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COMING SOON

# Renewable Energy Products

## Siemens Microinverter Features and Technical Data

### Productive

- Maximize energy production
- Resilient to dust, debris, and shading
- Performance monitoring per module

### Safe

- Low voltage DC
- Reduced Fire Risk

### Smart

- Quick & simple design, installation, and management
- 24/7 monitoring and analysis

### Reliable

- System availability greater than 99.8%
- No single point of system failure



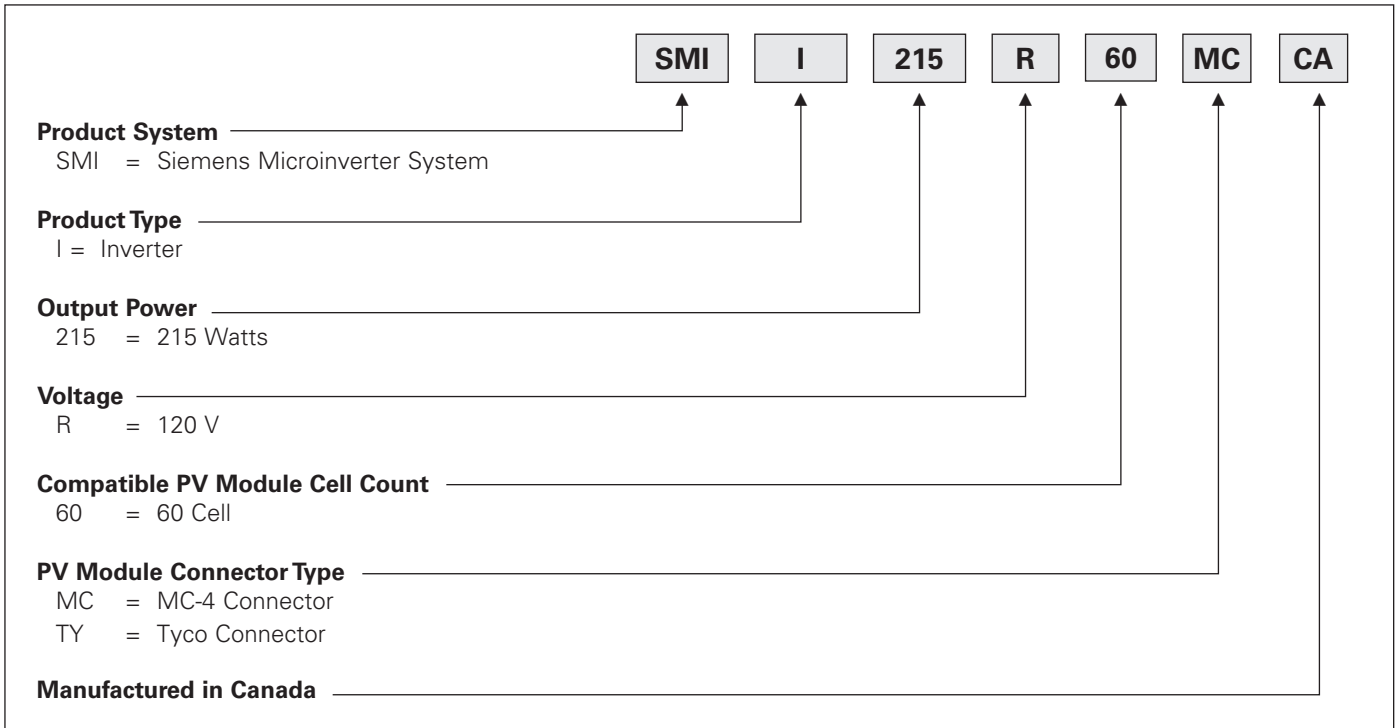
Input Data (DC)		
Recommended maximum input power (STC)	190 – 260 W	
Maximum input DC voltage	45 V	
Operating range	16 - 36 V	
Maximum DC short circuit current	15 A	
Maximum input current	10.5 A	
Compatibility	Pairs with most 60-cell PV modules	
Output Data (AC)		
	@ 208 VAC	@ 240 VAC
Nominal output current	1.0 A <sub>RMS</sub> (@ V <sub>nominal</sub> )	0.9 A <sub>RMS</sub> (@ V <sub>nominal</sub> )
Nominal voltage / range	208 / 183 – 229 V	240 / 211 – 264 V
Nominal frequency / range	60.0 / 59.4 – 60.5 Hz	60.0 / 59.3 – 60.5 Hz
Power factor	> 0.95	> 0.95
Maximum units per 20 A branch circuit	25 (three phase)	17 (single phase)
Maximum output fault current	1.05 A <sub>RMS</sub> over 3 cycles; 2.52 A <sub>peak</sub> 1.74 ms duration	
Efficiency		
CEC weighted efficiency	96.00%	
Peak inverter efficiency	96.30%	
Night time power consumption	46 mW	
Mechanical Data		
Operating temperature range	-40° C to +85° C	
Dimensions (W x H x D)	17.3 cm x 16.4 cm x 2.5 cm (6.8" x 6.5" x 1.0")*	
Weight	1.6 kg (3.5 lbs)	
Enclosure environmental rating	Outdoor – NEMA 6	
Communication	Power line carrier	
Warranty	25 years	
Compliance	UL1741/IEEE1547, FCC Part 15 Class B, CAN/CSA-C22.2 NO. 0-M91, 0.4-04, and 107.1-01	

\*Without mounting brackets

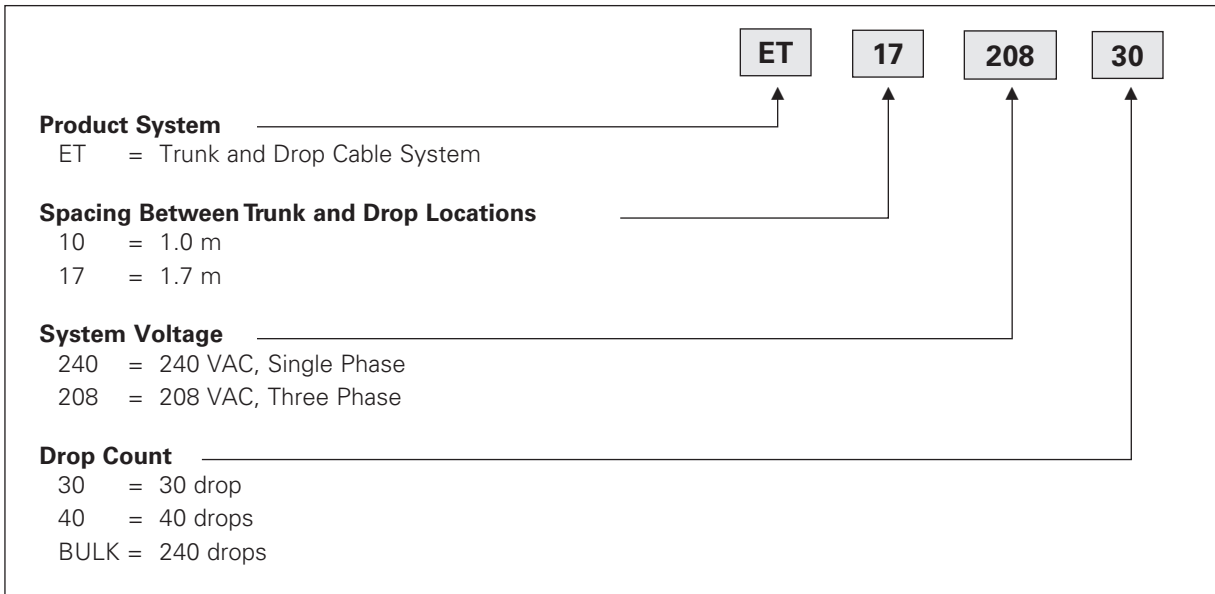
# Renewable Energy Products

## Catalogue Logic

### Siemens Microinverter System

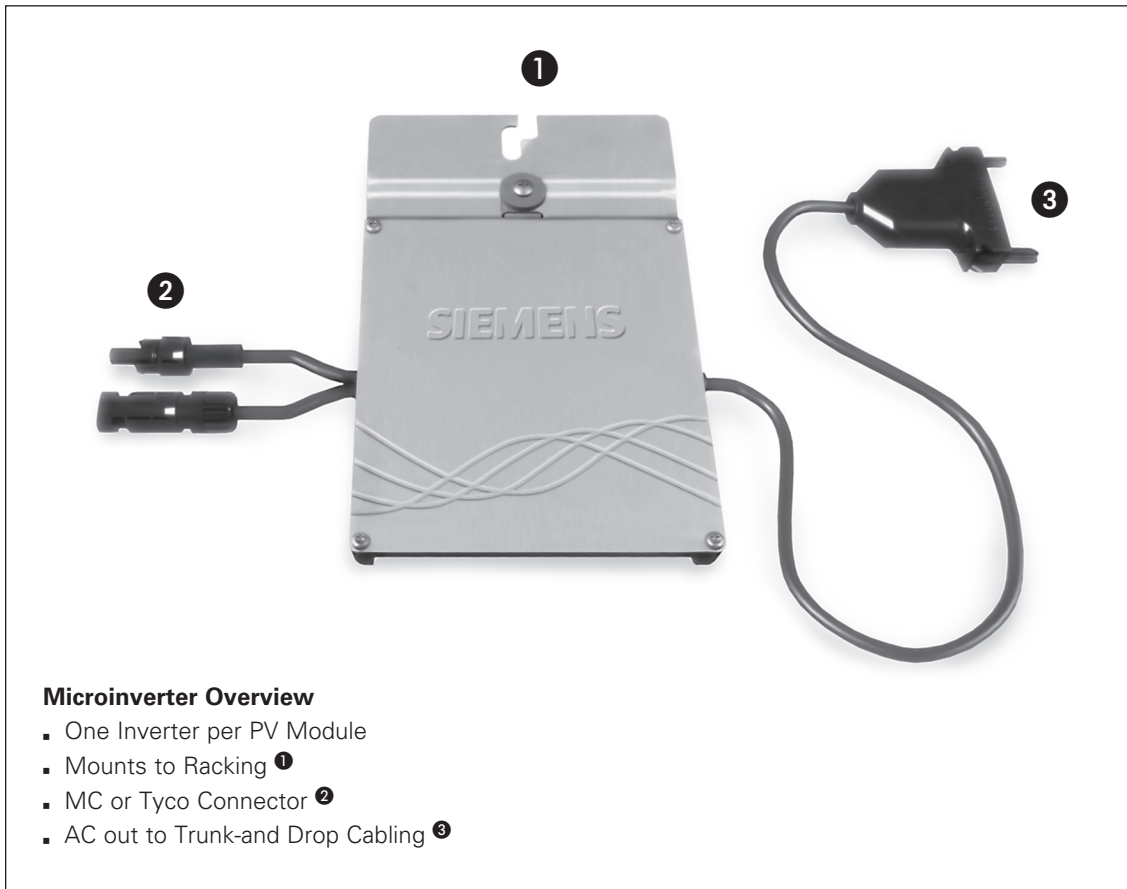


### Trunk and Drop Cabling



# Renewable Energy Products

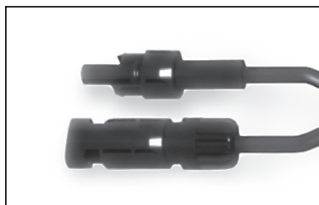
## Siemens Microinverter System



### Microinverter Overview

- One Inverter per PV Module
- Mounts to Racking ①
- MC or Tyco Connector ②
- AC out to Trunk-and Drop Cabling ③

Catalogue Number	Output (Watts)	Phase Voltage (V)	Connector Type	Country of Manufacture
SMII215R60MCCA	215	120	MC-4	Canada
SMII215R60TYCA	215	120	TYCO	Canada



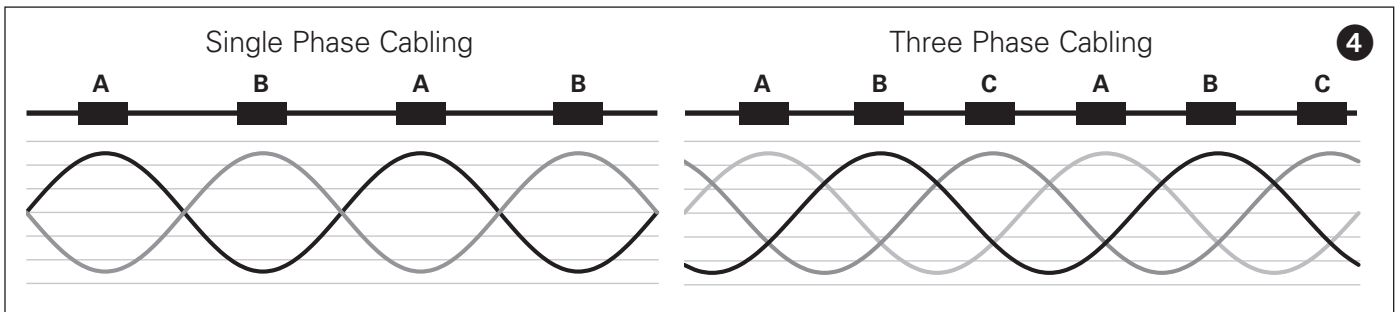
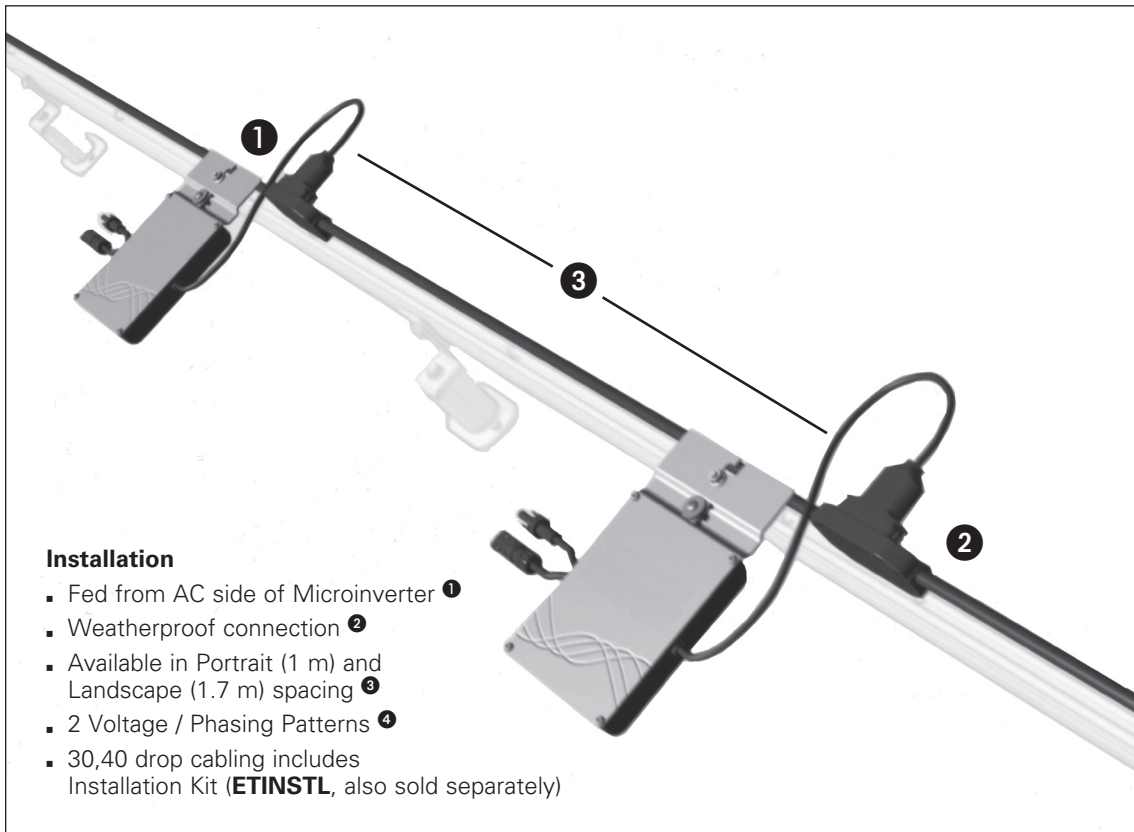
MC-4  
Connector



Tyco  
Connector

# Renewable Energy Products

## Microinverter Trunk and Drop Cabling



Catalogue Number	Cable Type	Length (m)	Voltage Rating (V)	Phase	Number of Drops
ET1024040	Trunk & Drop	1	240	Single	40
ET10240BULK	Trunk & Drop	1	240	Single	240
ET1724040	Trunk & Drop	1.7	240	Single	40
ET17240BULK	Trunk & Drop	1.7	240	Single	240
ET1020830	Trunk & Drop	1	208	Three	30
ET10208BULK	Trunk & Drop	1	208	Three	240
ET1720830	Trunk & Drop	1.7	208	Three	30
ET17208BULK	Trunk & Drop	1.7	208	Three	240

# Renewable Energy Products

## Microinverter System Components

### Envoy

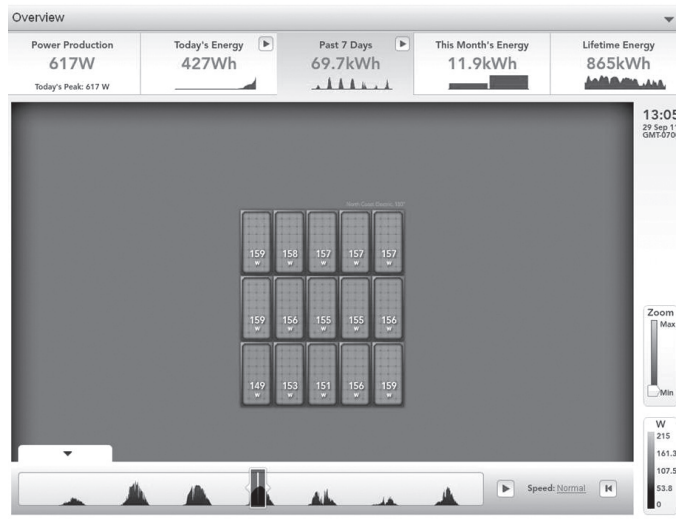
- Plugs into standard 120 V wall outlet and Ethernet cable
- Reads Power Line Carrier (PLC) Signal from each inverter
- Transmits PLC signal to Ethernet for display on Enlighten
- Transmits software / firmware updates from Enphase servers to each inverter
- CSA certified under file #240080 and UL 60950 listed
- Dimensions - Inches (mm)  
8.8 (224) x 4.4 (112) x 1.7 (43)



Catalogue Number	Description
IEMU03	Envoy Communications Gateway, indoor, PLC Bridge, Monitoring Included
EPLC01	Power Line Carrier Ethernet Bridge
ELCF120001	Line Communication Filter, Envoy Included

### Enlighten

- Online monitoring service
- Allows for 24/7 monitoring of individual PV modules
- Web and smart phone accessible
- Can mimic roof layout for easy understanding
- Can aggregate over several installs
- Easily troubleshoot faulty modules



Lifetime subscription included with each Envoy

# Renewable Energy Products

## Microinverter Accessories



Terminator Cap

Part Number: **ETTERM10**  
Required for end of each cable run



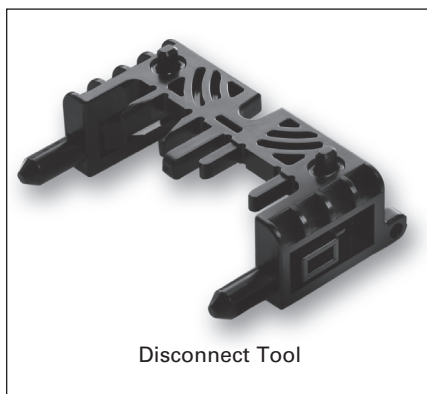
Seal Cap

Part Number: **ETSEAL10**  
Used to Fill unused Drop Positions on Trunk Cable



Splice Kit

Part Number: **ETSPLK05**  
Used to splice cables



Disconnect Tool

Part Number: **ETDISC05**  
Needed to remove Seal Cap

Catalogue Number	Part Description	Pack Quantity
<b>ETINSTL</b>	Installation Kit (4x Terminator Cap, 4x Seal Cap, 1x Disconnect Tool)	1
<b>ETTERM10</b>	Terminator Cap, 5 Pole	10
<b>ETSPLK05</b>	Splice Kit	5
<b>ETDISC05</b>	Disconnect Tool	5
<b>ETSEAL10</b>	Seal Cap for unused drop	10
<b>ETCLIP100</b>	Cable Clip for Trunk and Drop Cables	100

# Renewable Energy Products

## VersiCharge Features and Benefits



### Easy, 2 Button Controls

- Indicating Halo for easy status check
- Left Button stops and restarts charging
- Right Button sets 2, 4, 6, or 8 hour Charge Delay
- LED Indicators for each



### Cord Management

- All VersiCharge units come standard with 20 foot long cord
- Enclosure is designed for cord to be looped when not in use
- Built in J-Plug Holster stores and protects plug from weather, debris, and damage



### Load Control Compatible

- Inputs to remotely turn unit on or off
- Allows for control by home automation system or utility company



### Hinged Lid for Speed and Ease

- Hinged cover stays in place for easy maintenance
- No components in cover mean no risk of damage
- Ample spacing to work inside device
- One hand open / close
- Cover uses only 4 screws compared to up to 12 for competitors



### Adjustable Amperage

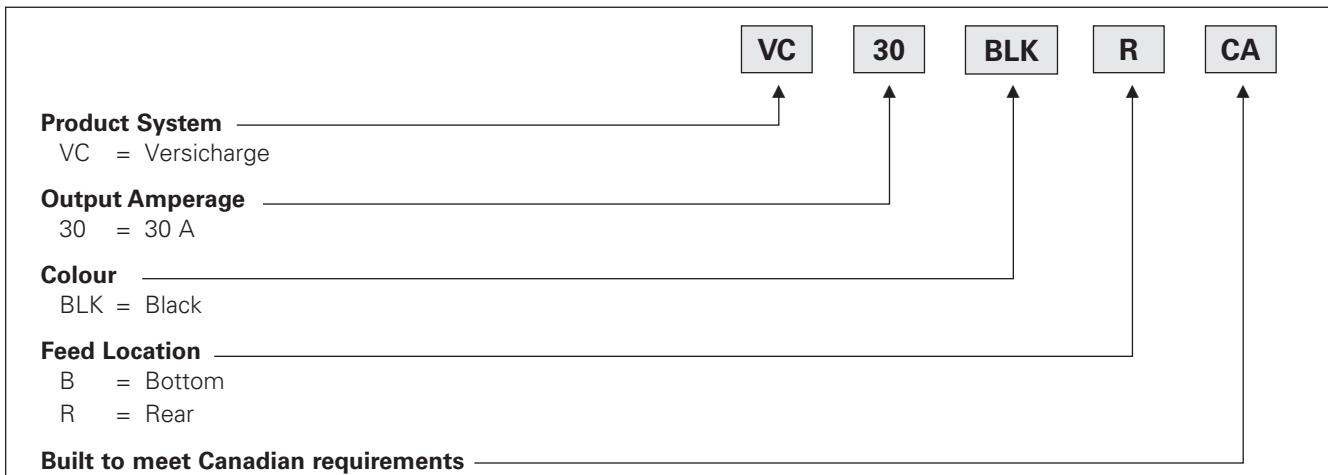
- Allows for changing charge rate based on customer preference



### NEMA 4 Rated Enclosure

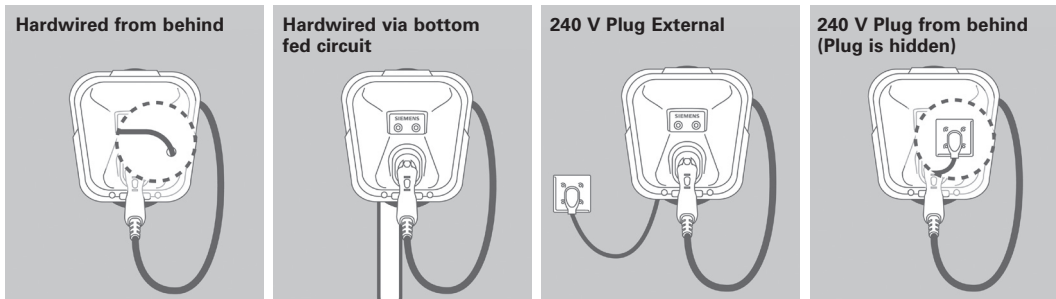
- Rated for direct water spray by sprinklers, hoses, or any weather
- ~50% recycled plastic content
- Glass impregnated plastic for strength and fire safety

## Electric Vehicle Supply Equipment



# Renewable Energy Products

## VersiCharge EVSE and Accessories



**Flexible  
Install  
Options**

**11**  
RENEWABLE  
ENERGY PRODUCTS



### Technical Data

Electrical	
Input voltage	208 – 240 VAC
Circuit requirement	40 Amperes
Output power	Up to 7.2 kW
Input power connections	Line 1, Line 2, Earth Ground
Mechanical	
Dimensions - Inches (mm)	16.5 (419) x 16.5 (419) x 6.5 (165)
Wall weight - lbs (kg)	21 (9.53)
Enclosure	NEMA 4
Connector	J1772
Safety and Operational	
Standards Compliance	UL and cUL listed under file E348556
Operating Temperature	-30° C to +50° C
Storage Temperature	-40° C to +60° C
Operating Humidity	Maximum 95% non-condensing
EMC compliance	FCC Part 15 Class B

### Electric Vehicle Chargers

Catalogue Number	Model	Output amperage	Color	Feed Location
VC30BLKRCA	VersiCharge	30	Black	Rear
VC30BLKBCA	VersiCharge	30	Black	Bottom

### Accessories

Catalogue Number	Model
VCMNTGBRK	Mounting Bracket for VersiCharge

# Notes

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