

ABB BALDOR RELIANCE III

Customer information packet

CECP4102T

20HP, 1180RPM, 3PH, 60HZ, 286TC, 1054M, TEFC, F

Class - CLI GP A,B,C,D

Division - Division II

Specifications

Enclosure	TEFC
Frame	286TC
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 230.0 V @ 60 HZ
Agency Approvals	CCSA US CSA EEV NEMA PREMIUM 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
Constant Torque Speed Range	1.0
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 %
Electrically Isolated Bearing	Not Electrically Isolated

Part Detail

Revision	J
Type	AC
Mech. spec.	10H412
Base	
Status	PRD/A
Elec. spec.	10WGY730
Layout	10LYH412
Eff. date	09-29-2025
CD Diagram	CD0180
Poles	06
Leads	9#10
Proprietary	False
Created date	05-29-2018

Enclosure Modification	Severe Duty Features
Feedback Device	NO FEEDBACK
Front Shaft Indicator	None
Haz Area Temp Code	T3C
Heater Indicator	No Heater
High Voltage Full Load Amps	27.0 a
Insulation Class	F
Inverter Code	Inverter Duty
KVA Code	H
Lifting Lugs	Standard Lifting Lugs
Locked Bearing Indicator	Locked Bearing
Max Speed	1800 rpm
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	28.00 IN
Power Factor	77
Product Family	Super-E Chemical Processing
Pulley End Bearing Type	Ball
Pulley Face Code	C-Face
Pulley Shaft Indicator	Standard
Rodent Screen	None
Service Factor	1.15
Shaft Diameter	1.875 IN
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

NP3241																	
CAT.NO.	CECP4102T			P/N						ENCLOSURE		TEFC					
SPEC.	10H412Y730G2		CC	010A	FRAME	286TC		S/N									
HP	20			CLASS	F	HZ	60	DES	A								
RPM	1180			RPM MAX		1800		PH	3	KVA-CODE		H					
VOLT	230/460			MOTOR WEIGHT			451										
AMP	54/27			SER.F.	1.15	PF	77	ODE BRG		6311	DE BRG		6311				
RATING	40C AMB-CONT			NEMA-NOM-EFF			91.7		GREASE		POLYREX EM						
							INV.TYPE		PWM								
TEMP CODE	T3C	INVERTER-TEMP-CODE			180												
TEMP =	160	C HP FR	60	C HP TO		90											
CT HZ FROM	1.0		CT HZ TO		60												
HTR-VOLTS		HTR-AMPS			HTR-WATTS			MAX. SPACE HEATER TEMP.					VT HZ FROM		O	VT HZ TO	60

AC Induction Motor Performance Data

Record # 52812

Typical performance - not guaranteed values

Winding: 10WGY730-R020				Type: 1054M		Enclosure: TEFC		
Nameplate Data				460 V, 60 Hz: High Voltage Connection				
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	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	77	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-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

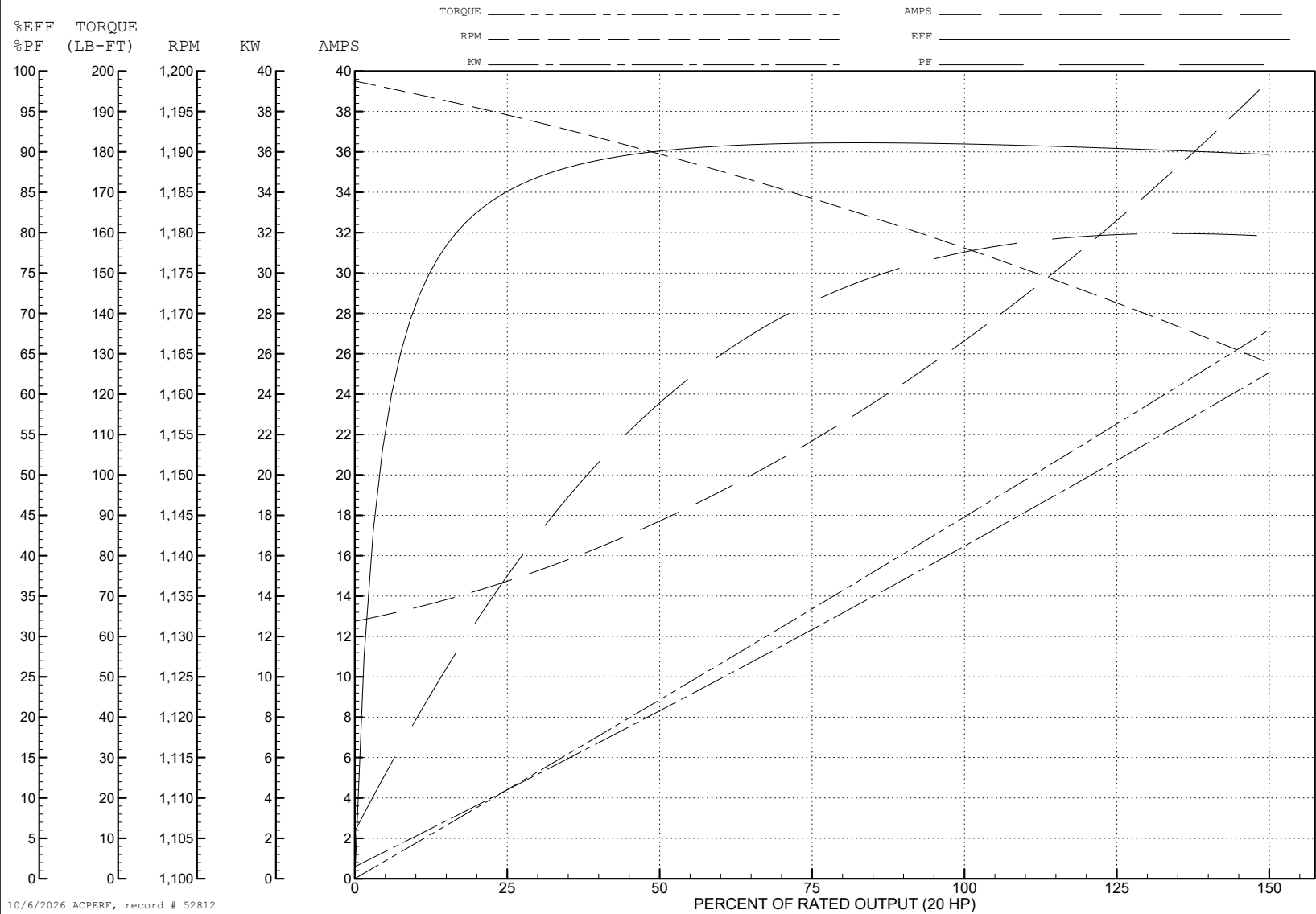
ABB Motors and Mechanical Inc.

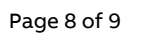
WINDING # 10WGY730

Typical performance - not guaranteed values.

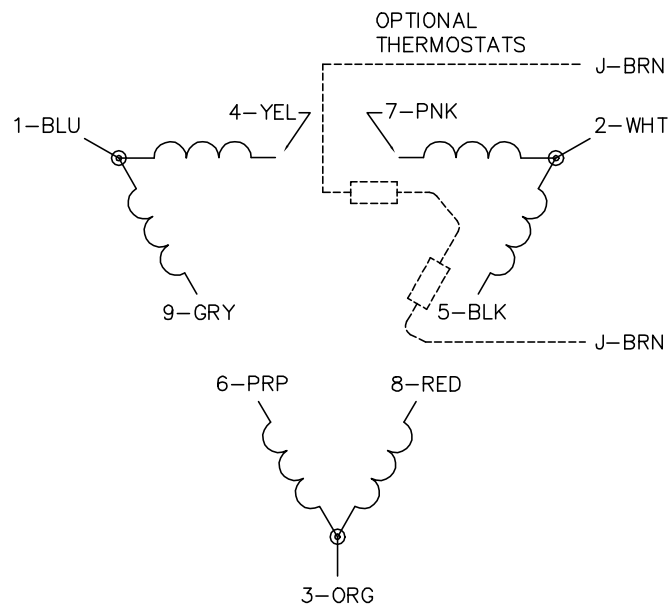
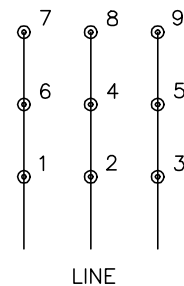
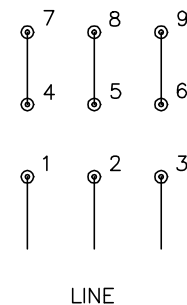
20 HP 3 PH 60 HZ 1180 RPM 460 V 1054M

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.

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

CD0180