SolarEdge CSS – OD

Commercial Backup Interface For South Africa

BUI100 / BUI250

100 kW

250 kW

Seamless Backup Power: Designed to ensure continuous power supply and secure your business against power outages

- Seamless transfer between on and off-grid mode, eliminating downtime
- Fast and reliable switchover based on a static switch
- Backup power* capability that supports diesel generators (DG) as an alternative power source
- Built-in on-site manager device, SolarEdge ONE Controller, orchestrates on-site energy sources: PV, grid, storage and diesel generator
- PE to N bonding mechanism supporting NRS 097-2-1, designed to ensure safety conditions during backup system operation
- Easy to service with front-facing access
- Built-in transformer designed to isolate SolarEdge CSS battery from potential Grid/DG disturbances and voltage spikes

* The SolarEdge Battery Inverters, Battery Cabinets and Commercial Backup Interface are all required to support backup functionality.

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	BUI100-XX-XX-E1-XX-XX	BUI250-XX-XX-E3-XX-XX	
AC SPECIFICATIONS			
Maximum Backed Up Load[1][2]	1 x PCS: ≤ 50 2 x PCS: ≤ 100	3 x PCS: ≤ 150 4 x PCS: ≤ 200 5 x PCS: ≤ 250	kVA
Rated Power[3][4]	150	370	kVA
Rated Current	217	536	A
Input Phases	3 + N + PE		
Supported Grid Topologies	400/230V WYE		
Rated Voltage	400 L – L		Vac
AC Frequency Range	50 / 60 (3 phases)		Hz
On-Grid to Off-Grid Maximum Switchover Time	≤ 20		ms
PCS MCCB[5]	125 x 2	125 x 5	A
Grid MCCB[5]	250	630	A
Diesel Generator MCCB[5]	250	630	A
PV Inverter & Load MCCB (combined)[5]	250	630	A
Diesel Generator Bypass MCCB[6]	250	630	A
Grid Bypass MCCB[6]	250	630	A
Built-in Isolation Transformer	100	250	KVA
FEATURES			
Backup Configurations	Full & Partial[7] Site Backup		
Electrical Protective Class	I		
Over Voltage Protection (Lightning)	Type II		
PE to N Bonding (off – grid)	Integrated with Automated Control Switching		
Communications	Ethernet / RS485		
Diesel Generator / ATS Control[8]	Integrated Dry Contact (NC/NO/C)		
ATS Status Auxiliary Interface[9]	Two Digital Inputs		
Emergency Power Off Pushbutton (EPO)	1 x Built-in Pushbutton 1 x Interface for connecting remote 3rd party EPO switch (optional) 3 x interfaces for tripping external power sources: Grid / DG / PV (optional)		
HMI Screen	Integrated 7" Touch Screen		
SolarEdge ONE Controller	Integrated		
Meters[10]	Integrated SolarEdge Meters: Grid (x1) & Diesel Generator (x1)		

(1) Dependent on the number of Battery Inverters connected to the Commercial Backup Interface.
(2) In cases where more than one Battery Inverter is installed, an even number of Battery Cabinets must be coupled to each Battery Inverter. If there is an uneven installation of Battery Cabinets to Battery Inverters, the backed-up load must not exceed (≤) 50 kW.
(3) The maximum input power allowed for PV, Grid, and Diesel Generator.
(4) Potentially a larger PV inverter size could be installed. For BUI100 a PV inverter size of 250 kW, and for BUI250 a PV inverter size of 620 kW. At the stated PV inverter size, load drops might cause the Load and PV MCCB to trip. Please contact a SolarEdge representative to review the specific site load stability and profile.
(5) 3 Pole MCCB.
(6) 4 Pole MCCB.
(7) In use cases where the site has critical (backed-up) and non-critical loads, it is required to order an additional Metering Kit, CSS-O1-M-B02-XX. Further information for correct installation is provided in the Quick Installation Guide or User Installation Manual.
(8) Required to control a 3rd party Diesel Generator or Automatic Transfer Switch.
(9) Required to be used with 3rd party Automatic Transfer Switch Grid/DG breakers/contactors state position (on/off).
(10) SolarEdge Commercial Energy Meter with Modbus Connection: SE-MTR-3Y-400V-A.

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	BUI100-XX-XX-E1-XX-XX	BUI250-XX-XX-E3-XX-XX	
INSTALLATION SPECIFICATIONS			
Supported PV Inverters	SolarEdge Three Phase Commercial Inverters SolarEdge Three Phase Inverters with Synergy Technology		
Supported Battery Inverters	SolarEdge CSS – OD: Battery Inverter 50kW		
IP Protection	IP54 / Outdoor		
Operating Temperature(11)	(-)25 – (+)60		°C
Operating Relative Humidity	0 – 95		%
Cooling Method	Air Cooled		
Cabinet Dimensions (W x H x D)	900 x 2380 x 930	1200 x 2380 x 1105	mm
Cabinet Weight	960	1250	kg
Maximum Operating Altitude	≤3000		m
Noise	75		dBA
Shipping State	Factory Pre-Assembled & Pre-Wired		
Cable Entry Location	Bottom		
AC Input Cables Cross Section / Lugs Size(12)	PCS 1/2: Up to 35 mm^2 / M6 GRID: Up to 120 mm^2 / M10 DG: Up to 120 mm^2 / M10 LOAD & PV: Up to 120 mm^2 / M10 NEUTRAL / PE: Up to 120 mm^2 / M10	PCS 1 -5: Up to 35 mm^2 / M6 GRID: Up to 2x 300 mm^2 / M16 DG: Up to 2x 300 mm^2 / M16 LOAD & PV: Up to 2x 300 mm^2 / M16 NEUTRAL / PE: 2x 300 mm^2 / M16	
STANDARD COMPLIANCE			
Safety(13)	IEC 62477-1		
Emissions	IEC 61000-6-2, IEC 61000-6-4, IEC 61000-3-11, IEC 61000-3-12, IEC 61000-2-2, CISPR 11		
WARRANTY(14)			
System	10		Years

(11) Power derating may apply for ambient temperatures above (+)45°C.
(12) Copper and aluminum cable types are supported. Up to 2 Lugs could be installed on single bus bar input connection.
(13) SolarEdge Battery Inverters 50kW coupled to the BUI are certified to NRS 097-2-1:2017 & NRS 097-2-1:2023.
(14) For warranty details, conditions, and exclusions, refer to the SolarEdge Limited Product Warranty.

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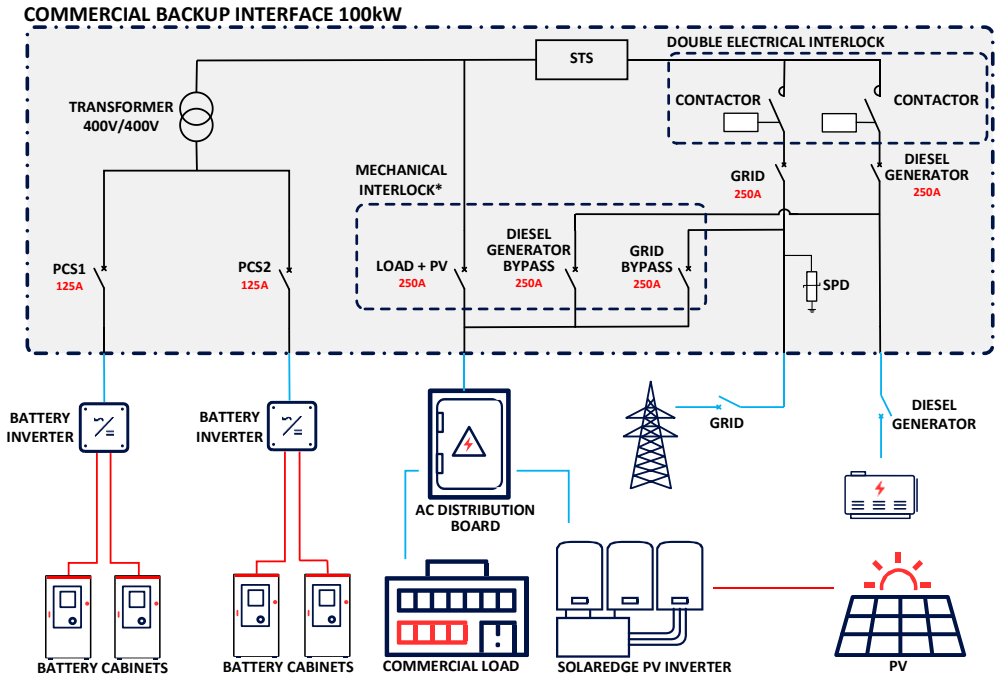
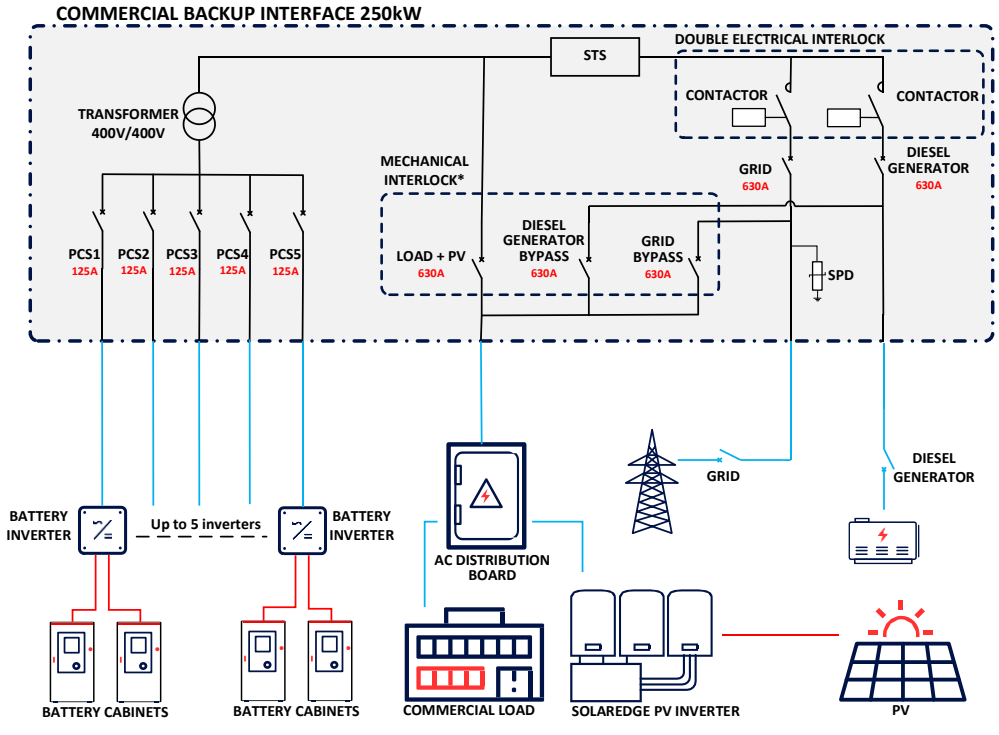
System Design

BUI100



*Only one of three MCCBs can be closed at a time

BUI250



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