

Introduction

Solar Energy Australia’s Guardian system should only be installed by a suitably qualified person. Solar Energy Australia holds no responsibility for systems that are under sized or perform below customer expectations.

It is the responsibility of the installer and/or integrator to have a comprehensive understanding of the Victron products be installed and application before installing the battery system.

The below recommended settings apply only to battery charge and discharge. All other settings should be reviewed and updated by the system installer.

SOC Deviation

State of Charge (SOC) can become inaccurate in some cases where the system does not get a full charge over a period of days and / or weeks.

SOC is calculated from coulombs in and out of the battery, where battery capacity is measured as a ‘C rate’. As the rate of charge and discharge change constantly, it is recommended that the battery system be fully charged once a week to recalibrate the SOC.

Table 1.1 below includes recommended systems for Victron Products

Product	Guardian 26	Guardian 38	Guardian 50
MultiPlus 48/1200/13-16 230V VE.Bus	YES	YES	YES
MultiPlus 48/1600/20-16 230V VE.Bus	YES	YES	YES
MultiPlus 48/2000/25-32 230V VE.Bus	YES	YES	YES
MultiPlus 48/3000/35-16 230V VE.Bus	YES	YES	YES
MultiPlus 48/3000/35-50 230V VE.Bus	YES	YES	YES
MultiPlus-II 48/3000/35-32 230V	YES	YES	YES
MultiPlus-II 48/3000/35-32 230V GX	YES	YES	YES
MultiPlus-II 48/5000/70-50 230V	YES	YES	YES
MultiPlus-II 48/5000/70-50 230V GX	YES	YES	YES
MultiPlus 48/5000/70-100 230V VE.Bus	YES	YES	YES
MultiPlus-II 48/8000/110-100 230V	YES	YES	YES
MultiPlus-II 48/10000/140-100 230V	NO	YES	YES
MultiPlus-II 48/15000/200-100 230V	NO	NO	YES
Quattro 48/5000/70-100/100 230V VE.Bus	YES	YES	YES
Quattro-II 48/5000/70-50/50 230V	YES	YES	YES
Quattro 48/8000/110-100/100 230V VE.Bus	YES	YES	YES
Quattro 48/10000/140-100/100 230V VE.Bus	NO	YES	YES
Quattro 48/15000/200-100/100 230V VE.Bus	NO	NO	YES

The above recommendations are based on the PCE operating under normal conditions with an efficiency of 95%, batteries at 48V and not in overload or surge.

Victron Integration Settings



Victron Multi & Quattro	General	Guardian 26	Guardian 38	Guardian 50
	Enable Battery Monitor	Yes		
	Total Battery Capacity	25400Wh	38400Wh	50800Wh
	SOC When Bulk Finished	90%		
	Charge Efficiency	0.96		
	Inverter			
	DC Input Low shutdown	10% SOC		
	DC Input Low Restart	45.4VDC		
	DC Input Low Pre-Alarm		44.4VDC	
	Low SOC Shutdown	Disable		
	Charger			
	Enable Charger	ON		
	Charge Current	100A	150A	200A
	Absorb Voltage	Disable		
	Float Voltage (Cyclic)	57.4VDC		
	Repeated Absorb Interval	N/A		
	Maximum Absorb Time	0 Hours		
	Battery Charge Curve	Fixed		
	Battery Type	Lithium		

Phoenix V.E. Direct Inverters	General	Guardian 26	Guardian 38	Guardian 50
	Dynamic Cut-Off	OFF		
	Low Battery Shutdown	44.4 VDC 10% SOC		
	Low Battery Restart & Alarm	45.4 VDC		
	Charge Detect	52VDC		

BMV & Smart Shunt	General	Guardian 26	Guardian 38	Guardian 50
	Battery Capacity	25400Wh	38400Wh	50800Wh
	Charged Voltage	57.4VDC		
	Discharge Floor	20%		
	Tail Current	4%		
	Charge Detection Time	1 Minute		
	Peukert Exponent	1.02		
	Charge Efficiency Factor	96%		
	Current Threshold	0.1A		
Time To Go Average Period	3 Minutes			

Solar MPPT and Charge Controllers	General	Guardian 26	Guardian 38	Guardian 50
	Max Charge Current	100A	150A	200A
	Charge Enabled	YES		
	Battery Pre-set	User Defined		
	Expert Mode	ON		
	Absorb Voltage	58.8VDC		
	Float Voltage (Cyclic)	57.4VDC		
	Equalisation Voltage	57.4VDC		
	Re-bulk Offset	0.4V		
	Absorb Duration	(Fixed)		
	Absorb Time	0 Hours		
	Equalisation Current Percentage	0%		
	Auto Equalisation	Disabled		
	Temperature Compensation	OFF		
Low Temperature Cut-off	0°C			