

ABB BALDOR RELIANCE III

Customer information packet

CFSWDM23934T-E

20HP, 1765RPM, 3PH, 60HZ, 256TC, 3960M, TEFC, F

Class - None

Division - Not Applicable

Specifications

Enclosure	TEFC
Frame	256TC
Frame Material	Stainless 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	230.0 V @ 60 HZ 460.0 V @ 60 HZ
Agency Approvals	UR CSA NEMA PREMIUM
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
Current @ Voltage	48.000 A @ 230.0 V 24.000 A @ 460.0 V
Design Code	A
Drip Cover	No Drip Cover
Duty Rating	CONT
Efficiency @ 100% Load	93.0 %
Electrically Isolated Bearing	Not Electrically Isolated
Feedback Device	NO FEEDBACK
Front Face Code	Standard
Front Shaft Indicator	None
Heater Indicator	No Heater

Part Detail

Revision	S
Type	AC
Mech. spec.	39E646
Base	
Status	PRD/A
Elec. spec.	39WGY400
Layout	39LYE646
Eff. date	02-10-2025
CD Diagram	CD0180
Poles	04
Leads	9#12
Proprietary	False
Created date	01-30-2018

High Voltage Full Load Amps	24.0 a
Insulation Class	H
Inverter Code	Inverter Ready
KVA Code	J
Lifting Lugs	Standard Lifting Lugs
Locked Bearing Indicator	Locked Bearing
Motor Lead Exit	Ko Box
Motor Lead Quantity/Wire Size	9 @ 12 AWG
Motor Lead Termination	Flying Leads
Motor Standards	NEMA
Motor Type	3960M
Mounting Arrangement	F1
Number of Poles	4
Overall Length	25.18 IN
Power Factor	84
Product Family	WD All SS Encapsulated
Pulley End Bearing Type	Sealed Bearing
Pulley Face Code	C-Face
Pulley Shaft Indicator	Standard
Rodent Screen	None
Service Factor	1.00
Shaft Diameter	1.625 IN
Shaft Extension Location	Pulley End
Shaft Ground Indicator	No Shaft Grounding
Shaft Rotation	Reversible
Shaft Slinger Indicator	No Slinger
Speed	1765 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

Nameplate

NP4427AAA05														
CAT #	CFSWDM23934T-E					WGT		LBS						
SPEC	39E646Y400G2					ENCL	TEFC							
SER #						CC	010A		IP	69				
HP	20		MAG CUR			19.4/9.7								
VOLTS	230/460					NEMA NOM. EFF				93				
AMPS	48/24					PF		84						
RATING	40C AMB-CONT													
RPM	1765					MAX RPM		2700						
FRAME	256TC		HZ	60		CODE	J		CLASS	H				
SER.F.	1.00		SF AMP					PH	3		DES	A		
DE	6309			ODE		6309								
LUBRICATION	POLYREX EM													
ID LOGO	INV TYPE:		VPWM		CHP	60		TO	90		1.5:1			
ID LOGO	WK2	2.52		CT	30		TO	60		2:1				
ID LOGO	SL HZ	1.2		VT	6		TO	60		10:1				
	</													

AC Induction Motor Performance Data

Record # 69070

Typical performance - not guaranteed values

Winding: 39WGY400-R001			Type: 3960M		Enclosure: TEFC		
Nameplate Data				460 V, 60 Hz: High Voltage Connection			
Rated Output (HP)		20		Full Load Torque		59.38 LB-FT	
Volts		230/460		Start Configuration		direct on line	
Full Load Amps		48/24		Breakdown Torque		226 LB-FT	
R.P.M.		1765		Pull-up Torque		109 LB-FT	
Hz	60	Phase	3	Locked-rotor Torque		139 LB-FT	
NEMA Design Code		A	KVA Code	J	Starting Current		188 A
Service Factor (S.F.)				1	No-load Current		9.7 A
NEMA Nom. Eff.		93	Power Factor	84	Line-line Res. @ 25°C		0.371 Ω
Rating - Duty		40C AMB-CONT		Temp. Rise @ Rated Load		92°C	
				Locked-rotor Power Factor		30.4	

Load Characteristics 460 V, 60 Hz, 20 HP

% of Rated Load	25	50	75	100	125	150
Power Factor	47	69	79	84	86	87
Efficiency	89.8	93.1	93.5	93.1	92.4	91.3
Speed	1792	1784.5	1776.1	1767.4	1758.1	1747.4
Line amperes	11.2	14.5	18.9	23.9	29.3	35.2

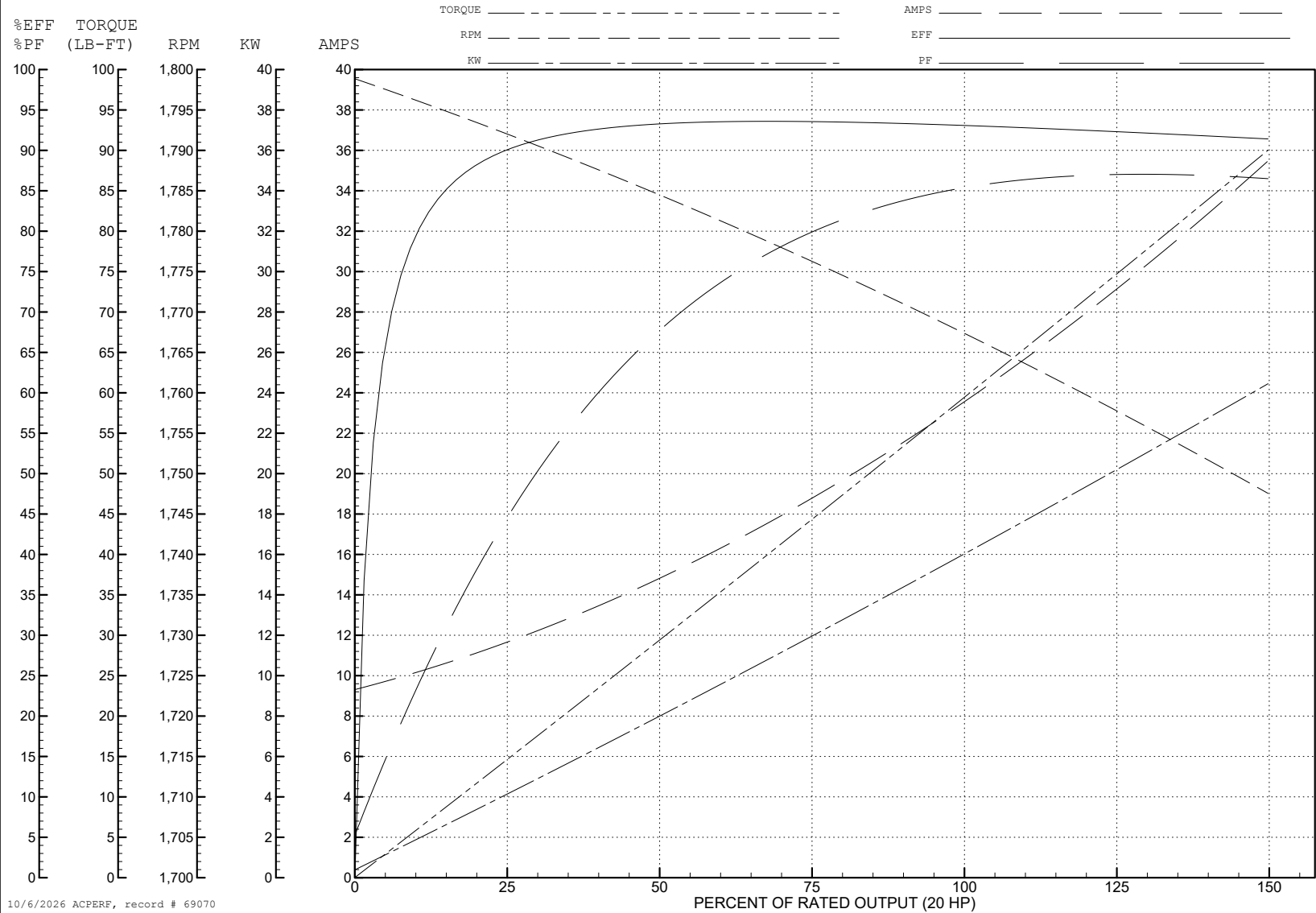
ABB Motors and Mechanical Inc.

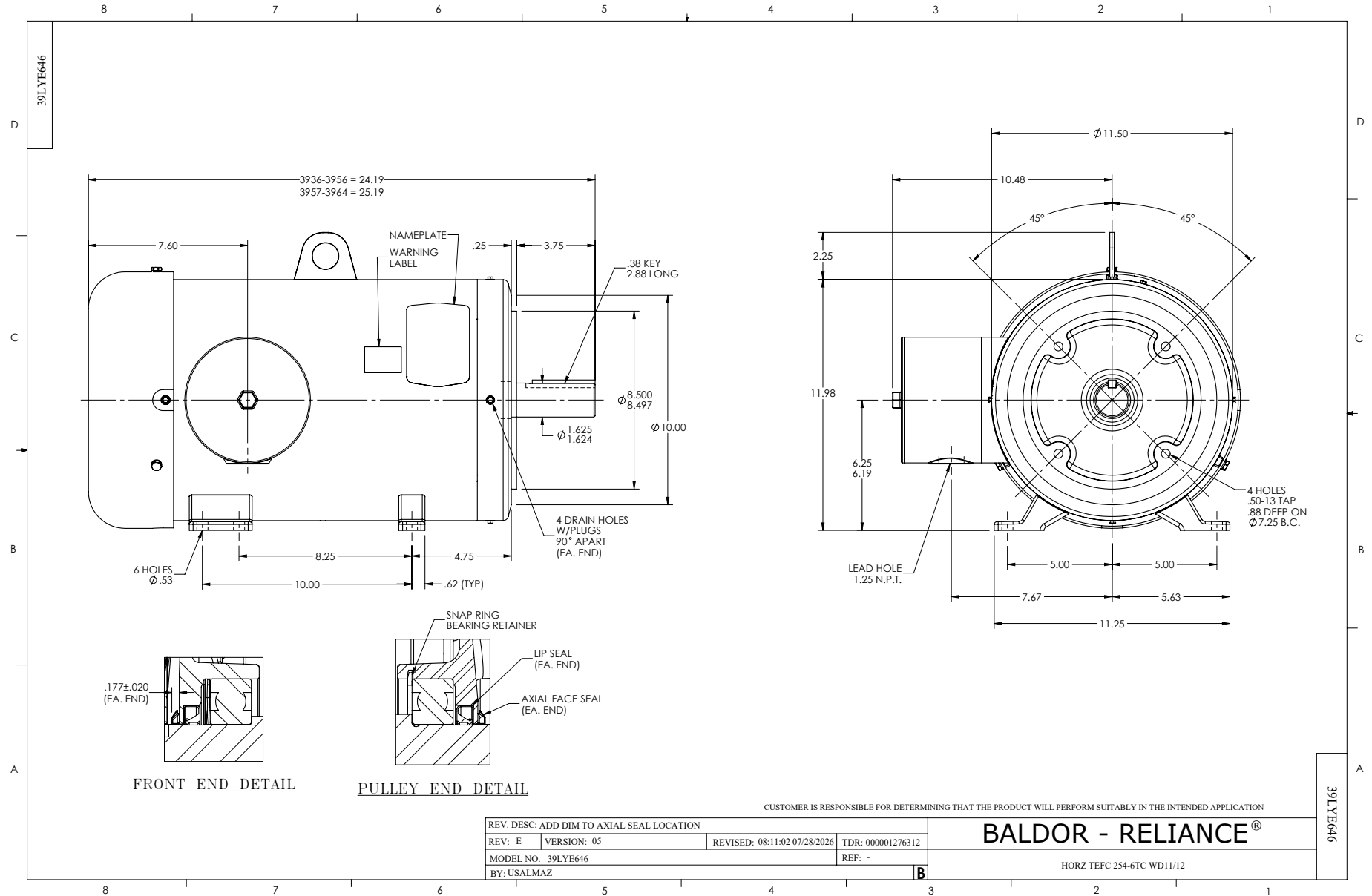
WINDING # 39WGY400

Typical performance - not guaranteed values.

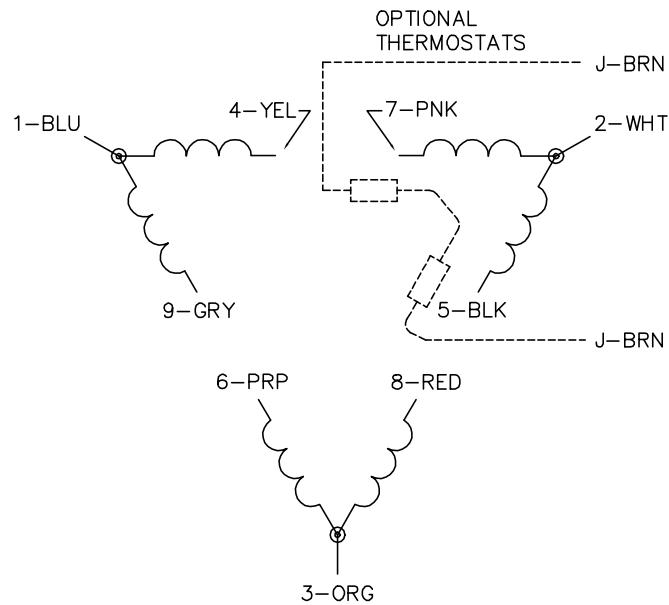
20 HP 3 PH 60 HZ 1765 RPM 460 V 3960M

TORQUES (LB-FT): PO=226 PU=109 LR=139 LRA=188

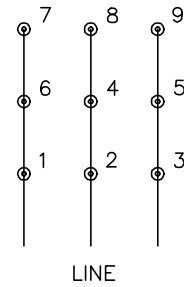




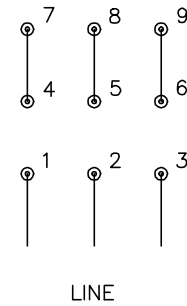
CD0180



LOW VOLTAGE
(2D)



HIGH VOLTAGE
(1D)



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.

REV. DESC: ADD CLASS CONN00000007

REV. LTR: D

VERSION: 01

TDR: 000001099922

FILE: \AAA\00005\148

REVISED: 10: 25: 29 02/19/2019

BY: ENBRIRO

MTL: —



BALDOR - RELIANCE®

3PH, DV, 9 LEADS, DELTA CONNECTION

SH 1 of 1

CD0180