ABB BALDOR RELIANCE

Customer information packet

CEM4102T-G

20HP, 1180RPM, 3PH, 60HZ, 286TC, TEFC, F1
Class - None
Division - Not Applicable

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Specifications

Enclosure	TEFC
Frame	286TC
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	230.0 V @ 60 HZ
	460.0 V @ 60 HZ
Agency Approvals	CSA
	CSA EEV
	NEMA PREMIUM
	UR
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
	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
Heater Indicator	No Heater
High Voltage Full Load Amps	27.0 a

Part Detail

Revision	H
Type	AC
Mech. spec.	
Base	
Status	PRD/A
Elec. spec.	10WGY730
Layout	10LYJ646
Eff. date	06-27-2024
CD Diagram	CD0180
Poles	06
Leads	9#10
Proprietary	False
Created date	03-06-2020

Insulation Class	H
Inverter Code	Inverter Duty
IP Rating	NONE
KVA Code	H
Lifting Lugs	Standard Lifting Lugs
Locked Bearing Indicator	Locked Bearing
Motor Lead Termination	Flying Leads
Motor Standards	NEMA
Motor Type	1054M
Mounting Arrangement	F1
Number of Poles	6
Overall Length	27.76 IN
Power Factor	77
Product Family	General Purpose
Pulley Face Code	C-Face
Rodent Screen	None
Service Factor	1.15
Shaft Diameter	1.875 IN
Shaft Ground Indicator	Shaft Grounding
Shaft Rotation	Reversible
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

NP3443LUA											
CAT.NO.	CEM4102T-G			**CUST. P/N**						**ENCL**	TEFC
SPEC.	10-0000835	**CC**	010A	**FRAME**	286TC		**SER.NO.**				
HP	20		**CLASS**	H	**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	**CT6-60H(10:1)VT3-60H(20:1**							
USABLE AT	50HZ 20HP 190/380V 62/31A			SF1.0							
VOLTS	**AMPS**			**MAX. SPACE HEATER TEMP.**							

AC Induction Motor Performance Data
Record # 53030
Typical performance - not guaranteed values

Winding: 10WGY730-R018	**Type:** 1054M	**Enclosure:** TEFC

Nameplate Data			
Rated Output (HP)			20
Volts			230/460
Full Load Amps			54/27
R.P.M.			1180
Hz	60	**Phase**	3
NEMA Design Code	A	**KVA Code**	H
Service Factor (S.F.)			1.15
NEMA Nom. Eff.	91.7	**Power Factor**	77
Rating - Duty			40C AMB-CONT
S.F. Amps			

460 V, 60 Hz: High Voltage Connection	
Full Load Torque	90.1 LB-FT
Start Configuration	direct on line
Breakdown Torque	276 LB-FT
Pull-up Torque	115 LB-FT
Locked-rotor Torque	166 LB-FT
Starting Current	165 A
No-load Current	13.1 A
Line-line Res. @ 25ºC	0.425 Ω
Temp. Rise @ Rated Load	65°C
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

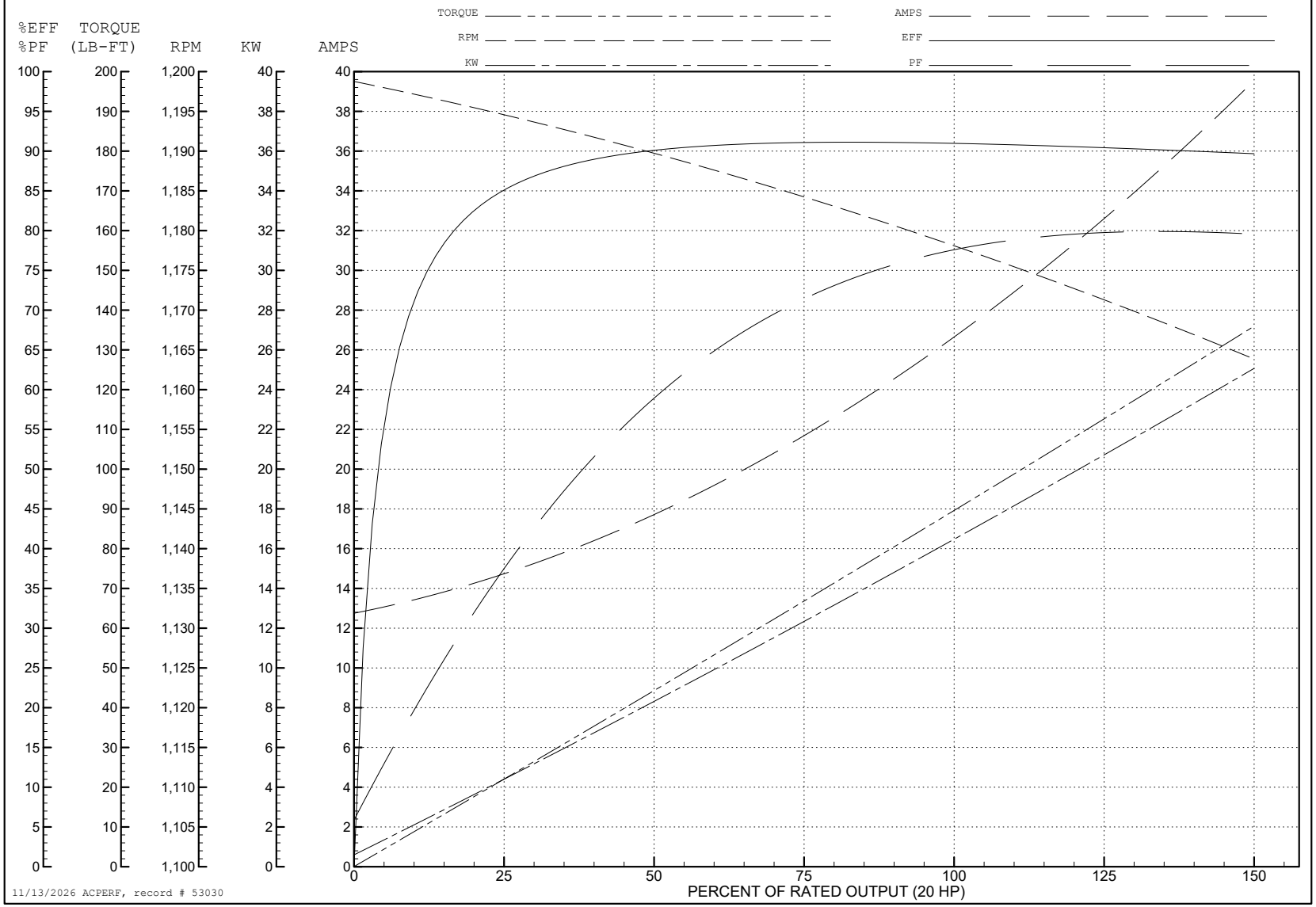
ABB Motors and Mechanical Inc.

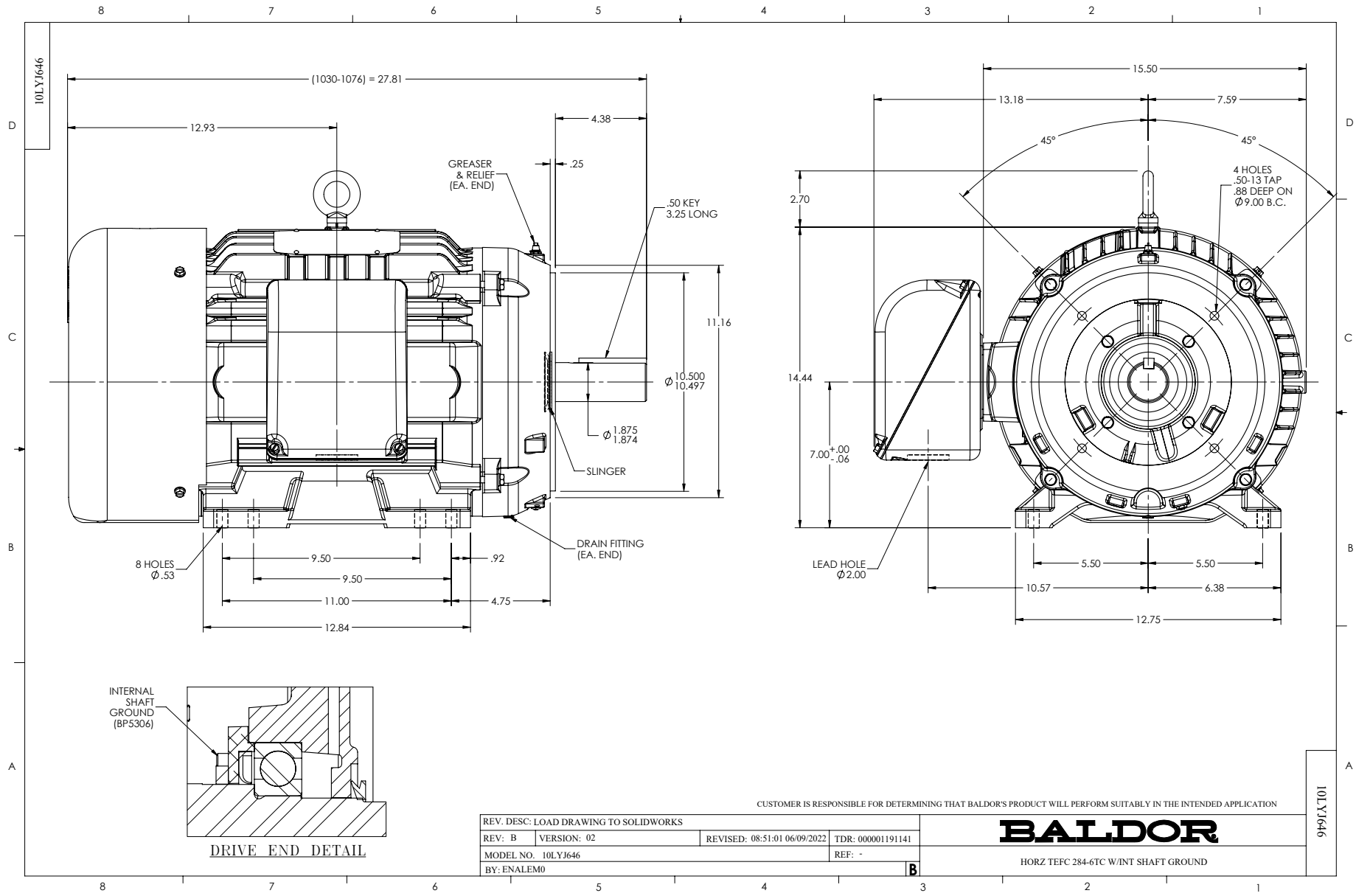
WINDING # 10WGY730

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

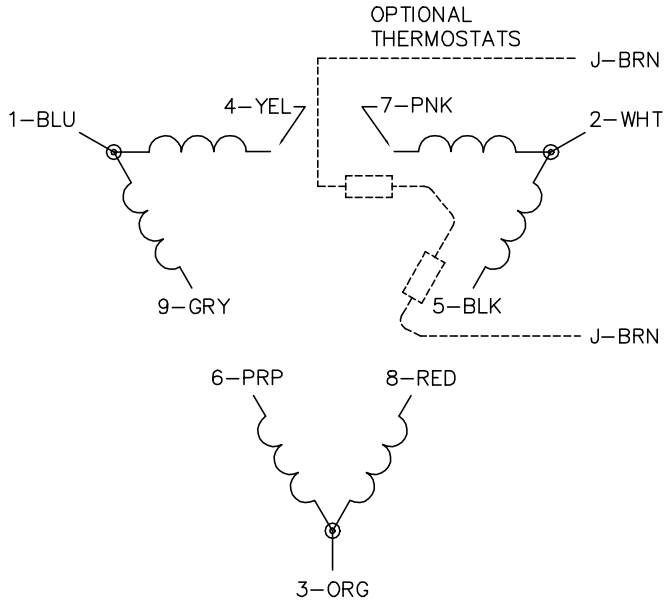
Typical performance - not guaranteed values.

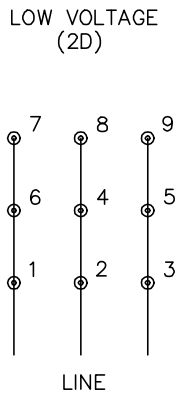
TORQUES(LB-FT): PO=276 PU=115 LR=166 LRA=165

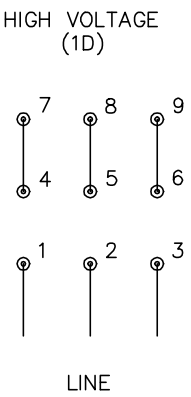



10LYJ646
(1030-1076) = 27.81
12.93
4.38
.25
GREASER & RELIEF (EA. END)
.50 KEY 3.25 LONG
11.16
Ø 10.500 10.497
Ø 1.875 1.874
SLINGER
DRAIN FITTING (EA. END)
8 HOLES Ø .53
9.50
.92
9.50
11.00
4.75
12.84
15.50
13.18
7.59
45°
45°
4 HOLES .50-13 TAP .88 DEEP ON Ø 9.00 B.C.
2.70
14.44
7.00 +.00 -.06
LEAD HOLE Ø 2.00
5.50
5.50
10.57
6.38
12.75
INTERNAL SHAFT GROUND (BP5306)
DRIVE END DETAIL
CUSTOMER IS RESPONSIBLE FOR DETERMINING THAT BALDOR'S PRODUCT WILL PERFORM SUITABLY IN THE INTENDED APPLICATION
REV. DESC: LOAD DRAWING TO SOLIDWORKS
REV: B
VERSION: 02
REVISED: 08:51:01 06/09/2022
TDR: 000001191141
MODEL NO. 10LYJ646
REF: -
BY: ENALEM0
B
BALDOR
HORZ TEFC 284-6TC W/INT SHAFT GROUND
10LYJ646

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

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