PRODUCT INFORMATION PACKET

Model No: TCA1P51A3181GACD01
Catalog No: TCA1P51A3181GACD01
Cast Iron Motor, 2 HP, 3 Ph, 50 Hz, 415 V, 3000 RPM, 90S Frame, TEFC

Nameplate Specifications

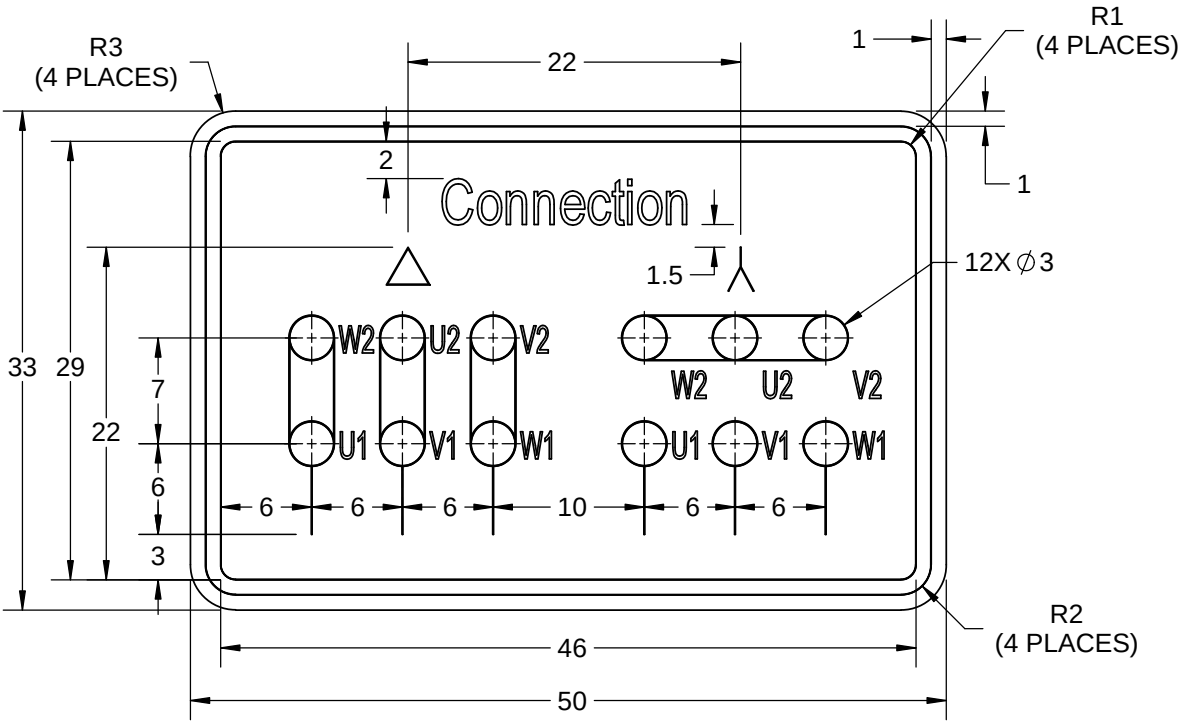
Phase	3	Output HP	2 Hp
Output KW	1.5 kW	Voltage	415 V
Speed	2876 rpm	Service Factor	1
Frame	90S	Enclosure	Totally Enclosed Fan Cooled
Thermal Protection	No Protection	Efficiency	84.2 %
Ambient Temperature	50 °C	Frequency	50 Hz
Current	2.8 A	Power Factor	0.89
Duty	S1	Insulation Class	F
Drive End Bearing Size	6205	Opp Drive End Bearing Size	6205
UL	No	CSA	No
CE	Yes	IP Code	55
Number of Speeds	1	Efficiency Class	IE3

Technical Specifications

Electrical Type	Squirrel Cage	Starting Method	Direct On Line
Poles	2	Rotation	Bi-Directional
Mounting	B14B	Motor Orientation	Horizontal
Drive End Bearing	2z-C3	Opp Drive End Bearing	2z-C3
Frame Material	Cast Iron	Shaft Type	Keyed
Overall Length	307 mm	Frame Length	128 mm
Shaft Diameter	24 mm	Shaft Extension	50 mm
Assembly/Box Mounting	Top		
Connection Drawing	8442000085		

DRAWING REVISION	REVISION BY	DATE
A	SN	13/01/2017
ECO	APPROVED BY	DATE
ECO-0116390	SBD	13/01/2017
ECO DESCRIPTION		
NEW DRAWING RELEASE		

GEOMENTRIC TOLERANCE		
LINEAR DIM	>0~6	±0.1
	>6~30	±0.2
	>30~120	±0.3



NOTES:

1. PRESSURE-SENSITIVE ADHESIVE COATED PAPER ON THE BACK OF SELF-ADHESIVE.
2. AT THE END OF YELLOW, WORDS, SYMBOLS, LETTERS ARE BLACK, BORDER IS BLACK.
3. THE TOLERANCE OF THE LINEAR SIZE OF THE TOLERANCE WITHOUT THE TOLERANCE BY THE TABLE.

8WD.442.2017

	DRAWN BY: SN	REGAL™ Regal Beloit America, Inc.	
	DATE: 16/12/2016		
	APPROVED BY: SBD	DESCRIPTION: CONN DIAGRAM-NAMEPLATE	
	DATE: 16/12/2016		
	REFERENCE	MATERIAL	PROCESS/FINISH
	THIRD ANGLE PROJECTION	SIZE: A / DRAWING NUMBER: 8442000085	SHEET: 1 OF 1

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TerraMAX®

Model No. TCA1P51A3181GACD01

U (V)	Δ / Y Conn	f [Hz]	P [kW]	P [hp]	I [A]	n [RPM]	T [Nm]	IE Class	% EFF at __ load 5/4FL	FL	3/4FL	1/2FL	PF at __ load FL	3/4FL	1/2FL	I_A/I_N [pu]	T_A/T_N [pu]	T_K/T_N [pu]
415	Y	50	1.5	2.0	2.8	2876	4.95	IE3	-	84.2	84.2	83.3	0.89	0.84	0.73	7	3.0	3.1

Motor type	TCA	
Enclosure	TEFC	
Frame Material	Cast Iron	
Frame size	90S	
Duty	S1	
Voltage variation *	± 10%	
Frequency variation *	± 5%	
Combined variation *	10%	
Design	N	
Service factor	1.0	
Insulation class	F	
Ambient temperature	-20 to +50	°C
Temperature rise (by resistance)	70 [Class B]	K
Altitude above sea level	1000	meter
Hazardous area classification	NA	
Zone classification	NA	
Gas group	NA	
Temperature class	NA	
Rotor type	Aluminum Die cast	
Bearing type	Anti-friction ball bearing	
DE / NDE bearing	6205-2Z / 6205-2Z	
Lubrication method	Greased for life	
Type of grease	NA	

Degree of protection	IP 55
Mounting type	IM B14B
Cooling method	IC 411
Motor weight - approx.	26.7 kg
Gross weight - approx.	27.7 kg
Motor inertia	0.0025 kgm^2
Load inertia	Customer to Provide
Vibration level	1.6 mm/s
Noise level (1meter distance from motor)	63 dB(A)
No. of starts hot/cold/Equally spread	2/3/4
Starting method	DOL
Type of coupling	Direct
LR withstand time (hot/cold)	7/15 s
Direction of rotation	Bi-directional
Standard rotation	Clockwise form DE
Paint shade	RAL 5014
Accessories	
Accessory - 1	-
Accessory - 2	-
Accessory - 3	-
Terminal box position	TOP
Maximum cable size/conduit size	1R x 3C x 10mm²/2 x M20 x 1.5
Auxiliary terminal box	NA

I_A/I_N - Locked Rotor Current / Rated Current

T_A/T_N - Locked Rotor Torque / Rated Torque

T_K/T_N - Breakdown Torque / Rated Torque

NOTE

All performance values at rated voltage and frequency.

All performance parameters are subjected to standard tolerance as per IEC 60034-1

* Voltage, Frequency and combine variation are as per IEC60034-1

Technical data are subject to change. There may be discrepancies between calculated and name plate values.

Efficiency	Europe	China	India	Aus/Nz	Brazil	Global IEC
Standards	-	-	IS 12615 : 2018	-	-	-

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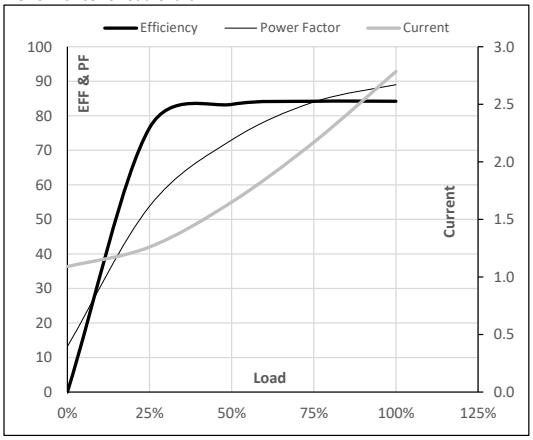
Model No. TCA1P51A3181GACD01

Enclosure	U (V)	Δ / Y Conn	f [Hz]	P [kW]	P [hp]	I [A]	n [RPM]	T [kgm]	T [Nm]	IE Class	Amb [°C]	Duty	Elevation [m]	Inertia [kg-m^2]	Weight [kg]
TEFC	415	Y	50	1.5	2.0	2.8	2876	0.50	4.95	IE3	50	S1	1000	0.0025	27

Motor Load Data

Load Point		NL	1/4FL	1/2FL	3/4FL	FL	5/4FL
Current	A	1.1	1.3	1.7	2.2	2.8	
Torque	Nm	0.0	1.2	2.4	3.7	4.9	
Speed	r/min	3000	2970	2942	2911	2876	
Efficiency	%	0.0	76.5	83.3	84.2	84.2	
Power Factor	%	13.2	53.8	73.0	84.0	89.0	

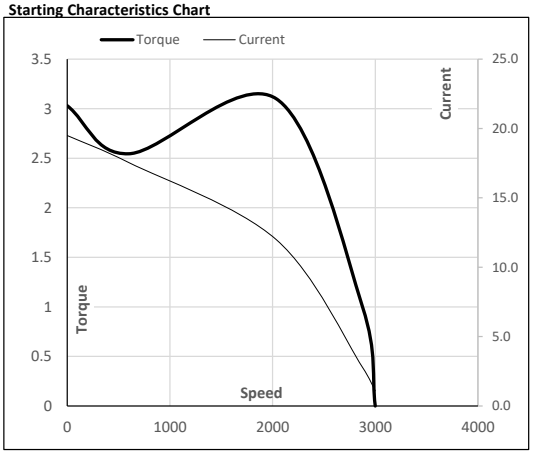
Performance vs Load Chart



Motor Speed Torque Data

Load Point		LR	P-Up	BD	Rated	NL
Speed	r/min	0	600	2036	2876	3000
Current	A	19.5	17.5	12.0	2.8	1.1
Torque	pu	3.0	2.5	3.1	1	0

Starting Characteristics Chart



NOTE Refer data sheet for applicable standard and tolerances on performance parameters

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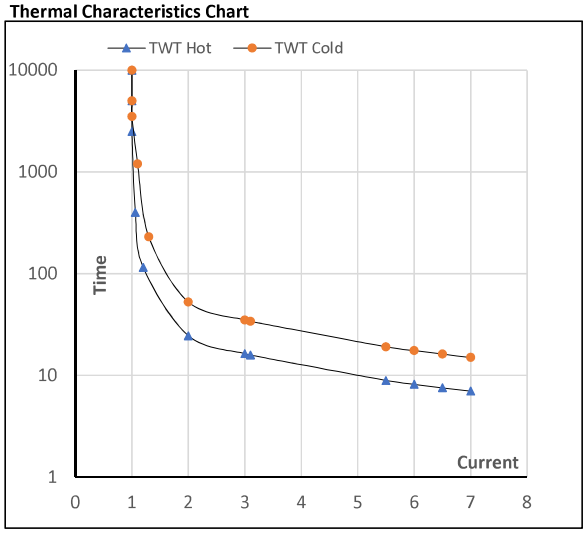
Model No. TCA1P51A3181GACD01

Enclosure	U (V)	Δ / Y Conn	f [Hz]	P [kW]	P [hp]	I [A]	n [rpm]	T [kgm]	T [Nm]	IE Class	Amb [°C]	Duty	Elevation [m]	Inertia [kg-m^2]	Weight [kg]
TEFC	415	Y	50	1.5	2.0	2.8	2876	0.50	4.95	IE3	50	S1	1000	0.0025	26.7

Motor Speed Torque Data

Load		FL	I_1	I_2	I_3	I_4	I_5	LR
TWT Hot	s	10000	25	16	14	11	9	7
TWT Cold	s	10000	52	35	30	22	19	15
Current	pu	1	2	3	4	5	5.5	7

Thermal Characteristics Chart



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