

ABB BALDOR RELIANCE III

Customer information packet

ECTM4102T

20 AIR OVERHP, 1180RPM, 3PH, 60HZ, 286T, 1054

Class - None

Division - Not Applicable

Specifications

Enclosure	TEAO
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	230.0 V @ 60 HZ 460.0 V @ 60 HZ
Agency Approvals	UR CSA CSA EEV
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	56.000 A @ 208.0 V 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 %
Feedback Device	NO FEEDBACK
Front Face Code	Standard
Front Shaft Indicator	None
Heater Indicator	No Heater

Part Detail

Revision	X
Type	AC
Mech. spec.	10G189
Base	
Status	PRD/A
Elec. spec.	10WGY730
Layout	10LYG189
Eff. date	09-29-2025
CD Diagram	CD0180
Poles	06
Leads	9#10
Proprietary	False
Created date	07-30-2010

High Voltage Full Load Amps	27.0 a
Insulation Class	F
Inverter Code	Inverter Ready
KVA Code	H
Lifting Lugs	Vertical 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	25.63 IN
Power Factor	77
Product Family	Super-E Chemical Processing
Pulley End Bearing Type	Sealed Bearing
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

Nameplate

NP2178									
CAT.NO.	ECTM4102T								
SPEC.	10G189Y730G1								
HP	20 AIR OVER								
VOLTS	230/460								
AMP	54/27								
RPM	1180								
FRAME	286T	HZ		60	PH		3		
SER.F.	1.15	CODE	H	DES	A	CL	F		
NEMA-NOM-EFF	91.7	PF	77						
RATING	40C AMB-CONT								
CC									
DE	6311	ODE		6309					
ENCL	TEAO	SN							
	2050 FPM @ 520CFM								

AC Induction Motor Performance Data

Record # 32055

Typical performance - not guaranteed values

Winding: 10WGY730-R002			Type: 1054M		Enclosure: TEFC	
Nameplate Data			460 V, 60 Hz: High Voltage Connection			
Rated Output (HP)		20 AIR OVER	Full Load Torque		89.4 LB-FT	
Volts		208-230/460	Start Configuration		direct on line	
Full Load Amps		56-54/27	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	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		0.39486 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

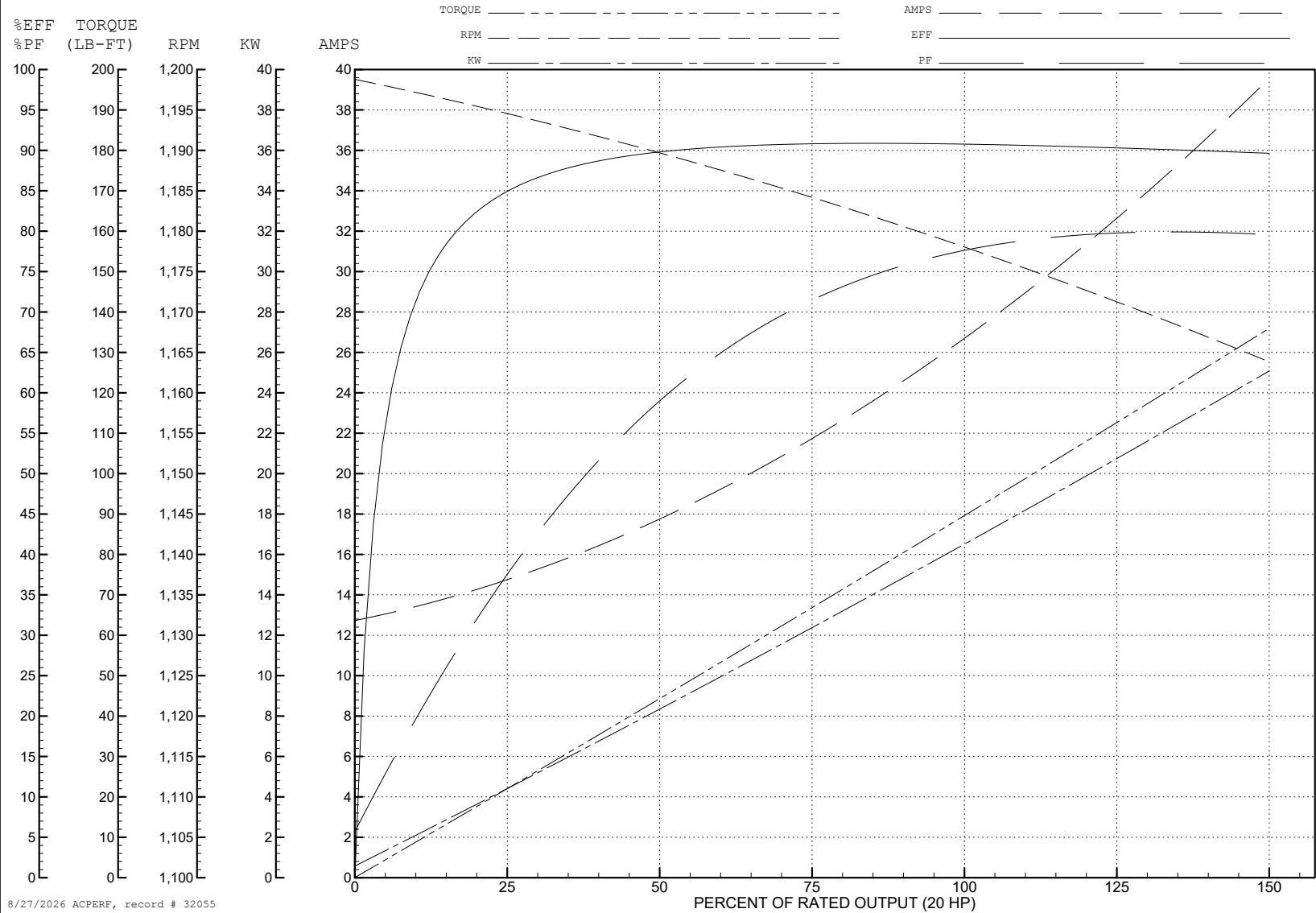
ABB Motors and Mechanical Inc.

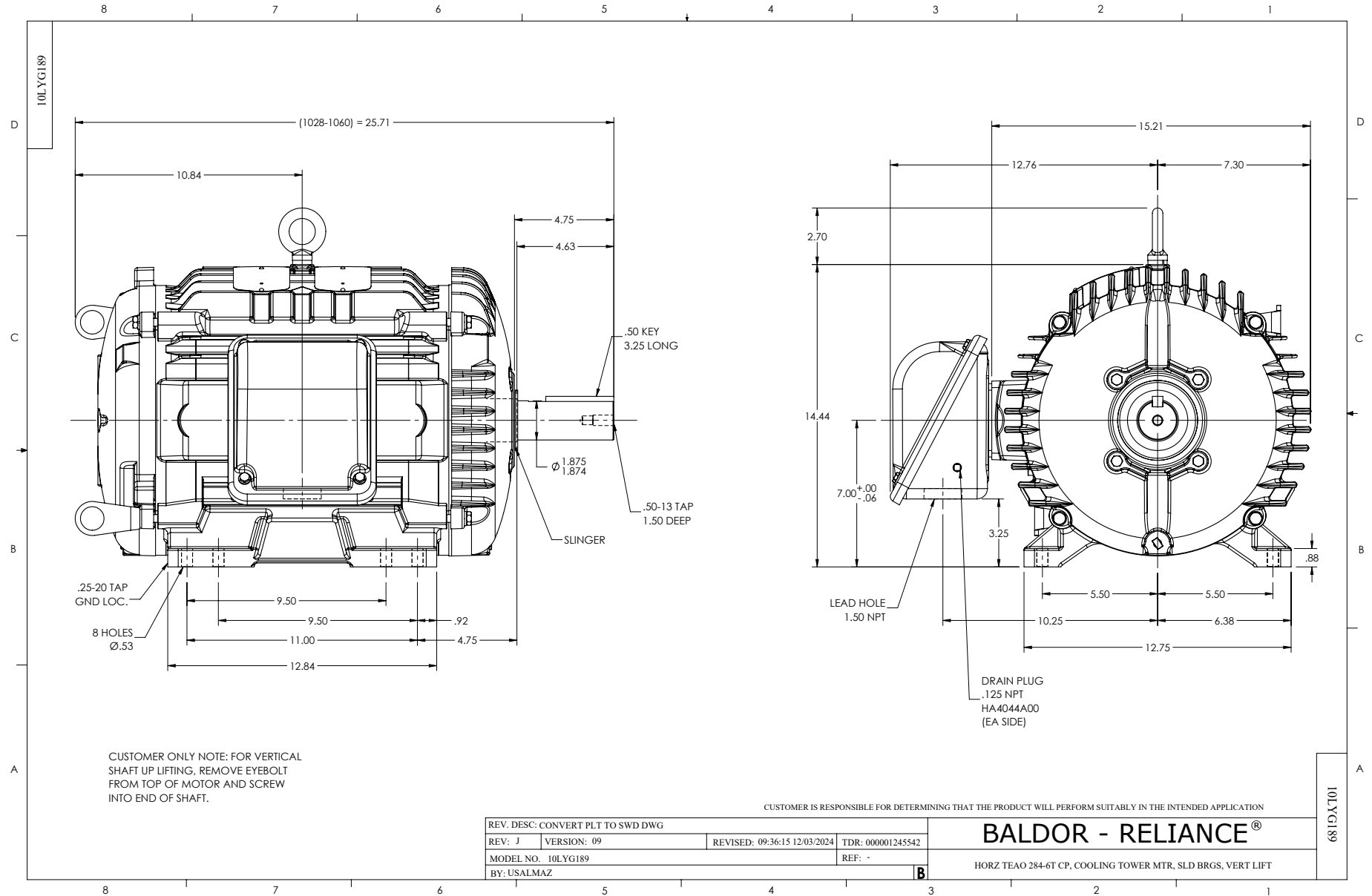
WINDING # 10WGY730

Typical performance - not guaranteed values.

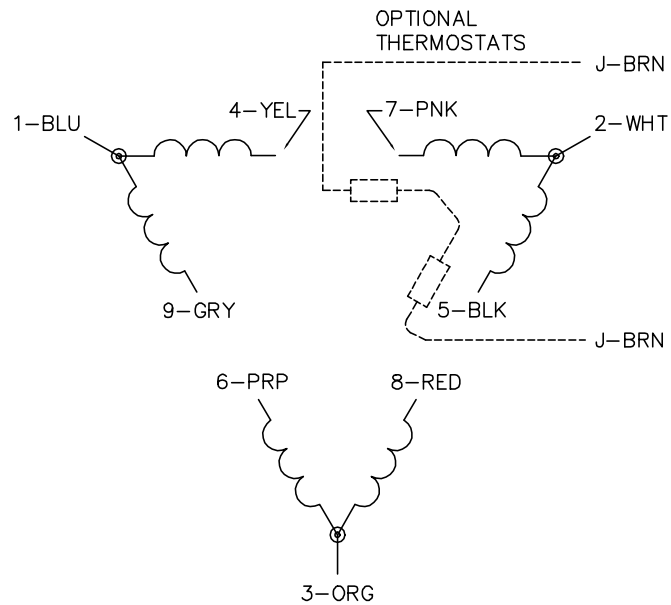
20 HP 3 PH 60 HZ 1180 RPM 460 V 1054M

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

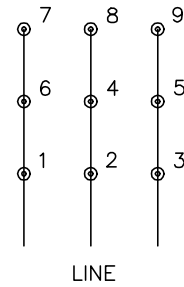




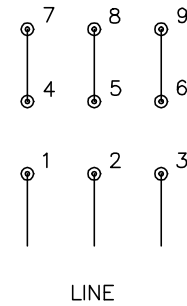
CD0180



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

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