ABB BALDOR RELIANCE

Customer information packet

SUM70104SM

1HP, 1770RPM, 3PH, 60HZ, 180TY, XPNV, V1
Class - CLI GP C,D
Division - Not Applicable

Copyright © All product information within this document is subject to ABB Motors and Mechanical Inc. copyright © protection, unless otherwise noted.
11/19/2026 5:20:05 PM

Specifications

Enclosure	XPNV
Frame	180TY
Frame Material	Iron
Frequency	60.00 Hz
Haz Area Class and Group	CLI GP C,D
Haz Area Division	Not Applicable
Motor Letter Type	Three Phase
Phase	3
Agency Approvals	CCSA US
Base Indicator	Rigid
Bearing Grease Type	Polyrex EM (-20F +300F)
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	M
Lifting Lugs	Standard Lifting Lugs
Motor Standards	NEMA
Motor Type	M
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	0.875 IN
Shaft Rotation	Reversible
Shaft Slinger Indicator	No Slinger

Part Detail

Revision	C
Type	AC
Mech. spec.	
Base	
Status	PRD/A
Elec. spec.	85864
Layout	619738-002
Eff. date	12-10-2024
CD Diagram	
Poles	///
Leads	
Proprietary	False
Created date	10-22-2021

Speed Code	Single Speed
Starting Method	Direct on line
Thermal Device - Winding	Normally Closed Thermostat

Nameplate

000613007RT											
CAT.NO.	SUM70104SM			**SPEC NO.**	S18-CWS0-0002						
SER.NO.				**FRAME SIZE**	180TY						
	HP	**RPM**	**VOLTS**	**AMPS**	**HZ**	**S.F.**					
	1	1770	230/460	3.6/1.8	6-60	1.00					
	1	1770	230/460	3.6/1.8	60	1.15					
CONSTANT HP RPM		**@**		**HZ**	**CODE**	M					
TYPE	P	**INSUL.CLASS**	F	**TORQUE**	10:1_VT			**DESIGN**	B		
D.E. BRG.	50BC02JPP30A		**ENCL**	TENV	**DUTY**	15 MIN		**PH**	3		
O.D.E. BRG.	25BC02JPG30A			**MOTOR WEIGHT**			**AMB**	40			
	FINAL CONN VOLTAGE = 230 *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.	SUM70104SM			**SPEC NO.**	S18-CWS0-0002						
SER.NO.				**FRAME SIZE**	180TY						
	HP	**RPM**	**VOLTS**	**AMPS**	**HZ**	**S.F.**					
	1	1770	230/460	3.6/1.8	6-60	1.00					
	1	1770	230/460	3.6/1.8	60	1.15					
CONSTANT HP RPM		**@**		**HZ**	**CODE**	M					
TYPE	P	**INSUL.CLASS**	F	**TORQUE**	10:1_VT			**DESIGN**	B		
D.E. BRG.	50BC02JPP30A			**ENCL**	TENV	**DUTY**	15 MIN	**PH**	3		
O.D.E. BRG.	25BC02JPG30A			**MOTOR WEIGHT**			**AMB**	40			
	FINAL CONN VOLTAGE = 230 *15										
	MIN IN AIR ;SUB. IN SEWAGE /										
	WATER ONLY										

AC induction motor performance data

Record #85864 - Typical performance - not guaranteed values

Winding	06WGA0013
Type	0620M
Enclosure	XPNV

Nameplate data

Rated Output			1
Volts			230/460
Full Load Amps			3.6/1.8
R.P.M.			1770
Hz	60	Phase	3
KVA Code			M
S.F.			1.15
NEMA Nom. Eff.	85.5	Power Factor	69
Duty			15 MIN
S.F. Amps			

460 V, 60 Hz:
High Voltage Connection

Full Load Torque	2.98 LB-FT
Start Configuration	direct on line
Breakdown Torque	19.9 LB-FT
Pull-up Torque	7.1 LB-FT
Locked-rotor Torque	12.1 LB-FT
Starting Current	17.5 A
No-load Current	1.37
Line-line Res. @ 25°C	9.3 Ω
Temp. Rise @ Rated Load	2°C
Temp. Rise @ S.F. Load	3°C
Locked-rotor Power Factor	48.7
Rotor inertia	0.186 lb-ft²

Load Characteristics 460 V, 60 Hz, 1 HP

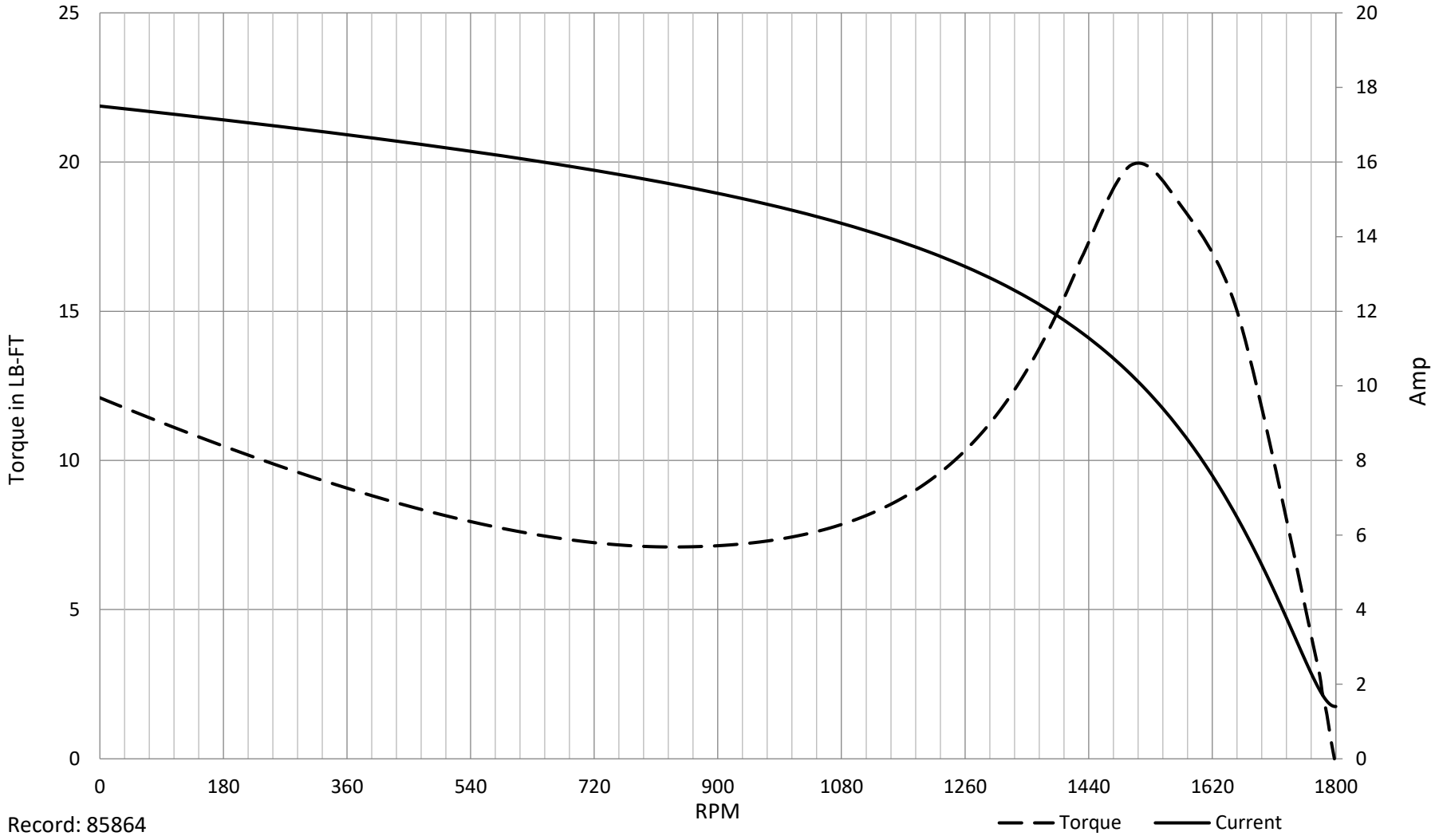
% of Rated Load	NL	25	50	75	100	125	150	SF
Power Factor	8	25	40	51	60	67	72	73
Efficiency	0	67.9	79.2	83.9	85.6	86.4	86.5	85.6
Speed	1798	1792	1787	1780	1775	1767	1760	1763
Line amperes	1.37	1.41	1.52	1.66	1.83	2.03	2.27	1.72

SPEED TORQUE / SPEED CURRENT CURVES

BALDOR • RELIANCE

06WGA0013

1HP 460V 60HZ



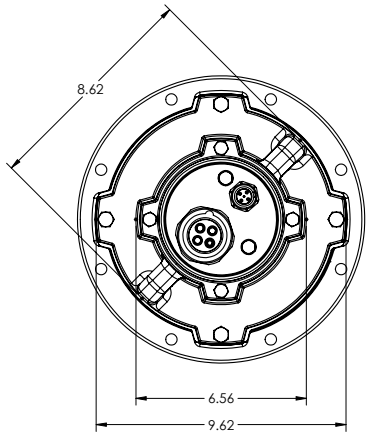
Record: 85864

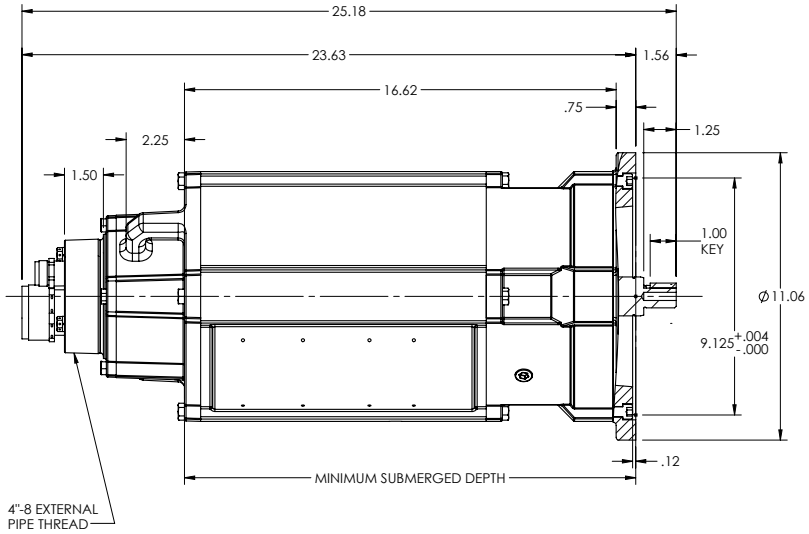
DUTY MASTER ALTERNATING CURRENT MOTORS

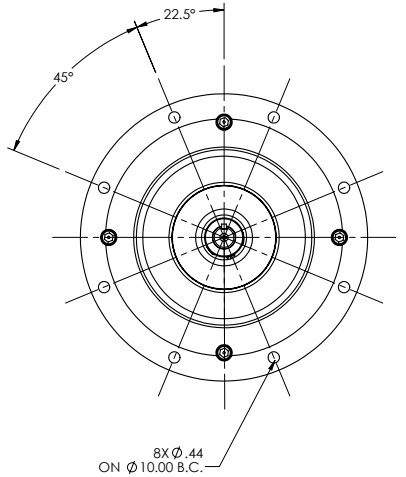
SQUIRREL-CAGE INDUCTION
ENCLOSURE: TOTALLY ENCLOSED

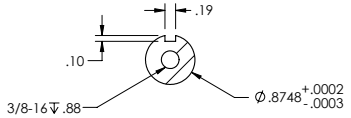
SUBMERSIBLE
ONE SIZE SMALLER SHAFT AND FLANGE

619738-002









SECTION A–A

NOTES:
1. FACE RUNOUT AND ECCENTRICITY .008 MAX T.I.R.
2. PROTECTIVE CONDUIT FURNISHED BY CUSTOMER
3. WEIGHT (LBS): 200±15%
4. PROVIDED WITH CABLE ONNECTOR TO LENGTH OF CABLE AS REQUESTED BY CUSTOMER

CUSTOMER IS RESPONSIBLE FOR DETERMINING THAT BALDOR'S PRODUCT WILL PERFORM SUITABLY IN THE INTENDED APPLICATION

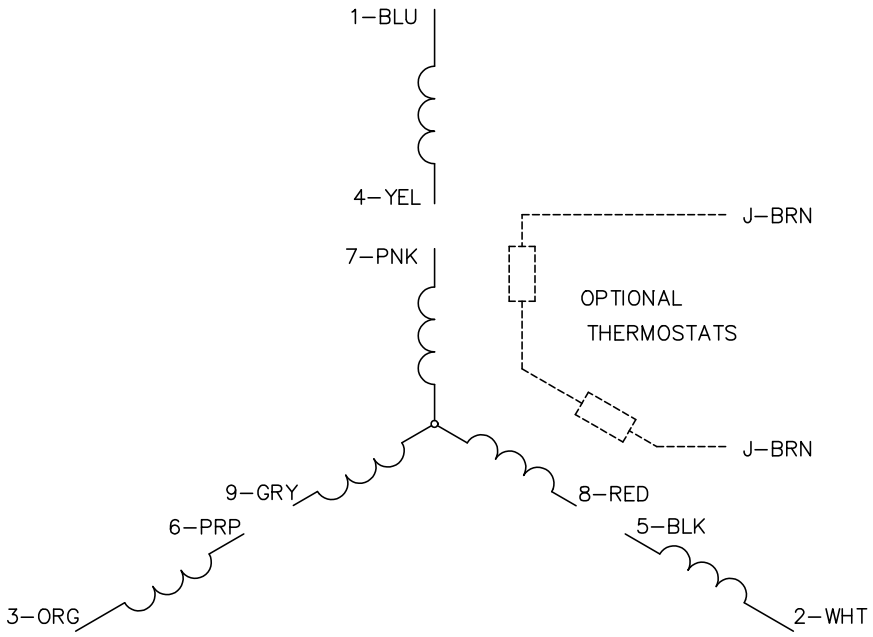
REV. DESC: INITIAL RELEASE			
REV: -	VERSION: 00	REVISED: 08:52:25 09/04/2020	TDR: 000001147566
MODEL NO. 619738-002			REF: -
BY: RGGJAO			B

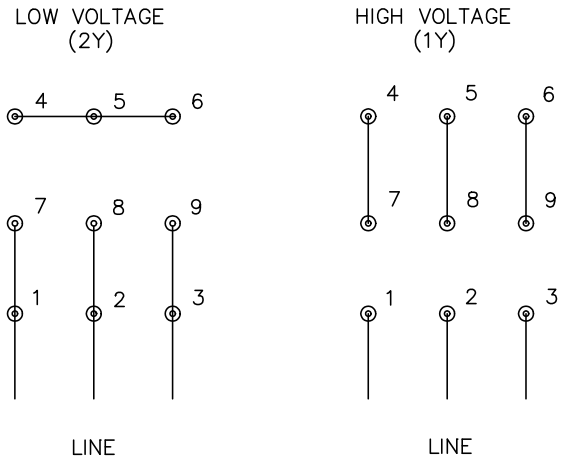
BALDOR

DIM SHT 180TY SUB ONE SIZE SMALLER SH/FLNG WITH CABLE CONN.

619738-002

CD0005





NOTES:

1. INTERCHANGE ANY TWO LINE LEADS TO REVERSE ROTATION.
2. OPTIONAL THERMOSTATS ARE PROVIDED WHEN SPECIFIED.
3. ACTUAL NUMBER OF INTERNAL PARALLEL CIRCUITS MAY BE A MULTIPLE OF THOSE SHOWN ABOVE.
4. LEAD COLORS ARE OPTIONAL. LEADS MUST ALWAYS BE NUMBERED AS SHOWN.

CD0005

REV. DESC: REVISE TO SHOW OPTIONAL COLORS			BALDOR ELECTRIC Co.
REV. LTR: E	BY: JLP	REVISED: 01/19/99 10:15	TDR: 0171435
CD0005		FILE: AAA00005140	MDL: –
		MTL: –	3PH, DV, 9 LEADS