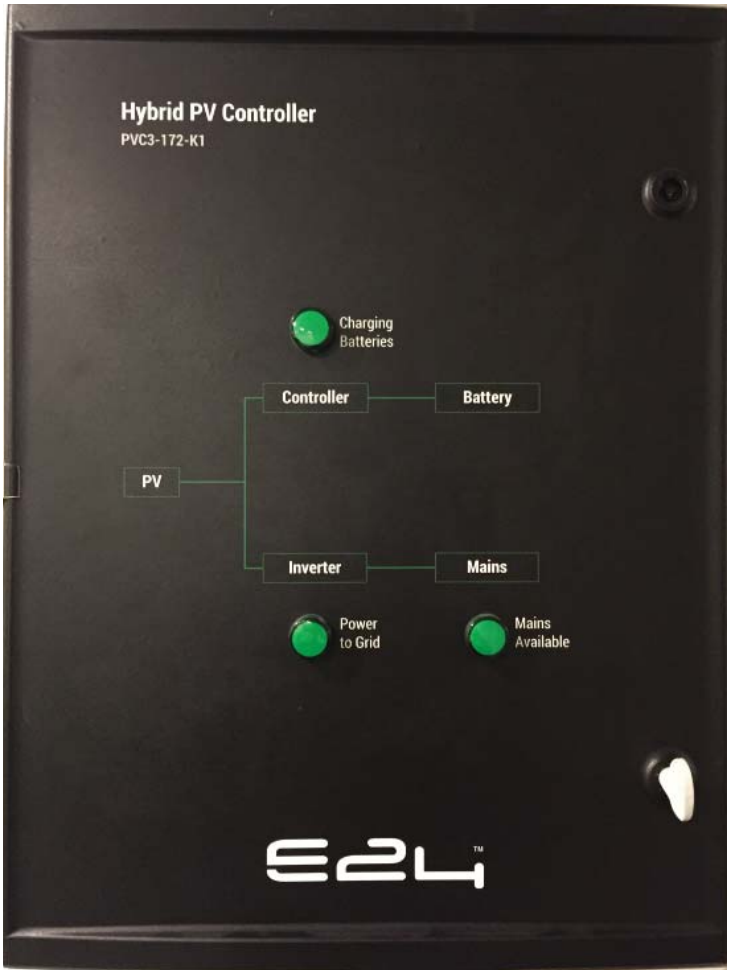
The PV Controller Series

P150E



PV Solar Controllers (PVC) control the flow of energy incoming from the PV panels. PVCs decide when to use the solar panels output to charge the battery bank and when to use it to feedback the grid (mains or generator).

PVCs are also the last line of defence before the solar power enters E24's system. It provide several protection measures from AC & DC circuit breakers to AC & DC surge arrestors.

Applications

PV Solar Controllers (PVC) are the brains that direct the solar panels output power. The PVC connects to the solar panels, Energy Storage Control & Bypass Panel (ESCB), PV Grid Connected Inverter (PVIE), and PV Solar Charge Controller (PVCC).

The PVC decides when to direct the solar power to charging the battery bank and when feed it back to the grid.

The PVC also plays an important safety role by providing several protection equipment from circuit breakers to fuses to surge arrestors.

Unmatched Features

Directing Solar Panels Output

The PVC directs the solar panels output to charging the battery bank or feeding back the grid. The PVC's decision is based on a signal received from the the Energy Storage Controller and Bypass Module (ESCB).

AC & DC Side Protection

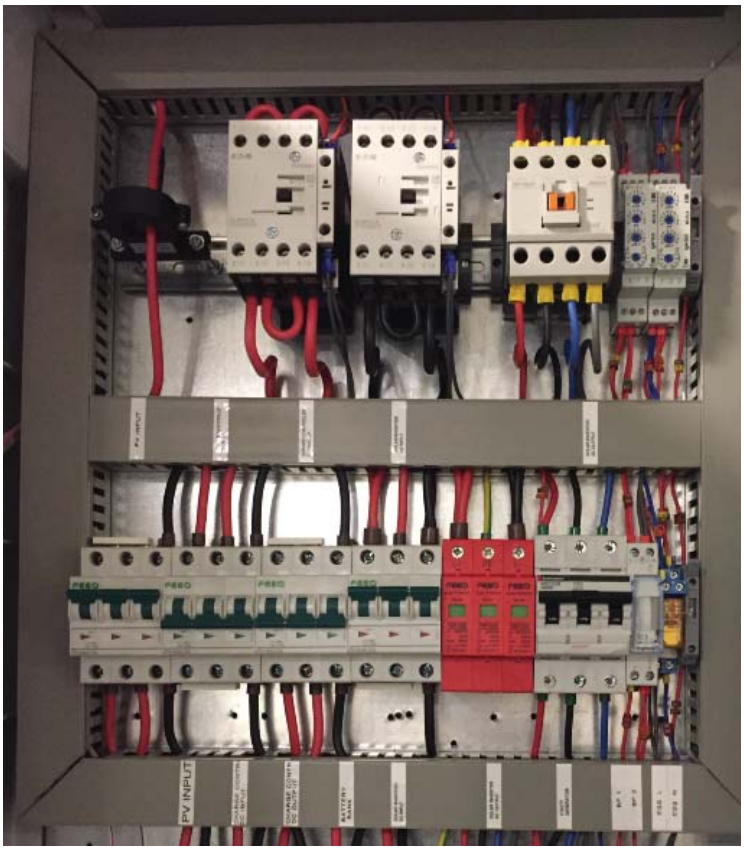
The PVC includes AC & DC circuit breakers, fuses, and surge arrestors that protect all E24 system components from any fault.

Battery Protection

The PVC cuts-off solar panels output during night time in order to protect the solar charge controller (PVCC) and battery bank from any unneeded surges or signals.

Standards

The PVC is built in complinace to the following standards:
IEC 60204-1, IEC 61439-1, IEC 61439-2, IEC 61000-4-2, IEC 61000-4-3, IEC 61000-4-4, IEC 61000-4-5, UL 508A, NEC 409



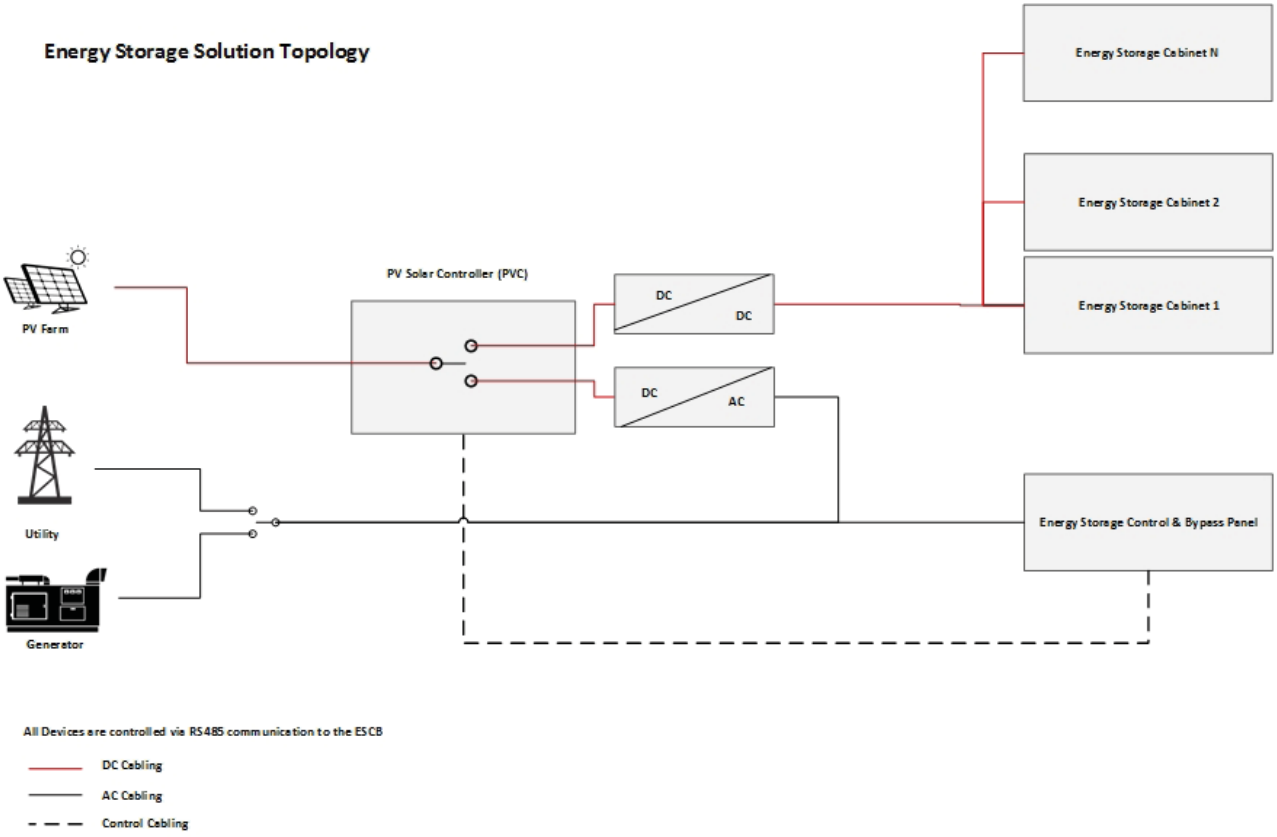
Operation

The PV Solar Controllers (PVC) are the brains that direct the solar panels output power as per the below Single Line Diagram.

The PVC desides whether to send the solar power to the solar charge controller (PVCC) and charge the battery bank or to the solar grid-connected inverter (PVIE) and feed back the grid with the power. The ESCB sends a signal to the PVC when the batteries are fully charged which in turn cuts off solar power from the PVCC and directs it to feedback the excess to the grid. When the charge level of the batteries is low again, the PVC restores the PV input to the PVCC and continuous charging the batteries.

The PVC also cuts-off solar panels output during night time in order to protect the solar charge controller (PVCC) and battery bank from any unneeded surges or signals. It could be programmed to operate in a certain time interval.

Finally, the PVC is the last line of defence before the solar power enters E24's system. It provides protection agianst the severe high DC voltages coming from the solar panels. It includes AC & DC circuit breakers, fuses, and surge arrestors that protect all E24 system components from any fault.



Technical Specifications

	PVC3-06K7	PVC3-13K4	PVC3-17K2	PVC3-20K2	PVC3-33K6	PVC3-55K0
DC Input:						
Max. DC Voltage (V):	1000 Vdc					
Max. DC Current (A):	17	36	43	51	84	138
Maximum Power (kW):	7	14	18	21	34	56
AC Output:						
Acceptable AC Voltage (V):	415 +/- 20%					
Maximum Current (A):	3x10	3x20	3x26	3x30	3x51	3x83
Frequency (Hz):	50/60 +/- 5%					
Mechanical Characteristics:						
Weight (Kg)	15	19	23	31	49	53
Dimensions HxWxD (mm)	400x500x250	500x700x270	500x700x270	600x800x270	600x800x270	800x1000x300
Footprint WxD (mm)	400x250	500x270	500x270	600x270	600x270	800x270

Ordering Information

Ref Number	Description
PVC1-2X4KI	PV Controller for 2 PV Strings of 4KW,430Vdc, Single Phase, 230 Vac, 50/60Hz
PVC3-2X8KI	PV Controller for 2 PV Strings of 8KW,430Vdc, Three Phase, 400/230Vac. 50/60Hz
PVC3-2X10KI	PV Controller for 2 PV Strings of 10KW,660Vdc, Three Phase, 400/230Vac. 50/60Hz
PVC3-2X13KI	PV Controller for 2 PV Strings of 13KW,660Vdc, Three Phase, 400/230Vac. 50/60Hz
PVC3-2X15KI	PV Controller for 2 PV Strings of 15KW,660Vdc, Three Phase, 400/230Vac. 50/60Hz
PVC3-2X18KI	PV Controller for 2 PV Strings of 18KW,660Vdc, Three Phase, 400/230Vac. 50/60Hz
PVC3-2X20KI	PV Controller for 2 PV Strings of 20KW,660Vdc, Three Phase, 400/230Vac. 50/60Hz

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ISO 9001:2015

QUALITY STANDARD