

# SMARTEN ON, TENSION GONE

**PRIME** MPPT BASED SOLAR CHARGE CONTROLLER



Complete Protection  
Against Overcharge/  
Reverse Current /  
High PV/Over Temp.



Great Power  
Saving up to 30%



Automatic  
Battery selection



DSP Base  
Design For High  
Efficiency

IS 16242  
(Part 1): 2014



R-95000477



## TECHNICAL SPECIFICATION

MODEL : MPPT PRIME+ SERIES

	12V	24V	24V	48V
Battery Type	LA/Tubular/SMF			
Technology	Digital Processor Based High Efficiency Design			
Max. BATTERY Current Rating	30 AMP		50 AMP	
Max. PV Voltage Rating	45V	85V		120V
Max. Panel Install	500 Watt	1000 Watt	1500 Watt	3000 Watt
Battery Qty. 12V 100-220AH	01	02		04
Float Charging Voltage	13.7V±0.2V	27.4V±0.2V		54.8V±0.2V
Boost Charging Voltage For Tubular And SMF Battery	14.5V±0.2V	29V±0.2V		58V±0.2V
Boost Charging Voltage For LA Battery	14V±0.2V	28V±0.2V		56V±0.2V
Bulk/Absorption Voltage	14.8V±0.2V	29.6V±0.2V		59.2V±0.2V
Mains Connect	20% if battery volt. is 12.5v	20% if battery volt. is 25.0v		20% if battery volt. is 50.0v
	30% if battery volt. is 12.0v	30% if battery volt. is 24.0v		30% if battery volt. is 48.0v
	40% if battery volt. is 11.5v	40% if battery volt. is 23.0v		40% if battery volt. is 46.0v
	50% if battery volt. is 11.0v	50% if battery volt. is 22.0v		50% if battery volt. is 44.0v
Mains Disconnect	if Battery reaches boost level then after < 10 min. Mains Will be disconnect.			
MPPT To PV Power Connection Time	<15 Sec.			
Peak Efficiency	>94%			
SCC Type	MPPT			
<b>PROTECTIONS</b>				
Reverse PV Protection	Yes Provided, it will also show on display			
Reverse Current Flow to PV	Yes Provided, it will also show on display			
High PV Voltage	Yes Provided, it will also show on display			
Over Temperature	Yes Provided, If heat sink temperature goes above 100°C, system will shut down			
<b>DISPLAY PARAMETERS</b>				
Display Type	LCD Display			
Display Messages	Welcome, Smarten Website Address, System Capacity, PV Current, Battery Current, Battery Voltage, PV Voltage			
SCC Fault/Protection Status	Reverse PV/High PV voltage / High Temp.			
<b>SAFETY</b>				
HV Test Input to Earth	Leakage current <5MAmp. when 1.5 KV Applied for 1 Min.			
HV Test Output to Earth				
IR Test Input to Earth	<5MΩ between @ 500V DC			
IR Test Output to Earth				
<b>ENVIRONMENT</b>				
Operating Temperature	0°C To 40°C			
Storage Temperature	0°C To 50°C			
Operating Relative Humidity	90% Non-Condensing			
Fixing	Wall Mounted			



HOME UPS

SOLAR PCU

TUBULAR BATTERY


SMF BATTERY

**MPPT SOLAR**  
POWER CONDITIONING UNIT

**SOLAR**  
CHARGE CONTROLLER

**SOLAR**  
KITS & ACCESSORIES

 SMARTEN POWER SYSTEMS PVT. LTD.

Plot No. 374, Pace City-II, Sector-37, Gurugram, Haryana- 122001, India,  
 Toll Free No. : 1800 1800 649 (India)  +91 85069 09749, +91 94168 44281  
 Email- export@smartenpowersystems.com, info@smartenpowersystems.com