

ABB BALDOR RELIANCE III

Customer information packet

SUM75004-4

50HP, RPM, 3PH, 60HZ, 320TY, XPNV, V1

Class - CLI GP C,D

Division - Not Applicable

Specifications

Enclosure	XPNV
Frame	320TY
Frequency	60.00 Hz
Haz Area Class and Group	CLI GP C,D
Haz Area Division	Not Applicable
Phase	3
Agency Approvals	C UR US CCSA US
Base Indicator	Rigid
Bearing Grease Type	Polyrex EM (-20F +300F)
Cable Length	25 FOOT
Design Code	B
Drip Cover	No Drip Cover
Duty Rating	CONT
Haz Area Temp Code	T3C
Heater Indicator	No Heater
Insulation Class	F
Inverter Code	Not Inverter
IP Rating	IP68
KVA Code	G
Lifting Lugs	Standard Lifting Lugs
Motor Standards	NEMA
Mounting Arrangement	V1
Number of Poles	4
Product Family	Pump - Centrifugal
Pulley End Bearing Type	Ball
Pulley Face Code	Standard
Service Factor	1.15
Shaft Diameter	2.499 IN
Shaft Rotation	Reversible
Shaft Slinger Indicator	No Slinger
Starting Method	Direct on line

Part Detail

Revision	D
Type	AC
Mech. spec.	
Base	
Status	PRD/A
Elec. spec.	85946
Layout	619738-007
Eff. date	12-10-2024
CD Diagram	416820-036
Poles	///
Leads	
Proprietary	False
Created date	05-06-2021

Thermal Device - Winding

Normally Closed Thermostat

Nameplate

000613007MS											
CAT.NO.	SUM75004-4			SPEC NO.	S32-CWS0-0011						
SER.NO.					FRAME SIZE	320TY					
CONSTANT HP RPM	HP	RPM	VOLTS		AMPS		HZ		S.F.		
	50	1775	460		60		6-60		1.00		
	50	1775	460		60		60		1.15		
	@			HZ	CODE	G					
	TYPE	P	INSUL.CLASS		F	TORQUE	10:1_VT				DESIGN
D.E. BRG.	85BJ33J30X			ENCL	TENV		DUTY	15MIN		PH	3
O.D.E. BRG.	50BC03JPG30A			MOTOR WEIGHT					AMB	40	
	*15 MIN IN AIR ;SUB. IN										
	SEWAGE / WATER ONLY										

000613007RC			
CLASS I GROUP	C D X	NO.	
CLASS II GROUP	X X X		
OPERATING TEMP CODE	T3C		

000692000MB	
SUITABLE FOR OPERATION ON PWM	
INVERTER EQUIPPED WITH IGBT	
DEVICES AND CAPABLE OF	
CARRIER	
FREQUENCY OF 2 KHZ MINIMUM	

000613007MS

CAT.NO.	SUM75004-4		SPEC NO.		S32-CWS0-0011			
SER.NO.				FRAME SIZE	320TY			
	HP	RPM	VOLTS	AMPS	HZ	S.F.		
	50	1775	460	60	6-60	1.00		
	50	1775	460	60	60	1.15		
CONSTANT HP RPM		@		HZ	CODE	G		
TYPE	P	INSUL.CLASS		F	TORQUE	10:1_VT	DESIGN	B
D.E. BRG.	85BJ33J30X		ENCL	TENV	DUTY	15MIN	PH	3
O.D.E. BRG.	50BC03JPG30A		MOTOR WEIGHT			AMB	40	
	*15 MIN IN AIR ;SUB. IN							
	SEWAGE / WATER ONLY							

Record #85946 - Typical performance - not guaranteed values

Winding	12WGA0157
Type	1254M
Enclosure	PART

Nameplate data

Rated Output	50		
Volts	230/460		
Full Load Amps	120/60		
R.P.M.	1775		
Hz	60	Phase	3
KVA Code	G		
S.F.	1.15		
NEMA Nom. Eff.	93	Power Factor	84
Duty	15 MIN		
S.F. Amps			

460 V, 60 Hz:

High Voltage Connection

Full Load Torque	148 LB-FT
Start Configuration	direct on line
Breakdown Torque	395 LB-FT
Pull-up Torque	166 LB-FT
Locked-rotor Torque	205 LB-FT
Starting Current	335 A
No-load Current	21.49
Line-line Res. @ 25°C	0.138 Ω
Temp. Rise @ Rated Load	78°C
Temp. Rise @ S.F. Load	97°C
Locked-rotor Power Factor	27.1
Rotor inertia	7.19 lb-ft ²

Load Characteristics 460 V, 60 Hz, 50 HP

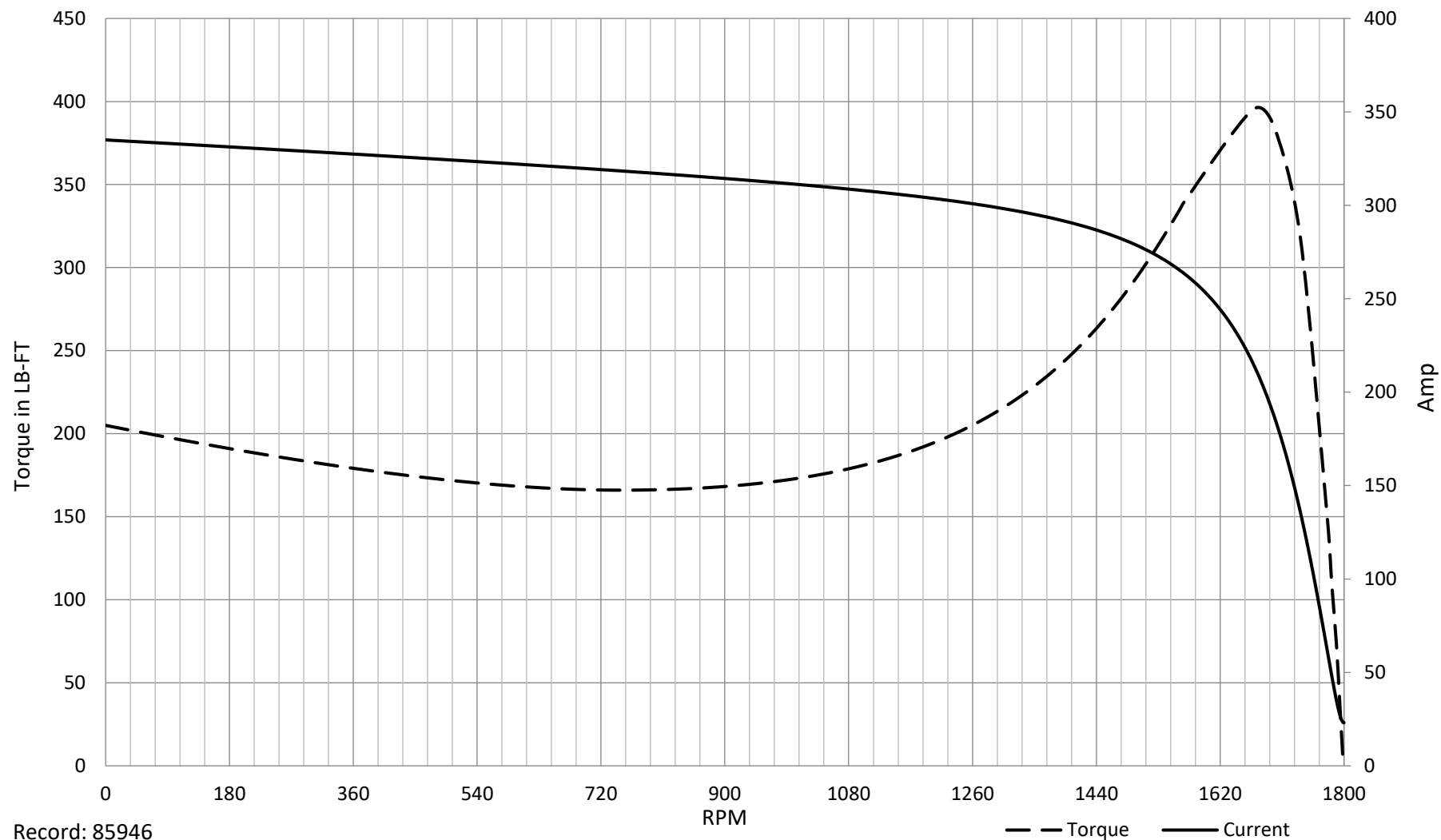
% of Rated Load	NL	25	50	75	100	125	150	SF
Power Factor	7	54	74	82	84	85	85	85
Efficiency	0	84.6	90.6	92.1	92.8	92.4	92.2	92.6
Speed	1799	1794	1789	1782	1776	1769	1760	1772
Line amperes	21.49	25.84	34.93	46.52	60.36	74.08	89.43	68.6

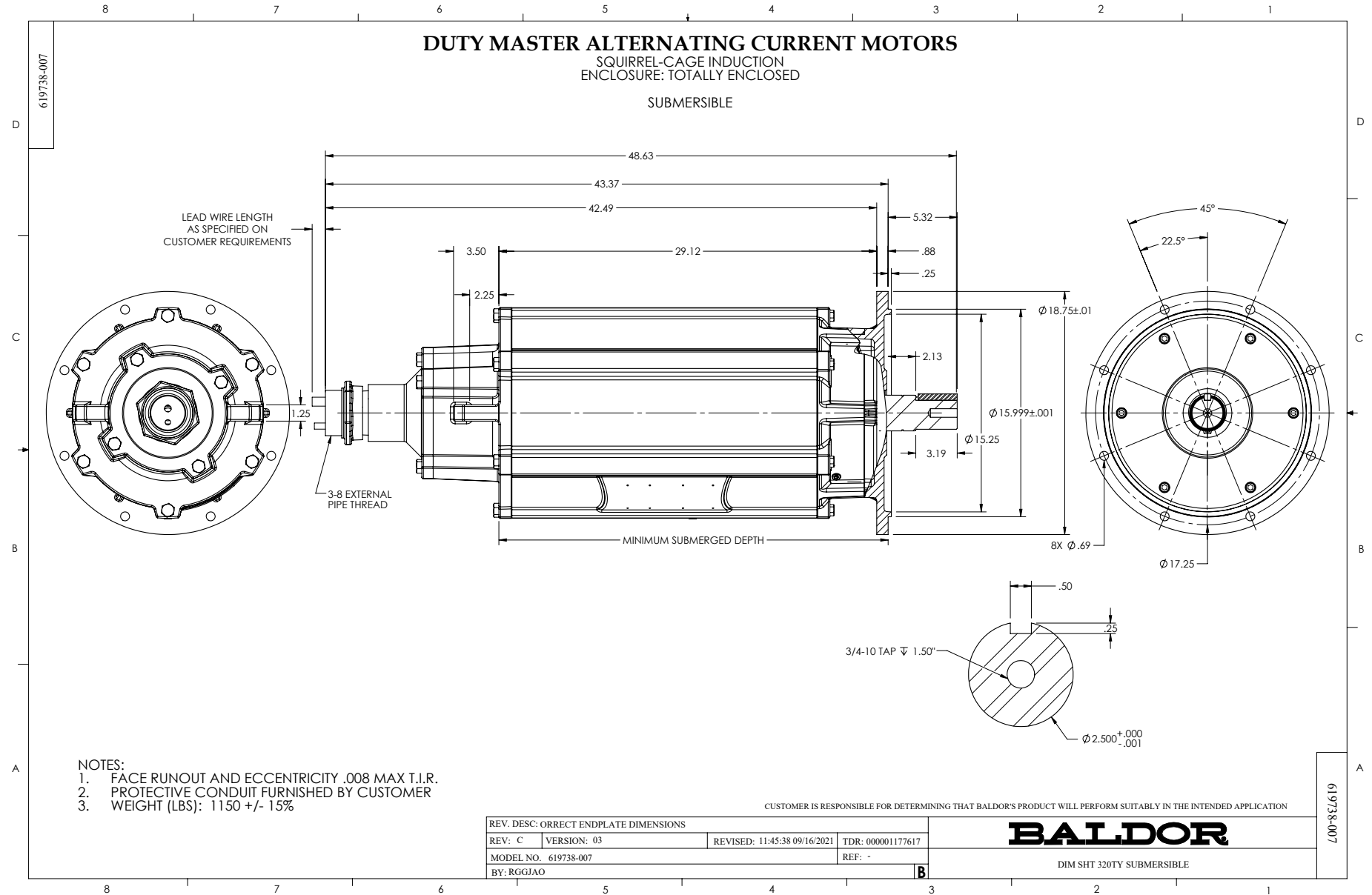
SPEED TORQUE / SPEED CURRENT CURVES



12WGA0157

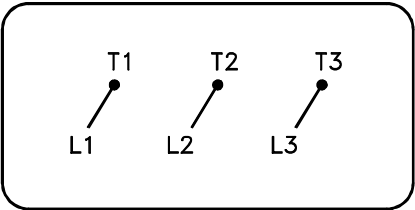
50HP 460V 60HZ





416820-036

A-C MOTOR
CONNECTION DIAGRAM
STANDARD 3 LEAD CONNECTED



(N.P. 1575-BA)

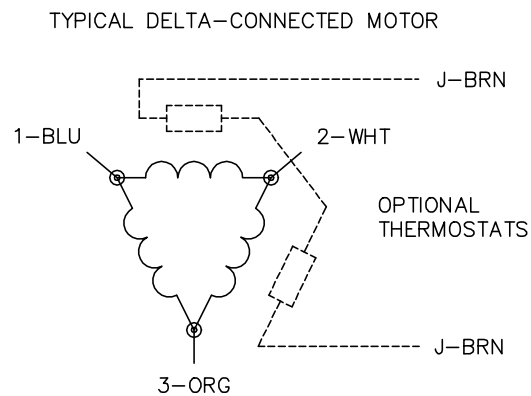
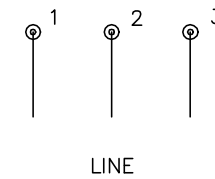
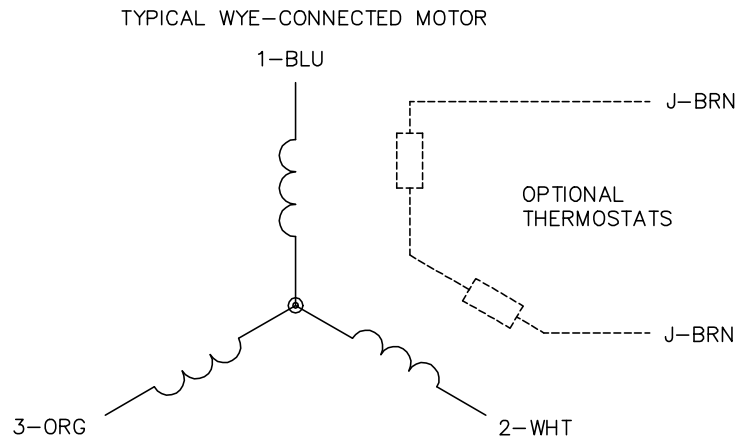
416820-036

REV. DESC: LOADED TO BUS, C/R 335225		
REV. LTR: -	VERSION: 00	TDR: 000000538207
FILE: \MGA\00000\682		REVISED: 11: 54: 06 04/30/2010
MTL: -		BY: RAGRA

BALDOR

CONN DIAG - STANDARD 3 LEAD
SH 1 of 1

CD0006



NOTES:

1. THREE LEAD MOTOR MAY BE EITHER WYE CONNECTED OR DELTA CONNECTED.
2. INTERCHANGE ANY TWO LINE LEADS TO REVERSE ROTATION.
3. OPTIONAL THERMOSTATS ARE PROVIDED WHEN SPECIFIED.
4. ACTUAL NUMBER OF INTERNAL PARALLEL CIRCUITS MAY VARY.
5. LEAD COLORS ARE OPTIONAL. LEADS MUST BE NUMBERED AS SHOWN.

CD0006

REV. DESC: ADD CLASS CONN00000007

REV. LTR: E

VERSION: 01

TDR: 000001099922

FILE: \AAA\00005\141

REVISED: 10:24:49 02/19/2019

BY: ENBRIRO

MTL: -



BALDOR - RELIANCE®

3PH, SV, 3 LEADS, WYE OR DELTA CONNECTED

SH 1 of 1