

SU-KAM MPPT SOLAR CHARGE CONTROLLER	Available in varied capacities			
	12 Volt / 20Amp.	24 Volt / 20Amp.	36 Volt / 20Amp.	48 Volt / 20Amp.

Su-Kam
Ek nayi soch

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Su-Kam
SOLAR CHARGE CONTROLLER



THE POWER OF SAVING MONEY

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Certifications
ISO 9001:2008
ISO 14001:2004
R&D Recognised by
MINISTRY OF SCIENCE & TECHNOLOGY
GOVERNMENT OF INDIA

Su-Kam
Toll Free Helpline No.: 1800-102-4423
24x7 call log in facility
Su-Buddy
SERVICE WITH SMILE

Su-Kam MPPT Solar Charge Controller

is a state-of-the-art device that draws solar energy and helps you get rid of heavy electricity bills besides providing a reliable battery back-up.

It can run the DC load directly without inverter.



Convert your existing inverter into a solar inverter

Once attached with your existing, normal Inverter, Su-Kam MPPT Solar Charge Controller converts it into a solar inverter.

It charges the battery as well runs the load when battery is fully charged and solar power is still available.

When solar power is not available, back-up is provided by the battery.

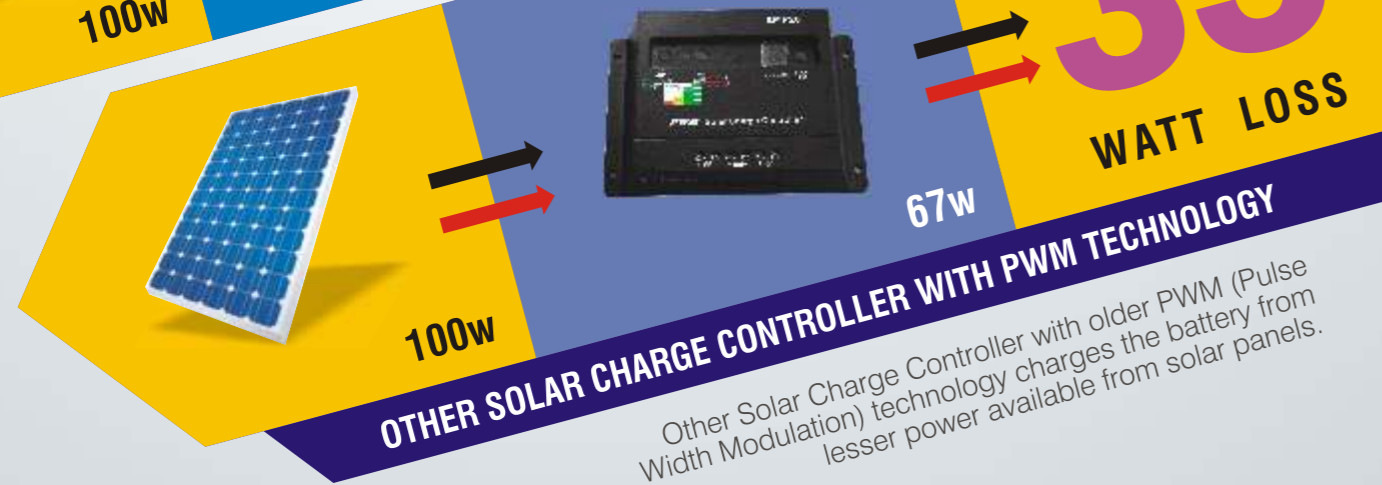
Advantage MPPT

(Maximum Power Point Tracking)

Su-Kam MPPT Solar Charge Controller

- Draws the maximum power available from the solar panel.
- Can draw up to 96W power from a 100W solar panel.
- Controls the variation of solar power.
- Helps in saving money right from installation.

SU-KAM MPPT SOLAR CHARGE CONTROLLER



Other Solar Charge Controller with older PWM (Pulse Width Modulation) technology charges the battery from lesser power available from solar panels.

12 V DC LOAD



25 WP
20 HOURS A DAY



25 WP
8 HOURS A DAY



10 WP
4 HOURS A DAY



180 AH /
12 V



120 WP



120 WP



120 WP

TOTAL LOAD:
25W + 25W + 10W = 60W

TOTAL ESTIMATED CONSUMPTION
in a day: 740WH

SELECTING RIGHT CAPACITY OF BATTERY AND SOLAR PANEL

For Su-Kam MPPT Solar Charge Controller of varied capacity

ESTIMATED LOAD:
60 W (25 W Fan + 25 W TV+ 10 W LED) as shown in the diagram

Su-Kam MPPT Solar Charge Controller capacity	Battery capacity	Solar panel capacity
12V/27AMP	12V/180AH	350-360 WP
24V/27AMP	24V/180AH	700-720 WP

V= Volt Amp= Ampere (Current) AH= Ampere Hour WH= Watt Hour (Power Consumption) WP= Watt Power

Varied Capacities, Different Backup

12 V DC LOAD



ESTIMATED LOAD: 25+25+5+5=60W

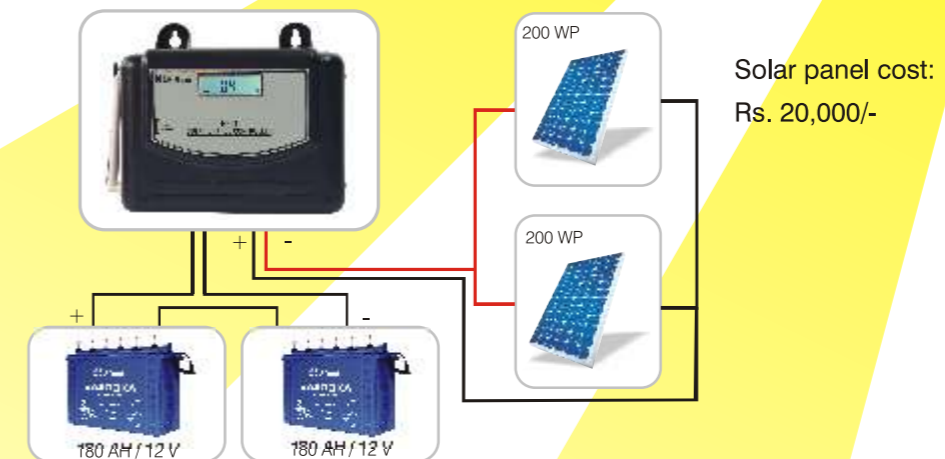
Battery capacity	Solar panel capacity	Back-up
12V/50AH	100 WP	8-9 Hrs.
12V/100AH	150 WP	15-16 Hrs.
12V/150AH	200 WP	22-23 Hrs.
12V/180AH	200 WP	30-32 Hrs.

Great Savings

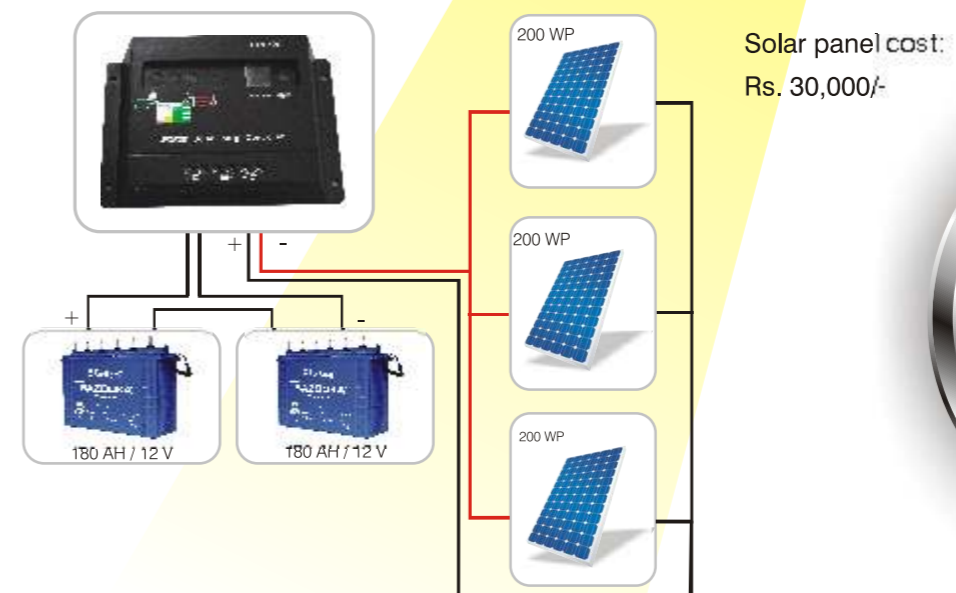
More saving everyday, as Su-Kam MPPT Solar Charge Controller draws up to 30% extra per 100 Watt solar panel. Thereby, you require lesser panels and save money.



SU-KAM MPPT SOLAR CHARGE CONTROLLER OF 24V/27AMP

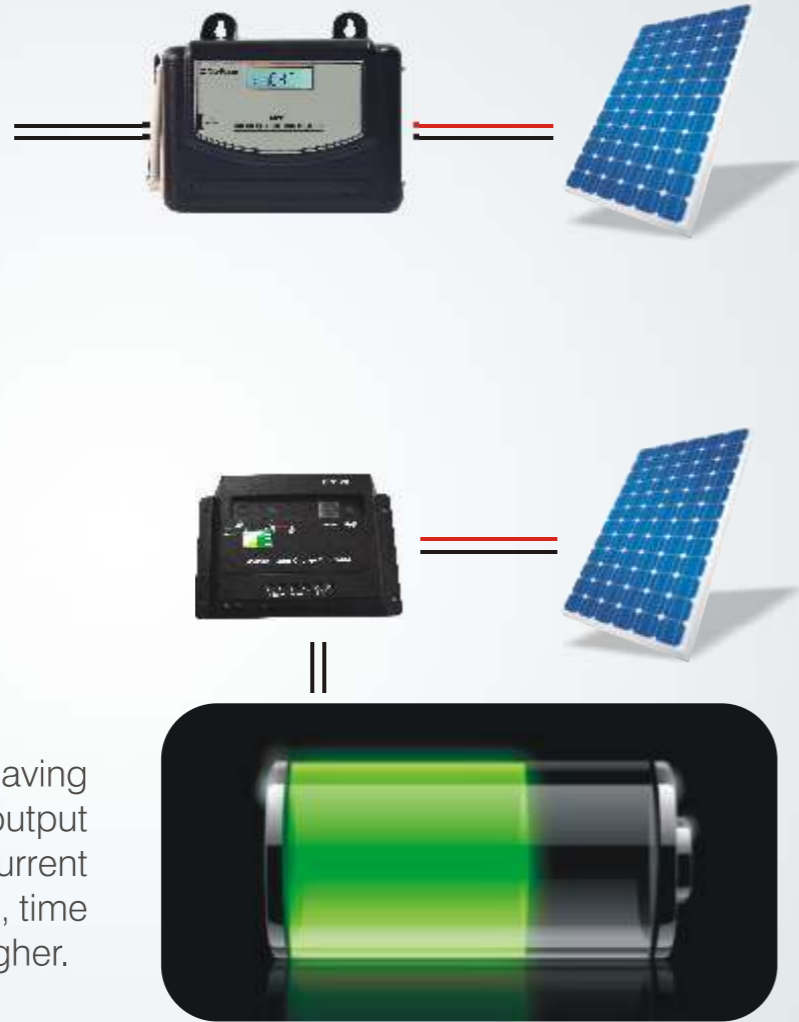


OTHER PWM SOLAR CHARGE CONTROLLER



Faster Battery Charging

Su-Kam Solar Charge Controller's innovative MPPT Technology enhances the output current. Consequently, battery gets charged faster.



With other charge controllers having older PWM technology, the output current is same as the input current or at times even lesser. Hence, time taken for charging battery is higher.

Increased Battery Life

Su-Kam MPPT Solar Charge Controller has:

- Switch for selecting right type of battery (Lead acid, alkaline, tubular, or it can even charge lithium ion battery).
- Automatic selection of battery capacity.
- Automatic Temperature Compensation and six state battery charging increase battery life by 30%.



Su-Kam MPPT Solar Charge Controller gets you an added advantage during winter season when the Sun comes for little duration. Even in that limited time, it ensures the battery is charged fully.

Automatic Temperature Compensation (ATC)

Adjusts battery charging by sensing varied outside temperature

NORMAL BATTERY CHARGING SCENARIO (WITHOUT ATC)



First time in India, Su-Kam introduces MPPT Solar Charge Controller with **ATC (Automatic Temperature Compensation) technology** which automatically senses the ambient temperature and accordingly takes control of charging, overcharging and under charging to maximize battery performance. In effect, increases the battery life by 30% and provides excellent battery back-up.

ATC

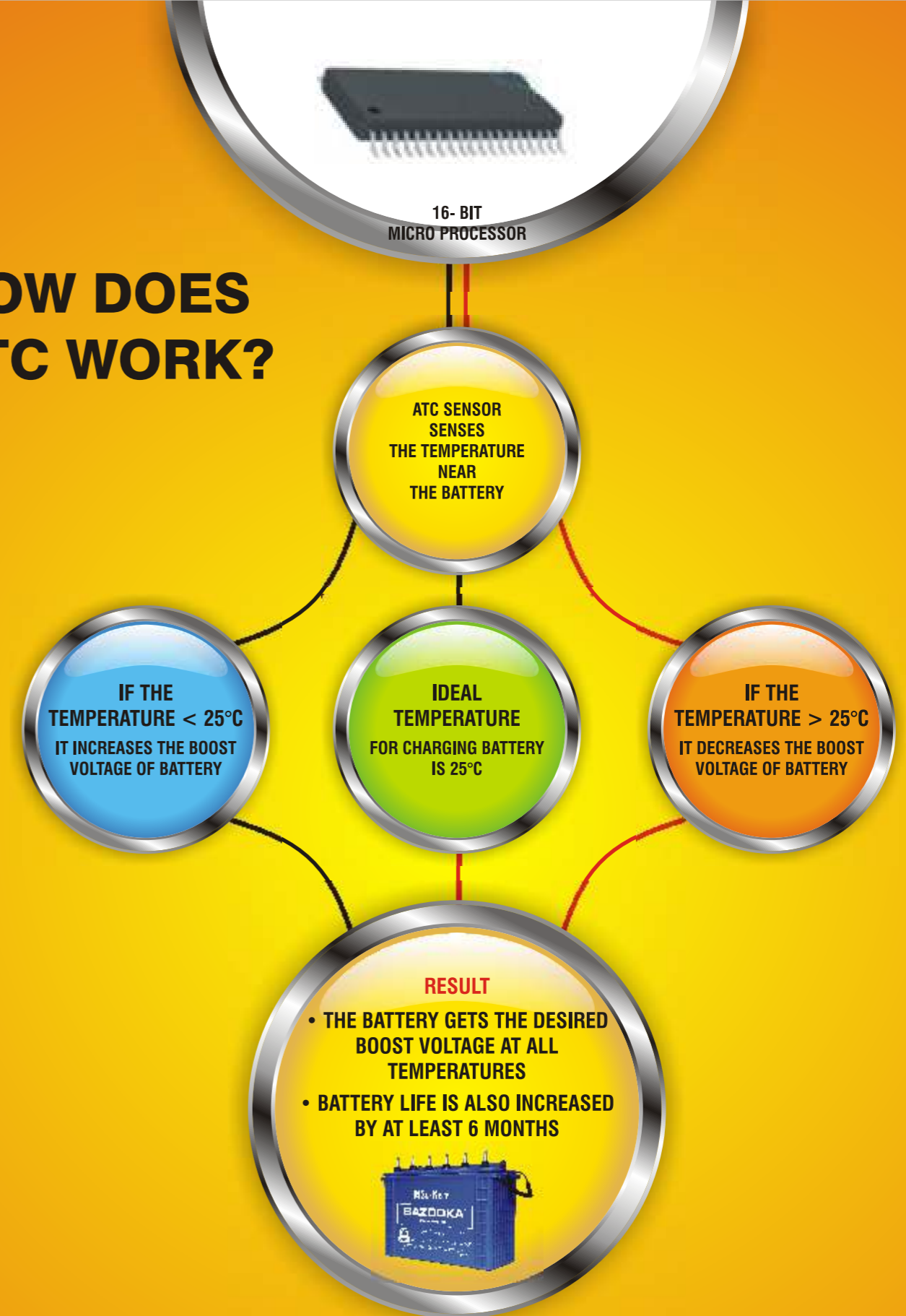
TECHNOLOGY





Senses temperature, adjusts charging

HOW DOES ATC WORK?



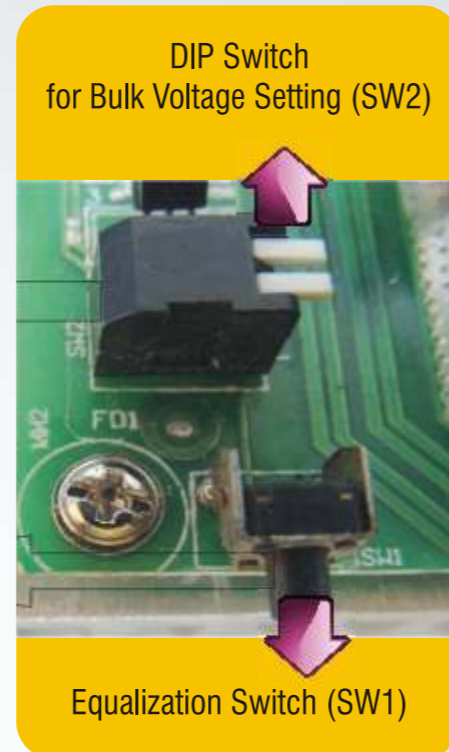
BENEFITS OF ATC TECHNOLOGY:

1. Controls over-charging and under-charging of the battery.
2. Low maintenance: Less frequent water topping.
3. Increases battery life by at least 6 months.
4. Helps in increasing backup time as well as battery life.

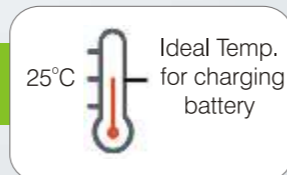
Ensuring Optimum Specific Gravity for better performance

- At different temperature levels, different bulk voltage setting is required to adequately charge and not over/under-charge the battery. Specific Gravity of the acid level in a battery also changes accordingly.
- With the help of a DIP Switch installed in the Su-Kam MPPT Solar Charge Controller, the bulk voltage setting can be adjusted as per the following chart:

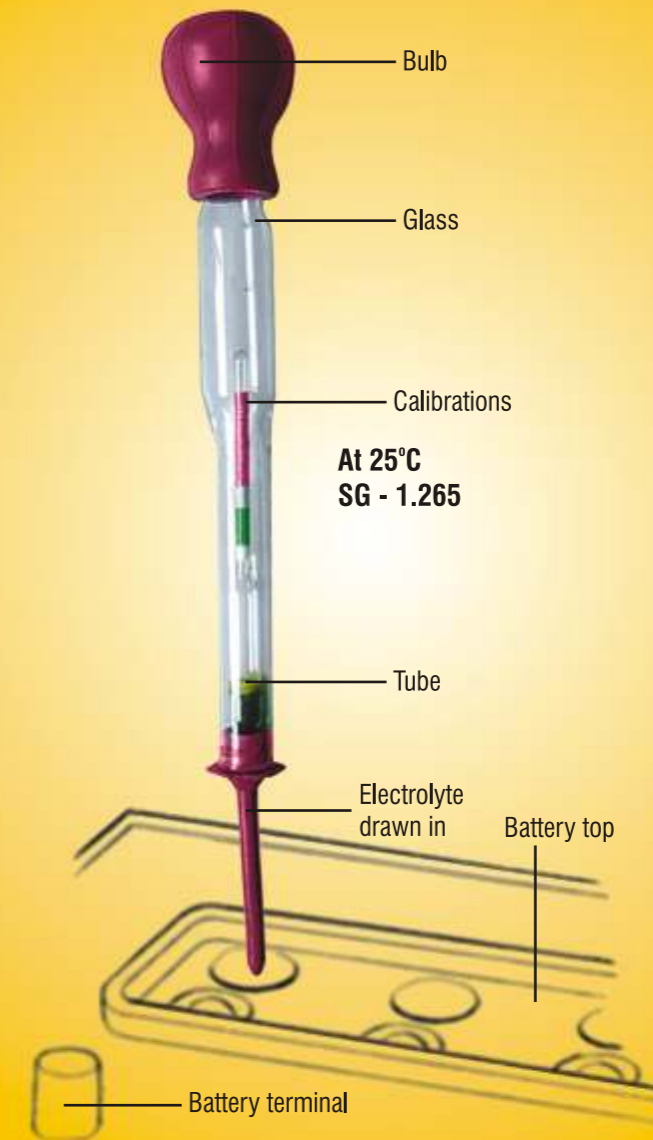
Battery Bulk Voltage Setting (SW2)				
Voltage	Default 14.2/28.4	13.8/ 27.6	14.0/ 28.0	14.4/ 28.8
SW 2 Position-1	OFF	OFF	ON	ON
SW 2 Position-2	OFF	ON	OFF	ON



Temperature (°C)	Bulk Voltage for Tubular Battery	Specific Gravity
-10	14.98	?
00	14.85	1.294
10	14.67	1.285
20	14.49	1.265
25	14.40	1.271
30	14.31	?
35	14.22	?
40	14.13	1.253
45	14.04	?
50	13.95	?



Charging of the battery can be checked as per the following chart:



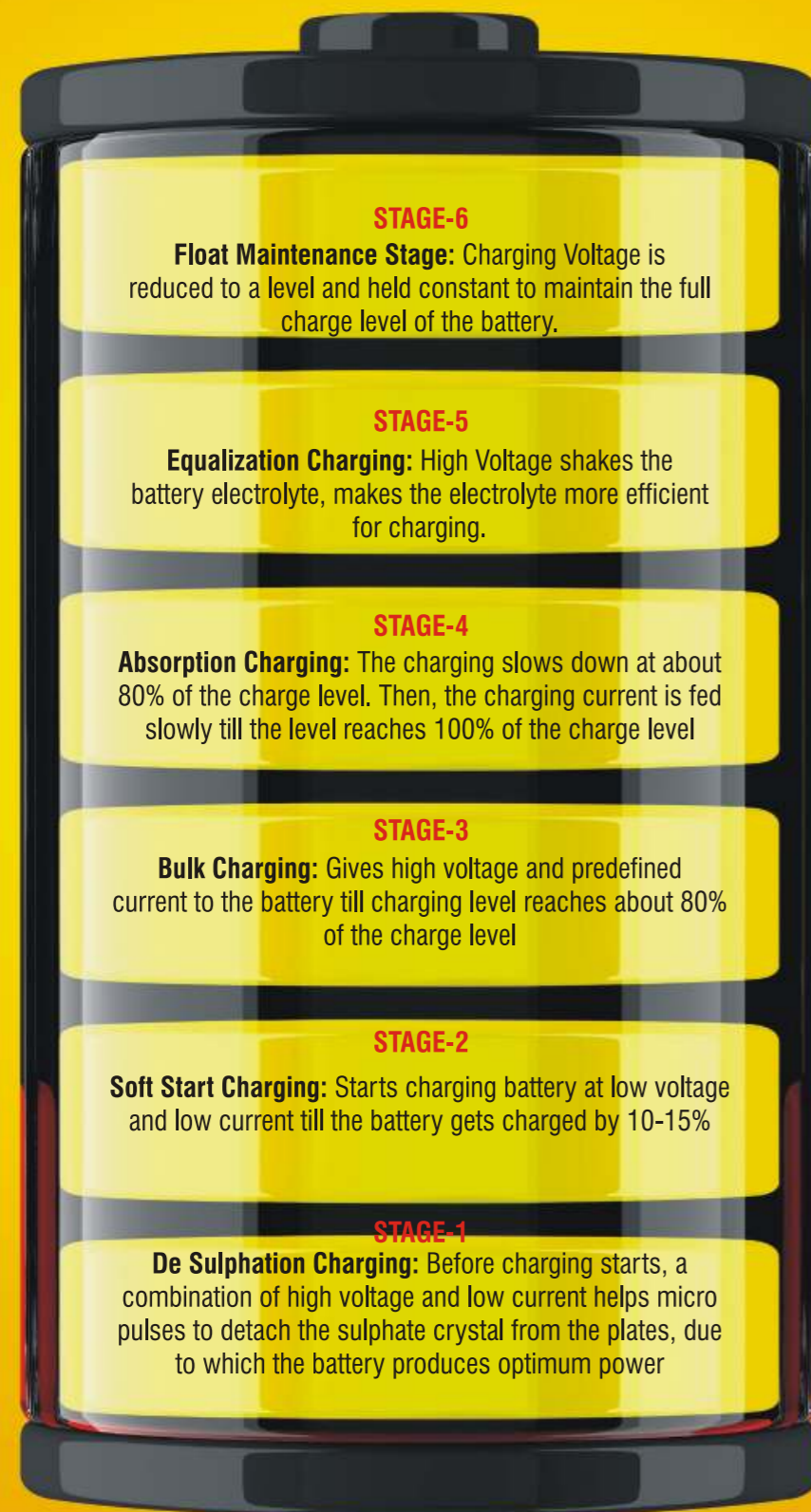
Specific Gravity of different charging level at 25° C (Ideal Temperature for charging)

Charge Percentage	Specific Gravity
100%	1.265
75%	1.285
50%	1.265
25%	1.271
10%	1.253

More life to your battery

6-stage Battery Charging

Only Su-Kam MPPT Solar Charge Controller provides 6-stage battery charging that increases the battery life by up to 30%. These 6 stages include:

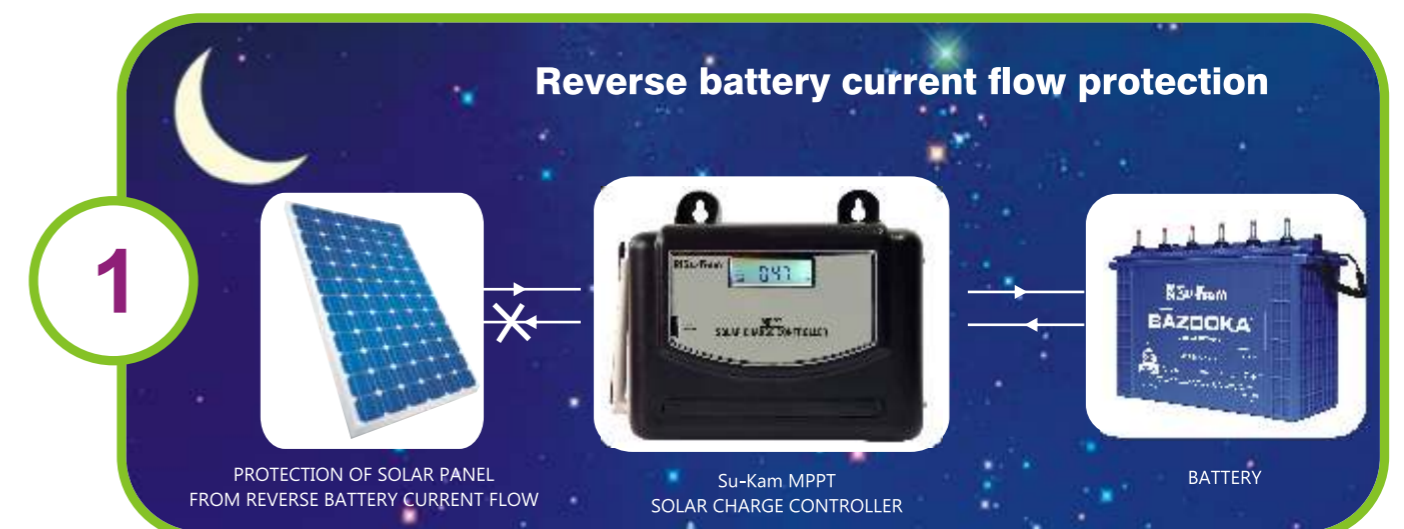


Advantage: Battery life increases by minimum 6 months

Total Protection of battery and solar panels

1. Reverse battery current flow protection

During night, when there is no solar power available, Su-Kam MPPT Solar Charge Controller protects the current from the battery to flow towards solar panel which saves the panel life





2

THERMAL PROTECTION

If the heat sink temperature of Su-Kam MPPT Solar Charge Controller increases beyond 90°C, charging stops only to resume once the heat sink temperature hits 70°C



3



PROTECTION FROM REVERSE BATTERY CONNECTION

Even if the poles of the batteries are connected to opposite poles of Su-Kam MPPT Solar Charge Controller, the battery remain protected

4



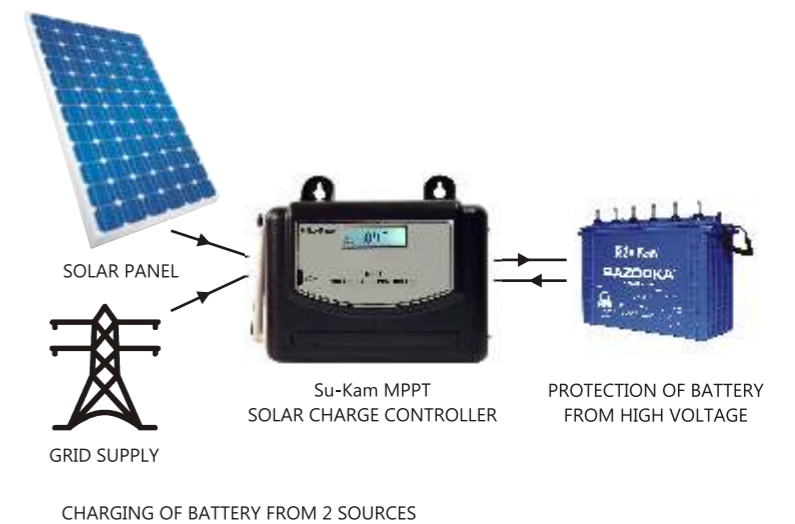
SOLAR PANEL HIGH CURRENT PROTECTION

If solar panel is wrongly configured and produces more than the required current, Su-Kam MPPT Solar Charge Controller protects the battery

5

BATTERY HIGH VOLTAGE PROTECTION

Even if the battery is charged with 2 sources, Su-Kam MPPT Solar Charge Controller protects the battery



6

SURGE PROTECTION

A chip called MOV is attached to Su-Kam MPPT Solar Charge Controller, which controls the high voltage to protect the battery from surge in voltage

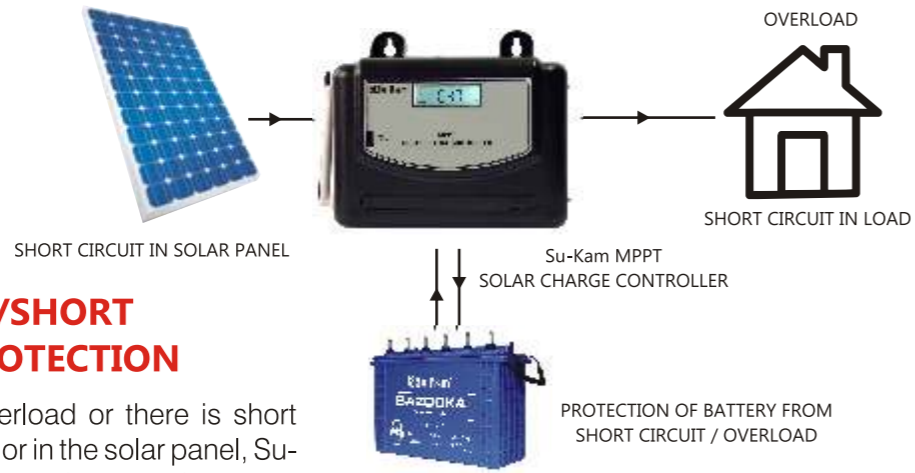




7

OVERLOAD/SHORT CIRCUIT PROTECTION

If there is an overload or there is short circuit in the load or in the solar panel, Su-Kam MPPT Solar Charge Controller protects the solar panel and the battery.



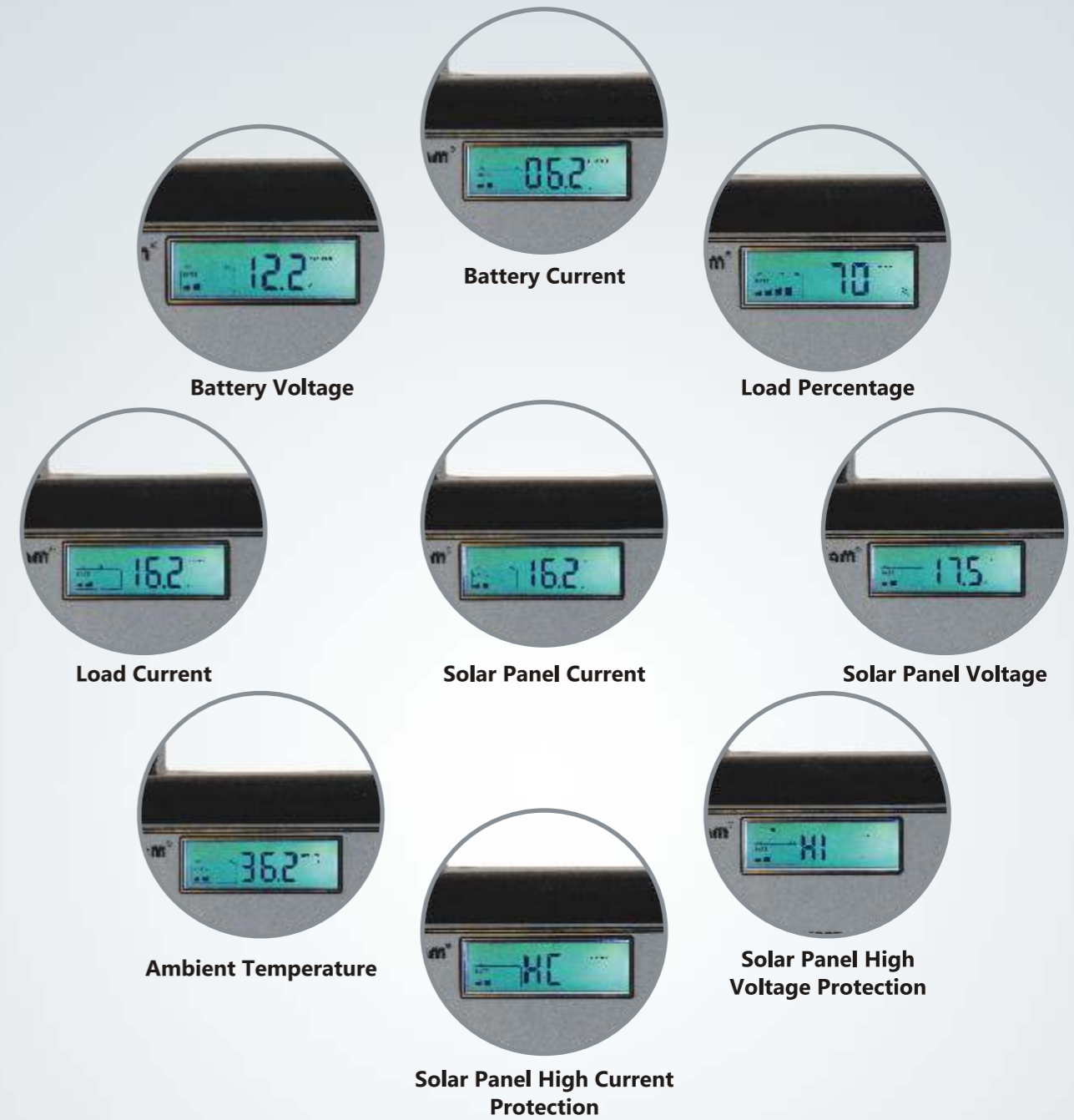
SOLAR PANEL REVERSE PROTECTION

If the solar panels are wrongly connected, Su-Kam MPPT Solar Charge Controller protects the panels as well as the battery

8



DISPLAYS



Equalization
Status on / off

