

**BALDOR • RELIANCE**

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# 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
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
XP Class and Group	None
XP Division	Not Applicable
Agency Approvals	CSA CSA EEV UR
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
Front Shaft Indicator	None

## Part detail

Revision	S
Type	AC
Mech. spec.	10C156
Base	
Status	PRD/A
Elec. spec.	10WGY730
Layout	10LYC156
Eff. date	07-12-2022
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	27.76 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 (OLD)
Thermal Device - Winding	None
Vibration Sensor Indicator	No Vibration Sensor
Winding Thermal 1	None

**Winding Thermal 2**

**None**

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**Nameplate**

**NP3443L**

<b>CAT.NO.</b>	EFM4102T	<b>CUST. P/N</b>				<b>ENCL</b>	<b>TEFC</b>
<b>SPEC.</b>	10C156Y730G1	<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>USABLE AT 208V</b>			56		
<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>VPWM INVERTER READY</b>			
	SFA 61/60.5						
<b>HTR-VOLTS</b>		<b>HTR-AMPS</b>		<b>HTR-WATTS</b>			

**AC Induction Motor Performance Data**

Record # 53029

Typical performance - not guaranteed values

<b>Winding: 10WGY730-R006</b>		<b>Type: 1054M</b>		<b>Enclosure: TEFC</b>	
<b>Nameplate Data</b>			<b>460 V, 60 Hz: High Voltage Connection</b>		
<b>Rated Output (HP)</b>	20		<b>Full Load Torque</b>	90.1 LB-FT	
<b>Volts</b>	230/460		<b>Start Configuration</b>	direct on line	
<b>Full Load Amps</b>	54/27		<b>Breakdown Torque</b>	276 LB-FT	
<b>R.P.M.</b>	1180		<b>Pull-up Torque</b>	115 LB-FT	
<b>Hz</b>	<b>60 Phase</b>	3	<b>Locked-rotor Torque</b>	166 LB-FT	
<b>NEMA Design Code</b>	<b>A KVA Code</b>	H	<b>Starting Current</b>	165 A	
<b>Service Factor (S.F.)</b>	1.15		<b>No-load Current</b>	13.1 A	
<b>NEMA Nom. Eff.</b>	<b>91.7 Power Factor</b>	77	<b>Line-line Res. @ 25°C</b>	0.425 Ω	
<b>Rating - Duty</b>	40C AMB-CONT		<b>Temp. Rise @ Rated Load</b>	65°C	
<b>S.F. Amps</b>			<b>Temp. Rise @ S.F. Load</b>	79°C	
			<b>Locked-rotor Power Factor</b>	32	
			<b>Rotor inertia</b>	6.61 LB-FT <sup>2</sup>	

**Load Characteristics 460 V, 60 Hz, 20 HP**

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

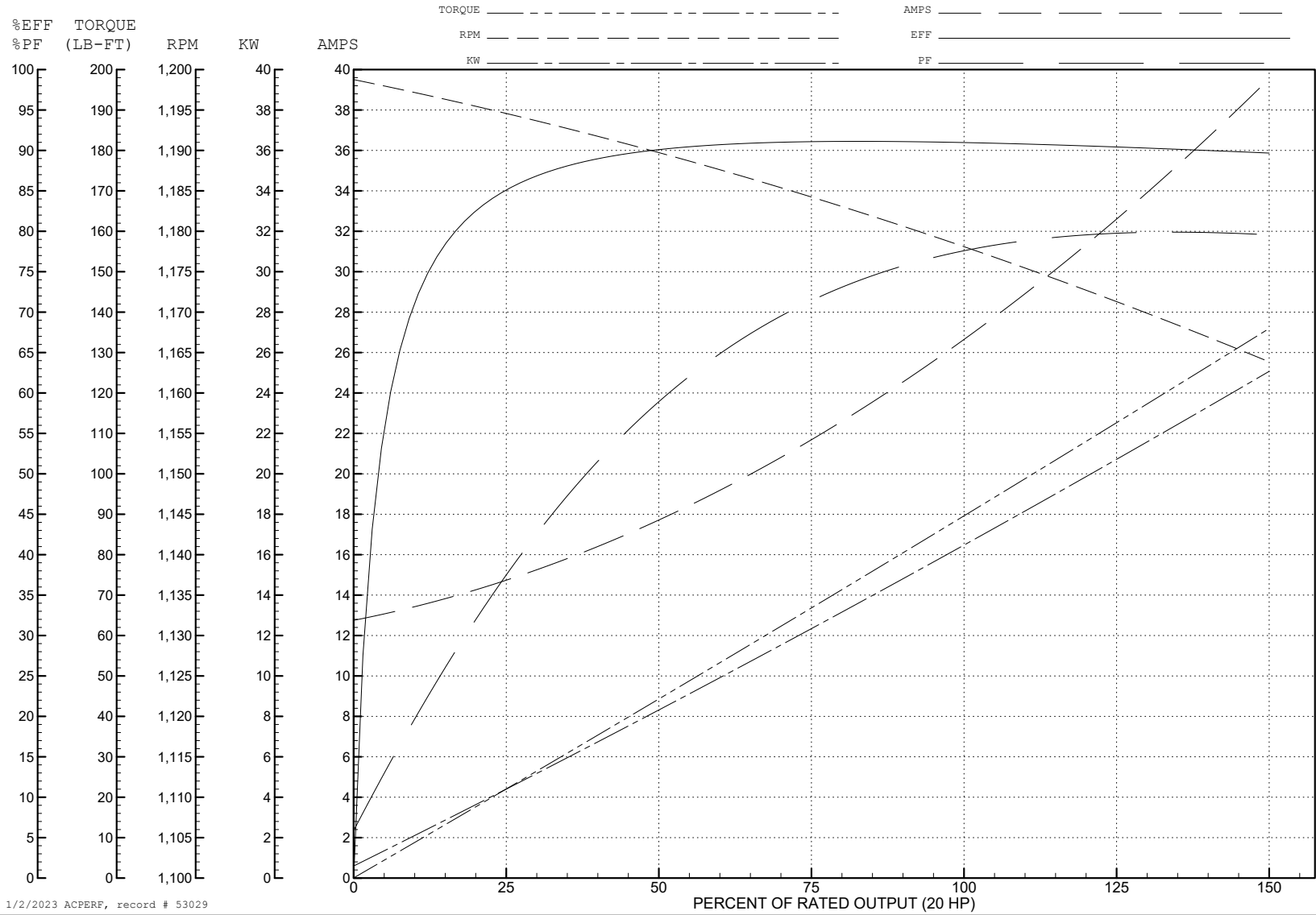
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WINDING # 10WGY730

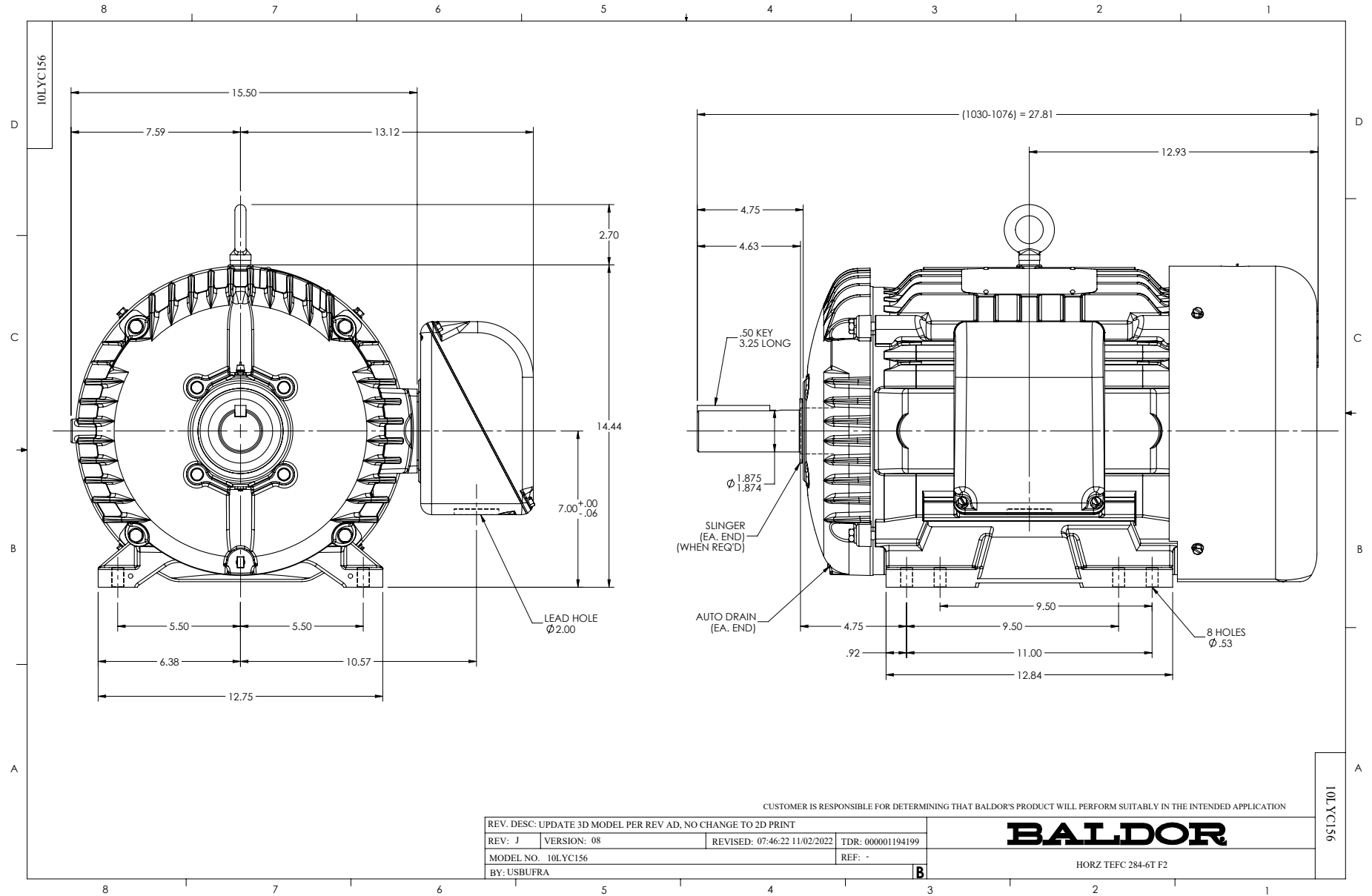
Typical performance - not guaranteed values.

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

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

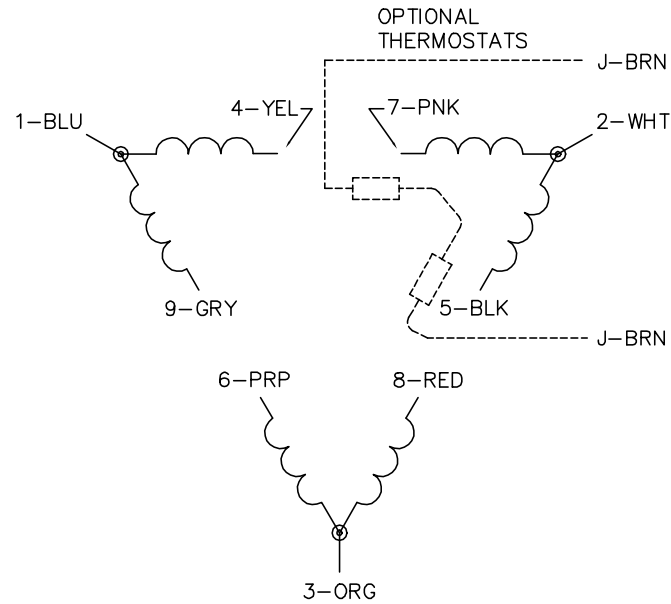


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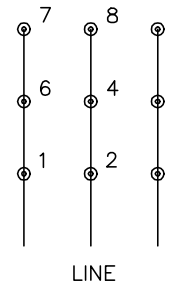




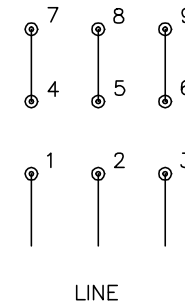
CD0180



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

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3PH, DV, 9 LEADS, DELTA CONNECTION

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