

Charge Controllers



SunSaver-6/10/20

5 Year Warranty



SunGuard



ProStar-15M/30M

Model	SunGuard	SunSaver 6L	SunSaver 10L	SunSaver 10L/24	SunSaver 20L	SunSaver 20L/24	ProStar 15	ProStar 15M	ProStar 30	ProStar 30M	ProStar 15M-48V	
Mfg	Morningstar											
Regulation	PWM series											
Voltage	V	12	12	12	24	12	24	12/24*	12/24*	12/24*	12/24*	48
Battery type selection		No					Yes					
LCD		No					No	Yes	No	Yes	Yes	
Solar current	A	4.5	6.5	10	10	20	20	15	15	30	30	15
Load current	A	4.5	6	10	10	20	20	15	15	30	30	15
Consumption	mA	6	6 a 10	6 a 10	6 a 10	6 a 10	6 a 10	22/25	22/25	22/25	22/25	28
Load voltage	V	14.1	14.4	14.4	28.8	14.4	28.8	Depende do tipo de bateria				
Low Voltage Disconn	V	N.A.	11.5	11.5	23.0	11.5	23.0	11.4	11.4	11.4	11.4	11.4
Equalization Voltage	V	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	Depende do tipo de bateria				
Size	mm	152x56x33					153x105x55					
Weight	kg	0.09	0.28	0.28	0.28	0.28	0.28	0.4	0.4	0.4	0.4	0.4
Part#		12313	10403	10404	12307	12308	12309	17601	17602	10350	14574	17603

\* Automatic selection, all table voltages multiplied by 2 for 24V and by 4 for 48V

Model	SunLight-10	SunLight-10/24	SunLight-20	SunLight-20/24	
Mfg	Morningstar				
Regulation	PWM series				
Voltage	V	12	24	12	24
Solar current	A	10	10	20	20
Load current	A	10	10	20	20
Consumption	mA	8	9	8	9
Load voltage	V	14.4	28.8	14.4	28.8
Low Voltage Disconn	V	11.7	23.4	11.7	23.4
Equalization Voltage	V	N.A.	N.A.	N.A.	N.A.
Size	mm	152x56x33	152x56x33	152x56x33	152x56x33
Weight	kg	0.28	0.28	0.28	0.28
Part#		11512	12310	12311	12312



SunLight-10/20

The SunLight controller is used for controlling lighting, with 10 selectable ranges, based on sunrise/sunset sensed by the solar panel.

Model	SHS-6	SHS-10	
Mfg	Morningstar		
Regulation	PWM série		
Voltage	V	12	12
Solar current	A	6	10
Load current	A	6	10
Consumption	mA	8,4	8,4
Load voltage	V	14,3	14,3
Low Voltage Disconn	V	11,5	11,5
Equalization Voltage	V	N.A.	N.A.
Size	mm	151x66x36	151x66x36
Weight	kg	0,113	0,113
Part#		29680	29681

SHS-6/10



Sunsaver x SHS

	SunSaver	SHS
Product Positioning	Industrial, leisure	Rural electrification
Applications	telecom, oil/gas, instrumentation, caravan, boats	solar home systems in developing countries
Design objective	high reliability, better battery charging	low cost
Current Ratings	6, 10 and 20 amps	6 and 10 amps
Voltage Ratings	12 or 24V versions	12V only
Overload protection	25% of ratings	None
Warranty	5 years	2 years
Certifications	CE, hazardous locations, NEC	CE, World Bank
Low voltage disconnect	yes, on "L" versions	yes; blinks loads as LVD warning (not suitable for industrial loads)
Switching	positive leg...complies with NEC	negative leg...does not comply with NEC*
Battery type	2 choices optimized for sealed or flooded	no battery type select
Regulation accuracy	accurate precision shunts	lower accuracy...uses voltage drop across FETs
Tropicalization	epoxy encapsulation	conformal coating on circuit board
Enclosure	anodized aluminum	plastic
Temperature Rating	rated -40C to +60C	rated -25C to +50C
Terminal Size	to 5.2 mm; #10 AWG	to 4 mm; #12 AWG

The SHS Controller is ideal for home solar systems up to 170W, targeting low cost, given the specifications of the World Bank and CE.