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# Customer information packet

## ECP84102T-4

20HP, 1175RPM, 3PH, 60HZ, 286T, TEFC, F1

Class - CLI GP A,B,C,D

Division - Division II

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## Specifications

Enclosure	TEFC
Frame	286T
Frame Material	Iron
Frequency	60.00 Hz
Haz Area Class and Group	CLI GP A,B,C,D
Haz Area Division	Division II
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
Agency Approvals	CCSA US CSA EEV NEMA PREMIUM NEMA_PREMIUM 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
Constant Torque Speed Range	1.3
Current @ Voltage	26.000 A @ 460.0 V
Design Code	B
Drip Cover	No Drip Cover
Duty Rating	CONT
Efficiency @ 100% Load	91.7 %
Electrically Isolated Bearing	Not Electrically Isolated
Enclosure Modification	841
Feedback Device	NO FEEDBACK
Haz Area Temp Code	T3C

## Part detail

Revision	L
Type	AC
Mech. spec.	
Base	
Status	PRD/A
Elec. spec.	10WGZ429
Layout	10LYH231
Eff. date	07-17-2023
CD Diagram	CD0006
Poles	06
Leads	3#10
Proprietary	False
Created date	12-06-2018

Heater Indicator	No Heater
High Voltage Full Load Amps	26.0 a
Insulation Class	F
Inverter Code	Inverter Duty
IP Rating	IP56
KVA Code	G
Lifting Lugs	Standard Lifting Lugs
Locked Bearing Indicator	Locked Bearing
Max Speed	1800 rpm
Motor Lead Termination	Ring Terminals
Motor Standards	NEMA
Motor Type	1056M
Mounting Arrangement	F1
Number of Poles	6
Overall Length	28.00 IN
Power Factor	78
Product Family	Chem Process S/P 32-8 IEEE 841
Pulley Face Code	Standard
Rodent Screen	None
Service Factor	1.15
Shaft Diameter	1.875 IN
Shaft Ground Indicator	No Shaft Grounding
Shaft Rotation	Reversible
Speed	1175 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**

**NP4332**

<b>STK.NO.</b>	ECP84102T-4	<b>P/N</b>		<b>ENCLOSURE</b>	TEFC
<b>SPEC.</b>	10-0000-0394	<b>CC</b>	010A	<b>FRAME</b>	286T
<b>HP</b>	20	<b>CLASS</b>	F	<b>HZ</b>	60
<b>RPM</b>	1175	<b>RPM MAX</b>	1800	<b>ODE BRG</b>	6311
<b>VOLT</b>	460	<b>PH</b>	3	<b>DE BRG</b>	6311
<b>AMP</b>	26	<b>DES</b>	B	<b>D.E. BRG.</b>	55BC03X30X
<b>RATING</b>	40C AMB-CONT	<b>KVA-CODE</b>	G	<b>O.D.E. BRG.</b>	55BC03X30X
<b>NEMA-NOM-EFF</b>	91.7	<b>MOTOR WEIGHT</b>	442	<b>GREASE</b>	POLYREX EM
<b>G.MIN.EFF</b>	90.2	<b>MAX. KVAR</b>	7.7	<b>BLANK</b>	
<b>TEMP CODE</b>	T3C	<b># OF ROTOR BARS</b>	42	<b>SER.F.</b>	1.15
<b>TEMP =</b>	160	<b># OF STATOR SLOTS</b>	54	<b>IP</b>	56
<b>CT HZ FROM</b>	1.3	<b>PF</b>	78	<b>INV.TYPE</b>	PWM
<b>HTR-VOLTS</b>		<b>INVERTER-TEMP-CODE</b>	180		
<b>HTR-AMPS</b>		<b>C HP FR</b>	60	<b>C HP TO</b>	90
<b>HTR-WATTS</b>		<b>CT HZ TO</b>	60		
<b>MAX. SPACE HEATER TEMP.</b>				<b>VT HZ FROM</b>	0
				<b>VT HZ TO</b>	60

**AC Induction Motor Performance Data**

Record # 53389

Typical performance - not guaranteed values

<b>Winding:</b> 10WGZ429-R001		<b>Type:</b> 1056M		<b>Enclosure:</b> TEFC	
<b>Nameplate Data</b>			<b>460 V, 60 Hz: Single Voltage Motor</b>		
<b>Rated Output (HP)</b>	20	<b>Full Load Torque</b>	89.1 LB-FT		
<b>Volts</b>	460	<b>Start Configuration</b>	direct on line		
<b>Full Load Amps</b>	26	<b>Breakdown Torque</b>	236 LB-FT		
<b>R.P.M.</b>	1175	<b>Pull-up Torque</b>	95.1 LB-FT		
<b>Hz</b>	60 <b>Phase</b>	3	<b>Locked-rotor Torque</b>	137 LB-FT	
<b>NEMA Design Code</b>	<b>B KVA Code</b>	G	<b>Starting Current</b>	143 A	
<b>Service Factor (S.F.)</b>	1.15	<b>No-load Current</b>	11.6 A		
<b>NEMA Nom. Eff.</b>	91.7	<b>Power Factor</b>	78	<b>Line-line Res. @ 25°C</b>	0.47101 Ω
<b>Rating - Duty</b>	40C AMB-CONT		<b>Temp. Rise @ Rated Load</b>	63°C	
<b>S.F. Amps</b>			<b>Temp. Rise @ S.F. Load</b>	79°C	
			<b>Locked-rotor Power Factor</b>	31.8	

**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>	41	63	73	78	80	80	79
<b>Efficiency</b>	88.6	92.1	92.5	91.9	90.8	89.2	91.2
<b>Speed</b>	1194.6	1189.1	1183.8	1177.1	1169.8	1160.7	1173
<b>Line amperes</b>	13.1	16.4	20.7	26.1	32	39.1	29.6

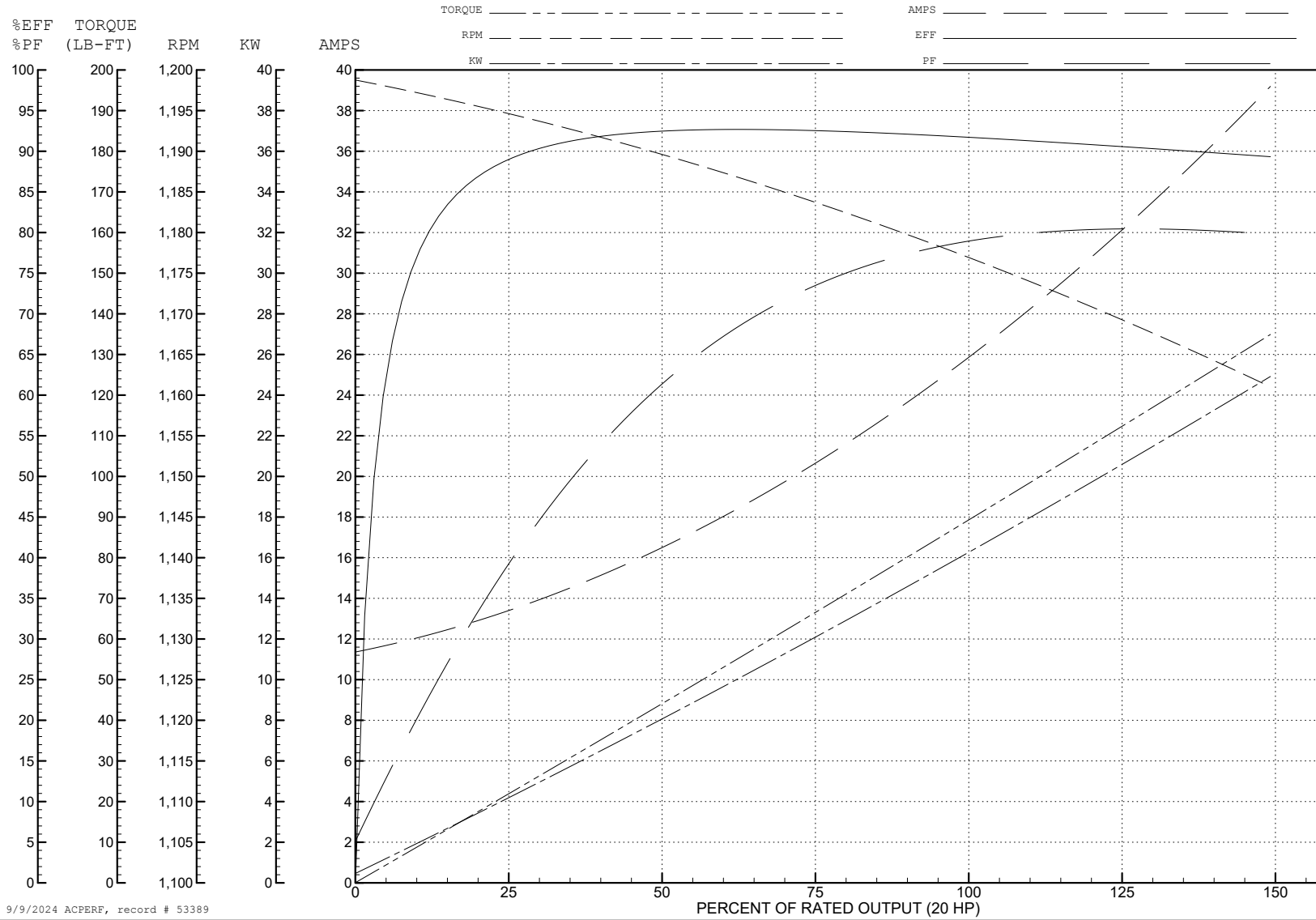
ABB Motors and Mechanical Inc.

WINDING # 10WGZ429

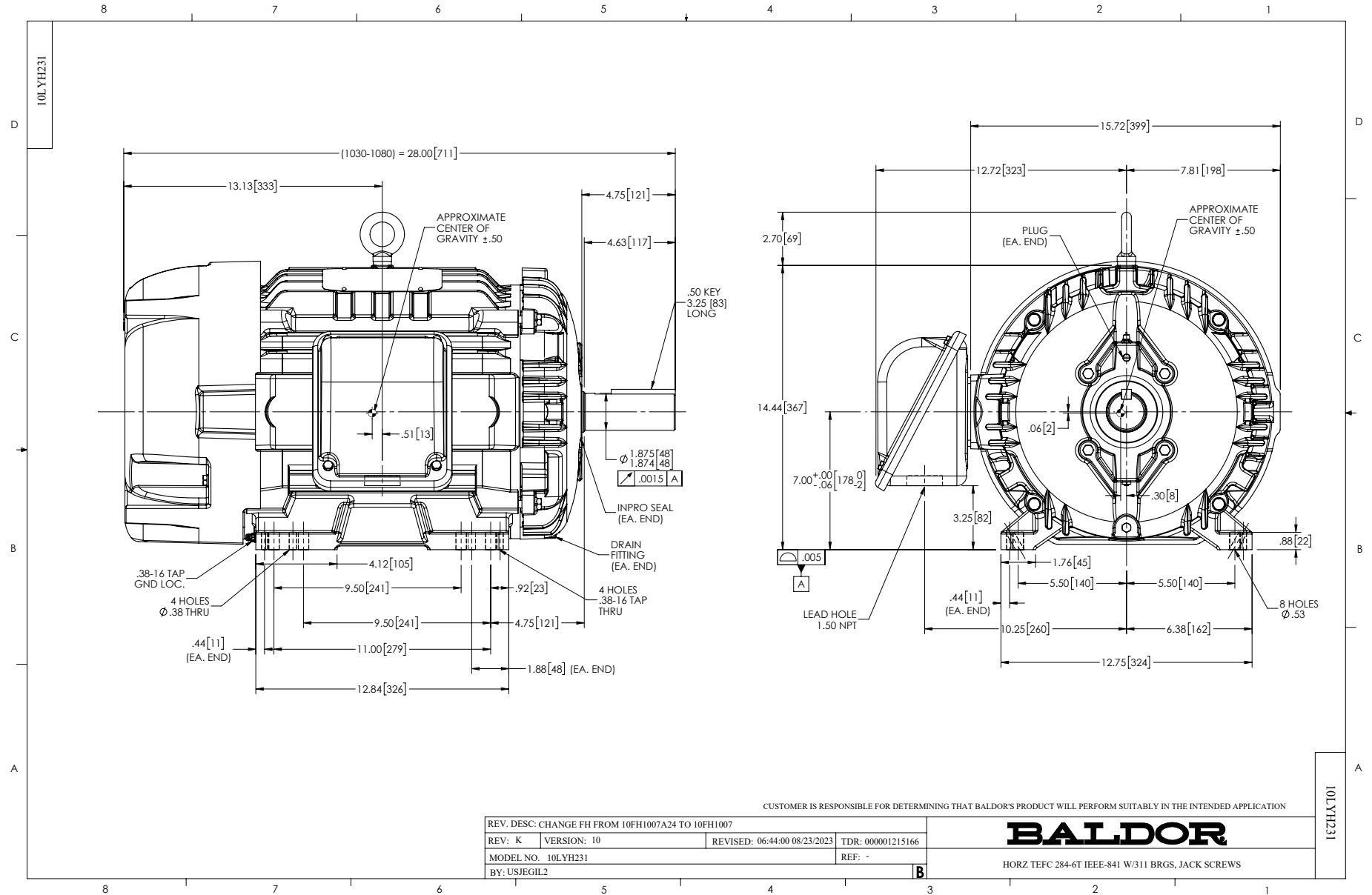
Typical performance - not guaranteed values.

20 HP 3 PH 60 HZ 1175 RPM 460 V 1056M

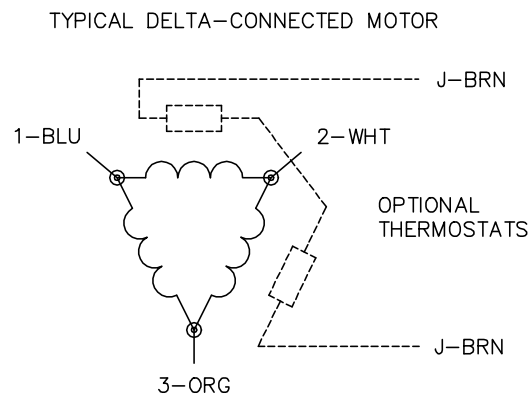
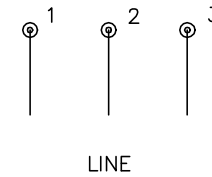
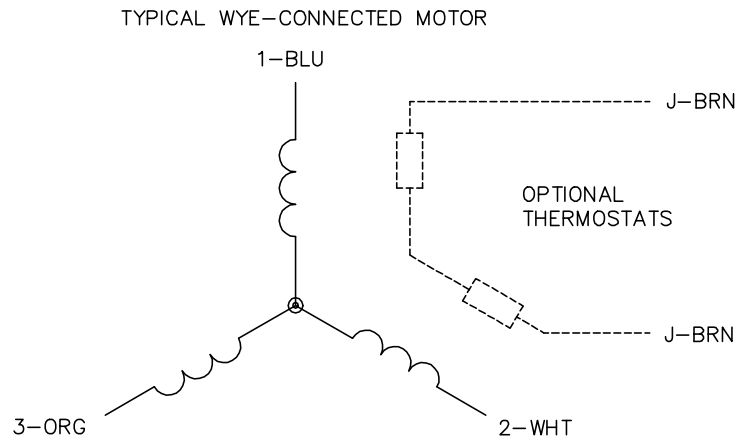
TORQUES (LB-FT): PO=236 PU=95.1 LR=137 LRA=143



9/9/2024 ACPERF, record # 53389



CD0006



NOTES:

1. THREE LEAD MOTOR MAY BE EITHER WYE CONNECTED OR DELTA CONNECTED.
2. INTERCHANGE ANY TWO LINE LEADS TO REVERSE ROTATION.
3. OPTIONAL THERMOSTATS ARE PROVIDED WHEN SPECIFIED.
4. ACTUAL NUMBER OF INTERNAL PARALLEL CIRCUITS MAY VARY.
5. LEAD COLORS ARE OPTIONAL. LEADS MUST BE NUMBERED AS SHOWN.

CD0006

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3PH, SV, 3 LEADS, WYE OR DELTA CONNECTED

SH 1 of 1