



# Switches

Gardner Bender™ switches are available in many different styles and sizes. They are used in countless applications, from basic on-off to multifunction applications.



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## Switch Terminology

**Single Pole (SP):** A switch device that opens, closes or changes connections in a single conductor of an electrical circuit

**Double Pole (DP):** A switch device that opens, closes or changes connections in both conductors of the same circuit.

**Two Circuit (2 CIR):** A switch device that opens, closes or changes connections in a single conductor of two independent circuits.

**Single Throw (ST):** A switch device that opens, closes or completes a circuit at only one of the extreme positions of its actuator.

**Double Throw (DT):** A switch device that opens, closes or completes a circuit at both extreme positions of its actuator.

**Actuator:** A lever, push-button, slide, trigger or other means by which an external force is applied to operate a switch mechanism.

**Normally Open (NO):** A momentary type switch in which one or more circuits are open when the switch actuator is at its normal or rest position.

**Normally Closed (NC):** A momentary type switch in which one or more circuits are closed when the switch actuator is at its normal or rest position.

**Alternate Action (Double Action Push):** Push to make, then push to break, a circuit.

**Power Ratings for Switches:** The current handling capability of a switch measured in amperes, horsepower, lamp load or combinations of these with applicable voltages.



## UL/CSA Rated Switches

**A UL/CSA-marked rating** in amperes indicates that the switch meets or exceeds test house performance requirements of 6000 make-and-break cycles at the rated current, preceded by 50 make-and-break cycles at 150% switch current rating. 125% is used when switch ratings exceed 10 amperes.

**A UL/CSA horsepower-only rated device** meets minimum test requirements of 50 make-and-break cycles at the appropriate locked rotor current, followed by 6000 cycles at one-sixth the AC-locked rotor current and 10% of the DC-locked rotor current.

AC ampere ratings are resistive or inductive, with the inductive rating tested at 75% to 80% power factor.

AC horsepower ratings are inductive and tested at 40% to 50% power factor.

**“L” Rating** denotes ability of an AC-only switch to handle the initial high in-rush characteristics of a tungsten filament lamp on AC voltage only.

**“T” Rating** denotes ability of an AC/DC switch to handle the initial high in-rush characteristics of a tungsten filament lamp on either AC or DC voltage.

All **DC ratings** are 100% resistive only (non-inductive).

Many **AC-only rated** switches can be used in applications where less than 30 volts DC is required, provided current does not exceed full current rating of the switch.

**Ampere-rated** switches will *not* automatically handle in-rush characteristics of five to six times switch rating.

## Toggle Switches



Versatile toggle switch family with multiple position configurations.

- Available in single or double pole.
- Perfect for industrial equipment or emergency lighting.
- 1/2" mounting hole required.
- **Specifications:** 10 A, 277 V AC / 20 A, 125 V AC

**tip:** All switches must be installed with a hex nut (provided) behind panel to prevent damage during installation.

<b>Part Number</b>	<b>GWS-10</b>	<b>GWS-11*</b>	<b>GWS-110</b>	<b>GWS-121</b>
<b>Poles</b>	<b>SPST</b>			
<b>Pkg Qty</b>	1/card	1/card	1/card	1/card
<b>Toggle Position</b>	ON-OFF	ON-OFF	ON-OFF	ON-OFF
<b>Terminal Type</b>	Screw	Screw	"O" Ring & Screw	Spade
<b>Rating</b>	1½ HP 125-250 V AC	¾ HP 125-250 V AC	¾ HP 125-250 V AC	¾ HP 125-250 V AC

\*GWS-11 has an ON-OFF faceplate.

<b>Part Number</b>	<b>GWS-12</b>	<b>GWS-13</b>	<b>GWS-120</b>	<b>GWS-117</b>
<b>Poles</b>	<b>SPDT</b>			
<b>Pkg Qty</b>	1/card	1/card	1/card	1/card
<b>Toggle Position</b>	ON-ON	ON-OFF-ON	ON-OFF-ON	(ON)-OFF-(ON)
<b>Terminal Type</b>	Screw	Screw	Spade	Screw
<b>Rating</b>	¾ HP 125-250 V AC	¾ HP 125-250 V AC	¾ HP 125-250 V AC	¾ HP 125-250 V AC

( ) Indicates momentary action

<b>Part Number</b>	<b>GWS-14</b>	<b>GWS-15</b>	<b>GWS-16</b>	<b>GWS-123</b>
<b>Poles</b>	<b>DPST</b>		<b>DPDT</b>	
<b>Pkg Qty</b>	1/card	1/card	1/card	1/card
<b>Toggle Position</b>	ON-OFF	ON-ON	ON-OFF-ON	(ON)-OFF-(ON)
<b>Terminal Type</b>	Screw	Screw	Screw	Screw
<b>Rating</b>	1½ HP 125-250 V AC	1½ HP 125-250 V AC	1½ HP 125-250 V AC	1½ HP 125-250 V AC

( ) Indicates momentary action

<b>Part Number</b>	<b>GWS-17*</b>	<b>GWS-18*</b>	<b>GWS-124</b>	<b>GWS-125</b>	<b>GWS-125BP</b>
<b>Poles</b>	<b>SPST</b>				
<b>Pkg Qty</b>	1/card	1/card	1/card	1/card	10/box
<b>Toggle Position</b>	ON-OFF	ON-OFF	ON-OFF	ON-OFF	ON-OFF
<b>Terminal Type</b>	Screw	6" wire leads	screw	6" wire leads	6" wire leads
<b>Actuator</b>	bat lever	bat lever	short ball	short ball	short ball
<b>Rating</b>	3 A/240 V AC, 6 A/120 V AC	8 A/125 V, 4 A/250 V, 1/3 HP/125 V AC, 10 A/125 V AC	3 A/240 V AC, 6 A/120 V AC	3 A/250 V, 6 A/125 V	3 A/250 V, 6 A/125 V

( ) Indicates momentary action \*GWS-17 & 18 have an ON-OFF faceplate.

## Toggle Switch Cover

Tough EDPM rubber covers to protect switches from moisture, dust and dirt.

- Built-in hex nut base screws onto all GB® toggle switches.



Part #	Pkg Qty	Description
GSW-20	2/card	Toggle Switch Cover

## Double Insulated, Plastic Toggle Switches



Double insulated for moisture protection in all environments.

- Internal "O" ring design for moisture and dust resistance.
- Perfect for marine/recreational equipment and weather-resistant applications.
- **Specifications:** 10 A, 277 V AC / 20 A, 125 V AC

Part Number	GSW-19	GSW-114
Poles	SPST	SPDT
Pkg Qty	1/card	1/card
Toggle Position	ON-OFF	(ON)-OFF-(ON)
Terminal Type	Screw	Spade

## Momentary Contact Push-Button Switches



Basic push-button switch family utilized in applications requiring intermittent continuity contacts.

- Normally OFF or normally ON models.
- Screw terminals.
- Mounts in standard 1/2" diameter hole.
- Mounting nut included.

Part Number	GSW-22	GSW-23
Poles	SPST	
Pkg Qty	1/card	1/card
Toggle Position	OFF (ON)	ON (OFF)
Terminal Type	screw	screw
Plating	Black	Red
Rating	6 A/120 V AC, 3 A/240 V AC	3 A/120 V AC, 1.5 A/277 V AC

( ) Indicates momentary action

## Maintained Contact Push-Button Switch - Motor Rated



Maintained push-button switch rugged and versatile enough to be utilized in many applications.



- Push on, push off switch with #18 AWG, 6" stripped wire leads.
- Mounting nut included.



Part #	Pkg Qty	Poles	Toggle Position	Terminal Type	Rated
GSW-21	1/card	SPST	Push ON-Push OFF	Wire Leads	10 A/125 V AC, 8 A/125 V, 4 A/250 V, 1/3 HP 125 V AC

## Maintained Contact Push-Button Switches



Double insulated for moisture protection in all environments.



- Internal "O" ring design for moisture and dust resistance.
- Perfect for marine/recreational equipment and weather-resistant applications.
- **Specifications:** 1 A, 125 VT / 6 A, 125 VL / 6 A, 125 V AC / 3 A, 250 V AC

**tip:**

Horsepower Rating: AC horsepower ratings are inductive and tested at 40% to 50% power rating.



Part Number	GSW-24	GSW-24BP	GSW-25
Poles	SPST		
Pkg Qty	1/card	10/box	1/card
Toggle Position	ON-OFF	ON-OFF	ON-OFF
Terminal Type	6" wire leads	6" wire leads	6" wire leads
Plating	Nickel	Nickel	Brass
Circuit	2 pos. 2 wire	2 pos. 2 wire	2 pos. 2 wire

## Single Circuit Pull-Chain Switches



Basic ON-OFF switch family with pull-chain feature.



- ON-OFF switch with #18 AWG, 6" stripped wire leads.
- Mounts in 1<sup>3</sup>/<sub>32</sub>" diameter hole (GSW-35 mounts in 1/2" diameter hole).
- Color coordinated nickel or brass plated.
- **Specifications:** 3 A/125 VL, 6 A/125 V AC, 3 A/250 V AC

**tip:**

"L" Rating Example: 3A/125VL means the switch is rated to handle the high in-rush from 3 amp incandescent AC loads.



Part Number	GSW-31	GSW-31BP	GSW-32	GSW-32BP	GSW-35*
Poles	SPST				
Pkg Qty	1/card	10/box	1/card	10/box	1/card
Toggle Position	ON-OFF	ON-OFF	ON-OFF	ON-OFF	ON-OFF
Terminal Type	6" wire leads	6" wire leads	6" wire leads	6" wire leads	wire leads
Plating	Nickel	Nickel	Brass	Brass	Nickel
Circuit	2 Pos. 2 Wire	2 Pos. 2 Wire	2 Pos. 2 Wire	2 Pos. 2 Wire	2 Pos. 2 Wire

\*All angle

## Variable Speed & Two Circuit Pull-Chain Switches



Pull chain switches for multifunction applications.



- Two and three speed switching.
- Push-in connections for #18 AWG wire.
- Mounts in 1 $\frac{1}{32}$ " diameter hole.
- **Specifications:** 6 A/125 V AC, 3 A/250 V AC, 6 A/125 VL

<b>Part Number</b>	<b>GWS-33</b>	<b>GWS-34</b>	<b>GWS-39</b>
<b>Poles</b>	<b>SPDT</b>	<b>SP3T</b>	<b>DP3T</b>
<b>Pkg Qty</b>	1/card	10/box	1/card
<b>Toggle Position</b>	OFF-ON-ON	OFF-ON-ON-ON	OFF-ON(A)-ON(B) -ON(A+B)
<b>Terminal Type</b>	wire leads	wire leads	6" wire leads
<b>Plating</b>	Brass	Brass	Brass
<b>Circuit</b>	3 Pos. 3 Wire	4 Pos. 4 Wire	4 Pos. 3 Wire

## Standard Rocker Switches



Heavy-duty rocker switches that fit .830" X 1.45" panel cutouts.



- Frame and rocker are black glass-filled nylon.
- Lighted or unlighted versions available.
- **Specifications:** 10 A/277 V AC, 20 A/125 V AC
- Switches with solder terminals come in a phenolic case and do not have a moisture and dust resistant seal.



## Appliance Rocker Switches

Economy rocker switches that fit standard .550" X 1.125" panel cutouts.

- Perfect for machinery or appliances.
- Lighted or unlighted versions available.
- **Specifications:** 16 A/125 V AC, 8 A/250 V AC

<b>Part Number</b>	<b>GWS-45</b>	<b>GWS-49*</b>
<b>Poles</b>	<b>SPST</b>	
<b>Pkg Qty</b>	1/card	1/card
<b>Toggle Position</b>	ON-OFF	ON-OFF
<b>Terminal Type</b>	spade	spade
<b>Rating</b>	$\frac{1}{2}$ HP 125 - 250 V AC	$\frac{1}{2}$ HP 125 - 250 V AC

\*Red lighted

<b>Part Number</b>	<b>GWS-41</b>	<b>GWS-42*</b>
<b>Poles</b>	<b>SPST</b>	
<b>Pkg Qty</b>	1/card	1/card
<b>Toggle Position</b>	ON-OFF	ON-OFF
<b>Terminal Type</b>	spade	spade

\*Red lighted

## Mini Rocker Switch



Miniature rocker switch that fits .520" X .776" panel cutouts.



- Perfect for small machinery or appliances.
- Lighted or unlighted versions available.
- **Specifications:** 13 A/125 V AC, 10 A/250 V AC,  $\frac{1}{2}$  HP 125 - 250 V AC.



Part #	Pkg Qty	Poles	Toggle Position	Terminal Type	Rated
<b>GWS-48*</b>	1/card	<b>SPST</b>	ON-OFF	spade	10 A/125 - 250 V AC, $\frac{1}{2}$ HP 250 V AC, $\frac{1}{2}$ HP 125 V AC

\*Red lighted

## Rotary Switches



Single or three position switches in various fan and lighting applications.



- #18 AWG, 6" stripped wire leads.
- Brass terminals.

Part Number	GSW-61	GSW-63B	GSW-69	GSW-69BP	GSW-62	GSW-68
Poles	SPST				DP3T	SPTT
Pkg Qty	1/card	1/card	1/card	10/box	1/card	1/card
Toggle Position	ON-OFF	ON-OFF	ON-OFF	ON-OFF	OFF-ON(P)-ON(N) -ON(N+P)	OFF-ON(P)-ON(N) -ON(N+P)
Plating / Color	Brass	Black Button	Black Plastic	Black Plastic	Brass	Brass
Rating	6 A/125 V AC, 3 A/250 V AC	1.5 A/250 V AC	6 A/125 V AC, 3 A/250 V AC	6 A/125 V AC, 3 A/250 V AC	6 A/125 V AC, 3 A/250 V AC	6 A/125 V AC, 3 A/250 V AC
Mounting Hole	.406"	.513"	.513"	.513"	.406"	.513"

## Door Switch



Push button switch with metal box, cover plate and mounting hardware to operate lights when door is opened.

- Mounts in door jam.
- Fits in 1.25" X 2.75" X 2.0" deep approximate mounting hole.
- **Specifications:** 16 A/125 V AC, 10 A/250 V AC, 10 A/277 V AC, ½ HP 125 - 277 V AC.

Part Number	GSW-SK	GSW-26
Poles	SPST	
Pkg Qty	1/card	1/card
Toggle Position	Normally ON -Mom Contact	Normally ON -Mom Contact
Description	AC/DC Door Switch	Replacement for GSW-SK