



---

# Customer information packet

## EM4102T

20HP, 1180RPM, 3PH, 60HZ, 286T, 1054M, TEFC, F1

Class - None

Division - Not Applicable

## 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	NEMA PREMIUM NEMA_PREMIUM UR CSA EEV
Ambient Temperature	40 °C
Auxillary Box	No Auxillary Box
Auxillary 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

## Part detail

Revision	AA
Type	AC
Mech. spec.	10C151
Base	
Status	PRD/A
Elec. spec.	10WGY730
Layout	10LYC151
Eff. date	06-27-2024
CD Diagram	CD0180
Poles	06
Leads	9#10
Proprietary	False
Created date	05-06-2010

Front Shaft Indicator	None
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	F1
Number of Poles	6
Overall Length	27.76 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**

**NP3443LUA**

<b>CAT.NO.</b>	EM4102T			<b>CUST. P/N</b>					<b>ENCL</b>	TEFC
<b>SPEC.</b>	10C151Y730G1	<b>CC</b>	010A	<b>FRAME</b>	286T	<b>SER.NO.</b>				
<b>HP</b>	20	<b>CLASS</b>		F	<b>HZ</b>	60				
<b>R.P.M.</b>	1180	<b>PH.</b>	3	<b>DES.</b>		A				
<b>VOLTS</b>	230/460	<b>CODE</b>		H	<b>ODE BRG</b>	6309	<b>DE BRG</b>	6311		
<b>AMPS</b>	54/27									
<b>RATING</b>	40C AMB-CONT	<b>NEMA NOM. EFF.</b>			91.7	<b>GREASE</b>		POLYREX EM		
<b>P.F.</b>	77	<b>SER.F.</b>	1.15	<b>CT6-60H(10:1)VT3-60H(20:1)</b>						
<b>USABLE AT</b>	50Hz 20HP 190/380V 62/31A	SF1.0								
<b>VOLTS</b>	<b>AMPS</b>	<b>MAX. SPACE HEATER TEMP.</b>								

**Accessories**

<b>Part number</b>	<b>Description</b>	<b>Multiplier</b>
10-1305	C FACE KIT	A8
10EP1502A01SP	D-FLANGE KIT	A8

**AC Induction Motor Performance Data**

Record # 53029

Typical performance - not guaranteed values

Winding: 10WGY730-R006		Type: 1054M	Enclosure: TEFC
<b>Nameplate Data</b>		<b>460 V, 60 Hz: High Voltage Connection</b>	
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	Locked-rotor Torque	166 LB-FT
NEMA Design Code	A KVA Code	Starting Current	165 A
Service Factor (S.F.)	1.15	No-load Current	13.1 A
NEMA Nom. Eff.	91.7 Power Factor	Line-line Res. @ 25°C	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-FT <sup>2</sup>

**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

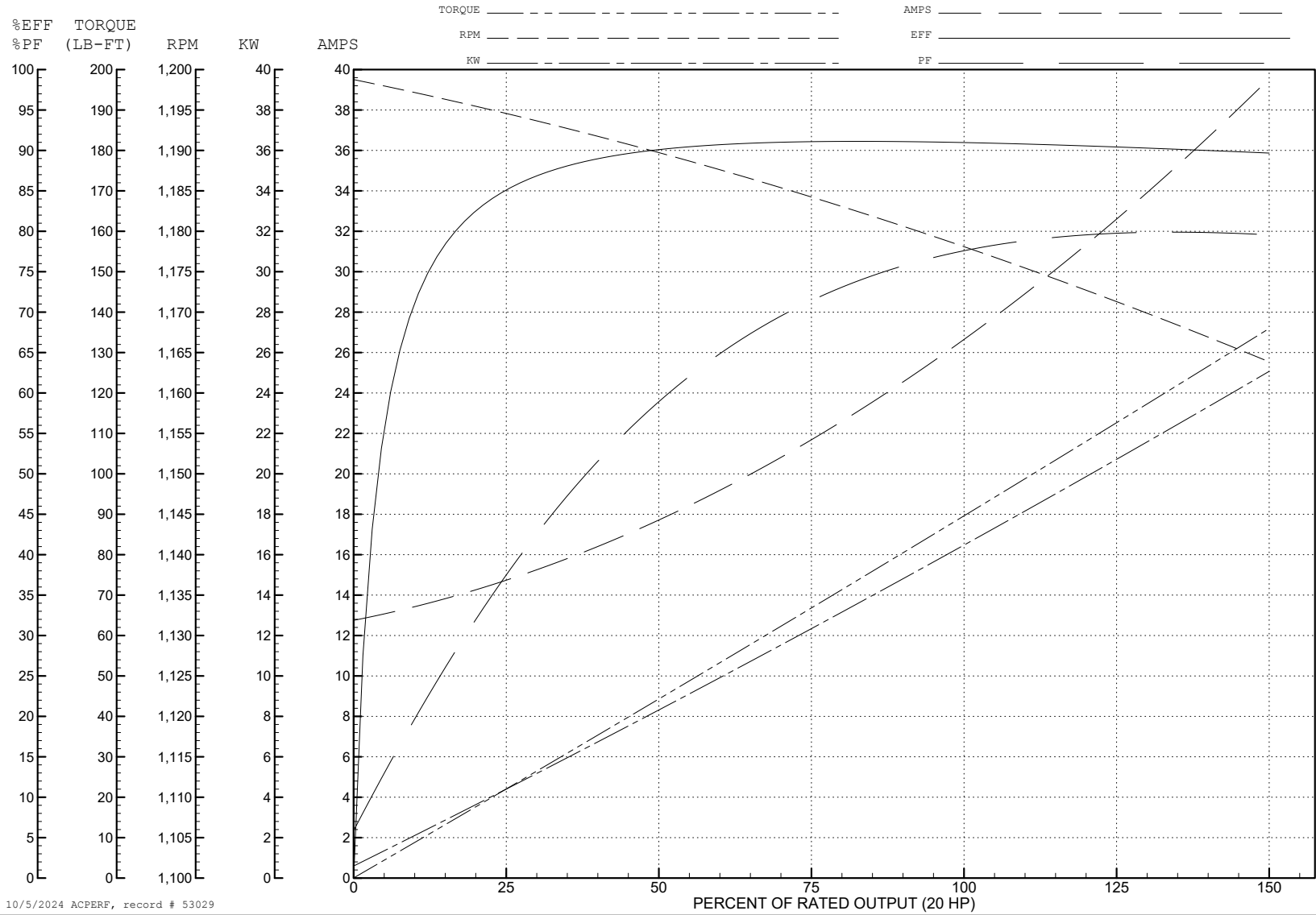
ABB Motors and Mechanical Inc.

WINDING # 10WGY730

Typical performance - not guaranteed values.

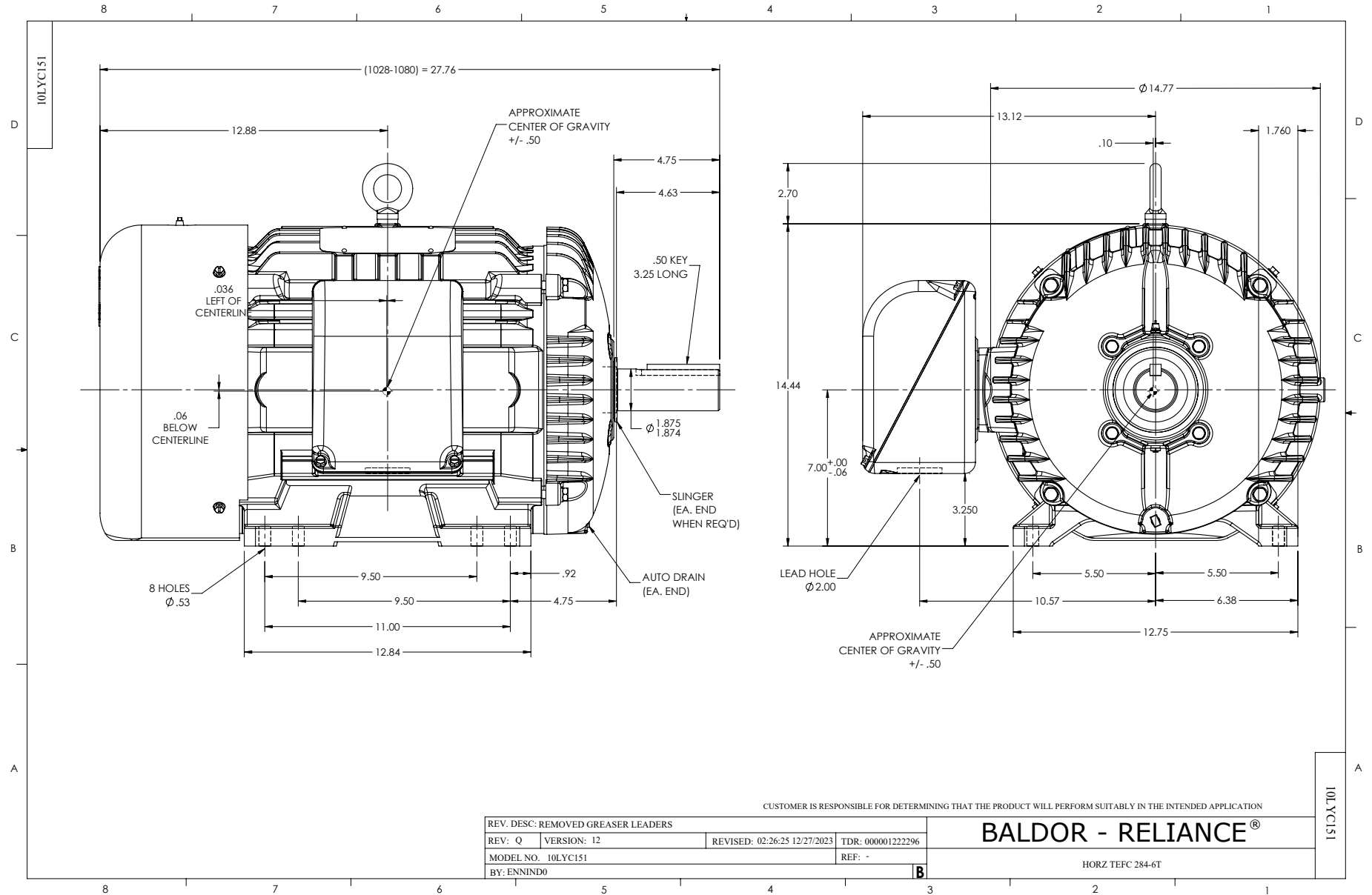
20 HP 3 PH 60 HZ 1180 RPM 460 V 1054M

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

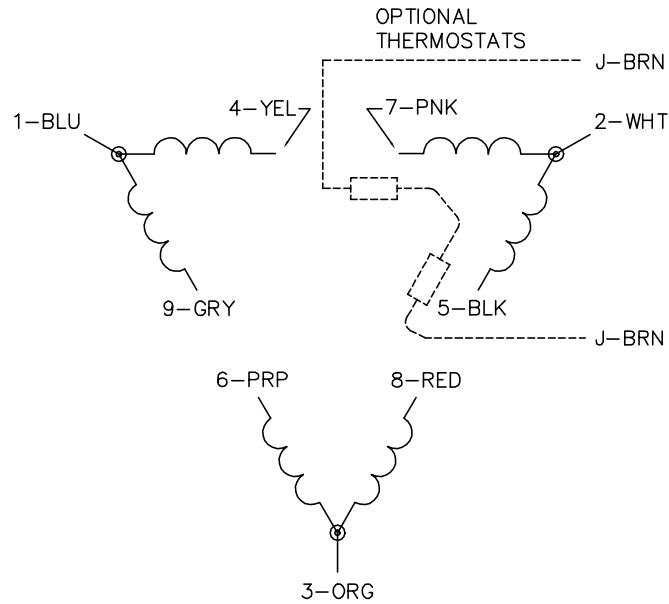


10/5/2024 ACPERF, record # 53029

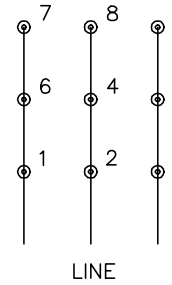




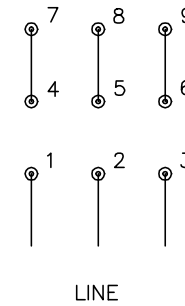
CD0180



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.

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: ENBRIRO
MTL: -	© □	

**BALDOR - RELIANCE®**

3PH, DV, 9 LEADS, DELTA CONNECTION

SH 1 of 1