

# PRODUCT INFORMATION PACKET

Model No: 182TPNSB10237

Catalog No: SY006A

SyMAX® Fan & Blower Motor, 3 HP, 3 Ph, 90 Hz, 230/460 V, 1800 RPM, 182TC Frame, TENV



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### Nameplate Specifications

Phase	<b>3</b>	Output HP	<b>3 Hp</b>
Output KW	<b>2.2 kW</b>	Voltage	<b>230/460 V</b>
Speed	<b>1800 rpm</b>	Service Factor	<b>1</b>
Frame	<b>182TC</b>	Enclosure	<b>Totally Enclosed Non Ventilated</b>
Thermal Protection	<b>Thermostat</b>	Efficiency	<b>92.9 %</b>
Ambient Temperature	<b>40 °C</b>	Frequency	<b>90 Hz</b>
Current	<b>6.8/3.4 A</b>	Power Factor	<b>87</b>
Duty	<b>Continuous</b>	Insulation Class	<b>H</b>
Design Code	<b>No Design Code</b>	KVA Code	<b>N/A</b>
Drive End Bearing Size	<b>6207</b>	Opp Drive End Bearing Size	<b>6207</b>
UL	<b>Recognized</b>	CSA	<b>N</b>
CE	<b>N</b>	IP Code	<b>54</b>
Number of Speeds	<b>1</b>		

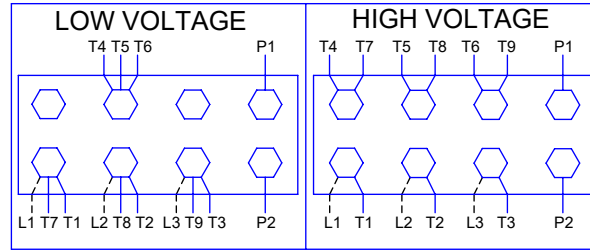
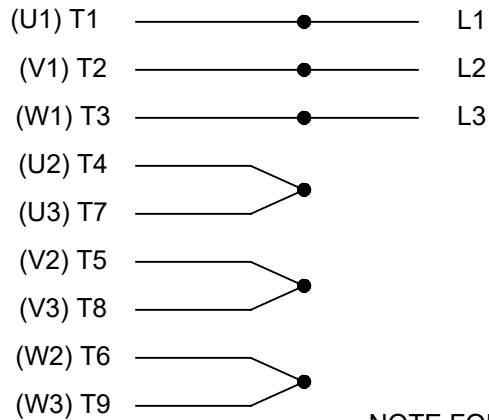
### Technical Specifications

Electrical Type	<b>AC Permanent Magnet</b>	Starting Method	<b>Inverter Only</b>
Poles	<b>6</b>	Rotation	<b>Reversible</b>
Resistance Main	<b>0 Ohms</b>	Mounting	<b>Rigid Base</b>
Motor Orientation	<b>Horizontal</b>	Drive End Bearing	<b>Ball</b>
Opp Drive End Bearing	<b>Ball</b>	Frame Material	<b>Cast Iron</b>
Shaft Type	<b>T</b>	Overall Length	<b>17.50 in</b>
Frame Length	<b>8.00 in</b>	Shaft Diameter	<b>1.125 in</b>
Shaft Extension	<b>2.62 in</b>	Assembly/Box Mounting	<b>F1 ONLY</b>
Inverter Load	<b>CONSTANT 20:1</b>		
Outline Drawing	<b>036277-800</b>	Connection Drawing	<b>EE7308T</b>



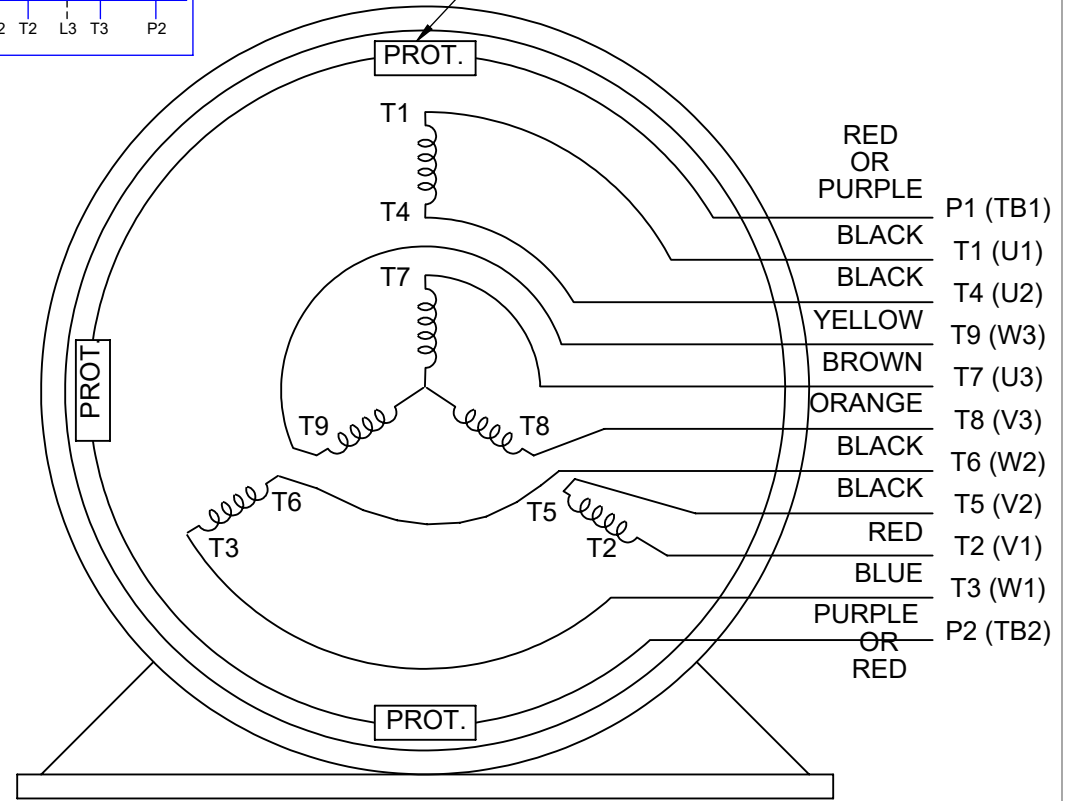


**HIGH VOLTAGE**



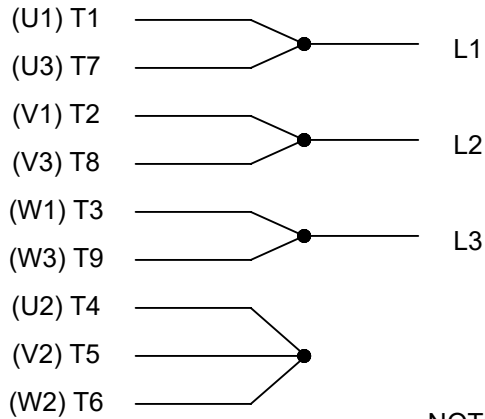
**THREE PHASE  
DUAL VOLTAGE MOTOR**

THERMO-PROTECTORS  
CONNECTED IN SERIES



NOTE FOR FACTORY USE ONLY:  
TO SURGE TEST FOR COMMON CONNECT:  
HIGH VOLT: CONNECT P1 TO T1  
THEN P2 TO L1  
LOW VOLT: CONNECT P1 TO T1 & T7,  
THEN P2 TO L1

**LOW VOLTAGE**



**VIEW OF TERMINAL END**

NOTE: LEAD'S COLOR CAN BE YELLOW OR WHITE FOR MT2 PLANT

DRAWING REVISION T	REVISION BY ZR	DATE 01-14-2019		DRAWN BY SMC	Regal Beloit America, Inc.
ECO ECO-0159915	APPROVED BY DR	DATE 01-15-2019		DATE 05-13-1992	
ECO DESCRIPTION ADDED TERMINAL CONNECTION DIAGRAM				APPROVED BY TB	DESCRIPTION <b>CONN DIAGRAM-INTERNAL</b> 3 PHASE - DUAL VOLTAGE MOTOR
<small>COPYRIGHT REGAL BELOIT AMERICA, INC. ALL RIGHTS RESERVED. PROPRIETARY AND CONFIDENTIAL INFORMATION - THIS DOCUMENT IS THE PROPERTY OF REGAL BELOIT AMERICA, INC. ("OWNER") AND CONTAINS OWNER'S PROPRIETARY INFORMATION. ANY PERSON, CORPORATION OR OTHER FIRM RECEIVING IT IS DEEMED, BY RECEIVING IT, TO AGREE THAT IT, AND/OR ANY PART OF IT, SHALL NOT BE DISCLOSED TO ANY PERSON, CORPORATION OR OTHER ENTITY, DUPLICATED, AND/OR USED, EXCEPT AS EXPRESSLY APPROVED IN WRITING IN ADVANCE BY OWNER. THIS DOCUMENT SHALL BE RETURNED TO OWNER UPON REQUEST. IT MAY BE SUBJECT TO CERTAIN RESTRICTIONS UNDER APPLICABLE EXPORT CONTROL LAWS AND REGULATIONS.</small>				DATE 05-13-1992	MATERIAL
			REFERENCE EE7308/EE7300	SIZE A	DRAWING NUMBER EE7308T

**CERTIFICATION DATA SHEET**

**Model#:** 182TPNSB10237 A      **WINDING#:** PM18406011 R1 1  
**CONN. DIAGRAM:** EE7308T      **ASSEMBLY:** F1 ONLY  
**OUTLINE:** 036277-800

**TYPICAL MOTOR PERFORMANCE DATA**

HP	KW	SYNC. RPM	F.L. RPM	FRAME	ENCLOSURE	KVA CODE	DESIGN
3	2.24	1800	1800	182TC	TENV	NO KVA CODE	PM

PH	Hz	VOLTS	FL AMPS	START TYPE	DUTY	INSL	S.F	AMB°C	ELEVATION
3	90	230/460	6.8/3.4	INVERTER ONLY	CONTINUOUS	H4	1.0	40	3300

FULL LOAD EFF: 92.9	3/4 LOAD EFF: 0	1/2 LOAD EFF: 0	GTD. EFF	ELEC. TYPE	NO LOAD AMPS
FULL LOAD PF: 87	3/4 LOAD PF: 85	1/2 LOAD PF: 85	92.4	AC PERMANENT MAGNET	1.2 / .6

F.L. TORQUE	LOCKED ROTOR AMPS	L.R. TORQUE	B.D. TORQUE	F.L. RISE°C
8.753 LB-FT	/	- LB-FT -	- LB-FT -	46

SOUND PRESSURE @ 3 FT.	SOUND POWER	ROTOR WK^2	MAX. WK^2	SAFE STALL TIME	STARTS /HOUR	APPROX. MOTOR WGT
0 dBA	10 dBA	0.19 LB-FT^2	0 LB-FT^2	0 SEC.	0	105 LBS.

**EQUIVALENT WYE CKT.PARAMETERS (OHMS PER PHASE)**

R1	R2	X1	X2	XM
0	2.84	47.8	92.9	215

RM	ZREF	XR	TD	TD0
0	1	0	0	0

**\*\*\* SUPPLEMENTAL INFORMATION \*\*\***

DE BRACKET TYPE	ODE BRACKET TYPE	MOUNT TYPE	ORIENTATION	SEVERE DUTY	HAZARDOUS LOCATION	DRIP COVER	SCREENS	PAINT
C-FACE	ENCODER	RIGID	HORIZONTAL	PREMIUM SEVERE DUTY	NONE	FALSE	NONE	BLACK (EPOXY)

BEARINGS		GREASE	SHAFT TYPE	SPECIAL DE	SPECIAL ODE	SHAFT MATERIAL	FRAME MATERIAL
DE	OPE						
BALL	BALL	POLYREX EM	T	NONE	NONE	1045 HOT ROLLED (C-204)	CAST IRON
6207	6207						

THERMO-PROTECTORS				THERMISTORS	CONTROL	SPACE /n HEATERS
THERMOSTATS	PROTECTORS	WDG RTDs	BRG RTDs			
TSTATS 140(N/C)	NOT	NONE	NONE	NONE	FALSE	NONE VOLTS

If Inverter equals NONE, contact factory for further information

INVERTER TORQUE: CONSTANT 20:1
INV. HP SPEED RANGE: 1.2 X BASE SPEED
ENCODER: PROVISIONS ONLY
NONE NONE
NONE NONE PPR
BRAKE: NONE NONE

\*  
N  
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S  
\*

NONE	P/N	NONE	
NONE	NONE		
NONE FT-LB		NONE V	NONE Hz

DATE: 06/27/2017 01:26:02 AM  
FORM 3531 REV.3 02/07/99  
\*\* Subject to change without notice.

**Data Sheet**



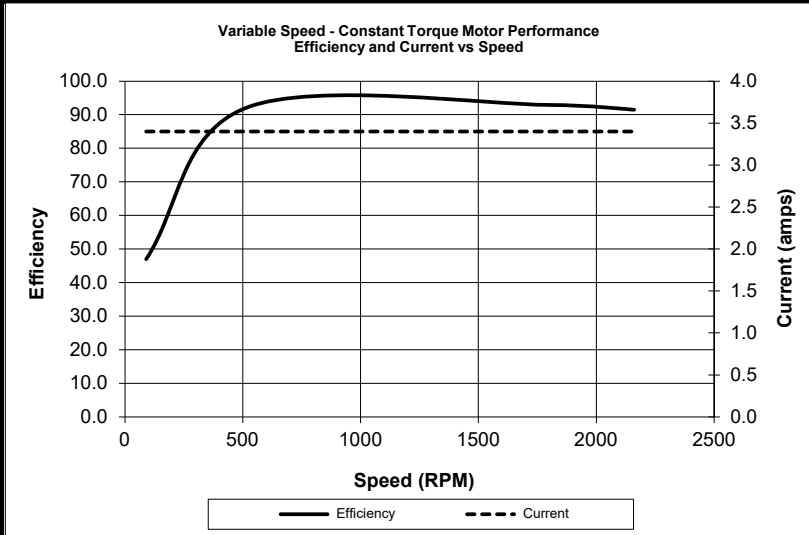
Date: 7/14/2021  
 Customer: \_\_\_\_\_  
 Attention: \_\_\_\_\_  
 Submitted by: SHERYL KUEHMICHEL

Model: 182TPNSB10237  
 Catalog: SY006A  
 Winding: PM18406011  
 Submittal Data @ 460 V

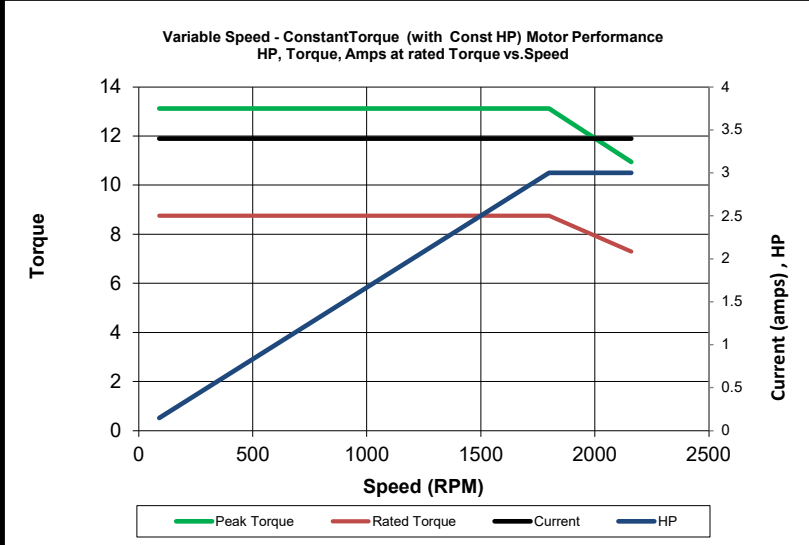
**Motor Load Data**

Load	0%	25%	50%	75%	100%	115%	125%	150%
Current (Amps)	1	0.0	0.0	0.0	3.4	1.36	0.0	
Torque (ft-lb)	0.0	2.2	4.4	6.6	8.8	10.1	10.9	13.1
Efficiency (%)		0.0	0.0	0.0	92.9	37.2	0.0	

**Motor Speed Data**



Motor Characteristics			
HP	3.00		
Sync. RPM	1800		
Frame	182		
Enclosure	TENV		
Construction Type	PNS		
Voltage	460 V		
Frequency	90 Hz		
Motor P.F. (%)	87.0		
Reserve Tq Capability	150 %		
Temp Rise @ FL	46 °C		
Insulation Class	H		
Duty	CONT		
Ambient	40 °C		
Elevation	3,300 feet		
Ref Wdg	PM18406011 R1		
Sound Pressure @ 1m	0 dBA		
Motor Wgt	105 Lb		
Rotor/Shaft wk <sup>2</sup>	0.19 Lb-Ft <sup>2</sup>		
CT Speed Range	20 :1		
VT Speed Range	2000 :1		
Outline Dwg	036277-800		
Conn. Diag	EE7308T		
DE Bearing	6207		
ODE Bearing	6207		
<b>Additional Specifications:</b>			
PWM variable frequency electronic drive that is permanent magnet motor capable required for operation. Motor efficiency reflects operation on a VFD			
R / phase (ohms)	Ld (mH)	Lq (mH)	BEMF (V/krpm)
2.84	47.8	92.9	215



**Constant Torque (Constant Power) Load Points**

Hz	RPM	HP	ft-lb	Amps	Eff	Pk Tq
5	90	0.15	8.753	3.4	47	13.13
90	1800	3.0	8.753	3.4	92.9	13.13
108	2160	3.0	7.294	3.4	91.5	10.94