

# Section C

## Surge and Isolated Ground Devices

### INDEX

### PAGE

#### Surge Suppression Receptacles

Product Features . . . . .	C-2
Hospital and Specification Grade Receptacles . . . . .	C-3

#### QUADPLEX® Surge Suppression Receptacles

Product Features . . . . .	C-4
Hospital Grade and Surge Suppression Receptacles . . . . .	C-5

#### Portable Surge Devices

Product Features and Ordering Data . . . . .	C-6
--	-----

#### Isolated Ground Straight Blade Receptacles

Product Features . . . . .	C-7
Hospital Grade and 15 and 20 Amp; Back and Side Wired . . . . .	C-8
QUADPLEX® Receptacles . . . . .	C-9
30 and 50 Amp; Back Wired . . . . .	C-10

#### Isolated Ground Locking Receptacles

15, 20 and 30A; Back or Side Wired . . . . .	C-11
--	------

#### Isolated Ground Surge Suppression Receptacles

Technical Specifications . . . . .	C-12
------------------------------------	------



# Surge and Isolated Ground Devices

## Surge Suppression Receptacle Features



Damage-alert alarm sounds when surge protection is no longer functioning; muting screw allows damage-alert alarm to be silenced until device is replaced

Power-on indicator light verifies that suppression circuit is fully functional; light off means power has been interrupted; flashing light indicates surge protection circuitry has been damaged

Automatic grounding clip attached to bridge meets NEC® requirements



High-impact nylon face resists breakage

Distinctive surge symbol provides quick visual identification of surge suppression receptacle

Fits standard wall box

SP83A

### Plug Into Protection

Eliminate costly equipment damage and subsequent downtime from transient voltage fluctuations with Bryant's CIRCUIT WATCH isolated ground duplex surge suppression receptacles. These devices stop virtually all voltage transients from internal and external sources. All CIRCUIT WATCH devices are UL Listed and CSA Certified.

### Specifications

Bryant surge receptacles conform to the following specifications.

- Transient suppression capacity peak energy will be 240 joules for a 10 x 1000 microsecond pulse
- Common and normal mode protection; normal mode (L-N), common mode (L-G) (N-G)
- Response time less than 5 nano-seconds
- MCOV rating: 150 volts maximum continuous operating voltage rating
- Receptacle rating are 15 or 20 amps, 125 volts
- Base and cover are constructed of high-impact thermoplastic

- Available with and without isolated ground feature
- Receptacles meet the following standards: IEEE 587, Category A and B; UL 1449, UL 498, CSA C22.2, No. 42

### Available Types

- 2-pole 3-wire; 15 and 20 amp
- Receptacles available in brown, blue, ivory, white, and gray
- Hospital grade/industrial grade
- 240 joule Isolated Ground terminal receptacles

### Isolated Ground Surge Receptacle

Combines isolated ground feature with 240 joule surge suppression protection in one easy-to-wire duplex receptacle. Large #8 brass binding head terminal accepts up to #10 solid or stranded wire.

NEC® is a registered trademark of the National Fire Protection Association (NFPA).

# Surge and Isolated Ground Devices Hospital and Specification Grade Surge Supression Receptacles



SP831A

## HOSPITAL GRADE DUPLEX RECEPTACLES



NEMA 5-15  
15A 125V



NEMA 5-20  
20A 125V

Description	Color	Catalog Number	
Surge suppression receptacles with light and alarm; 240 joules/15,000 amps per mode	Blue	<b>SP82A</b>	<b>SP83A</b>
	Gray	<b>SP82GYA</b>	<b>SP83GYA</b>
	Ivory	<b>SP82IA</b>	<b>SP83IA</b>
	White	<b>SP82WA</b>	<b>SP83WA</b>
Isolated ground; surge suppression receptacles with light and alarm; 240 joules/15,000 amps per mode	Blue	<b>SP82IGA</b>	<b>SP83IGA</b>
	Gray	<b>SP82IGGYA</b>	<b>SP83IGGYA</b>
	Ivory	<b>SP82IGIA</b>	<b>SP83IGIA</b>
	Orange	<b>SP82IGOA</b>	<b>SP83IGOA</b>
	Red	<b>SP82IGRA</b>	<b>SP83IGRA</b>
	White	<b>SP82IGWA</b>	<b>SP83IGWA</b>



SP521GA

## SPECIFICATION GRADE DUPLEX RECEPTACLES



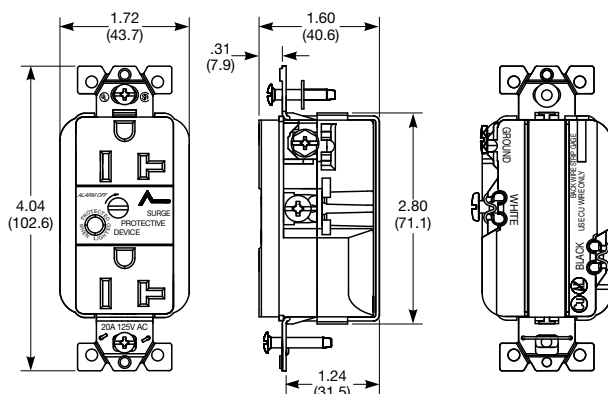
NEMA 5-15  
15A 125V



NEMA 5-20  
20A 125V

Description	Color	Catalog Number	
Surge suppression receptacles with light and alarm; 240 joules/15,000 amps per mode	Almond	<b>SP52ALA</b>	<b>SP53ALA</b>
	Blue	<b>SP52A</b>	<b>SP53A</b>
	Gray	<b>SP52GYA</b>	<b>SP53GYA</b>
	Ivory	<b>SP52IA</b>	<b>SP53IA</b>
	White	<b>SP52WA</b>	<b>SP53WA</b>
Isolated ground; surge suppression receptacles with light and alarm; 240 joules/15,000 amps per mode	Almond	<b>SP52IGALA</b>	<b>SP53IGALA</b>
	Blue	<b>SP52IGA</b>	<b>SP53IGA</b>
	Gray	<b>SP52IGGYA</b>	<b>SP53IGGYA</b>
	Ivory	<b>SP52IGIA</b>	<b>SP53IGIA</b>
	Orange	<b>SP52IGOA</b>	<b>SP53IGOA</b>
	White	<b>SP52IGWA</b>	<b>SP53IGWA</b>

## PRODUCT DIMENSIONS Inches (mm)



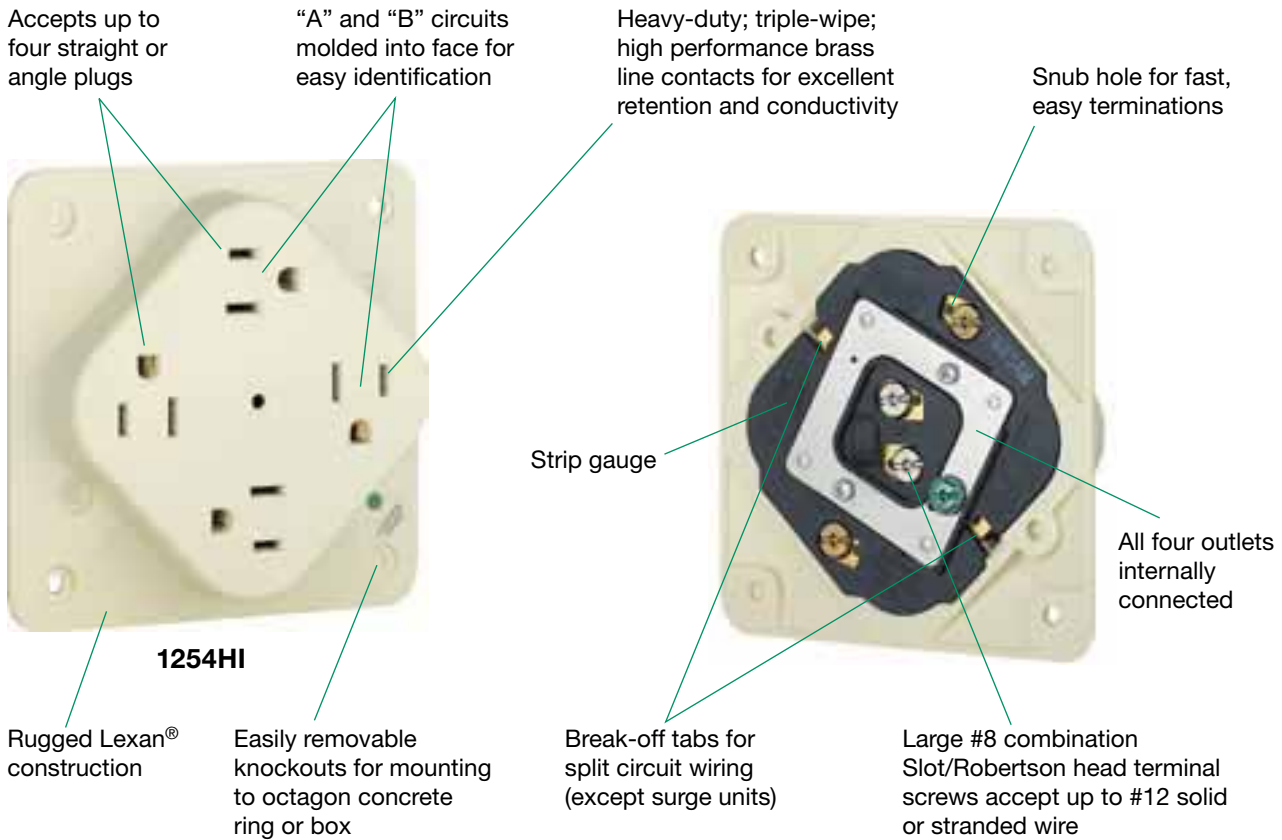
Surge Duplex Receptacle Series

# Surge and Isolated Ground Devices

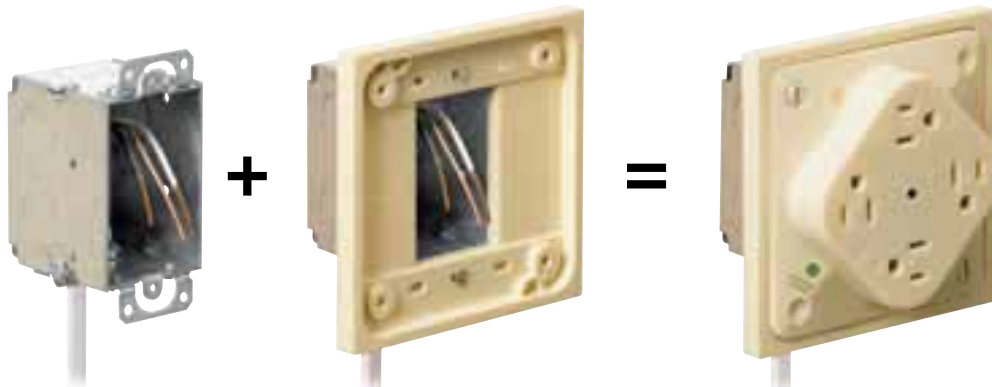
## QUADPLEX® Surge Suppression Receptacle Features



QUADPLEX®



- Receptacles meet or exceed all UL tests for hospital grade ● and are listed to UL Standards 498
- Mounts directly to 4 inch square or octagon boxes; no cover plate required; meets NEC®
- Adapter plate required for mounting on 1- and 2-gang device boxes; 4 inch square boxes and 4<sup>11</sup>/<sub>16</sub> inch square boxes with mud rings
- Break off tabs for split circuit wiring (except surge units)
- Saves wiring and installation time



Lexan® is a registered trademark of Sabic Innovative Plastics.  
 NEC® is a registered trademark of the National Fire Protection Association (NFPA).

# Surge and Isolated Ground Devices

## QUADPLEX® Surge Supression Receptacles



QUADPLEX®



1254HSIA

### HOSPITAL GRADE ● QUADPLEX® RECEPTACLES



NEMA 5-15  
15A 125V  
0.5 HP



NEMA 5-20  
20A 125V  
1.0 HP

Description	Color	Catalog Number	
Hospital grade; surge suppression; Lexan®	Blue	<b>1254HSA</b>	<b>21254HSA</b>
	Ivory	<b>1254HSIA</b>	<b>21254HSIA</b>



21254SA

### SURGE SUPPRESSION QUADPLEX® RECEPTACLES



NEMA 5-15  
15A 125V  
0.5 HP



NEMA 5-20  
20A 125V  
1.0 HP

Description	Color	Catalog Number	
Surge suppression; Lexan®, with terminal screws	Blue	<b>1254SA</b>	<b>21254SA</b>
	Ivory	<b>1254SIA</b>	<b>21254SIA</b>
Wire leads; isolated ground; Lexan®	Blue	—	<b>21254SLA</b>
	Ivory	—	<b>21254SILA</b>

Note: See page A-9 for additional information on Quadplex® receptacles.



ADAPI

### ADAPTER PLATES

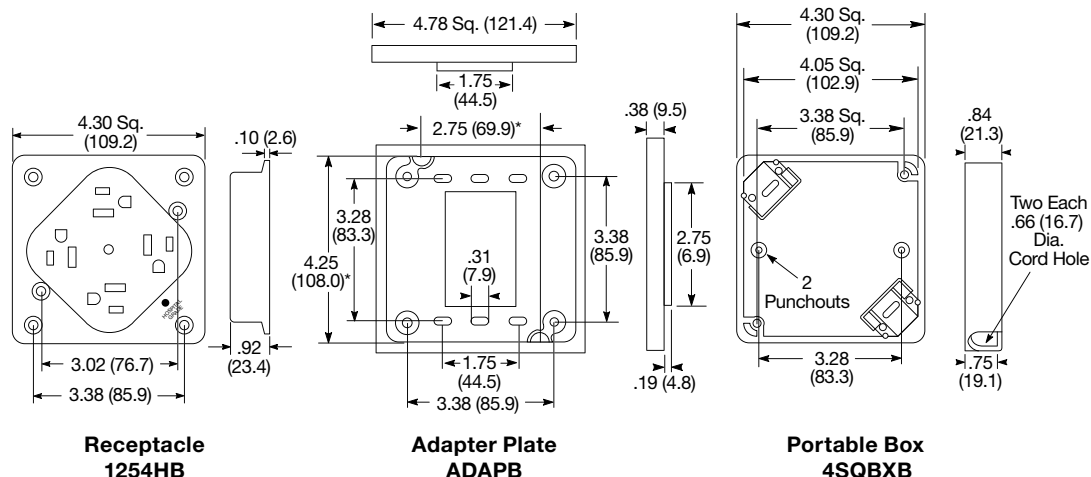
Description	Color	Catalog Number
For 1- and 2-gang device boxes	Blue	<b>ADAPBLU</b>
	Ivory	<b>ADAPI</b>

### PORTABLE BOXES Inches (mm)

Description	Color	Catalog Number
4 in. (101.6) square with two cord grips	Blue	<b>4SQBXBLU*</b>
	Ivory	<b>4SQBXI*</b>

Note: \*Portable boxes not UL Listed or CSA Certified.  
For indoor use only.

### PRODUCT DIMENSIONS Inches (mm)

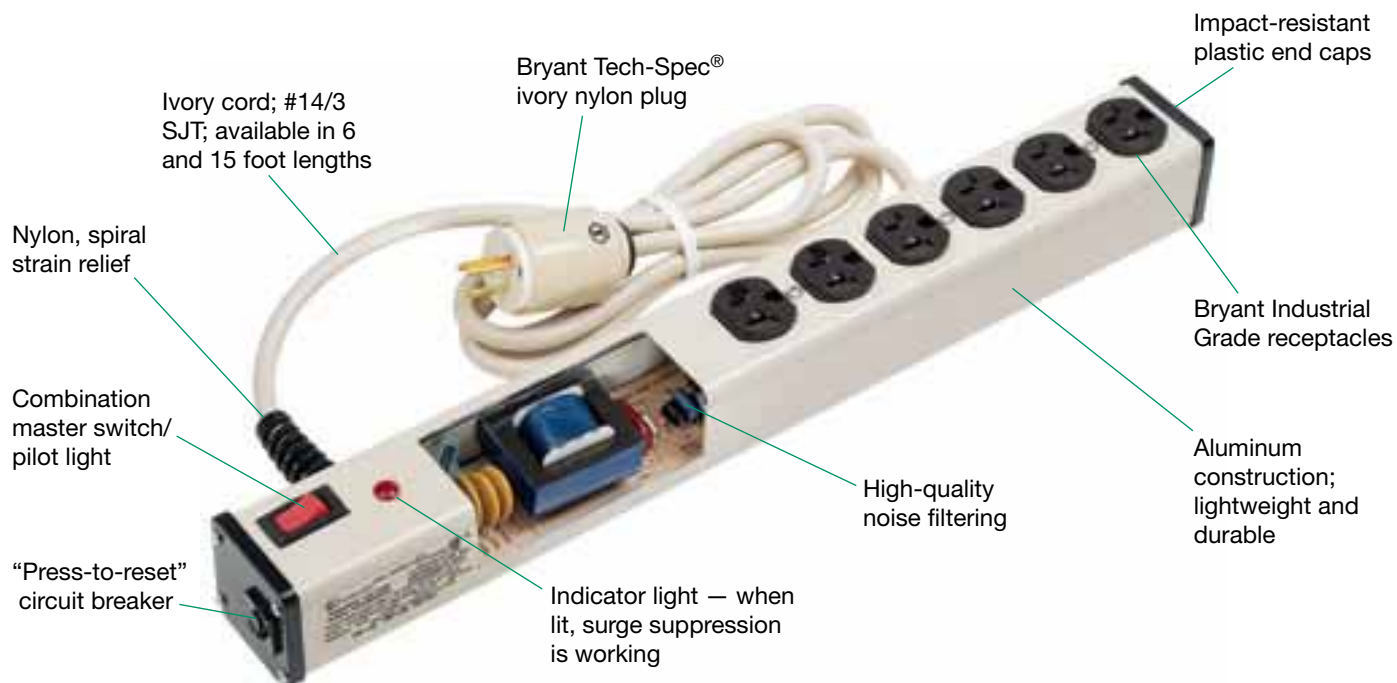


Note: \*Mounting dimensions for 4 1/16" adapter plate.

Lexan® is a registered trademark of Sabic Innovative Plastics.

# Surge and Isolated Ground Devices

## Portable Surge Protective Devices



### Portable Surge Strips

- #14/3 SJT ivory cord 6 foot (1.83 m) and 15 foot (4.57 m) available
- Tech-Spec® ivory nylon plug
- Plug-in unit has phone line protection

- Press-to-reset circuit breaker
- Lightweight and durable aluminum construction
- Impact-resistant plastic end caps
- Nylon, spiral strain relief

### All Units

- Surge protection "ON" indicator light
- 140 joule rated
- Quality EMI/RFI filtering



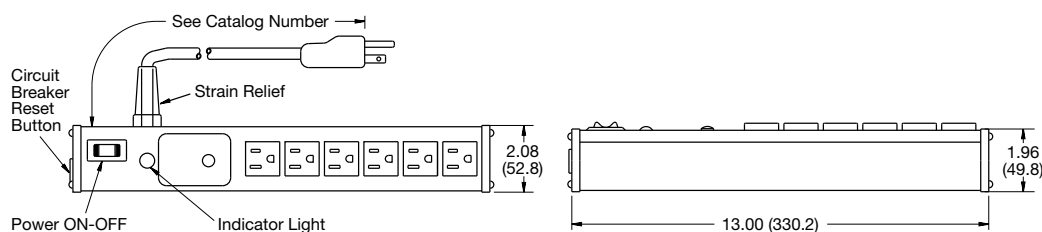
### PORTABLE SURGE STRIPS

#### NEMA 5-15 15 AMP 125V Feet (m)



Description	Color	Circuit Breaker Rating	Joule Rating	Catalog Number
6 outlets; 6 ft. (1.83) cord; competitive protection	Ivory	15A	140	<b>ST16</b>
6 outlets; 15 ft. (4.57) cord; competitive protection	Ivory	15A	140	<b>ST115</b>

### PRODUCT DIMENSIONS Inches (mm)

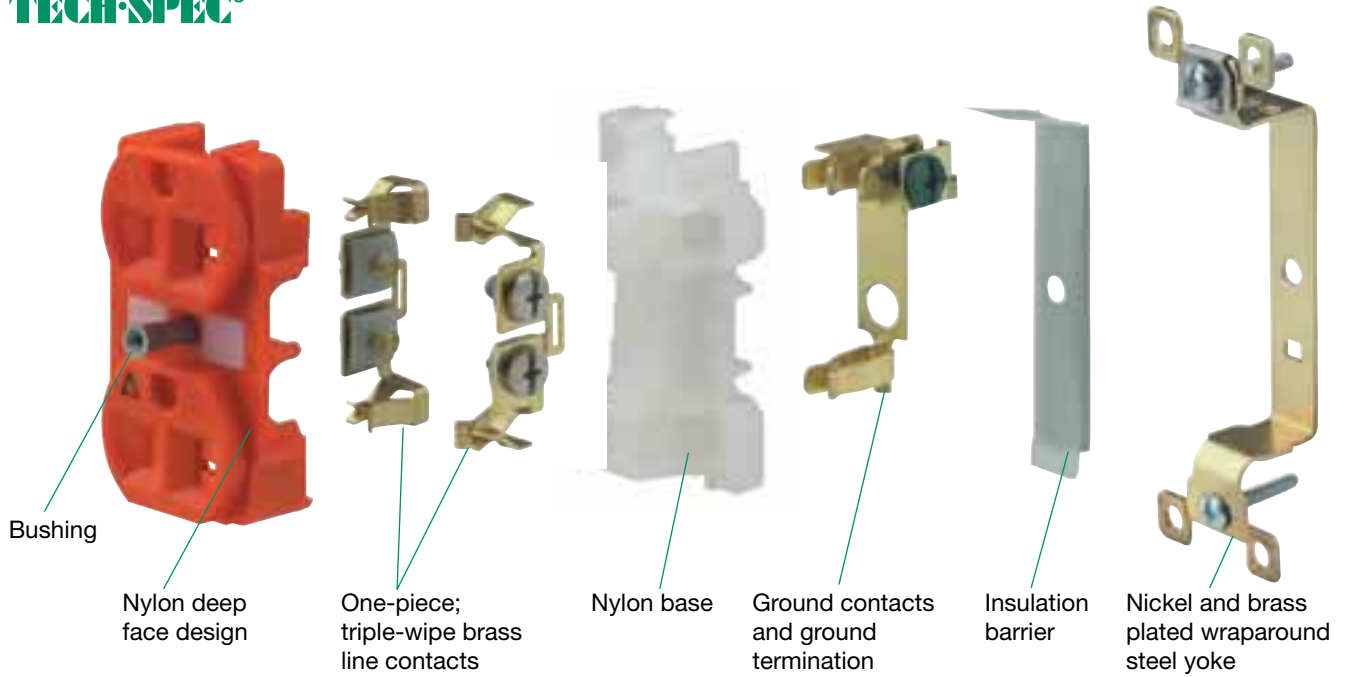


ST16

# Surge and Isolated Ground Devices

## Isolated Ground Receptacle Features

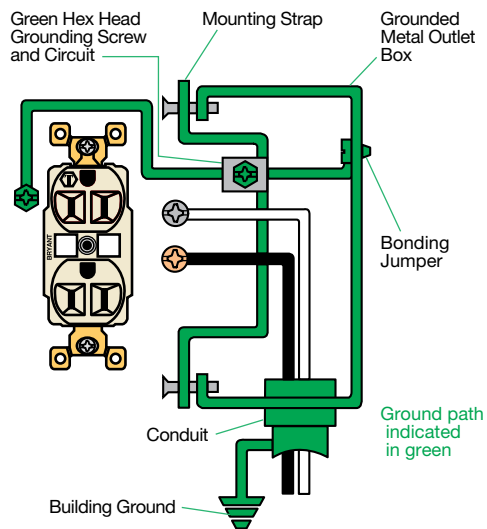
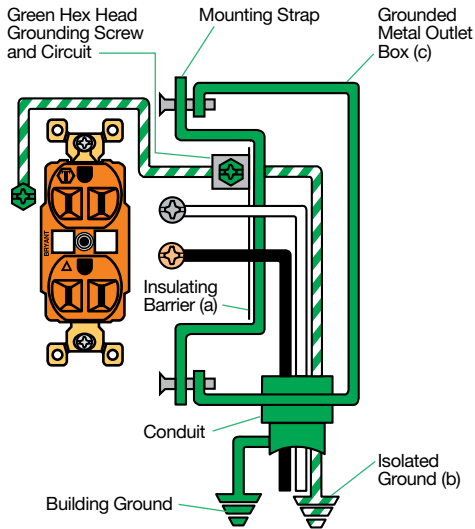
TECH·SPEC®



### Characteristics of Isolated Ground Wiring Devices

Isolated ground devices help limit electrical noise on the equipment grounding circuit by providing two grounding paths for the installation. The device grounding circuit terminal and grounding contacts are isolated from the grounding path of the metal outlet box, device mounting means, and metal cover or wall plate, thus establishing a separate, dedicated equipment grounding path for connecting noise-sensitive equipment.

### Principles of Operation



### Isolated Ground Receptacle

Isolated ground receptacles are not grounded to building ground at the receptacle location. Grounding of this device requires that an isolated ground path be established from the receptacle grounding terminal to a suitable equipment grounding point "upstream" from the device.

Insulating barrier (a) prevents isolated grounding circuit (b) from making contact with the outlet box (c) which otherwise would ground the receptacle through the building ground.

### Conventional Receptacle

Conventional receptacles are grounded to building ground at the receptacle outlet. When mounted in the box, a single grounding path is established through the grounded metal outlet box and the building ground system.

# Surge and Isolated Ground Devices

## Isolated Ground Straight Blade Receptacles



**BRY8200IG**

### HOSPITAL GRADE ● 15 AND 20 AMP, 120V RECEPTACLES



Description	Color	Catalog Number	
Duplex; nylon; back and side wired	Orange	<b>BRY8200IG</b>	<b>BRY8300IG</b>
Single; nylon; back and side wired	Orange	<b>8210IG</b>	<b>8310IG</b>
Fashion Series™; duplex; nylon; back and side wired	Gray	<b>9200IGGRY</b>	<b>9300IGGRY</b>
	Ivory	<b>9200IGI</b>	<b>9300IGI</b>
	Orange	<b>9200IG</b>	<b>9300IG</b>
	Red	<b>9200IGRED</b>	<b>9300IGRED</b>
	White	<b>9200IGW</b>	<b>9300IGW</b>



**9200IG**

### EXTRA HEAVY DUTY, INDUSTRIAL 15 AND 20 AMP, 125V RECEPTACLES

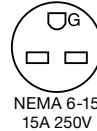


Description	Color	Catalog Number	
Duplex; nylon; back and side wired	Gray	<b>BRY5262IGGRY</b>	<b>BRY5362IGGRY</b>
	Ivory	<b>BRY5262IGI</b>	<b>BRY5362IGI</b>
	Orange	<b>BRY5262IG</b>	<b>BRY5362IG</b>
	White	<b>BRY5262IGW</b>	<b>BRY5362IGW</b>
Single; nylon; back and side wired	Gray	<b>5261IGGRY</b>	<b>5361IGGRY</b>
	Ivory	<b>5261IGI</b>	<b>5361IGI</b>
	Orange	<b>5261IG</b>	<b>5361IG</b>
	White	<b>5261IGW</b>	<b>5361IGW</b>



**BRY5262IG**

### EXTRA HEAVY DUTY, INDUSTRIAL 15 AND 20 AMP, 250V RECEPTACLES

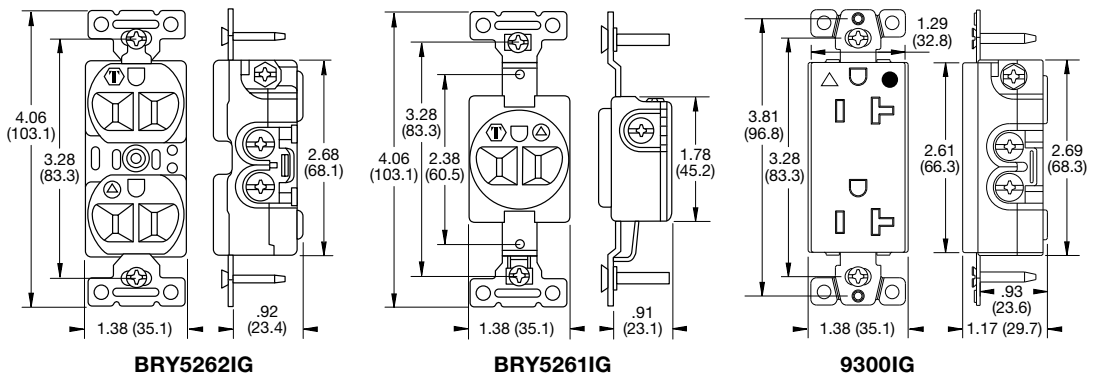


Description	Color	Catalog Number	
Duplex; nylon; back and side wired	Orange	<b>BRY5662IG</b>	<b>BRY5462IG</b>
Single; nylon; back and side wired	Orange	—	<b>8410IG</b>



**5261IG**

### PRODUCT DIMENSIONS Inches (mm)



# Surge and Isolated Ground Devices

## Isolated Ground Straight Blade Receptacles



CR15IG

### COMMERCIAL, SPECIFICATION GRADE 15 AND 20 AMP, 125V RECEPTACLES



NEMA 5-15  
15A 125V



NEMA 5-20  
20A 125V

Description	Color	Catalog Number	
Smooth nylon face; side wired only	Gray	<b>CR15IGRY</b>	<b>CR20IGRY</b>
	Ivory	<b>CR15IGI</b>	<b>CR20IGI</b>
	Light Almond	<b>CR15IGLA</b>	<b>CR20IGLA</b>
	Orange	<b>CR15IG</b>	<b>CR20IG</b>
	White	<b>CR15IGW</b>	<b>CR20IGW</b>

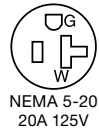


1254IGO

### ISOLATED GROUND QUADPLEX® RECEPTACLES



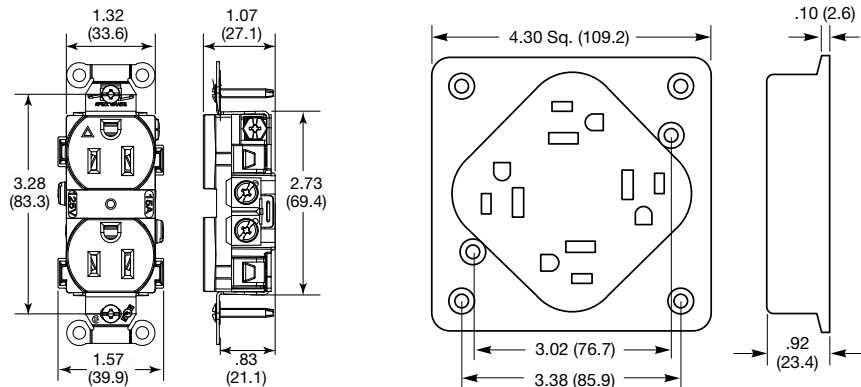
NEMA 5-15  
15A 125V



NEMA 5-20  
20A 125V

Description	Color	Catalog Number	
Isolated ground; Lexan® with terminal screws	Orange	<b>1254IGO</b>	<b>21254IGO</b>
Isolated ground; Lexan® with wire leads	Orange	—	<b>21254IGOL</b>

### PRODUCT DIMENSIONS Inches (mm)



CR15IG

Quadplex® Receptacle

Lexan® is a registered trademark of Sabic Innovative Plastics.

# Surge and Isolated Ground Devices

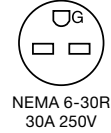
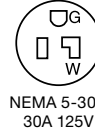
## Isolated Ground Straight Blade Receptacles



9530IG

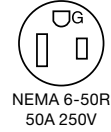
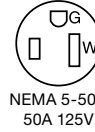


9550IG



### 30 AMP STRAIGHT BLADE DEVICES

Description	Color	Catalog Number	
Single; flush; RTP* nylon face; 2-pole, 3-wire; back wired	Orange	9530IG	9630IG

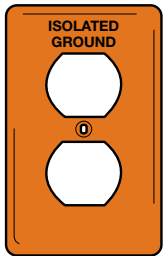


### 50 AMP STRAIGHT BLADE DEVICES

Description	Color	Catalog Number	
Single; flush; RTP* nylon face; 2-pole, 3-wire; back wired	Orange	9550IG	9650IG

### "ISOLATED GROUND" WALLPLATES\*\*

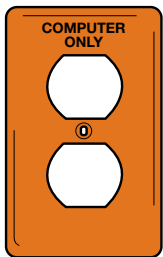
Description	Opening	Color	Catalog Number
Nylon; standard size; 1-gang; hot stamped; recessed black lettering	Duplex	Orange	NP80IG
	Single receptacle	Orange	NP70IG
	Locking 1.60 (40.6) ID	Orange	NP7200IG
	Fashion type	Orange	NP260IG



NP80IG

### "COMPUTER ONLY" WALLPLATES\*\*

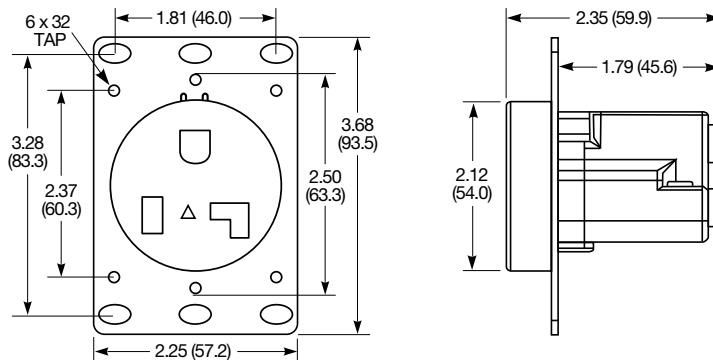
Description	Opening	Color	Catalog Number
Nylon; mid-size; 1-gang; hot stamped; recessed black lettering	Duplex	Orange	NPJ8CO
	Duplex	Ivory	NPJ8C
	Fashion type	Ivory	NPJ26C



NPJ8CO

Note: \*Reinforced Thermoplastic Polyester.  
\*\*See section O for more information on wallplates.

### PRODUCT DIMENSIONS Inches (mm)



9530IG, 9630IG, 9550IG & 9650IG

# Surge and Isolated Ground Devices

## Isolated Ground Locking Receptacles



4700DRIG

### 15 AMP LOCKING RECEPTACLES

Description	Color	Catalog Number	
Duplex; RTP* nylon face; 2-pole, 3-wire; back and side wired	Orange	<b>4700DRIG</b>	<b>70615DRIG**</b>
Single; nylon face; 2-pole, 3-wire; back and side wired	Orange	<b>4710IG**</b>	<b>70615IG**</b>



NEMA L5-15R  
15A 125V



NEMA L6-15R  
15A 250V



4710IG

### 20 AMP LOCKING RECEPTACLES

Description	Color	Catalog Number	
Single; nylon face; 2-pole, 3-wire; back and side wired	Orange	<b>70520IG</b>	<b>70620IG</b>



NEMA L5-20R  
20A 125V



NEMA L6-20R  
20A 250V



70520IG

### 20 AMP LOCKING RECEPTACLES

Description	Color	Catalog Number	
Single; nylon face; 3-pole, 4-wire; back and side wired	Orange	<b>71420IG</b>	<b>71430IG</b>



NEMA L14-20R  
20A 125/250V



NEMA L14-30R  
30A 125/250V



NEMA L5-30R  
30A 125V



NEMA L6-30R  
30A 250V

### 30 AMP LOCKING RECEPTACLES

Description	Color	Catalog Number	
Single; nylon face; 2-pole, 3-wire; back and side wired	Orange	<b>70530IG</b>	<b>70630IG</b>



NEMA L21-20R  
20A 120/208V 3ØY



NEMA L21-30R  
30A 120/208V 3ØY

### 30 AMP LOCKING RECEPTACLES

Description	Color	Catalog Number	
Single; nylon face; 4-pole, 5-wire; back and side wired	Orange	<b>72120IG</b>	<b>72130IG</b>

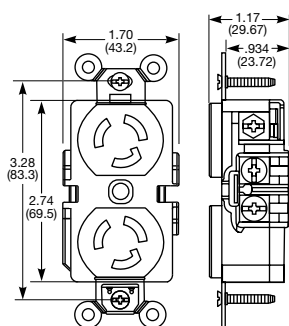


72130IG

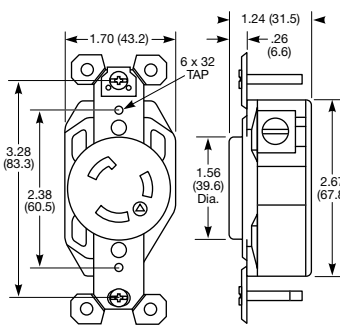
Note: \*Reinforced Thermoplastic Polyester.

\*\*See page H-8 for dimensions on 4710 and 70615 series receptacles.

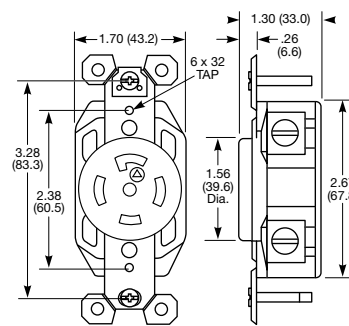
### PRODUCT DIMENSIONS Inches (mm)



4700DRIG



70520IG



72130IG

# Surge and Isolated Ground Devices

## Isolated Ground Surge Suppression Receptacles Technical Specifications



SP521G

### STRAIGHT BLADE DUPLEX RECEPTACLE

#### DESCRIPTION

**Manufacturer's Identification** — Bryant SP521G Series  
**Description** — Industrial grade isolated ground surge suppression duplex receptacle  
**Type** — 2-pole, 3-wire; grounding  
**Rating** — 15A, 125V

#### CERTIFICATION

- UL Listed
- UL Standards 1449 surge protective devices and 498 receptacles
- Certified to CSA; C22.2, No. 42
- ANSI/IEEE C62.41 (IEEE 587) categories "A" and "B"
- NEMA WD-6
- Meets UL and CSA varistor thermal protection requirements

#### COMPONENTS

Cover  
 Base  
 Line contacts  
 Clamp nut  
 Mounting yoke  
 Terminal screws  
 Grounding screw  
 Ground contacts  
 Auto grounding assembly  
 Flat head mounting screws

#### MATERIALS

Nylon  
 Nylon  
 High performance brass alloy  
 .03 inch (.8) brass  
 .05 inch (1.3)  
 Brass #8-32  
 Brass (green) #8-32  
 High performance  
 Stainless steel  
 Zinc-plated steel

#### PERFORMANCE

##### Electrical

UL voltage protection level	500V
Operating voltage	125V AC
Frequency	60 Hz
Protection modes	Normal mode (L-N); common mode (L-G) (N-G)
Noise filtration	RFI and EMI 100KHz; 4MHz-10DB to -20DB
Response time	Less than 5 nanoseconds (ns)
Peak energy 10X 1000µs	240 joules
Peak current 8X 20µs	15,000 Amps

##### Mechanical

Terminal identification	Terminals identified in accordance with UL 498 (brass, white, green)
Terminal accommodation	#14-10 AWG copper conductor only; solid or stranded
Product identification	Ratings are a permanent part of the device

##### Environmental

Flammability	Cover: UL 94 V2 Base: UL 94 V2
Operating temperatures	Maximum continuous 20°C to 55°C

### PRODUCT DIMENSIONS Inches (mm)

