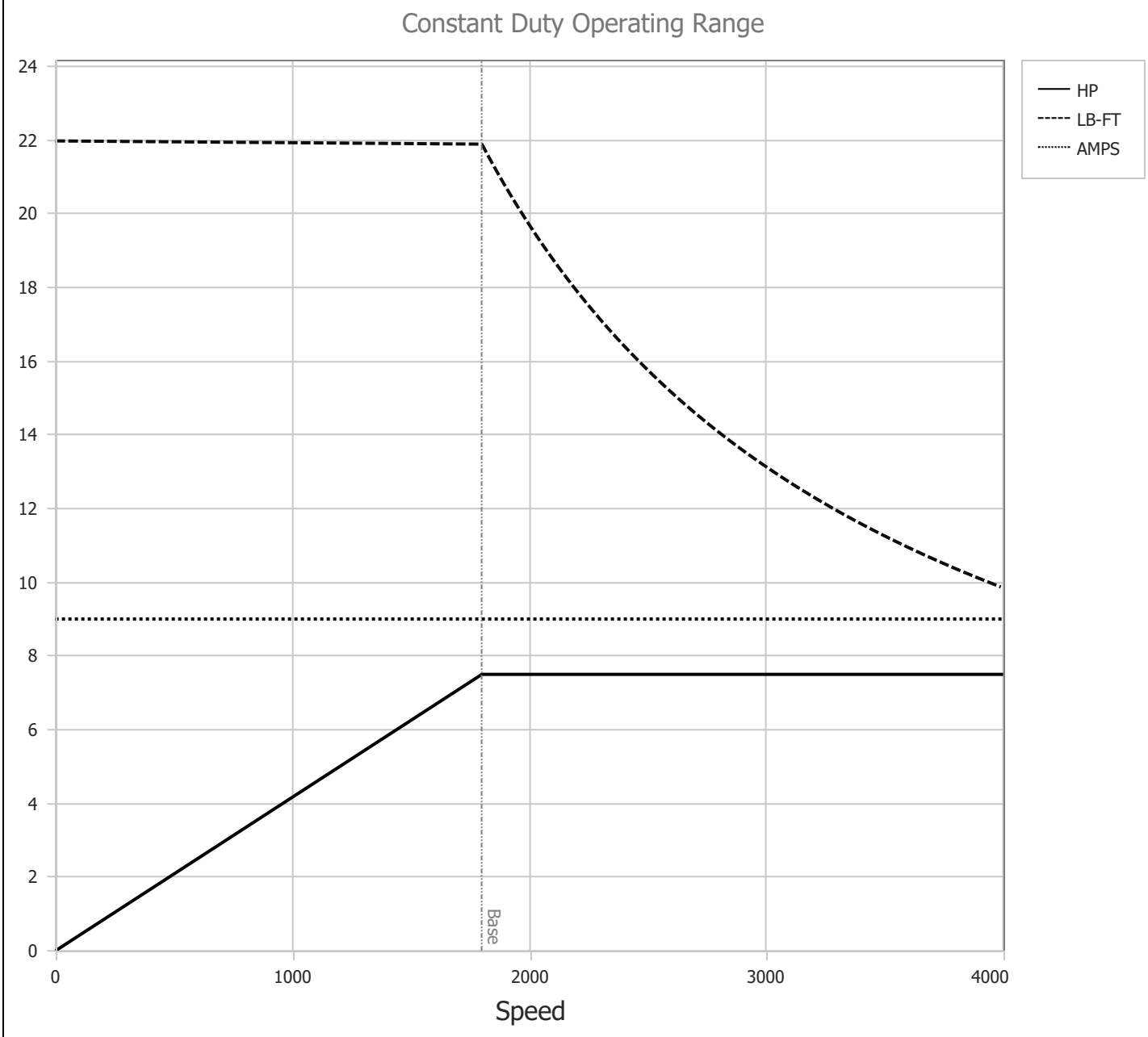
61800-9-2 PDS Performance at Reference Operating Points

	RPM	% Speed	LB-FT	% Torque	HP	System Efficiency	Loss (% FL)	Watts Loss (W)
P1	1802	100%	21.9	100%	7.5	91.5	9.22%	522
P2	901	50%	21.9	100%	3.8	87.1	7.36%	416
P3	300	17%	21.9	100%	1.3	73.5	5.95%	337
P4	1803	100%	10.9	50%	3.8	91.1	4.85%	275
P5	902	50%	10.9	50%	1.9	87.1	3.65%	207
P6	300	17%	10.9	50%	0.6	74.3	2.85%	161
P7	902	50%	5.5	25%	0.9	84.6	2.25%	128
P8	300	17%	5.5	25%	0.3	70.8	1.70%	96

Points not taken in certified order.

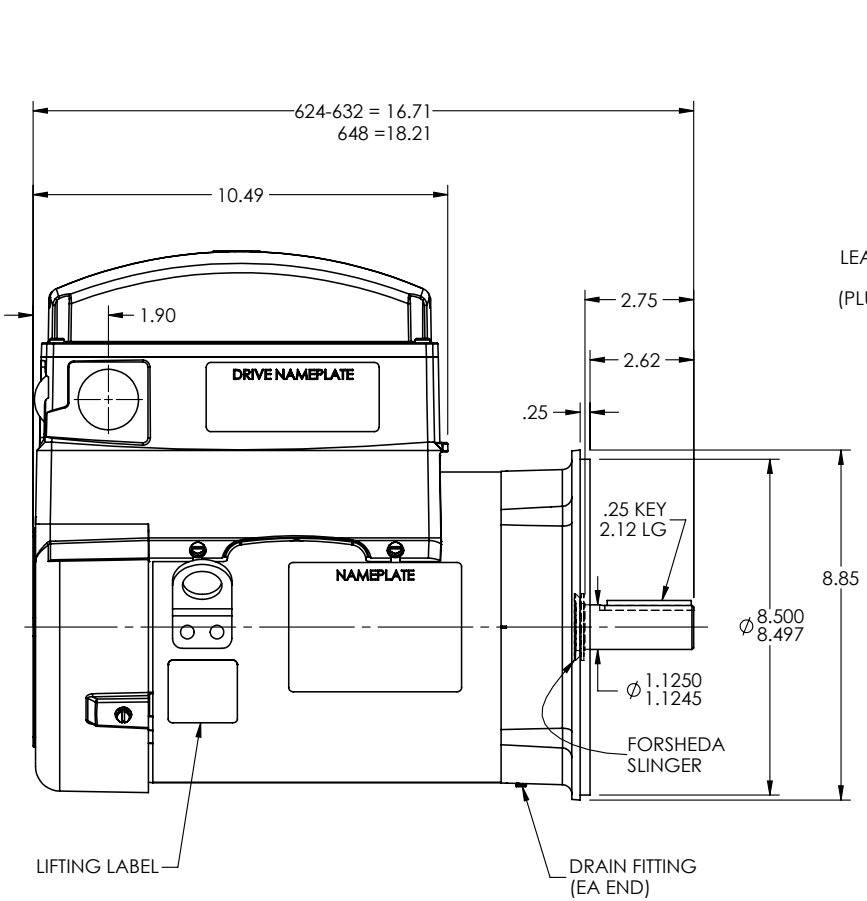
BALDOR • RELIANCE	DR By: R & D CK By: USTOSAN APP By: USJAROB1 Date: 09/12/2024	**AC MOTOR PERFORMANCE CURVES**	**36WGL111** 36T258L111G1 *Test - 111285*

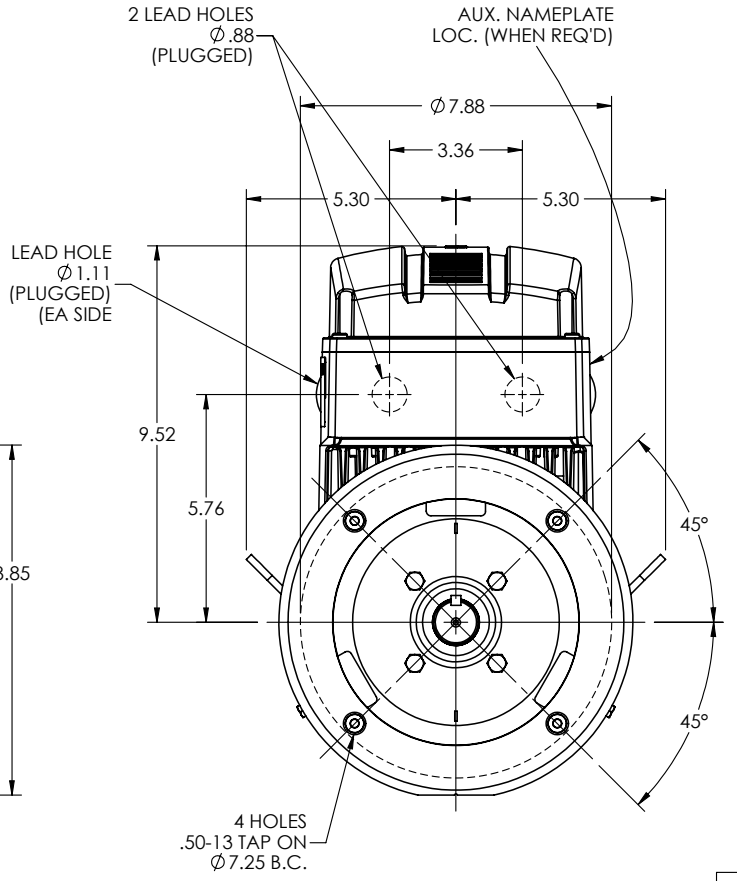
Volts	460	Max RPM	4000	Conn Diag.	CD0006	Leads	3
Amps	9.0	Max Amps		Cs Diagram	CS1126	BEMF	212
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36LYT270





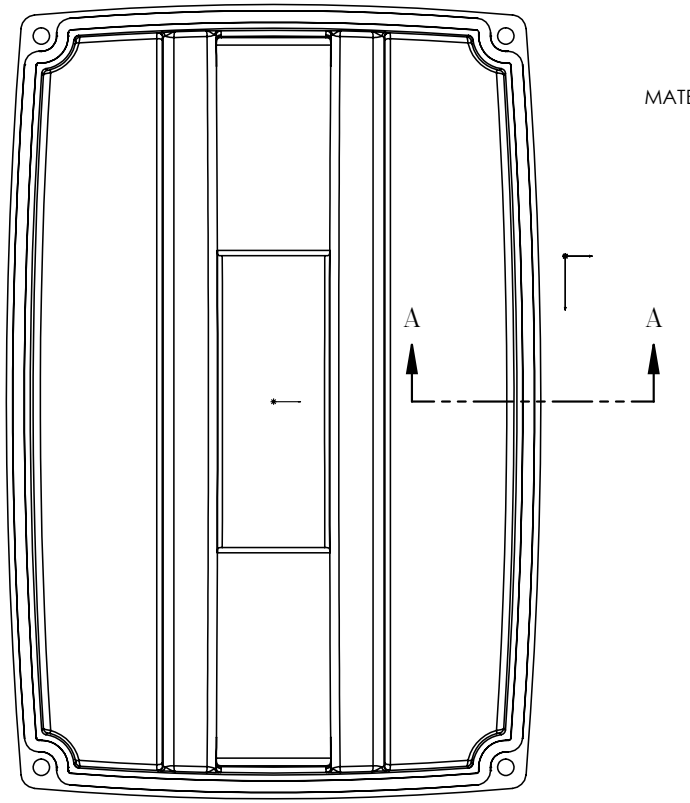
36LYT270

REV. DESC: UPDATE DRAWING GRAPHICS			
REV: E	VERSION: 05	REVISED: 02:10:44 03/18/2022	TDR: 000001187699
MODEL NO. 36LYT270			REF: -
BY: ENJEFD0	Material: -		

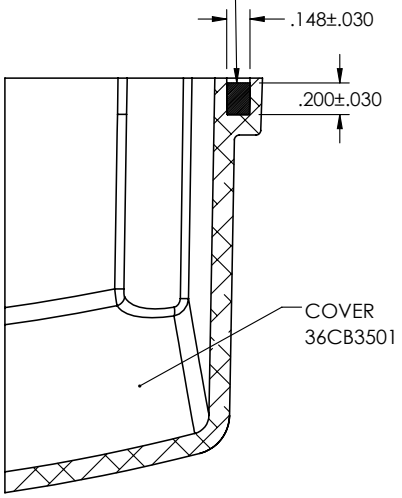
BALDOR

VERT 182-4TC TEFC 36B, TOP MOUNT DRV, BALDOR INT SH GND, ECS

36CB3501A00



MATERIAL: RAMPF, RAKU-PUR 32-3280-51L



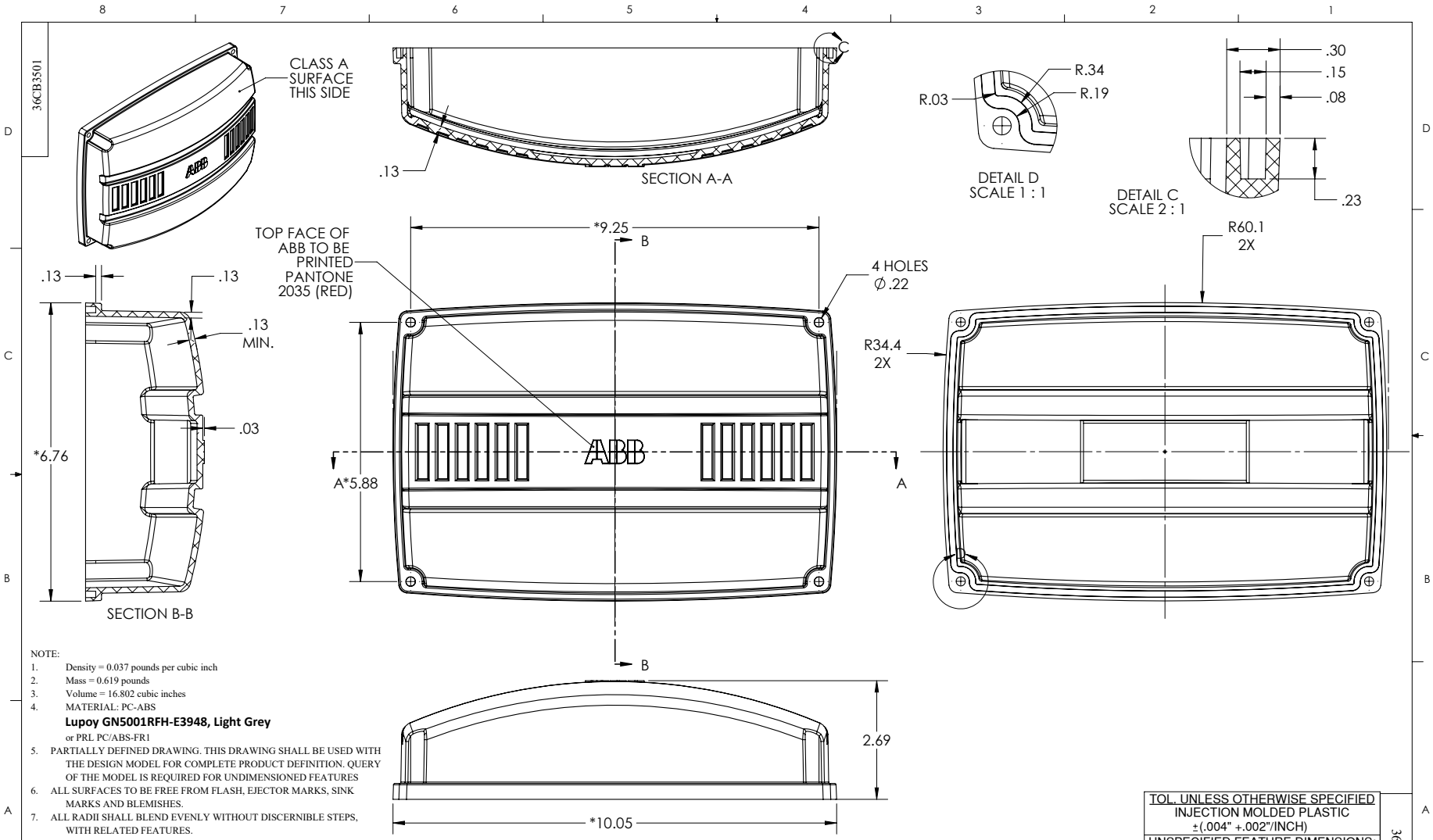
SECTION A–A

36CB3501A00

REV. DESC: UPDATE MATERIAL			
REV: A	VERSION: 01	REVISED: 10:46:37 03/29/2019	TDR: 000001101646
	MODEL NO. 36CB3501A00		REF: -
	BY: ENMARS0	Material: -	

BALDOR - RELIANCE®

36 & 37 FRAME TOP ECM COVER WITH FOAM SEAL



NOTE:
1. Density = 0.037 pounds per cubic inch
2. Mass = 0.619 pounds
3. Volume = 16.802 cubic inches
4. MATERIAL: PC-ABS
   Lupoy GN5001RFH-E3948, Light Grey
   or PRL PC/ABS-FR1
5. PARTIALLY DEFINED DRAWING. THIS DRAWING SHALL BE USED WITH THE DESIGN MODEL FOR COMPLETE PRODUCT DEFINITION. QUERY OF THE MODEL IS REQUIRED FOR UNDIMENSIONED FEATURES
6. ALL SURFACES TO BE FREE FROM FLASH, EJECTOR MARKS, SINK MARKS AND BLEMISHES.
7. ALL RADII SHALL BLEND EVENLY WITHOUT DISCERNIBLE STEPS, WITH RELATED FEATURES.
8. TOOLMAKER TO PROVIDE TOOL DRG., HIGHLIGHTING EJECTOR POSITIONS FOR APPROVAL PRIOR TO TOOLMAKING.
9. ALL CLASS A SURFACES TO BE TEXTURED WITH A 24 VDI SPARKED FINISH.
10. ALL INTERNAL NON CRITICAL SURFACES UNLESS OTHERWISE STATED TO BE SMOOTH AND FREE FROM TOOLING MARKS.

REV. DESC: CHANGE ALTERNATE MATERIAL			
REV: C	VERSION: 03	REVISED: 11:08:57 04/27/2023	TDR: 000001206464
MODEL NO. 36CB3501			
BY: ENMARS0			B

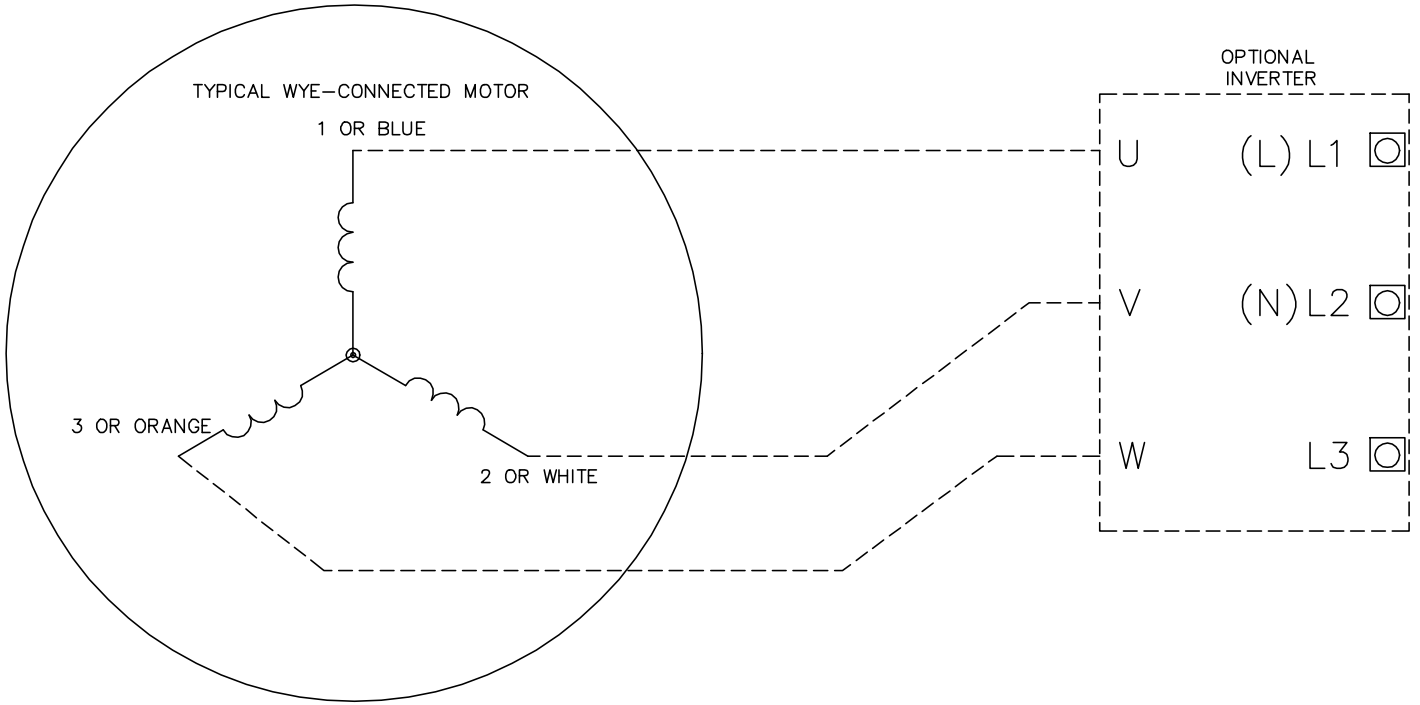
TOL. UNLESS OTHERWISE SPECIFIED
INJECTION MOLDED PLASTIC
±(.004" +.002"/INCH)
UNSPECIFIED FEATURE DIMENSIONS:
DRAFT= 1.0° ANGLES ±0.5°

BALDOR - RELIANCE®

36 & 37 FRAME TOP ECM COVER, PLASTIC

36CB3501

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