

Building a Brighter Future – The GE EverGold™ family of products provide a range of balance of system solar components for commercial photovoltaic installations including photovoltaic disconnects, recombiner and combiner boxes. Visit www.geindustrial.com/solar to see some of these products in application on the solar carport installation at our Plainville, CT headquarters.



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Solar EverGold™ Solar Duty Recombiner and Combiner Boxes

Overview

Overview

The EverGold solar duty recombiner box is the newest addition to GE's growing line of solar balance of system (BOS) electrical components. Its unique 4 x 100 amp fusible design includes a built-in 600Vdc disconnect. Factory installed standard features include an equipment ground and negative lugs, class R fuse clips, and a protective fuse barrier. A "shock hazard" warning label, required by the National Electrical Code, is included on the cover so there's one less thing for contractors to worry about. EverGold solar duty recombiner boxes, like all EverGold solar BOS components, are durable, safe, and easy to install.

Combiner boxes are available in NEMA Type 3R enclosures featuring a white powder coat finish over corrosion-resistant G90 galvanized steel, or in our innovative NEMA Type 4X fiberglass enclosures. The new recombiner box features a NEMA Type 4 enclosure, also fabricated from G90 galvanized steel with the same durable white powder coat finish. All the enclosure options feature gasketed cover seals that assure increased protection from the elements.

Combiner box features, such as touch-safe fuse holders and a clear plastic dead-front, offer added protection. Recombiner boxes include a fuse barrier to help guard against accidental contact with live voltage. All units include lockable over-center cover latches to provide a degree of protection against unauthorized entry.



This GE Solar Carport is outfitted with GE's EverGold balance of system electrical components. The installation includes NEMA 3R and NEMA 4X combiner boxes and NEMA 3R disconnects. The combiner boxes consolidate PV array wiring and the disconnects provide a convenient means for isolating circuits.



Solar EverGold™ Solar Duty Recombiner Box

Features and Mechanical Specifications

Features

- Accepts up to four 100A, 600Vdc combiner box inputs
- Reduces the number of wires running to the inverter
- Load break rated disconnect
- UL Listed for use in negative grounded photovoltaic applications per NEC 690
- NEMA Type 4 fusible construction
- G90 galvanized steel enclosure with white powder coat finish for durability in harsh outdoor and rooftop conditions
- Bright yellow operating handle and bilingual ON/OFF label for increased visibility
- Highly visible secondary ON/OFF labels on side of enclosure (fireman friendly)
- Factory installed negative lugs and equipment ground connections
- Factory installed fuse barrier for added protection
- Lockable over center cover latches for waterproof protection and security
- Easy access cover interlock defeat mechanism for security and maintenance
- Vertically hinged “side-swing” cover for easy access to electrical connections
- Low profile enclosure mounts vertically or horizontally for reduced shadowing
- Ample gutter space speeds up installation and wiring time



Mechanical Specifications - Recombiner Box

Recombiner Box with Disconnect	
Agency Listing	UL1741 File Number E339960
Poles	4
Voltage Rating/Pole (Max)	600Vdc
Ampere Rating per Pole	100A
Construction	Fusible
Fuse Type	Class R
Short Circuit Current Rating (Fused & Non-Fused)	10 kA
Enclosure Types	NEMA 4
Weight (lbs)	65
Mounting Orientation	Vertical & Horizontal
Finish	White Powder Coat
Operating Temperature	-30°C to 50°C (-22°F to 122°F)
Cover Interlock	Standard
Lockable Cover	Standard
Lockable Handle (OFF Position)	up to 3 padlocks
Terminal Type	Lugs (75°C Cu)
Equipment Ground Terminal	Factory Installed
Isolated Negative Terminal	Factory Installed
Wire Range	
"-" Terminals (In)	(4) 2/0 - #6 Cu
"-" Terminals (Out)	(4) 2/0 - #6 Cu
"-" Terminals (In)	(4) 2/0 - #14 Cu
"-" Terminals (Out)	(4) 2/0 - #14 Cu
Ground Terminal	(7) #4 - #14 Cu
Ground Terminal	(1) 2/0 - #6 Cu



Solar EverGold™ Solar Duty Recombiner Box - Fusible

Ordering Information, Replacement Parts, Wiring Diagram and Dimensions

Ordering Information - Recombiner Box with Disconnect

Max Rated Current Amps	Number of Inputs	Number of Outputs	Enclosure NEMA Type 4 ¹	List Price GO-131S
4 x 100	4	2	TS4634C ²	\$3561.00

¹Oversized enclosure with factory installed negative and recombiner lugs

²Available with "-BA" suffix for ARRA compliance

Replacement Parts - Recombiner Box

Description	Standard Package	Product Number	List Price GO-148A
Replacement Handle Kit	1	THRPLHDL2S	\$138.00
100A Line/Load Lug Kit - includes qty (4) lugs	1	TSLK411	\$80.00
100A Recombiner/Negative Lug Kit	1	TSRK111	\$232.00
Equipment Ground Kit	1	TLK20	\$11.00 ³
Equipment Ground Kit	1	TGK12	\$25.00 ³

Auxiliary Contact Kit - Recombiner Box

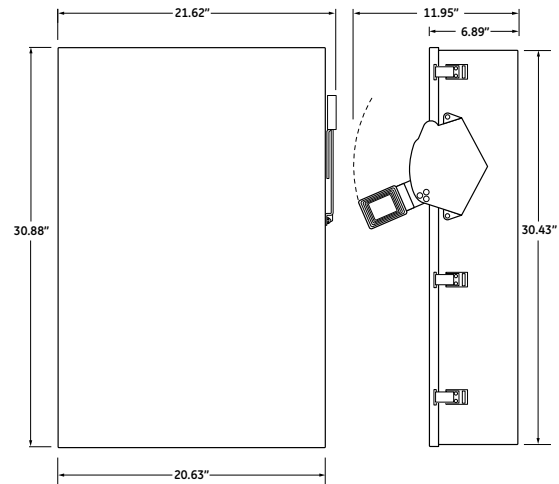
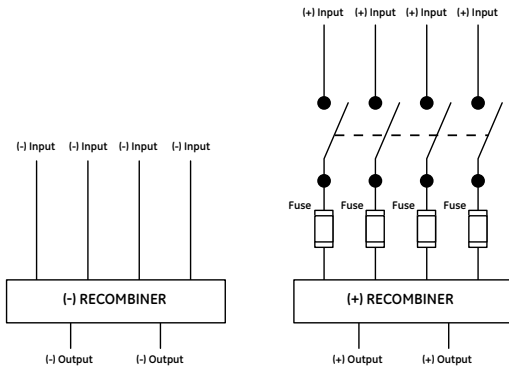
Description	Standard Package	Product Number	List Price GO-148A
SPDT Auxiliary Contact Kit	1	THAUx64S	\$135.00 ⁴

³GO-137A

⁴GO-131

Recombiner Box with Disconnect - Wiring Diagram

Recombiner Box with Disconnect - Dimensions



NEMA Type 4



Solar EverGold™ Solar Duty Combiner Box - Fusible

Features and Mechanical Specifications

Features

- UL Listed for use in negative grounded photovoltaic applications per NEC 690
- NEMA 3R corrosion resistant G90 galvanized steel enclosures include a white powder coat finish for added durability in harsh outdoor and rooftop conditions
- NEMA 4X fiberglass enclosures are light weight and exceptionally resistant to harsh environmental conditions
- 12 & 24 input circuits
- 15A maximum fuse capacity per terminal
- 600Vdc maximum voltage rating
- 90°C rated output terminals
- Touch-safe fuse holders for added protection
- Clear plastic dead-front to guard against accidental contact with live voltage
- Lockable over center cover latches for waterproof protection and security
- Vertically hinged “side-swing” cover for easy access to electrical connections
- Ample gutter space speeds up installation and wiring



Mechanical Specifications - Combiner Box

Agency Listing	UL1741	
	File Number E339960	
Max Voltage (Vdc)	600	
Max Continuous Current (A)	12 Circuit	180
	24 Circuit	360
Circuit Protection	Fuse	
Max Fuse Size (A)	15	
Fuse Type (600Vdc)	Midget 10x38 mm ¹	
Operating Temperature Range	-30°C to 50°C (-22°F to 122°F)	
Wire Range	Input	#14 - #6AWG
	Output	350kcmil - #6AWG
Enclosure Types	NEMA 3R	NEMA 4X
Weight (lbs)	12 Circuit	17
	24 Circuit	19
Material	G90	Fiberglass
Finish	White Powder Coat	N/A
Mounting Orientation	Vertical	Vertical or Flat

¹not provided



Solar EverGold™ Solar Duty Combiner Box - Fusible

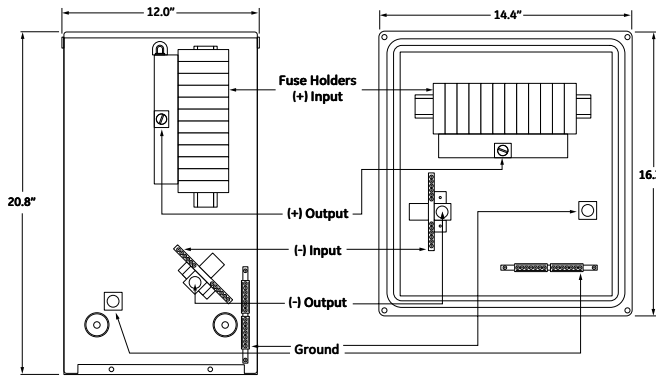
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Ordering Information, Accessories and Dimensions

Ordering Information - Combiner Box - Fusible

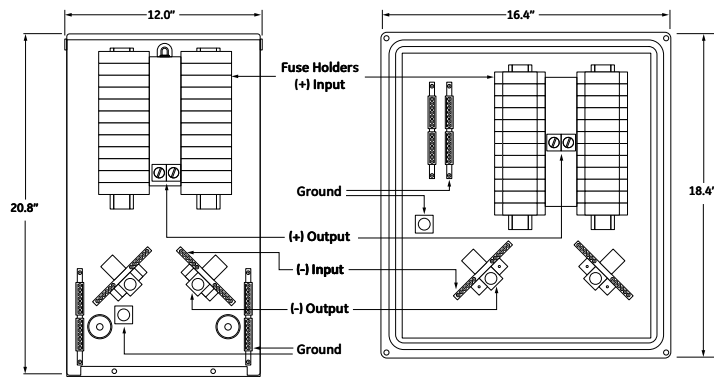
Max Rated Current Amps	Number of Inputs	Number of Outputs	Enclosure NEMA Type 3R	List Price GO-026C	Enclosure NEMA Type 4X	List Price GO-026C
180	12	1	TSCF126R	\$1100.00	TSCF126X	\$1800.00
360	24	2	TSCF246R	\$1500.00	TSCF246X	\$2500.00

Combiner Box - Dimensions



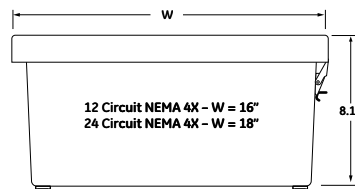
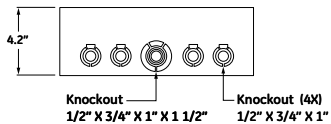
12 Circuit NEMA 3R

12 Circuit NEMA 4X
(Cover not shown)



24 Circuit NEMA 3R

24 Circuit NEMA 4X
(Cover not shown)



Solar EverGold™ Solar Duty Disconnects

Overview

Overview

GE EverGold solar duty disconnects provide the flexibility needed to wire Photovoltaic (PV) systems in the most efficient means possible. Now available in four-pole as well as single-pole construction, they are suitable for commercial negative-ground PV systems.

The new junction box option available with the four-pole disconnect minimizes components. The factory-installed negative lug eliminates the need for a secondary splice box typically used for negative connections, reducing the balance of system components by as much as 33%.

EverGold solar duty disconnects are designed to stand up to the harshest outdoor and rooftop conditions. The enclosures are fabricated from corrosion-resistant G90 galvanized steel. Besides providing additional protection, the white powder coat finish creates a cooler operating environment for disconnect components.

Installation challenges have also been considered in the enclosure design. Convenient enclosure mounting features, a vertically hinged side-swing cover and ample gutter space help reduce installation and wiring time. The NEMA Type 4 enclosure for the junction box option can be mounted either vertically or horizontally, minimizing rooftop shadowing.

EverGold solar duty disconnects are UL listed for 600Vdc and designed for use as a disconnect for photovoltaic applications per NEC 690. The factory installed fuse barrier on the four-pole disconnect provides an added level of protection. All EverGold solar duty disconnects come complete with factory installed equipment ground connections, a "shock hazard" warning label, and Class R fuse clips for added time savings.



1-Pole Disconnect



Solar EverGold™ Solar Duty Disconnects

Features

Features

- Available in single-pole and four-pole construction, 600Vdc
- Junction box configuration includes factory installed negative connection which eliminates the need for secondary splice box, reducing overall balance of system components
- G90 galvanized steel enclosures for prolonged enclosure life
- White powder coat finish for reduced internal operating temperature
- 3-point (single pole) and 4-point (four-pole) enclosure mounting helps reduce installation time
- Lockable over center cover latches (Types 3R and 4) for waterproof protection and security
- Easy access cover interlock defeat mechanism for security and maintenance
- Vertically hinged “side-swing” cover for easy access to electrical connections
- Type 4 enclosure can be mounted vertically or horizontally
- Ample gutter space (top, bottom, side) helps reduce wiring time
- Highly visible bright yellow operating handle with bilingual ON/OFF label and fireman-friendly grip
- Highly visible secondary ON/OFF labels on side (Type 4) of enclosure
- Factory installed bright red PV disconnect “shock hazard” warning label and class R fuse clips save time
- Factory installed fuse barrier on four-pole construction for added protection
- Factory installed equipment ground connections
- Factory installed negative connection on one-pole disconnects



**4-Pole Disconnect
with Junction Box**



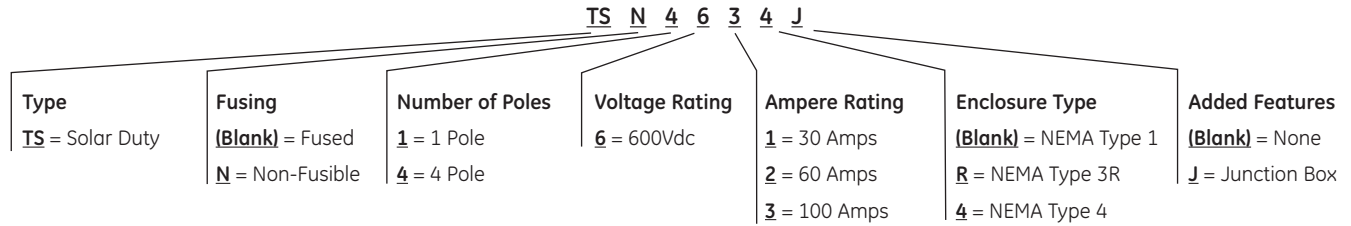
Standard 4-Pole Disconnect



Solar EverGold™ Solar Duty Disconnects

Ordering Information and Mechanical Specifications

Product Number Structure



Note: This information is provided for interpreting product numbers. It should not be used to build product numbers.

Ordering Information

Amps	Isc Rating Amps (NEC)	One-Pole, 600Vdc, Non-Fusible				One-Pole, 600Vdc, Fusible			
		Enclosure Type 1	List Price GO-131S	Enclosure Type 3R	List Price GO-131S	Enclosure Type 1	List Price GO-131S	Enclosure Type 3R	List Price GO-131S
30	19.2	TSN161	\$269.00	TSN161R	\$483.00	TS161	\$516.00	TS161R	\$869.00
60	38.4	TSN162	\$486.00	TSN162R	\$846.00	TS162	\$626.00	TS162R	\$1017.00
100	64.0	TSN163	\$765.00	TSN163R	\$1182.00	TS163	\$1145.00	TS163R	\$1587.00

Amps	Isc Rating Amps (NEC)	Four-Pole ¹ , 600Vdc, Non-Fusible			Four-Pole, 600Vdc, Fusible				
		Enclosure Type 3R	List Price GO-131S	Enclosure Type 4 ² J-Box Configuration	List Price GO-131S	Enclosure Type 3R	List Price GO-131S	Enclosure Type 4 ² J-Box Configuration	List Price GO-131S
100	64.0	TSN463R	\$1561.00	TSN4634J	\$2293.00	TS463R	\$2098.00	TS4634J	\$2829.00

¹Available with "-BA" suffix for ARRA compliance

²Oversized enclosure with factory installed negative lug

Mechanical Specifications

	Four-Pole Disconnect	Four-Pole Disconnect with Junction Box	One-Pole Disconnect
Agency Listing & File Number	UL98B E349257	UL98B E349257	UL98 E4669
Poles	4	4	1
Voltage Rating/Pole (Max)	600Vdc	600Vdc	600Vdc
Ampere Rating per Pole	100A	100A	30A/60A/100A
Construction	Fusible and Non-Fusible	Fusible and Non-Fusible	Fusible and Non-Fusible
Fuse Type	Class R	Class R	Class R
Short Circuit Current Rating (Fused & Non-Fused)	10 kA	10 kA	10 kA
Enclosure Types	Type 3R (outdoor)	Type 4 (water/dust tight)	Type 1 (indoor) Type 3R (outdoor)
Weight (lbs)	35 (non-fuse)	53 (non-fuse)	13 (non-fuse, 30A) 15 (non-fuse, 60/100A)
	45 (fuse)	63 (fuse)	14 (fuse, 30A) 16 (fuse, 60/100A)
			17 (non-fuse, 60/100A) 19 (fuse, 60/100A)
Mounting Orientation	Vertical	Vertical and Horizontal	Vertical
Finish	White Powder Coat	White Powder Coat	White Powder Coat
Operating Temperature	-30°C to 50°C (-22°F to 122°F)	-30°C to 50°C (-22°F to 122°F)	-30°C to 50°C (-22°F to 122°F)
Cover Interlock	Standard	Standard	Standard
Lockable Cover	Standard	Standard	Standard
Lockable Handle (OFF Position)	up to 3 padlocks	up to 3 padlocks	up to 3 padlocks
Terminal Type	Lugs (75°C Cu)	Lugs (75°C Cu)	Lugs (60/75°C Cu/Al)
Equipment Ground Terminal	Factory Installed	Factory Installed	Factory Installed
Isolated Negative Terminal	n/a	Factory Installed	Factory Installed
Wire Range			30/60 Amps 100 Amps
"+" Terminals (In)	(4) 2/0 - #6 Cu	(4) 2/0 - #6 Cu	12-2 Cu/Al 10-1/0 Cu/Al
"+" Terminals (Out)	(4) 2/0 - #6 Cu	(4) 2/0 - #6 Cu	12-2 Cu/Al 10-1/0 Cu/Al
"-" Terminals (In)		(4) 2/0 - #14 Cu	(2) 12-2 Cu/Al (2) 10-1/0 Cu/Al
"-" Terminals (Out)		(4) 2/0 - #14 Cu	(2) 12-2 Cu/Al (2) 10-1/0 Cu/Al
Ground Terminal	(8) #4 - #14 Cu	(8) #4 - #14 Cu	(4) 14-8 Cu/A (3) 10-1/0 Cu/Al



Solar EverGold™ Solar Duty Disconnects

Accessories, Replacement Parts and Wiring Diagrams

Section 22

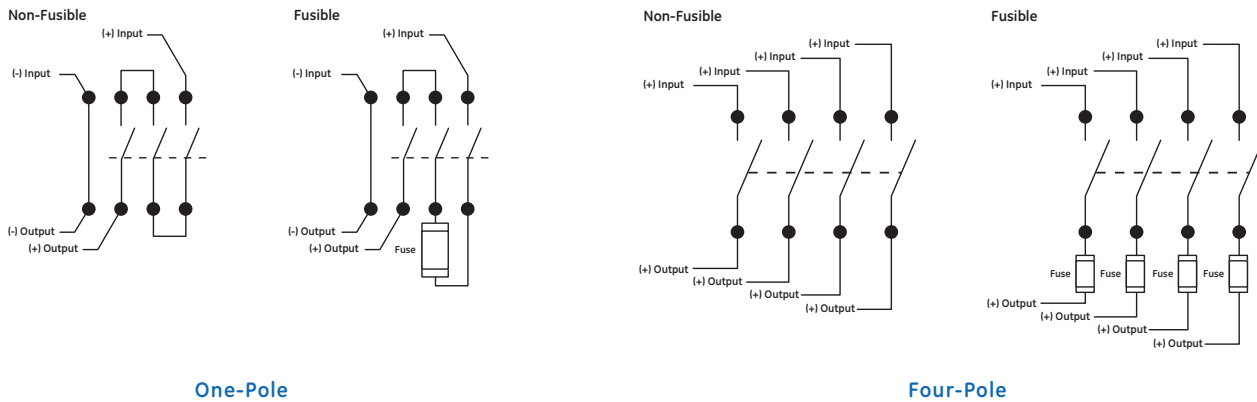
Accessories

Description	For Use With	Product Number	List Price	GO Schedule
DPDT Auxiliary Contact	One-pole	30A (Type 1/3R)	THAUX21D	\$135.00 GO-131
SPDT Auxiliary Contact	One-pole	30A (Type 1/3R)	THAUX61S	\$135.00 GO-131
DPDT Auxiliary Contact	One-pole	60/100A (Type 1/3R)	THAUX64D	\$193.00 GO-131
SPDT Auxiliary Contact	Four-pole	Type 3R and Type 4	THAUX64S	\$135.00 GO-131
Hub Kits - Conduit Size 3/4"	One-pole & Four-pole	Type 3R	TC75	\$24.00 GO-148A
Hub Kits - Conduit Size 1"	One-pole & Four-pole	Type 3R	TC100	\$24.00 GO-148A
Hub Kits - Conduit Size 1 1/4"	One-pole & Four-pole	Type 3R	TC125	\$24.00 GO-148A
Hub Kits - Conduit Size 1 1/2"	One-pole & Four-pole	Type 3R	TC150	\$24.00 GO-148A
Hub Kits - Conduit Size 2"	One-pole & Four-pole	Type 3R	TC200	\$40.25 GO-148A
Hub Kits - Conduit Size 2 1/2"	One-pole & Four-pole	Type 3R	TC250	\$67.75 GO-148A

Replacement Parts

Description	For Use With	Product Number	List Price	GO Schedule
Negative/Neutral Lug Kit	One-pole	30/60A (Type 1/3R)	TNI62	\$50.75 GO-131
Negative/Neutral Lug Kit	One-pole	100A (Type 1/3R)	TNI63	\$108.00 GO-131
Equipment Ground Lug Kit	One-pole	30/60A (Type 1/3R)	TGL1	\$12.00 GO-137A
Equipment Ground Lug Kit	One-pole	100A (Type 1/3R)	TNG3	\$60.00 GO-137A
Equipment Ground Kit	Four-pole	Type 3R and Type 4	TGK8C	\$8.25 GO-137A
Replacement Handle Kit	One-pole	30/60/100A (Type 1/3R)	THRPLHDL1S	\$138.00 GO-148A
Replacement Handle Kit	Four-pole	Type 3R and Type 4	THRPLHDL2S	\$138.00 GO-148A
100A Line/Load Lug Kit (4 lugs)	Four-pole	Type 3R and Type 4	TSLK411	\$80.00 GO-148A
100A Negative Lug Kit	Four-pole	Type 4	TSNK111	\$232.00 GO-148A
Closing Cap - White	One-pole & Four-pole	Type 3R	TCCPS	\$4.00 GO-148A

Wiring Diagrams



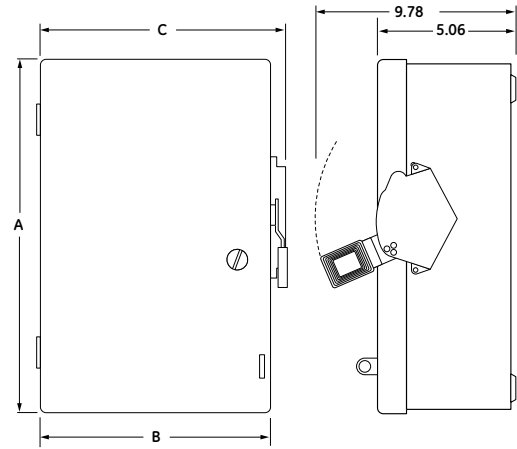
Solar EverGold™ Solar Duty Disconnects

Dimensions

Dimensional Drawings

600Vdc, NEMA Type 1

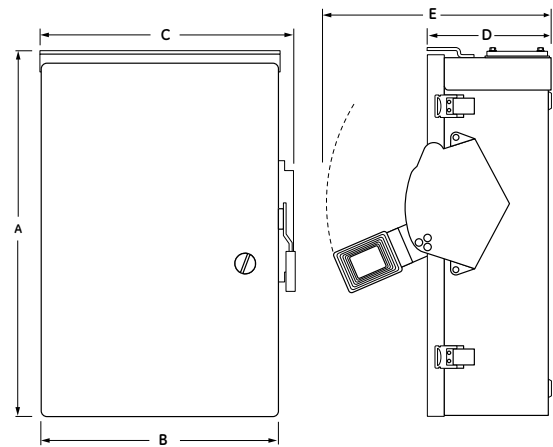
Ampere Rating	Poles	Type	A	B	C
30A	1	All	14.88	8.39	8.82
60/100A	1	All	22.33	9.39	9.72



NEMA Type 1

600Vdc, NEMA Type 3R

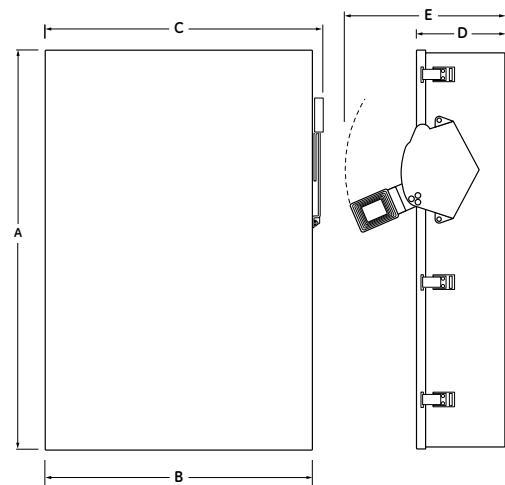
Ampere Rating	Poles	Type	A	B	C	D	E
30A	1	All	16.84	9.61	10.27	5.20	10.48
60/100A	1	All	23.03	9.61	10.27	5.20	10.48
100	4	Non-fuse	18.78	15.63	16.61	7.16	12.09
100	4	Fuse	25.88	15.63	16.61	7.16	12.09



NEMA Type 3R

600Vdc, NEMA Type 4

Ampere Rating	Poles	Type	A	B	C	D	E
100	4	Non-fuse	24.12	20.63	21.62	6.89	11.95
100	4	Fuse	30.88	20.63	21.62	6.89	11.95



NEMA Type 4

NOTE: All dimensions are in inches
All dimensions have ±0.125 tolerance



