

- SAFE
- SHOCKPROOF
- WATERPROOF
- EXPLOSION PROOF
- ECONOMICAL



**CONTROL**

# Presair

800.431.2625  
info@presair.com  
www.presair.com



**FOR SAFE, ECONOMICAL control of consumer, industrial, medical or other products and appliances in wet, chemical or explosive atmospheres or just for added safety.**



## **The Advantages of Presair Remote Air Controls:**

### **VARIETY**

Presair offers a variety of actuator styles with a selection of colors and finishes.

### **AVAILABILITY**

Presair air switches are made in the U.S.A. and available worldwide off the shelf or with minimal lead time.

### **SIZE**

Presair offers compact units that can sequence four functions with an air switch in less than a 2 1/4 inch cube.

### **ECONOMY**

Presair offers economy made possible by simplicity of design and large scale manufacturing.

### **SAFETY**

Presair offers the safety of electrical isolation inherent to air switching. Presair actuators are designed to prevent water entry to the air tube.

### **EFFICIENCY**

Presair offers the efficiency of air switches requiring no power source for operation (no internal relays are used).

*Presair—the World Class Air Switch Control*

## **SPECIFICATIONS:**

STANDARD™, TINYTROL®, & MAGICTROL®,  
Air, Pressure and Vacuum Switches.

**RATINGS:** 2HP @ 240 VAC  
1HP @ 120 VAC  
21 AMPS to 250 VAC  
Other ratings and sensitivities  
available to 25 AMPS.

**MATERIAL:** Acetel Body & Mechanism  
Stainless Steel Springs and  
Zinc-Plated or Stainless Steel Screws

**TESTING:** 100% Cycle Testing

### **APPROVAL:**

UL Recognized File E80254;  
CSA File LR69099

**ON**  
**OFF**

## AIR SWITCHES

### TINYTROL® SINGLE (SPDT)



TVA111B  
TVM111B

#### Alternate Action

TVA111A

(1/2" Mounting Thread)

TVA111B

(9/16" Mounting Thread)

TRA111A- Radial Spout

(Available with spout in any 90° position)

10 AMP, 10 AMP Very Sensitive, 25 AMP and 21 AMP SPST available.



TRA111A  
TRM111A

#### Momentary Action

TVM111A (1/2" Mtg. Thread)

TVM111B (9/16" Mtg. Thread)

TRM111A - Radial Spout

(Available with spout in any 90° position)

10 AMP, 10 AMP Very Sensitive, 25 AMP and 21 AMP SPST available.

### TINYTROL DOUBLE (DPDT)

U.S. Patent #4783580

Patented Action makes these units as sensitive as TINYTROL Single. U.S. Patent # 4783580



TVA211B  
TVM211B

#### Alternate Action

TVA211B

(9/16" Mounting Thread)

TVA211D - Hybrid

#### Momentary Action

(Alternate Action Switch)

TRA211A - Radial Spout

(Available with spout in any 90° position)

#### Momentary Action

TVM211B

(9/16" Mounting Thread)

TINYTROL Doubles are available with other ratings, sensitivities, and configurations up to 25 amps.

**ON**  
**OFF**

## AIR SWITCHES (cont'd)

### STANDARD™ SINGLE (SPDT) STANDARD™ DOUBLE (DPDT)

These units perform the same functions as the TINYTROL series and are in use in many systems. The ratings are the same as the TINYTROL series.

#### SINGLE

ARA111A Alternate Action, SPDT

ACA111A Alternate Action, SPDT

ATA111A Threaded Mount, Alternate Action SPDT

ARM111A, ACM111A, ATM111A, Momentary, SPDT

#### DOUBLE

ARA211A, ACA211A, ATA211A, Alternate Action, DPDT

ARM211A, ACM211A, ATM211A, Momentary, DPDT



ARA211A  
ARA111A  
ARM211A  
ARM111A



ATA211A  
ATA111A  
ATM211A  
ATM111A



ACA211A  
ACA111A  
ACM211A  
ACM111A

SPDT Units have Dummy Microswitch in one position.

## FIELD ADJUSTABLE PRESSURE SWITCHES

### SPST, Momentary Action



TNP411R-A1  
TNP411R-A2  
TNP411R-A3

TNP411R-A1 - 1-6 PSI

TNP411R-A2 - 1-10 PSI

TNP411R-A3 - 2-22 PSI

(1/8" NPT Mounting; Finger or tool adjustable)

Size: 2.12"W x 1"0 x 2.6"H

Field Adjustable switches are available factory set

# PRESSURE & VACUUM SWITCHES

## TINYTROL PRESSURE & VACUUM SWITCH

These miniature pressure switches with acetal bodies are available in fixed pressures from 1 psig to 50 psig.

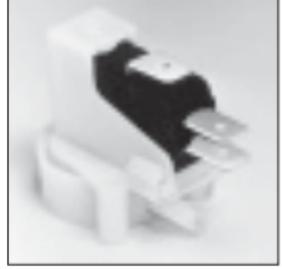
Electrical ratings are available from 1 amp to 25 amps with horsepower ratings to 1 Hp @ 120 VAC and 2 HP @ 240 VAC. Diaphragms are available in various materials (nitrile, silicon, neoprene, EPDM, etc.)



**TVP125B-XXXX**  
Spout for 1/8" ID tubing, 9/16" thread mount.  
Size: 1 3/4"L x 1 3/4"W x 1"D



**TNP125B-XXXX**  
1/8" NPT Pressure Port  
Size: 1 3/4"L x 1 3/4"W x 1"D



**TRP125B-XXXX**  
1/8" NPT Spout (Radial) for 1/8"ID tubing  
Size: 1 3/4"L x 1 3/4"W x 1"D

\* Part numbers shown above are for 25 amp units. XXXX represents pressure setting. Part number changes for other electrical ratings. Gold contacts available.

## STANDARD PRESSURE & VACUUM SWITCHES

Standard Ratings 21 Amp, 2 HP @ 240 VAC  
1 HP @ 120 VAC

Other ratings from 1 Amp to 25 Amp available.

Pressure Range: 1.5" H<sub>2</sub>O to 125 psi in various field adjustable models.

Gold plated contacts available.

UL Recognized File E80254; CSA File LR69099



**STYLE M**  
PRESSURE  
PM11120E, SPDT  
PM21120E, DPDT



**STYLE R**  
PRESSURE  
PR11120E, SPDT  
PR21120E, DPDT



**STYLE T**  
PRESSURE  
PT11120L, SPDT  
PT21120L, DPDT

VACUUM  
VM11106E

VACUUM  
VR11106E

1/8 NPT  
SIZE: 2 1/4" X 2 1/4"  
MOUNT: USE  
9/16-18 NUT

RADIAL SPOUT  
SIZE: 2 1/4" X 2 1/4"  
MOUNT: USE  
#4 SELF TAP  
SCREWS

CENTER SPOUT  
SIZE: 2 1/4" X 2 1/4"  
9/16" THREADED  
MOUNT

Other configurations available such as 1/8" NPT without mounting thread and center spout without mounting thread.

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## C SERIES PRINTED CIRCUIT BOARD MOUNT SWITCHES

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6" WG to 65 PSIG

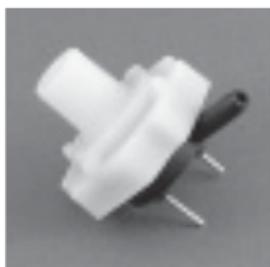
These Miniature Single Pole switches are used as Pressure, Vacuum or Differential Pressure Switches where moderate accuracy is sufficient.



Also available with 1/8" NPT

Sizes: "Low Profile" models  
1" Dia. x 1/2" H

Standard PC switch models  
1" Dia. x 3/4" H



The Switches are also suitable for use as Air Switches in conjunction with Presair Air Actuators.

 file E80254  
1 amp @ 120VAC  
(100,000 operations)



### **Minitrol**

Wire lead Add-On for PC Board Mount Air, Pressure or Vacuum Switch. Made for applications where a PC Board is not used, but where small size is required.

Wire leads available in a variety of diameters.

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## SENSITIVE DIFFERENTIAL SWITCH

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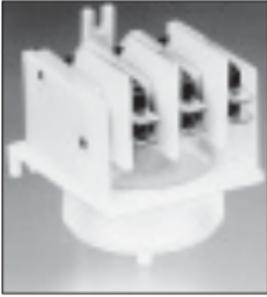
SENSITIVE PRESSURE SWITCH FOR PRESSURE, VACUUM OR DIFFERENTIAL SWITCHING.

*(CAN BE USED AS A WATER LEVEL DETECTOR.)*  
1 5/8" L x 1 1/8" W x 1" H

These Sensitive Single Pole Switches can be used as Pressure or Vacuum Switches, (from .25 inch W.G. to 40 inch W.G.) or as Differential Pressure Switches. The switch can respond to rapid pulsing and the gold plated silver contacts will handle low level switching currents.  file E80254. 1 Amp @ 120 VAC. (100,000 operations)

# 4 FUNCTION AIR SWITCH

## MAGICTROL® Sequencing Switch



MCG311A Green Cam  
MCB311A Blue Cam

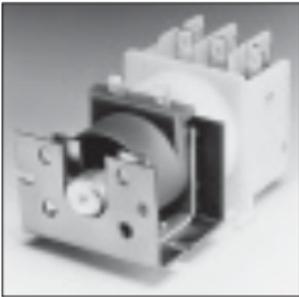


MRG311A Green Cam  
MRB311A Blue Cam



MTG311A Green Cam  
MTB311A Blue Cam

For actuation to 25' with our actuators.  
Full set of installation diagrams and technical  
information available on request.



4-function switch with solenoid  
for actuation to 100' away by  
Hand Actuator or Foot Pedal.  
Use Presair momentary air  
switch TVM118C to actuate this  
unit.

Below are some of the most widely used sequences.  
Many other sequences are possible using the  
magictrol 4-function switch.

Contact Presair for help with your specific applications.

### TYPICAL MAGICTROL SEQUENCES

Press	#1	#2	#3	#4	Application
Result	Off	Low Speed	Medium Speed	High Speed	Variable Speed D.C. Motor for Electric Vehicles by Switching Batteries
Result	Off	Low Heat	Medium Heat	High Heat	Heating Element Sequencing
Result	Off	Clockwise Rotation	Off	Counter Clockwise Rotation	Electric Motor Reversal (Waste Disposal Appliance)
Result	All Off	Reading Light Only	Reading & Room Light	Room Light Only	Patient Reading and Over Head (Room) Lights
Result	Low Speed Pump Only	High Speed Pump Only	Blower Only	High Speed Pump & Blower	Hydrotherapy SPA Pump (HI) Filtration-Pump (Low) Air Blower

## 3 FUNCTION AIR SWITCH



MTK211A  
Black Cam

For use with 2 speed pumps or blowers OR 2 stage heating elements OR 2 stage battery supplies (switch from series to parallel) or many other uses.

The chart below shows a popular sequence. Many other variations are possible, using Presair 3-function switches, for many types of equipment.

Example: (1) OFF (2) LO SPEED (3) HI SPEED

2 SPEED PUMP	PUSH 1	PUSH 2	PUSH 3
LOW SPEED	OFF	ON	OFF
HIGH SPEED	OFF	OFF	ON

## ACTUATORS

### ACTUATORS (AIR BUTTONS)

All Presair air buttons have sealed internal air bellows to prevent water from entering the air tube that connects the air button to the air switch.



B225

2.5" BEZEL DIA

Also available Flush B225F



B370

1.75" BEZEL DIA



B513

1.25" BEZEL DIA



B318

1.75" BEZEL DIA  
Also available with  
a MTG thread - B320

Above actuators are available in white, black and chrome. B225, B225F, B513 have buttons & bezels that are front replaceable. B513 available with long or short mounting thread. Other hard actuators available. Consult factory.

# ACTUATORS (cont'd)

## SOFT ACTUATORS (UV RESISTANT PVC)

U.S. Patent #5,962,826  
Construction is leak resistant



2.8" DIA

B143 - Smooth Top  
Available in long or short stem  
B143R - Recessed top  
Can use decal with a custom message or logo



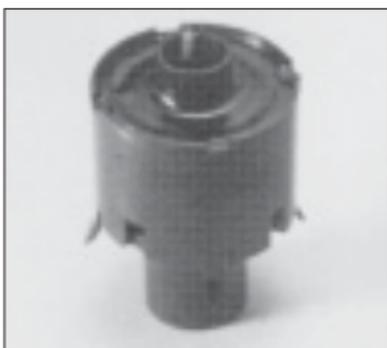
B142WA-White  
2.8" DIA  
Also available with short mounting thread  
B142WS



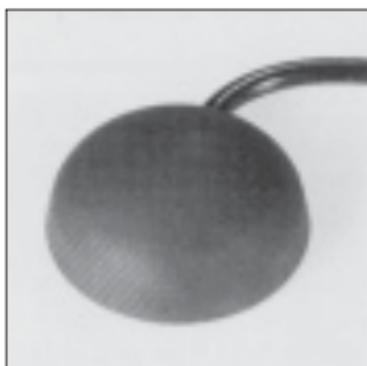
B414BA-BLACK  
1.4" DIA  
(Internal Bellow or B470-1 smaller bellow)



B141BA  
1.8" DIA



B470A  
1.25" DIA x 2" L  
Internal Bellow with hard casing



B415BA  
2.18" DIA



B465  
1.07" DIA x .95 H  
Available in colors  
Std. is Black

# ACTUATORS (cont'd)



Comes standard with black tubing.

B145 BA  
1.55" DIA x 3/25" L

## ELECTRIC TO PNEUMATIC/ELECTRIC CONVERTER BOX



FILE E171193



To convert electrical equipment or an appliance to a device controlled by a shockproof, waterproof, explosion proof air button or air foot pedal by plugging the equipment into a receptacle box which in turn plugs into a standard electrical receptacle.

PBA-01 (Latching)  
(Alt.Action)  
PBM-01 (Momentary)

The Converter Box units are most often used in conjunction with Presair's B621BA or B721BA - hard plastic foot pedals with internal bellow. F800BA - soft plastic (PVC) foot pedals, or Presair's push buttons.

## SAFE AIRE SINK DISPOSAL SWITCH



PBA-01 - Alternate Action (On/Off) Just plug the disposer into the air switch control box, then plug the control box into a dedicated grounded outlet and mount the button on the sink or

countertop. Works with any disposer.



PBAHW-01 - Alternate Action (On/Off) Plug the air switch control box into a dedicated grounded outlet or hardwire (licensed electrician only according to local codes) and mount the button on the sink or

countertop. Works with any disposer.

## TUBING

PART NO.	ID.	OD	MATERIAL	COLOR	COMMENT
T1206C	.12	.24	PVC	CLEAR	Good all-purpose tube
T140040C	.10	.19	PVC	CLEAR	Smaller I.D. for greater sensitivity & distance

Other sizes, types, and colors available.

## HARDWARE FOR TUBING

H419 AIRTUBE LOCKNUT PATENT #5.962.826

10326 AIRTUBE LOCKNUT- Black or White

HT120—"T" FITTING to connect. .12 I.D. OR .10 I.D. PVC tubing

HS 120—STRAIGHT IN LINE FITTING to connect. .12 I.D. OR .10 I.D. PVC TUBING. Bulkhead Connectors, In Line Air Bleeds, Air Tube Adaptors, Boot to cover pressure switches also available. Consult factory with your special requirements.

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# FOOT PEDALS

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## PNEUMATIC / ELECTRIC (Glass filled polypropylene)

Pneumatic/Electric Foot Pedals contain an internal bellow which, when pressed, sends a pulse of air through a tube to our air switch up to 100 feet away from the foot pedal. The foot pedals are **SHOCK-PROOF, EXPLOSION PROOF & WATERPROOF.**



E621A  
5.60" L x 4.10" W



E721A  
3.35" DIA x 4.12" L

## PNEUMATIC / ELECTRIC SOFT (UV Resistant PVC)



F800  
4" DIA x 5.25" L



B350 BA  
3.50" DIA x .85" H

Foot pedals come standard with 8' tubing. Other lengths available. Our soft foot pedals are standard in black. Special colors may be ordered.

## ELECTRIC FOOT PEDALS

Electric Footpedals are available with electrical ratings up to 25 amps, 1 HP @120 VAC, 2HP @ 240 VAC. Gold plated electrical contacts are available. Standard cable length is 8' with special lengths and connectors available.



E621  
5.60" L x 4.10" W



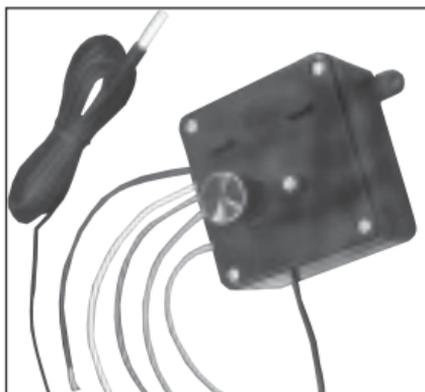
E721  
3.35" DIA x 4.12" L

**NOTE: Sizes given in this brochure are approximate. Specifications subject to change.**

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## SOLID STATE THERMOSTAT

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### Configuration:

- (A) P.C. Board (See envelope dimensions below)
- (B) Encased with leads. (Consult Factory)

### Range:

- (A) Set at 106°F (41°C) +/- 2°F
- (B) Units available with potentiometer (mounted on board or remote) temperature adjustment. Standard unit adjustment. From 40°F to 106°F (4.4°C - 41°C)
- (C) Other adjustable ranges from 0°F (-18°C) to 220°F (105°C) are available. Consult Factory

### Sensor:

Thermistor encased in plastic or stainless steel

Env. Dimensions 2 1/4" (57mm) x 2 3/8 (60mm) x 1" H (25.4mm)



## LCD DIGITAL THERMOMETER

A thermometer with an LCD Readout in F° or C° is suitable for wet areas and is powered by a simple "AA" battery which

is at the end of a 6' long cable which can be located where it can be easily changed by the user.



**PRESAIR LLC**

**1009 WEST BOSTON POST ROAD  
MAMARONECK, NEW YORK 10543  
914.698.2026 FAX 914.698.9456**

**800.431.2625  
info@presair.com  
www.presair.com**