PRODUCT INFORMATION PACKET

Model No: TCA7P51A3181GACD01 Catalog No: TCA7P51A3181GACD01 Cast Iron Motor, 10 HP, 3 Ph, 50 Hz, 415 V, 3000 RPM, 132S Frame, TEFC



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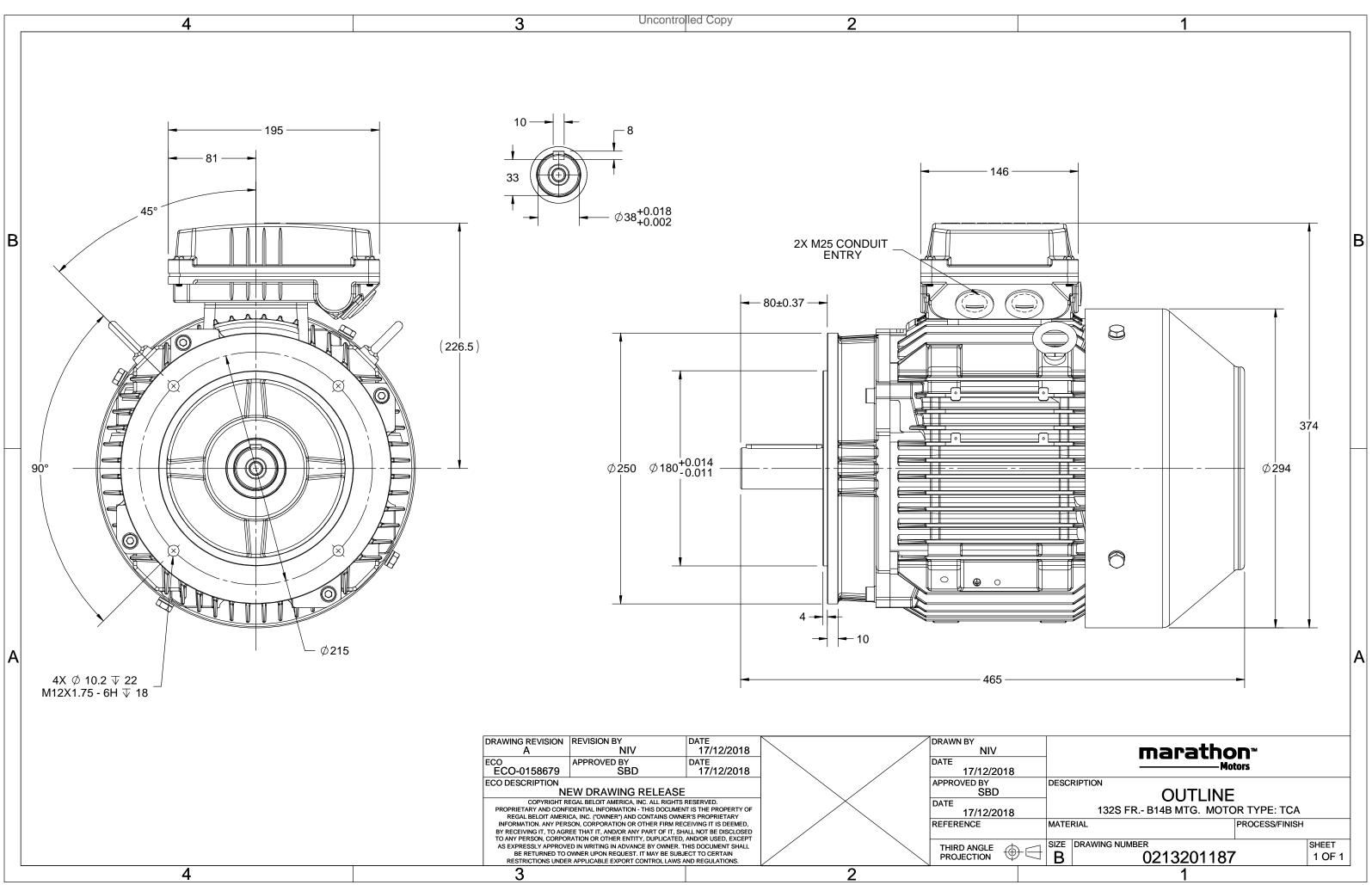
Nameplate Specifications

Output HP	10 Hp	Output KW	7.5 kW
Frequency	50 Hz	Voltage	415 V
Current	12.7 A	Speed	2931 rpm
Service Factor	1	Phase	3
Efficiency	90.1 %	Power Factor	0.91
Duty	S1	Insulation Class	F
Frame	132S	Enclosure	Totally Enclosed Fan Cooled
Frame Thermal Protection	132S No Protection	Enclosure Ambient Temperature	Totally Enclosed Fan Cooled 50 °C
Thermal Protection	No Protection	Ambient Temperature	50 °C
Thermal Protection Drive End Bearing Size	No Protection 6308	Ambient Temperature Opp Drive End Bearing Size	50 °C 6208

Technical Specifications

Electrical Type	Squirrel Cage	Starting Method	Direct On Line
Poles	2	Rotation	Bi-Directional
Mounting	B14B	Motor Orientation	Shaftdown
Drive End Bearing	2z-C3	Opp Drive End Bearing	2z-C3
Frame Material	Cast Iron	Shaft Type	Keyed
Overall Length	465 mm	Frame Length	202 mm
Shaft Diameter	38 mm	Shaft Extension	80 mm
Assembly/Box Mounting	Тор		
Connection Drawing	8442000085	Outline Drawing	0213201187

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3 of 7







Model No. TCA7P51A3181GACD01

(V) Conn [Hz] [kW] [hp] [A] [RPM] [Nm] Class 5/4FL FL 3/4FL 1/2FL FL 3/4FL 1/2FL [pu]																		- /	
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	DE / N	DE beari	ng		63	08-2Z / 6	5208-2Z			т	erminal b	ox posi	tion				TOP		
ype of grease NA Auxiliary terminal box NA	Lubrica	ation me	thod		0	Greased fo	or life			N							1R x 3C x 16mm²/2 x M25 x 1.5		
	Туре о	f grease				NA				А	uxiliary t	erminal	box				NA		

 I_A/I_N - Locked Rotor Current / Rated Current

 $T_{\text{A}}/T_{\text{N}}$ - Locked Rotor 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	-	-	-



 $T_{\rm K}/T_{\rm N}$ - Breakdown Torque / Rated Torque

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Model No. TCA7P51A3181GACD01

Enclosure	U	Δ / Y	f	Р	Р	I	n	Т	Т	IE	Amb	Duty	Elevation	Inertia	Weight
	(V)	Conn	[Hz]	[kW]	[hp]	[A]	[RPM]	[kgm]	[Nm]	Class	[°C]		[m]	[kg-m ²]	[kg]
TEFC	415	Δ	50	7.5	10.0	12.7	2931	2.48	24.30	IE3	50	S1	1000	0.023	86

Motor Load Data

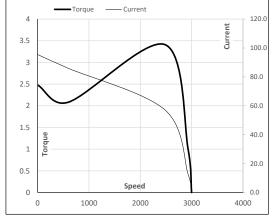
	NL	1/4FL	1/2FL	3/4FL	FL	5/4FL
Α	3.8	4.9	7.0	9.7	12.7	
Nm	0.0	6.0	12.0	18.1	24.3	
r/min	3000	2983	2967	2950	2931	
%	0.0	84.9	89.5	90.1	90.1	
%	10.8	62.6	81.0	88.0	91.0	
	Nm r/min %	A 3.8 Nm 0.0 r/min 3000 % 0.0	A 3.8 4.9 Nm 0.0 6.0 r/min 3000 2983 % 0.0 84.9	A 3.8 4.9 7.0 Nm 0.0 6.0 12.0 r/min 3000 2983 2967 % 0.0 84.9 89.5	A 3.8 4.9 7.0 9.7 Nm 0.0 6.0 12.0 18.1 r/min 3000 2983 2967 2950 % 0.0 84.9 89.5 90.1	A 3.8 4.9 7.0 9.7 12.7 Nm 0.0 6.0 12.0 18.1 24.3 r/min 3000 2983 2967 2950 2931 % 0.0 84.9 89.5 90.1 90.1

Performance vs Load Chart Efficiency ------ Power Factor 100 14.0 EFF & PF 90 12.0 80 10.0 70 60 Current 8.0 50 6.0 40 30 4.0 20 2.0 10 Load 0 0.0 25% 50% 75% 100% 125% 0%

Motor Speed Torque Data

Load Point		LR	P-Up	BD	Rated	NL	
Speed	r/min	0	600	2482	2931	3000	
Current	А	95.4	85.9	57.1	12.7	3.8	
Torque	pu	2.5	2.1	3.4	1	0	





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

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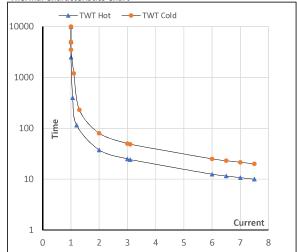
Model No. TCA7P51A3181GACD01

Enclosure	U	Δ / Y	f	Р	Р	1	n	Т	Т	IE	Amb	Duty	Elevation	Inertia	Weight
((V)	Conn	[Hz]	[kW]	[hp]	[A]	[rpm]	[kgm]	[Nm]	Class	[°C]		[m]	[kg-m ²]	[kg]
TEFC 4	415	Δ	50	7.5	10	12.7	2931	2.48	24.30	IE3	50	S1	1000	0.0230	86

Motor Speed Torque Data

TWT Hot s 100	00 37	25	20	16	13	10
TWT Cold s 100	00 80	50	44	36	29	20
Current pu 1	. 2	3	4	5	5.5	7.5

Thermal Characteristics Chart



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

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