

GE Energy



# GE EverGold™ Solar Balance of System Electrical Components

Your blueprint to a brighter future.



imagination at work

# Streamline your solar installation with GE EverGold

GE's EverGold solar balance of system (BOS) electrical components are designed with the needs of renewable energy distributors and installers in mind. Easy-to-install, safe and reliable, these are the kind of products you've come to expect from GE.

Their rugged construction, built-in safety and security features and factory-installed options make EverGold solar BOS electrical components the logical choice for your solar installations.

## EverGold solar duty recombiner and combiner boxes

**Minimum complexity.  
Maximum savings.**

The EverGold solar duty recombiner box is the newest addition to GE's growing line of solar 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.

***The benefits are clear— fewer components to install, fewer wire runs to the inverter and substantial savings in time and material.***

**Count on EverGold quality and safety.**

EverGold solar duty recombiner boxes, like all EverGold solar BOS components, are durable, safe, and easy to install. The 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.



**Recombiner box features class R fuse clips and a protective fuse barrier.**

## EverGold solar duty recombiner box 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



## EverGold solar duty combiner box 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 time



# EverGold solar duty disconnects

## Consolidate your connections.

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%.

**The result: GE EverGold solar duty disconnects deliver substantial savings in time and materials.**

## Rugged enclosure reduces installation time.

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.

## The disconnect you can count on.

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

## EverGold solar duty disconnect 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



4-Pole Disconnect  
with Junction Box



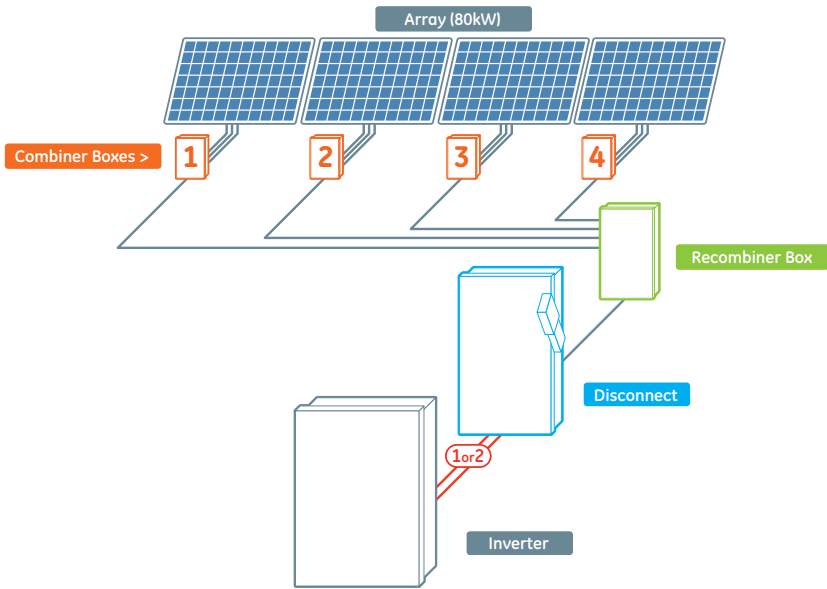
Fused Recombiner Box  
with 4-Pole Disconnect

Standard 4-Pole Disconnect

# EverGold Solar Duty Recombiner Box with Disconnect

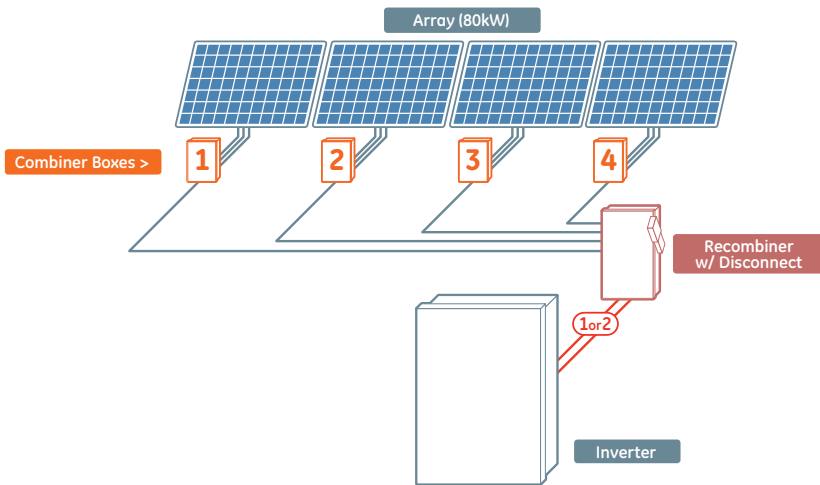
Fewer components to install, fewer wire runs to the inverter and substantial savings in time and material.

## Typical Configuration



Components	Quantity	Unit Weight	Total Weight
Combiner Box	4	17 lbs	68 lbs
Recombiner Box	1	34 lbs	34 lbs
400A 1-Pole Disconnect	1	175 lbs	175 lbs
<b>Total</b>	<b>6</b>		<b>277 lbs</b>

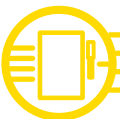
## Streamlined Configuration



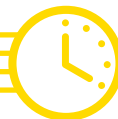
Components	Quantity	Unit Weight	Total Weight
Combiner Box	4	17 lbs	68 lbs
4 x 100A Recombiner with Disconnect	1	65 lbs	65 lbs
<b>Total</b>	<b>5</b>		<b>133 lbs</b>

The benefits are clear

Reduces Components



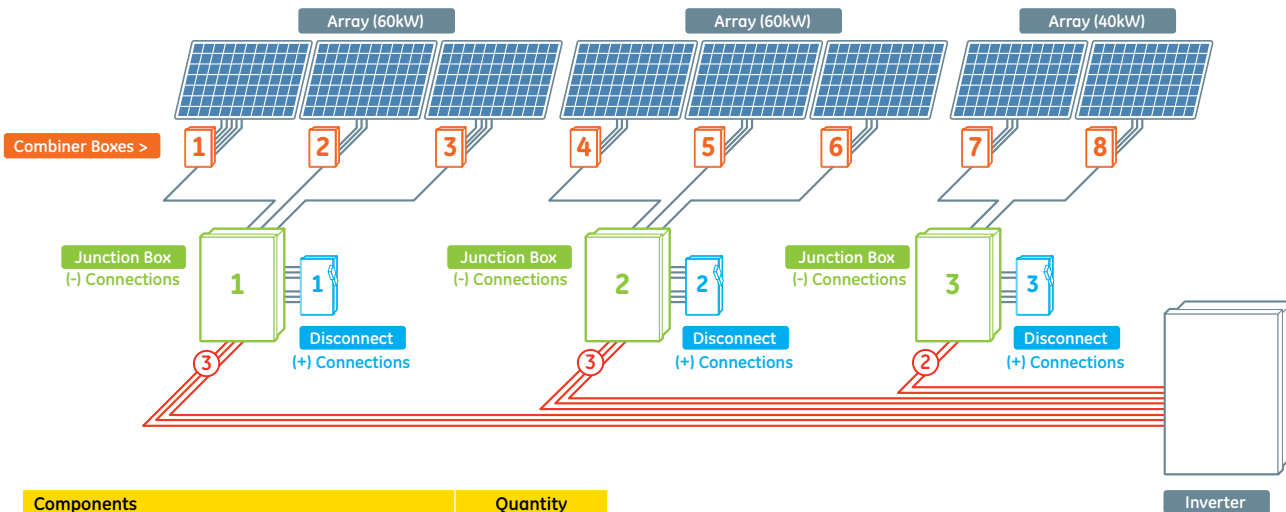
Reduces Wiring Time



# EverGold Solar Duty Disconnect with Junction Box

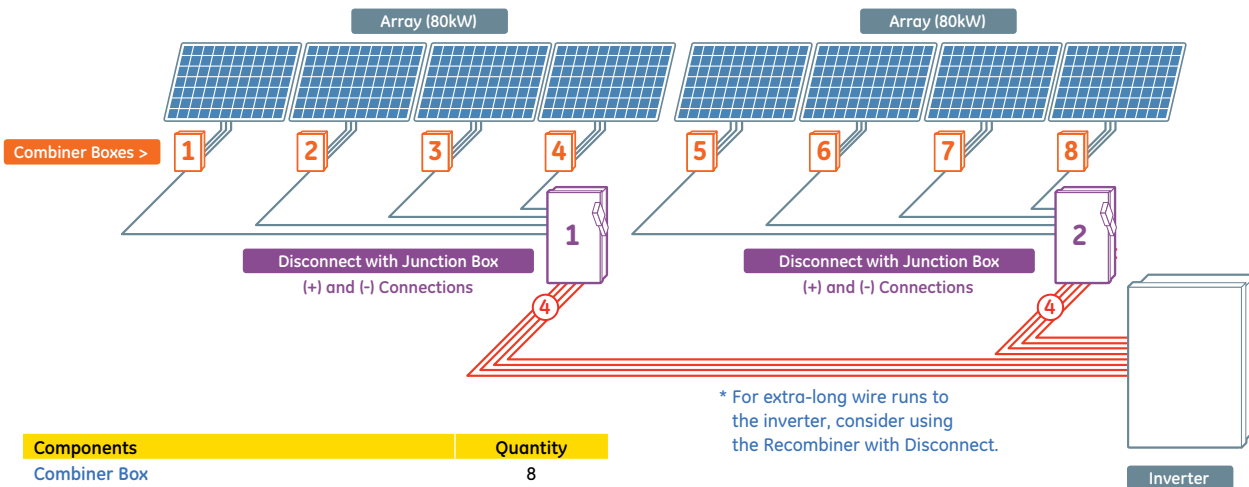
GE EverGold solar duty disconnects deliver substantial savings in time and materials.

## Typical Configuration



Components	Quantity
Combiner Box	8
Junction Box (for splicing negative wires)	3
100A 3-Pole Disconnect	3
<b>Total</b>	<b>14</b>

## Streamlined Configuration\*



Components	Quantity
Combiner Box	8
100A 4-Pole Disconnect with Junction Box	2
<b>Total</b>	<b>10</b>

\* For extra-long wire runs to the inverter, consider using the Recombiner with Disconnect.



Reduces Labor



Increases Profits

## Recombiner Box with Disconnect – Fusible

			Product Number
Max Rated Current (Amps)	Number of Inputs	Number of Outputs	NEMA Type 4 Enclosure <sup>1</sup>
4 x 100	4	2	TS4634C <sup>2</sup>

<sup>1</sup> Oversized enclosure with factory installed negative and recombiner lugs

<sup>2</sup> Available with "-BA" suffix for ARRA compliance.

### Replacement Parts - Recombiner Box

Description	Standard Package	Product Number
Replacement Handle Kit	1	THRPLHDL2S
100A Line/Load Lug Kit - includes qty (4) lugs	1	TSLK411
100A Recombiner/Negative Lug Kit	1	TSRK111
Equipment Ground Kit	1	TLK20
Equipment Ground Kit	1	TGK12

### Auxiliary Contact Kit - Recombiner Box

Description	Standard Package	Product Number
SPDT Auxiliary Contact Kit	1	THAUX64S

### 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
<b>Wire Range</b>	
"+" 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 (1) 2/0 - #6 Cu

## Combiner Box – Fusible

			Product Number	
Max Rated Current (Amps)	Number of Inputs	Number of Outputs	NEMA Type 3R Enclosure	NEMA Type 4X Enclosure
180	12	1	TSCF126R	TSCF126X
360	24	2	TSCF246R	TSCF246X

### Mechanical Specifications - Combiner Box

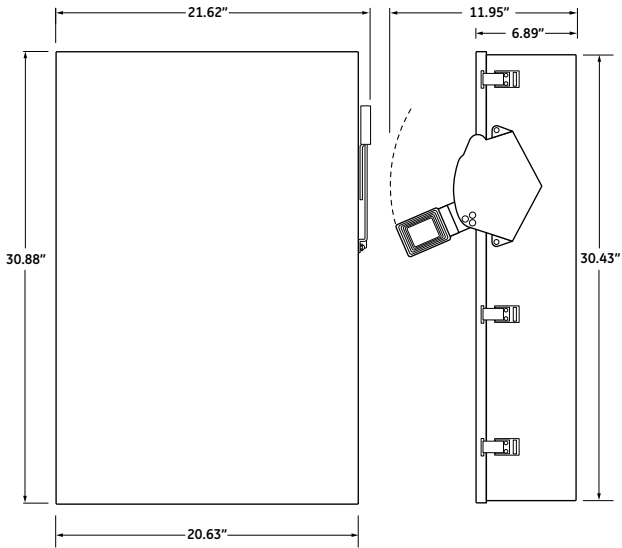
Agency Listing	UL1741 File Number E339960	
Max Voltage (Vdc)	600	
Max Continuous Current (A)	12 Circuit	180
	24 Circuit	360
Circuit Protection	Fuse	
Max Fuse Size (A)	15	
Fuse Type (600Vdc)	Midget 10x38 mm <sup>3</sup>	
Operating Temperature Range	-30°C to 50°C (-22°F to 122°F)	
Wire Range	Input	#14 - #6AWG
	Output	350kcmil - #6AWG
Enclosure Types	NEMA 3R	NEMA 4X
Weight (lbs)	12 Circuit	19
	24 Circuit	20
Material	G90	Fiberglass
Finish	White Powder Coat	N/A
Mounting Orientation	Vertical	Vertical or Flat

<sup>3</sup> Not provided

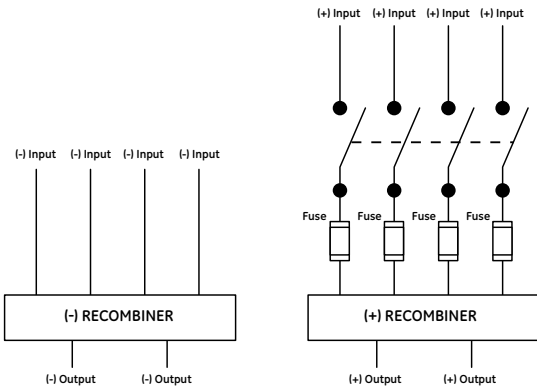
# Recombiner Box with Disconnect – Fusible

## Recombiner Box Dimensional Drawing

NEMA 4

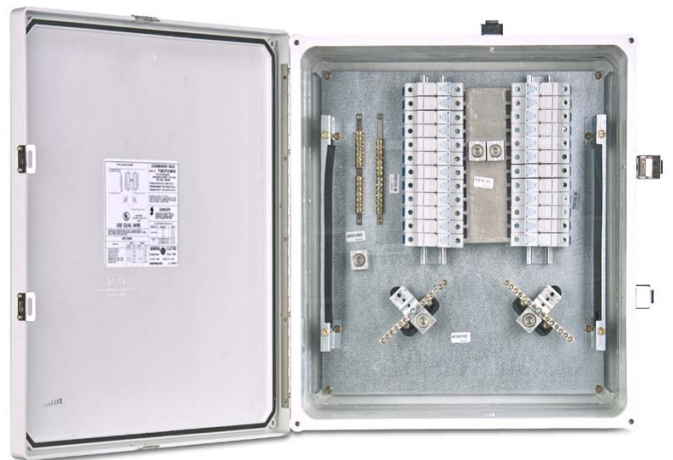
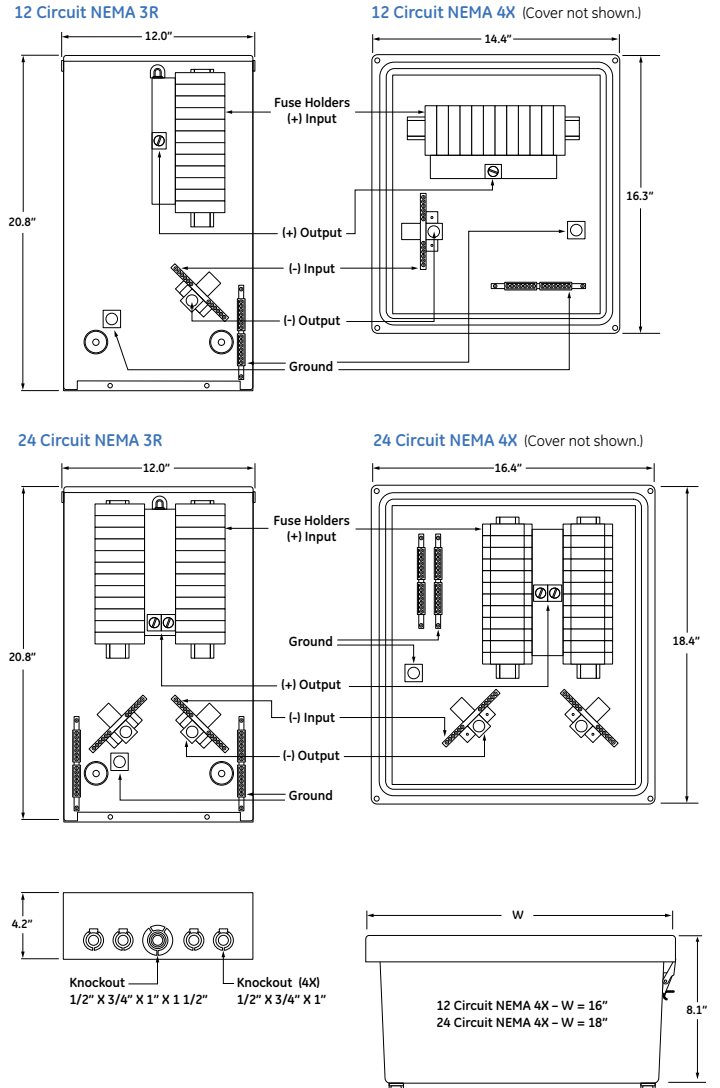


## Recombiner Box Wiring Diagrams



# Combiner Box – Fusible

## Combiner Box Dimensional Drawings



# 600Vdc Disconnects

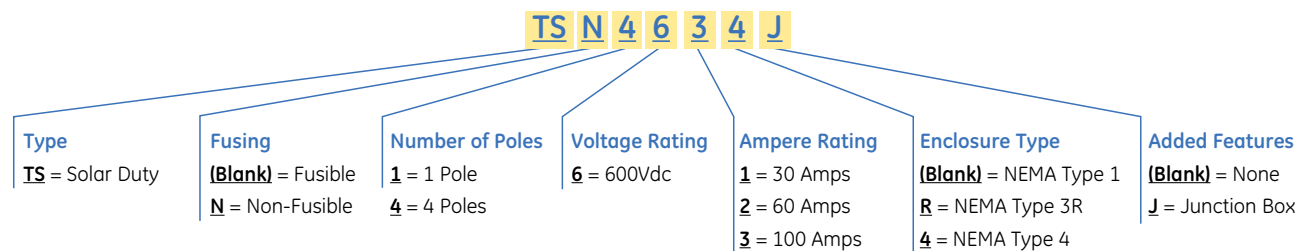
One-Pole			Non-Fusible		Fusible	
No. of Poles	Amps	Isc Rating - Amps (NEC)	Type 1	Type 3R	Type 1	Type 3R
1	30	19.2	TSN161	TSN161R	TS161	TS161R
1	60	38.4	TSN162	TSN162R	TS162	TS162R
1	100	64.0	TSN163	TSN163R	TS163	TS163R

Four-Pole <sup>1</sup>			Non-Fusible		Fusible	
No. of Poles	Amps	Isc Rating - Amps (NEC)	Type 3R	Type 4 <sup>2</sup> J-Box Configuration	Type 3R	Type 4 <sup>2</sup> J-Box Configuration
4	100	64	TSN463R	TSN4634J	TS463R	TS4634J

<sup>1</sup> Available with "-BA" suffix for ARRA compliance

<sup>2</sup> Oversized enclosure with factory installed negative lug.

## Product Number Structure



## Mechanical Specifications

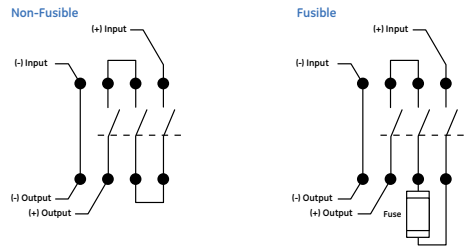
	Four-Pole Disconnect	Four-Pole Disconnect w/ Junction Box	One-Pole Disconnect	
Agency Listing & File Number	UL98B E349257	UL98B E349257	UL98 E4669	
Poles	4	4	1	
Voltage Rating/Pole (Max)	600Vdc	600Vdc	600Vdc	
Ampere Rating per Pole	100A	100A	30A/60A/100A	
Construction	Fusible & Non-Fusible	Fusible & Non-Fusible	Fusible & 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, 30A)
	45 (fuse)	63 (fuse)	14 (fuse, 30A)	16 (fuse, 30A)
			15 (non-fuse, 60/100A)	17 (non-fuse, 60/100A)
		17 (fuse, 60/100A)	19 (fuse, 60/100A)	
Mounting Orientation	Vertical	Vertical & 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/Al (3) 14-4 Cu/6-4 Al	(3) 10-1/0 Cu/Al

# 600Vdc Disconnects

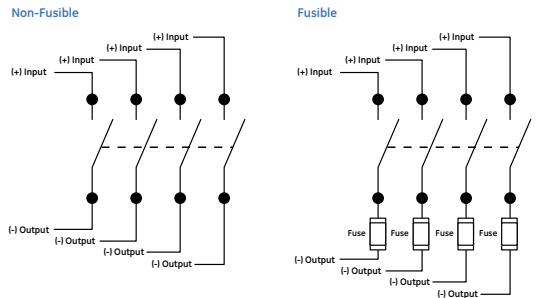
## Accessories

Description	For Use with		Product Number
DPDT Auxiliary Contact	One-pole	30A (Type 1/3R)	THAUX21D
SPDT Auxiliary Contact	One-pole	30A (Type 1/3R)	THAUX61S
DPDT Auxiliary Contact	One-pole	60/100A (Type 1/3R)	THAUX64D
SPDT Auxiliary Contact	Four-pole	Type 3R and Type 4	THAUX64S
Hub Kits - Conduit Size 3/4"	One-pole & Four-pole	Type 3R	TC75
Hub Kits - Conduit Size 1"	One-pole & Four-pole	Type 3R	TC100
Hub Kits - Conduit Size 1 1/4"	One-pole & Four-pole	Type 3R	TC125
Hub Kits - Conduit Size 1 1/2"	One-pole & Four-pole	Type 3R	TC150
Hub Kits - Conduit Size 2"	One-pole & Four-pole	Type 3R	TC200
Hub Kits - Conduit Size 2 1/2"	One-pole & Four-pole	Type 3R	TC250

## Wiring Diagrams - One-Pole



## Wiring Diagrams - Four-Pole

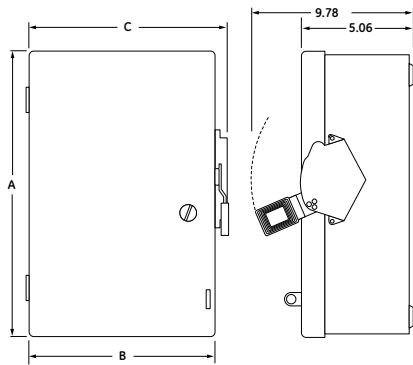


## Replacement Parts

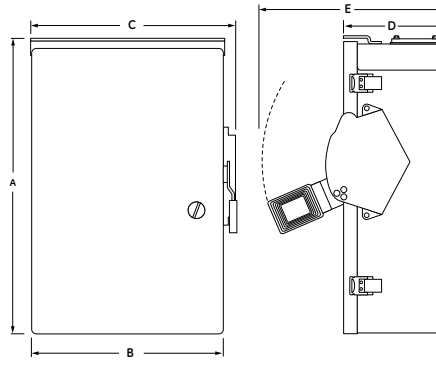
Description	For Use with		Product Number
Replacement Handle Kit	One-pole	30/60/100A (Type 1/3R)	THRPLHDL1S
Replacement Handle Kit	Four-pole	Type 3R and Type 4	THRPLHDL2S
Negative/Neutral Lug Kit	One-pole	30/60A (Type 1/3R)	TNI62
Negative/Neutral Lug Kit	One-pole	100A (Type 1/3R)	TNI63
Equipment Ground Lug Kit	One-pole	30/60A (Type 1/3R)	TGL1
Equipment Ground Lug Kit	One-pole	100A (Type 1/3R)	TNG3
100A Line/Load Lug Kit (4 lugs)	Four-pole	Type 3R and Type 4	TSLK411
100A Negative Lug Kit	Four-pole	Type 4	TSNK111
Equipment Ground Kit	Four-pole	Type 3R and Type 4	TGK8C
Closing Cap - White	One-pole & Four-pole	Type 3R	TCCPS

## Dimensional Drawings

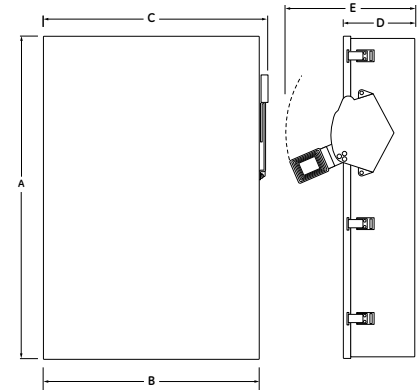
NEMA 1



NEMA 3R



NEMA 4



600Vdc, EverGold Solar Duty Disconnect  
NEMA Type 1

Ampere Rating	A	B	C
30A	14.88	8.39	8.82
60/100A	22.33	9.39	9.72

600Vdc, EverGold Solar Duty Disconnect  
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

600Vdc, EverGold Solar Duty Disconnect  
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

**NOTE:** All dimensions are in inches.  
All dimensions have  $\pm 0.125$  tolerance

**GE Energy**

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