Key Features

- MPPT with conversion efficiency up to 99% under charging mode
- With high efficient MPPT operation scheme and adopting TI28035 chip
- Controller with Intelligent design and free lifelong online upgrade service.
- Compliance with 2002/95/EC environment protecting demands, and exclude Cadmium, hydride and fluoride materials.
- Using the well-known brand components, which make the devices can suffer temperature not less than 105℃. And Controller service life is designed with 10+ years in theory.
- Three Stages Charge mode: fast charge, constant charge, floating charge.
- 12V/24V/48V system auto detect for easy control.
- Nominal maximum solar/PV input is DC 150V
- Several Battery Types for option: Sealed lead acid, vented, Gel, NiCd battery. Other types of the batteries can also be defined.
- LCD and LEDs Display all kinds of parameter
- Free RS232 Communication Port. RS232 communication
- Providing free PC/Computer Monitoring Microsoft in 7 languages.
- Extensible LAN remote control.
- Packing: Controller + CD-ROM(microcomputer software) + communication wire +Anderson terminals;
- With CE, ROHS, FCC, PSE certifications
- 2 years warranty. And 3~10 years extended warranty service can be provided.

UPSEN

MPPT Solar Charge Controller

Smart 1 Series 12V/24V/48Vdc 40Amp - 60Amp

Technical Specification

Smart 1 Series		40A	50A	60A
Charge Mode		Maximum Power Point Tracking		
Method	3 stages: fast charge(MPPT),constant voltage,floating charge			
System Type	DC12V/24V/48V	Automatic recognition		
System Voltage	12V system	DC9V~DC15V		
	24V system	DC18V~DC30V		
	48Vsystem	DC36V~DC60V		
Soft Start Time	12V/24V/48Vsystem	≤10S		
Dynamic Response		500us		
Recovery Time				
Conversion Efficiency	12V/24V/48Vsystem	≥96.5%,≤99%		
PV Modules Utilization Rate	12V/24V/48Vsystem	≥99%		
Input Characteristics				
MPPT Working Voltage and Range	12V system	DC18V~DC150V		
	24V system	DC34~DC150V		
	48V system	DC65~DC150V		
Low Voltage Input Protection Point	12V system	DC16V		
	24V system	DC30V		
	48V system	DC60V		
Low Voltage Input Recovery Point	12V system	DC22V		
	24V system	DC34V		
	48V system	DC65V		
Max DC Voltage	12V/24V/48V system	DC160V		
Input Overvoltage Protection Point	12V/24V/48V system	DC150V		
Input Overvoltage Recovery Point	12V/24V/48V system	DC145V		
Max. PV Power	12V system	570W	700W	900W
	24V system	1130W	1400W	1700W
	48V system	2270W	2800W	3400W
Output Characteristics				
Selectable Battery Types (Default type is GEL battery)	12V/24V/48Vsystem	Sealed lead acid, vented, Gel, NiCd battery (Other types of the batteries also can be defined)		
Constant Voltage	12V/24V/48V system	Please check the charge voltage according to the battery type form.		
Floating Charge Voltage	12V/24V/48V system			
Over Charge Protection Voltage	12V system	14.6V		
	24V system	29.2V		
	48V system	58.4V		
Rated Output Current	12V/24V/48V system	40A	50A	60A
Current-limiting Protection	12V/24V/48V system	44A	55A	66A
Temperature Factor	12V/24V/48V system	±0.02%/℃		
Temperature Compensation	12V/24V/48V system	14.2V-(The highest temperature-25℃)*0.3		
Output Ripples(peak)	12V/24V/48V system	200mV		
Output Voltage Stability Precision	12V/24V/48V system	≤±1.5%		
Display				
LCD display		Input,output parameter and output power etc (check the LCD display instruction)		
LED display		3 LEDs indicates:Fault indicate light,charge indicate light,power source indicate light(check the LED instruction)		
Software Control through PC(communication port)		RS232 (matching) or LAN(optional)		
Protection				
Input Low Voltage Protection		Check the input characteristics		
Input Overvoltage Protection		Check the input characteristics		
Input Polarity Reversal Protection		yes		
Output Overvoltage Protection		Check the output characteristics		
Output Polarity Reversal Protection		yes		
Short-circuit Protection		Recover after eliminating the Short-circuit fault,no problem		
Temperature Protection		95℃		
Temperature protection		Above 85℃,decrease the output power,decrease 3A per		