ABB BALDOR RELIANCE

Customer information packet

EFM4102T

20HP, 1180RPM, 3PH, 60HZ, 286T, 1054M, TEFC, F2
Class - None
Division - Not Applicable

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Specifications

Enclosure	TEFC
Frame	286T
Frame Material	Iron
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	1200 RPM @ 60 HZ
Voltage @ Frequency	460.0 V @ 60 HZ
	230.0 V @ 60 HZ
Agency Approvals	CURUSEEV
	NEMA PREMIUM
	NEMA PREMIUM (OLD LOGO)
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	54.000 A @ 230.0 V
	56.000 A @ 208.0 V
	27.000 A @ 460.0 V
Design Code	A
Drip Cover	No Drip Cover
Duty Rating	CONT
Efficiency @ 100% Load	91.7 %
Electrically Isolated Bearing	Not Electrically Isolated
Feedback Device	NO FEEDBACK
Front Face Code	Standard
Front Shaft Indicator	None

Part Detail

Revision	V
Type	AC
Mech. spec.	10C156
Base	
Status	PRD/A
Elec. spec.	10WGY730
Layout	10LYC156
Eff. date	06-27-2024
CD Diagram	CD0180
Poles	06
Leads	9#10
Proprietary	False
Created date	06-11-2014

Heater Indicator	No Heater
High Voltage Full Load Amps	27.0 a
Insulation Class	F
Inverter Code	Inverter Ready
KVA Code	H
Lifting Lugs	Standard Lifting Lugs
Locked Bearing Indicator	Locked Bearing
Motor Lead Exit	Ko Box
Motor Lead Quantity/Wire Size	9 @ 10 AWG
Motor Lead Termination	Flying Leads
Motor Standards	NEMA
Motor Type	1054M
Mounting Arrangement	F2
Number of Poles	6
Overall Length	27.81 IN
Power Factor	77
Product Family	General Purpose
Pulley End Bearing Type	Ball
Pulley Face Code	Standard
Pulley Shaft Indicator	Standard
Rodent Screen	None
Service Factor	1.15
Shaft Diameter	1.875 IN
Shaft Extension Location	Pulley End
Shaft Ground Indicator	No Shaft Grounding
Shaft Rotation	Reversible
Shaft Slinger Indicator	Shaft Slinger
Speed	1180 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

NP3443L											
CAT.NO.	EFM4102T			**CUST. P/N**						**ENCL**	TEFC
SPEC.	10C156Y730G1	**CC**	010A	**FRAME**	286T		**SER.NO.**				
HP	20		**CLASS**	F	**HZ**	60					
R.P.M.	1180		**PH**	3	**DES**	A					
VOLTS	230/460			**CODE**	H		**ODE BRG**	6309	**DE BRG**	6311	
AMPS	54/27										
RATING	40C AMB-CONT			**NEMA NOM. EFF.**		91.7		**GREASE**	POLYREX EM		
P.F.	77	**SER.F.**	1.15	**VPWM INVERTER READY**							
	SFA 61/60.5										
HTR-VOLTS		**HTR-AMPS**			**HTR-WATTS**						

AC Induction Motor Performance Data
Record # 53029
Typical performance - not guaranteed values

Winding: 10WGY730-R006	**Type:** 1054M	**Enclosure:** TEFC

Nameplate Data				**460 V, 60 Hz: High Voltage Connection**	
Rated Output (HP)			20	**Full Load Torque**	90.1 LB-FT
Volts			230/460	**Start Configuration**	direct on line
Full Load Amps			54/27	**Breakdown Torque**	276 LB-FT
R.P.M.			1180	**Pull-up Torque**	115 LB-FT
Hz	60	**Phase**	3	**Locked-rotor Torque**	166 LB-FT
NEMA Design Code	A	**KVA Code**	H	**Starting Current**	165 A
Service Factor (S.F.)			1.15	**No-load Current**	13.1 A
NEMA Nom. Eff.	91.7	**Power Factor**	77	**Line-line Res. @ 25ºC**	0.425 Ω
Rating - Duty			40C AMB-CONT	**Temp. Rise @ Rated Load**	65°C
S.F. Amps				**Temp. Rise @ S.F. Load**	79°C
				Locked-rotor Power Factor	32
				Rotor inertia	6.61 LB-FT2

Load Characteristics 460 V, 60 Hz, 20 HP

% of Rated Load	**25**	**50**	**75**	**100**	**125**	**150**	**S.F.**
Power Factor	39	60	71	77	79	80	78
Efficiency	86.6	91.1	91.9	91.7	90.9	89.8	91.2
Speed	1194.6	1189.5	1184.1	1178.3	1171.4	1163.8	1174
Line amperes	14.3	17.5	21.9	26.9	32.7	39.3	30.4

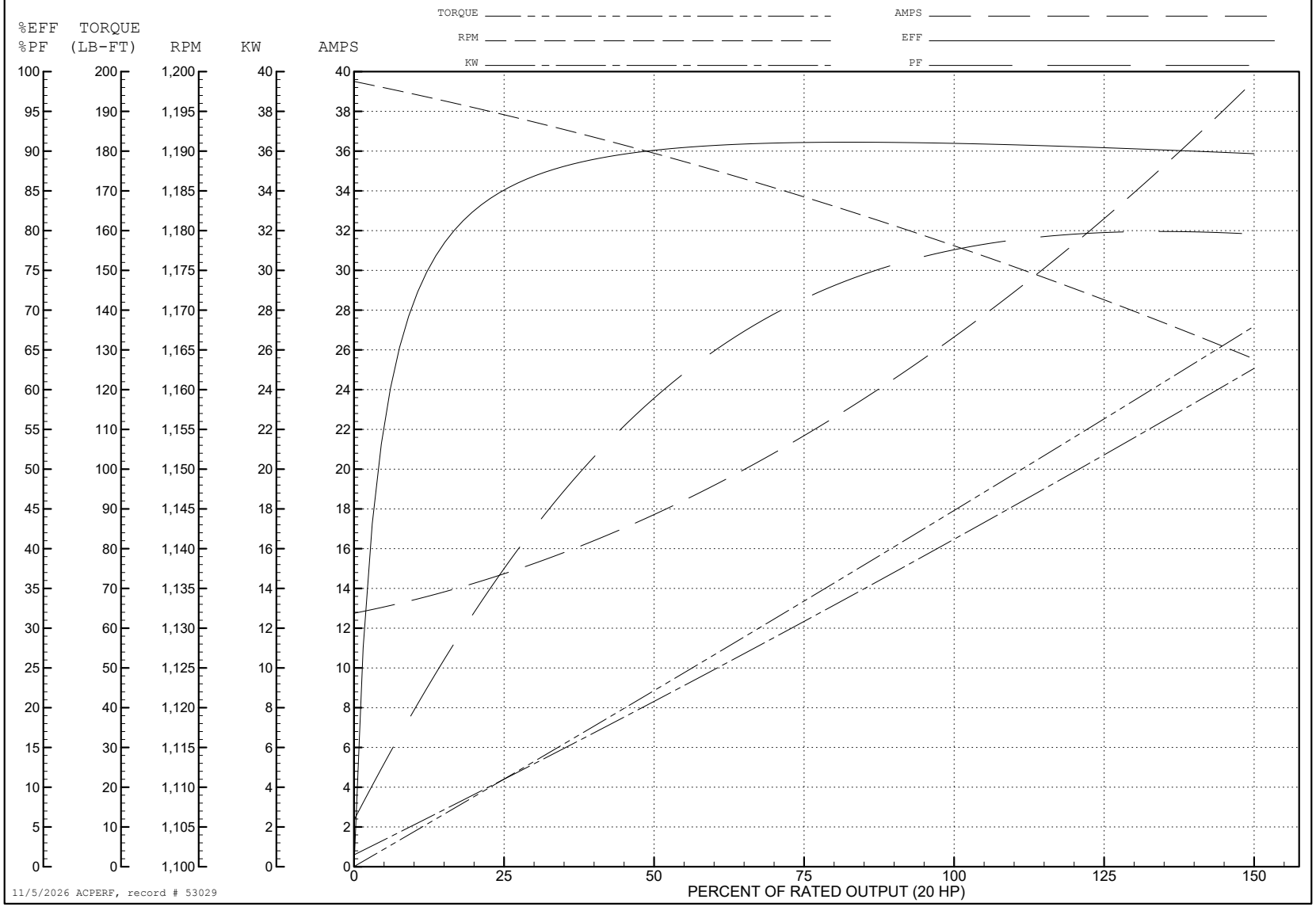
ABB Motors and Mechanical Inc.

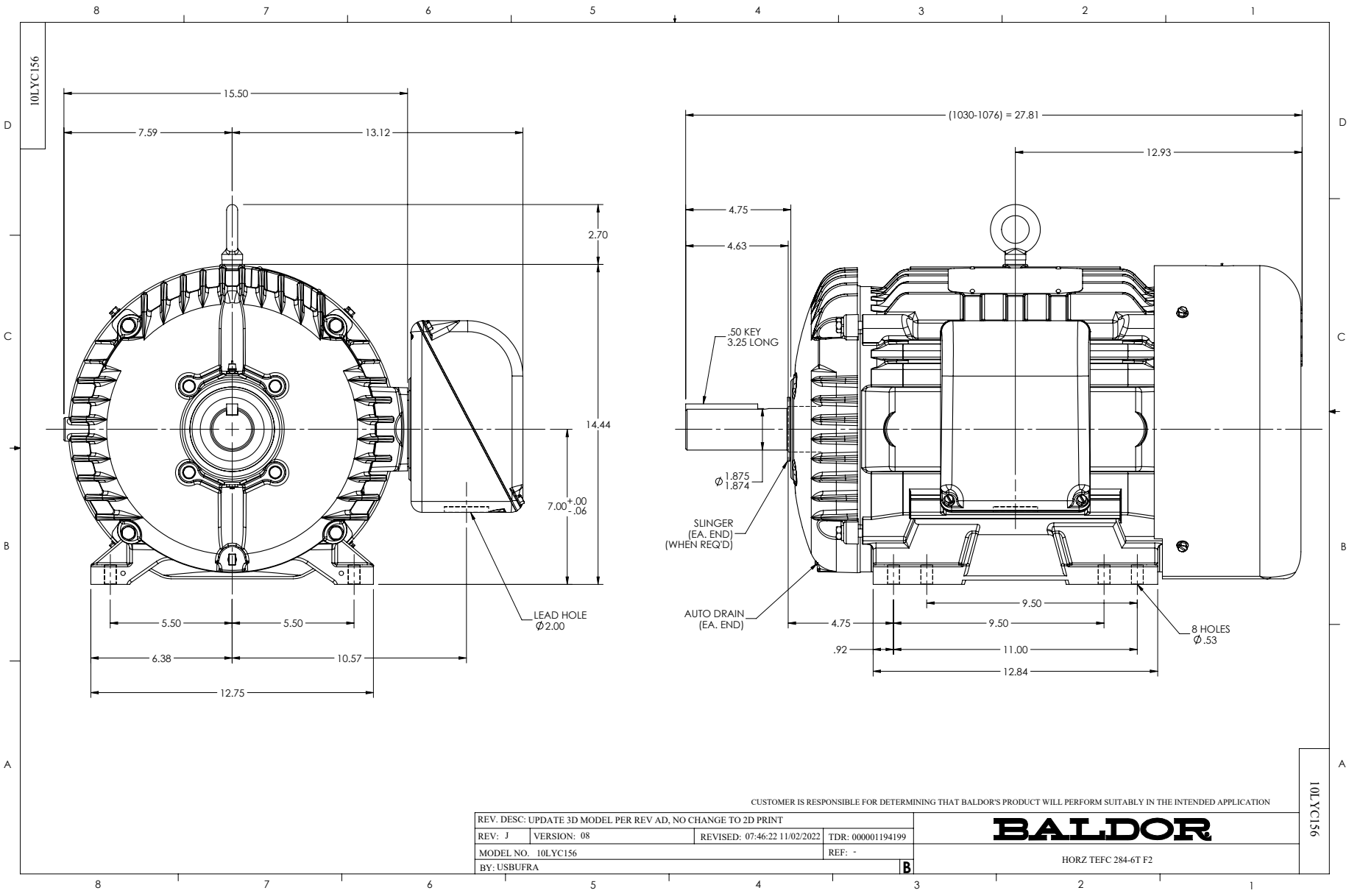
WINDING # 10WGY730

20 HP 3 PH 60 HZ 1180 RPM 460 V 1054M

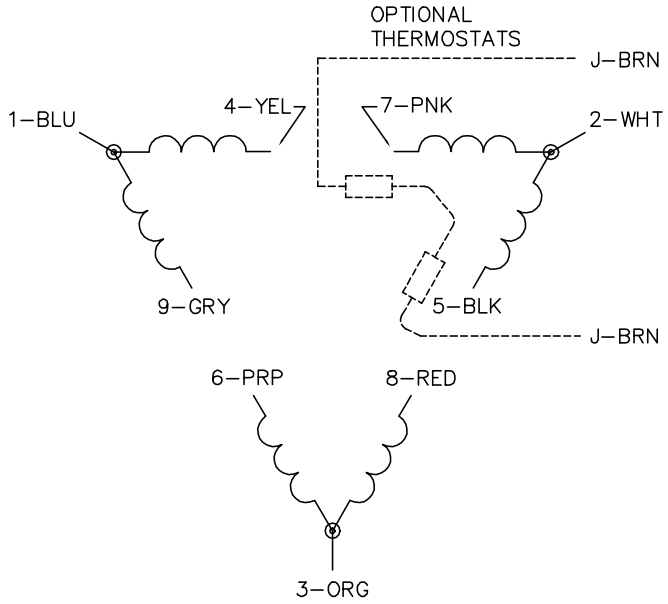
Typical performance - not guaranteed values.

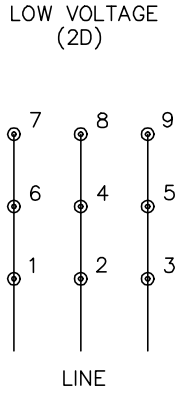
TORQUES(LB-FT): PO=276 PU=115 LR=166 LRA=165

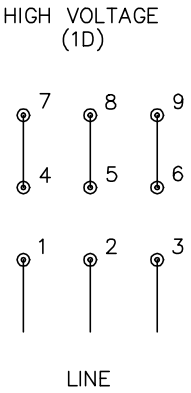



10LYC156
15.50
7.59
13.12
2.70
14.44
7.00 +.00 -.06
5.50
5.50
6.38
10.57
12.75
LEAD HOLE Ø2.00
(1030-1076) = 27.81
12.93
4.75
4.63
.50 KEY 3.25 LONG
Ø 1.875 1.874
SLINGER (EA. END) (WHEN REQ'D)
AUTO DRAIN (EA. END)
9.50
4.75
9.50
.92
11.00
12.84
8 HOLES Ø .53
CUSTOMER IS RESPONSIBLE FOR DETERMINING THAT BALDOR'S PRODUCT WILL PERFORM SUITABLY IN THE INTENDED APPLICATION
REV. DESC: UPDATE 3D MODEL PER REV AD, NO CHANGE TO 2D PRINT
REV: J
VERSION: 08
REVISED: 07:46:22 11/02/2022
TDR: 000001194199
MODEL NO. 10LYC156
REF: -
BY: USBUFRA
B
BALDOR
HORZ TEFC 284-6T F2
10LYC156

CD0180







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.

CD0180

REV. DESC: ADD CLASS CONN00000007		
REV. LTR: D	VERSION: 01	TDR: 000001099922
FILE: \AAA\00005\148	REVISED: 10:25:29 02/19/2019	BY: ENBRIR0
MTL: –		

BALDOR - RELIANCE®

3PH, DV, 9 LEADS, DELTA CONNECTION

SH 1 of 1