ABB BALDOR RELIANCE

Customer information packet

ECS101M4H20FB4

20HP, 1800RPM, 3PH, 60HZ, 215TC, TEFC, N
Class - None
Division - Not Applicable

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Specifications

Enclosure	TEFC
Frame	215TC
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	20.000 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	21.600 A @ 460.0 V
Drip Cover	No Drip Cover
Duty Rating	CONT
Efficiency @ 100% Load	95.9 %
Electrically Isolated Bearing	Not Electrically Isolated
Feedback Device	NO FEEDBACK
Heater Indicator	No Heater
High Voltage Full Load Amps	21.6 a
Insulation Class	F
Inverter Code	Inverter Duty
IP Rating	NONE
Lifting Lugs	Standard Lifting Lugs

Part Detail

Revision	H
Type	AC
Mech. spec.	
Base	
Status	PRD/A
Elec. spec.	37WGA0019
Layout	37LYQ466
Eff. date	03-09-2026
CD Diagram	CD0006B03
Poles	04
Leads	3#10
Proprietary	False
Created date	09-21-2020

Locked Bearing Indicator	Locked Bearing
Motor Lead Termination	Flying Leads
Motor Standards	NEMA
Motor Type	3780B
Mounting Arrangement	F1
Number of Poles	4
Overall Length	24.24 IN
Power Factor	91
Product Family	General Purpose
Pulley Face Code	C-Face
Rodent Screen	None
RoHS Status	ROHS COMPLIANT
Service Factor	1.50
Shaft Diameter	1.375 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

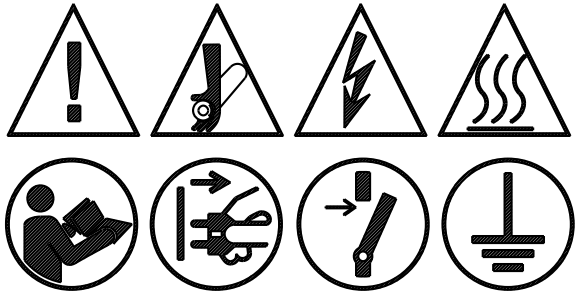
BALDOR·RELIANCE

EC-Titanium™

CAT. NO.	ECS101M4H20FB4							
SPEC.	37-0000-0296					YR	***	
FRAME	215TC		ENCL.	TEFC		IP	54	
HP	20	RATING	40C AMB-CONT					
NOM. EFF.	95.9		PF	91		SF	1.5	
VOLTS	460			FLA	22.03			
RPM	1800		RPM MAX	4000				
HZ	60		PH.	3	CLASS	F		
BEMF (V)	231			Rs (Ω)	0.33			
Ld (mH)	10.6			Lq (mH)	35.5			
INV TYP	VPWM	CHP	60 TO 133 HZ					
	CT	6 TO 60 HZ		VT	1 TO 133 HZ			
MATCHED INV	ACS380-04XX-[N/A]/25A0-4							
BEARING	DE	6307		ODE	6206			
SERIAL#	***							

ELECTRIC 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.

Volts	460	Max RPM	3000	Conn Diag.	CD0006	Leads	3
Amps	21.6	Max Amps		Cs Diagram	CS1127	BEMF	241
HP	20	VFD#	ACS380-040S-03			LD	10
RPM	1800	S.F.	1.50			LQ	35.9
Phase/Hz	3/60	Rating	C AMB-40			Rs	0.3236 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%	58.4	100%	18.0	96.3	3.45%	521
P2	900	50%	58.4	100%	10.0	94.8	2.71%	410
P3	450	25%	58.4	100%	5.0	91.6	2.29%	345
P4	1620	90%	29.2	50%	9.0	95.4	2.16%	325
P5	900	50%	29.2	50%	5.0	94.0	1.58%	238
P6	900	50%	14.6	25%	2.5	89.9	1.39%	210
P7	450	25%	14.6	25%	1.2	86.3	0.99%	149

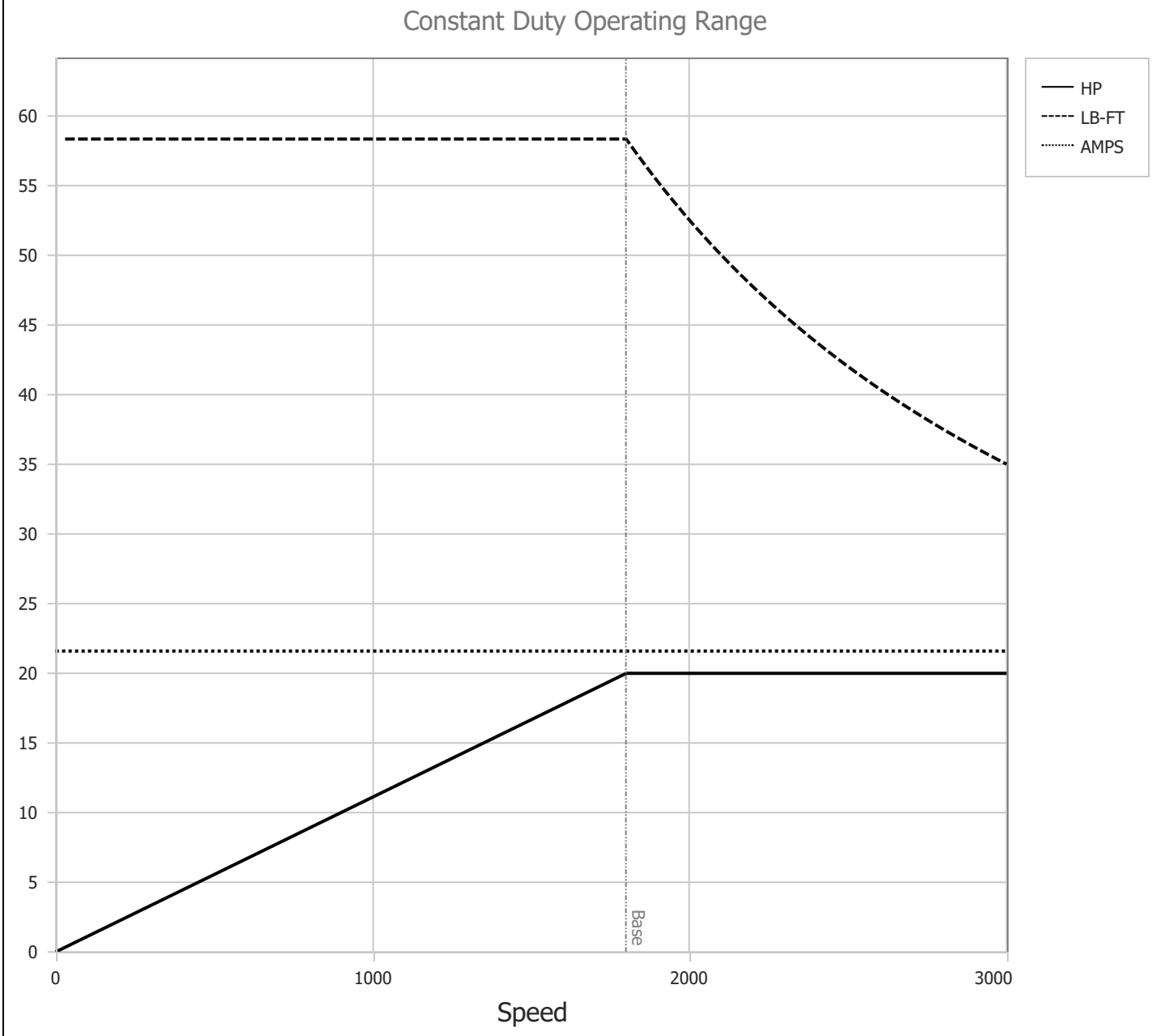
61800-9-2 PDS Performance at Reference Operating Points

	RPM	% Speed	LB-FT	% Torque	HP	System Efficiency	Loss (% FL)	Watts Loss (W)
P1	1800	100%	58.4	100%	20.0	94.2	6.03%	910
P2	900	50%	58.4	100%	10.0	91.4	4.67%	705
P3	300	17%	58.3	100%	3.3	80.3	4.04%	609
P4	1800	100%	29.2	50%	10.0	93.0	3.73%	563
P5	900	50%	29.2	50%	5.0	90.0	2.74%	414
P6	300	17%	29.2	50%	1.7	79.7	2.09%	316
P7	900	50%	14.6	25%	2.5	83.6	2.42%	365
P8	300	17%	14.6	25%	0.8	68.6	1.89%	285

Points not taken in certified order.

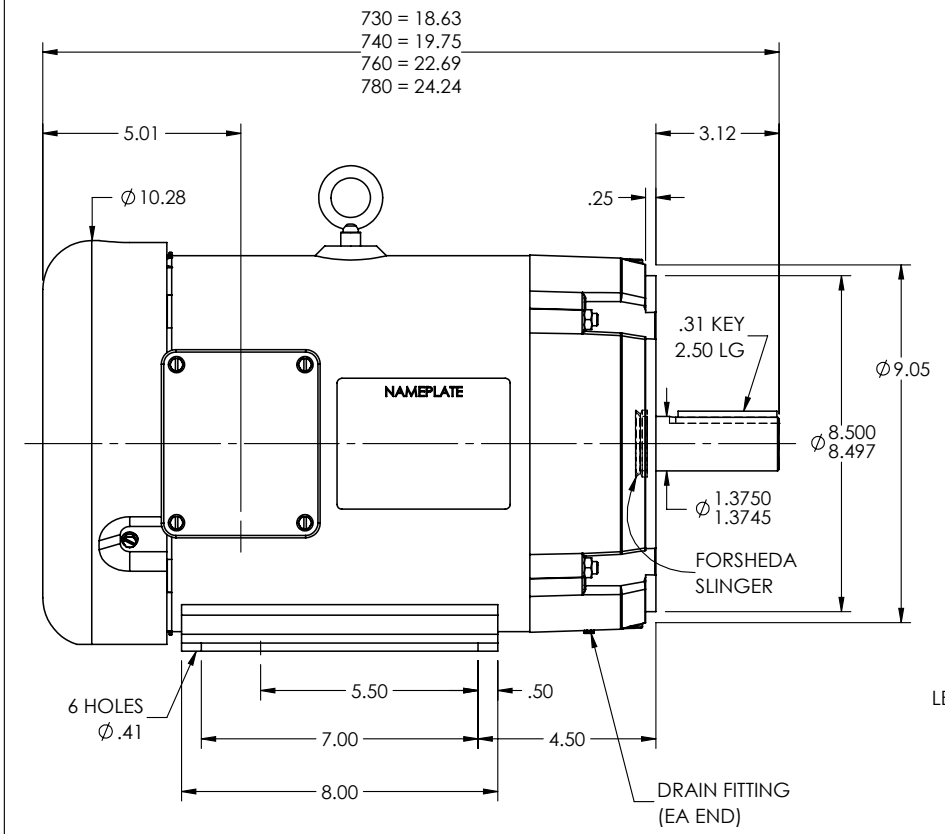
BALDOR • RELIANCE	DR By: R & D CK By: USTOSAN APP By: USJAROB1 Date: 01/08/2025	**AC MOTOR PERFORMANCE CURVES**	**37WGL003** 37Q435L003G2 *Test - 111777*

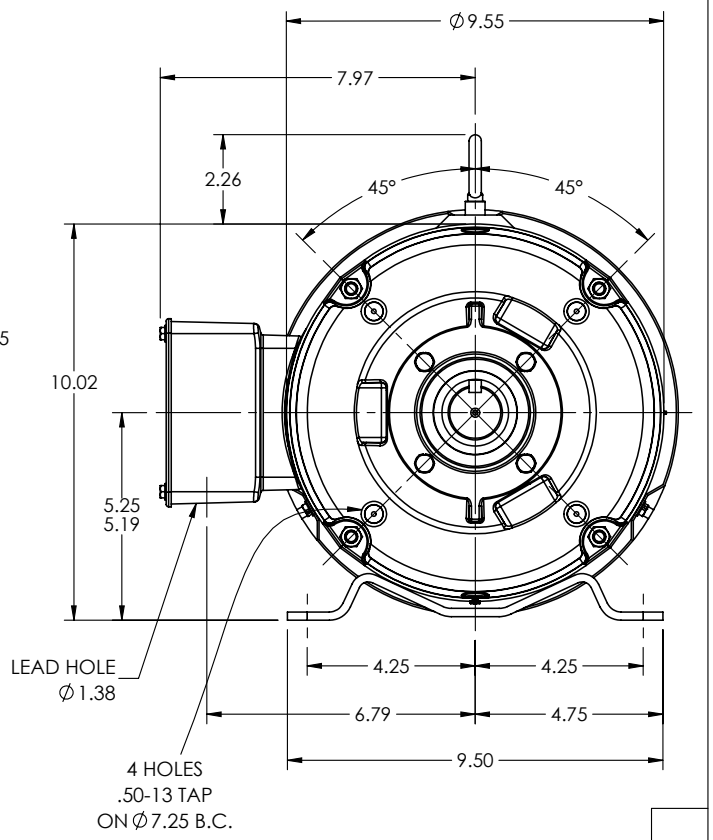
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37LYQ466





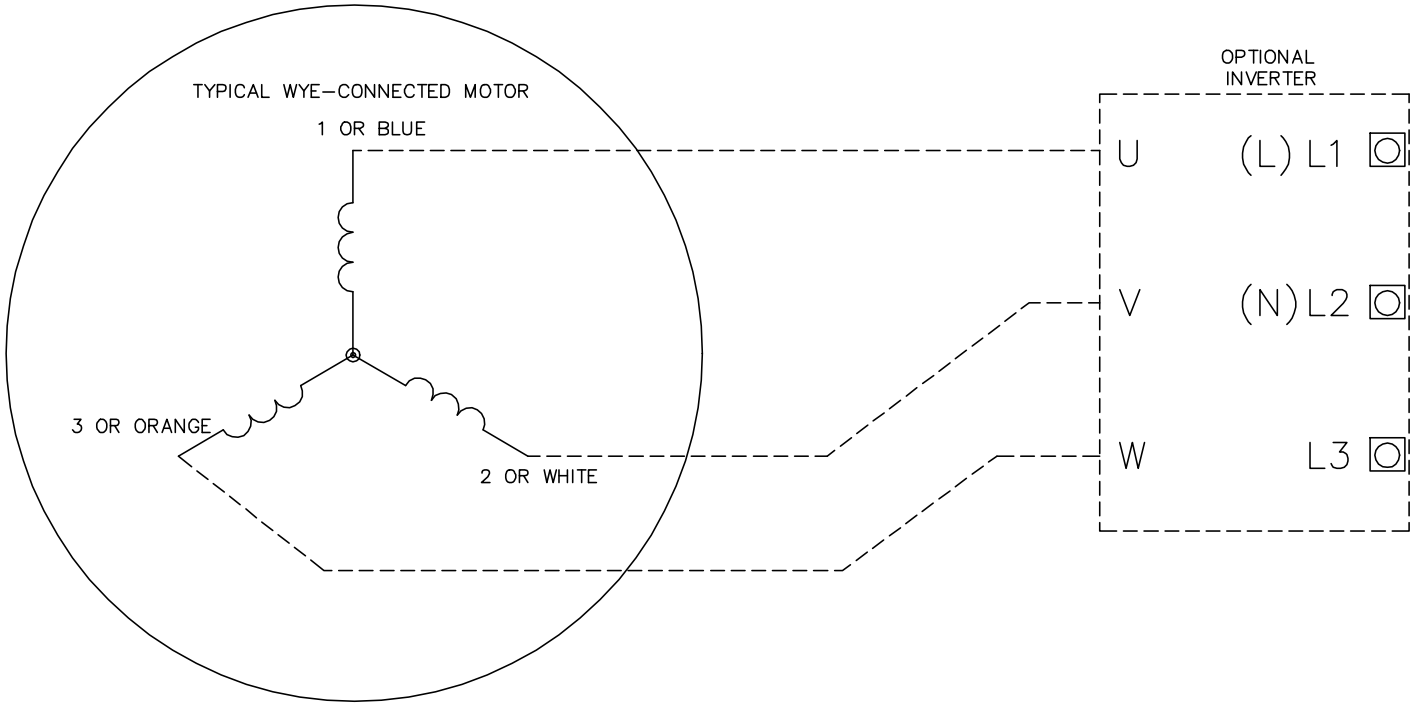
37LYQ466

REV. DESC: UPDATE DRAWING GRAPHICS			
REV: C	VERSION: 03	REVISED: 02:44:17 04/19/2022	TDR: 000001189579
37LYQ466	MODEL NO. 37LYQ466		REF: -
	BY: ENJEFD0		

BALDOR - RELIANCE®

HOR 213-5TC TEFC B INT SH GND ECS

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