



## **Charging Parameters for SMA SUNNY ISLAND**





## 4.5.2 Battery (220#) // 221# Property

No.	Name	Description	Value	Default value	GenZ Value
221.01	BatTyp	Battery type	VRLA	-	VRLA
			FLA		
221.02	BatCpyNom	Nominal battery capacity C10 in Ah	100 Ah ... 10,000 Ah	166 Ah	Total Ah capacity of genZ bank
221.03	BatVtgNom	Nominal battery voltage in V	42.0 V ... 48.0 V	-	48V
221.04	BatTmpMax	Maximum battery temperature in °C (expert mode)	221.05 BatTmpStr ... 50°C	40°C	40°C
221.05	BatTmpStr	Temperature for start after stop due to overtemperature in °C (expert mode)	0°C ...	35°C	35°C
			221.04 BatTmpMax		
221.06	BatWirRes	Cable resistance of the battery connection in m Ω (expert mode)	0 m Ω ... 100 m Ω	0 m Ω	0 m Ω
221.07	BatFanTmpStr	Start temperature for theBatFanfunction of the multifunction relay in °C	20°C ...	40°C	40°C
			221.04 BatTmpMax		

## 222# Charger mode

No.	Name	Description	Value	Default value	GenZ Value
222.01	BatChrgCurMax	Maximum charge current of battery in A	10 A ... 900 A	-	0.5C of total genZ capacity
222.02	AptTmBoost	Absorption time of the boost charge in minutes	1 min ... 600 min	180 min	120 min
		(expert mode)		90 min	
222.03	AptTmFul	Absorption time of the full charge in hours	1.0 h ... 20.0 h	6	2 h
		(expert mode)			
222.04	AptTmEqu	Absorption time of the equalisation charge in hours	1.0 h ... 48.0 h	12.0 h	2 h
		(expert mode)			

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222.05	CycTmFul	Cycle time of the full charge in days (expert mode)	1 d ... 180 d	14 d	180 d
222.06	CycTmEqu	Cycle time of the equalisation charge in days (expert mode)	7 d ... 365 d	90 d	180 d
222.07	ChrgVtgBoost	Target value of the cell voltage for boost charge in V (expert mode)	2.20 V ... 2.70 V	2,40 V	2,39V
				2,40 V	
				2,55 V	
222.08	ChrgVtgFul	Target value of the cell voltage for full charge in V (expert mode)	2.30 V ... 2.70 V	2,45 V 2,50 V	2,39V
222.09	ChrgVtgEqu	Target value of the cell voltage for equalisation charge in V (expert mode)	2.30 V ... 2.70 V	2,45 V	2,39V
				2,55 V	
				2,50 V	
222.1	ChrgVtgFlo	Target value of the cell voltage for float charge in V (expert mode)	2.20 V ... 2.40 V	2,25 V	2,30V
222.11	BatTmpCps	Battery temperature compensation in mV/°C (expert mode)	0 mV/°C ...	4,0 mV/°C	0 mV/°C
			10 mV/°C		
222.12	AutoEquChrgEna	Automatic equalisation charge (expert mode)	Disable	Enable	Disable
			Enable		
222.13	BatChrgVtgMan	Manual target value of the battery charge voltage for disabled battery management in V (expert mode)	41.0 V ... 63.0 V	54,0 V	54,0 V

### 261# General

No.	Name	Description	Value	Default value	GenZ Value
261.03	Saisonenable	No for no seasonal adjustment or Yes for seasonal adjustment		-	Subject to system designer
				-	

262# BatUsage

No.	Name	Description	Value	Default value	GenZ Value
262.01	ProtResSOC	Range for protection during deep discharge as a percentage of the abttery capacity	Lead acid (VRLA, FLA)	10%	10%
262.02	BatResSOC	Range for the protection against deep discharge on the longest day of the year as a percentage of the batetry capacity.	Lead acid (VRLA, FLA) exclusively for increased selfconsumption (not battery backup)	30%	5%
		The range remains constant year-around when seasonal adjustment is deactivated.	Lead acid (VRLA, FLA)	5%	
			Battery backup system (also in combination with increased self-consumption)		
262.03	BUResSOC	Range for the battery backup system function.		0%	0%
262.04	PVResSOC	Range for maintaining the state of charge of the battery as a percentage of the battery capacity		5%	5%
262.05	MinSlfCsmplSOC	Range for increasing self-consumption on the shortest day of the year as a percentage of the battery capacity.	Lead acid (VRLA, FLA)	35%	35%
		When seasonable adjsutment is deactivated, this value is used year-round for increased self-consumption.			