



FLOCON

A SPAN PRODUCT



SAVE ENERGY.. SAVE MONEY

In today's high performance world, energy efficiency is the key to Success. **Span Pumps Pvt. Ltd.** with its vast experience in innovation of green energy tech, has come up with very unique state of the art product - FLOCON. FLOCON the intelligent pump/motor controller with advanced features, to save water & energy ultimately your valuable money. FLOCON allows you to have automatic control over the pump/ motor and takes care of its duty cycle as per requirement. Controller enhances motor life as well by continuous monitoring its operation.

FEATURES OF FLOCON

- Saves energy & water.
- Controls motor with level feedback.
- Smart enough to diagnose sensor healthiness.
- Dual mode of operation – Auto/Manual
- Highly reliable & uninterrupted operation.
- Rigid design for outdoor application
- Lowest self-power consumption.
- Long life and smooth operation.
- Special earthing protection.
- Works on both AC and DC supply.

APPLICATIONS

- Solar Pump controller (Integrate with solar panel & pump)
- Industrial pumps (non-critical)
- Agricultural pumps
- Residential building, office, commercial towers, hotels, schools, colleges, etc.

Established in 1987, **SPAN PUMPS PVT.LTD.** is a pioneer manufacturing and EPC player in the water pumping and solar power sector. Its industry leading solutions such as hand pumps, joy pumps, solar dual pumps, solar pumps and solar rooftop systems are widely used by companies worldwide.



SPECIFICATIONS

Power Input	AC (Grid) or DC (Solar Panel Supply as well)
Operating Voltage	47 - 300 VDC 68 - 240 VAC
Level sensor	Float type or level switch
Variants	(900W & 1200 W Solar Power)
Self-power consumption	=< 3W
Protection class	IP 56
Mounting	Wall/ Pole mounting Panel



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Innovate. design. implement.



PLUTO SOLAR PUMP CONTROLLER

As the name aptly suggests, this Solar Pump Controller is dedicated to the NASA team led by Alan Stern and the discoverer Clyde W. Tombaugh.

Pluto Solar Pump Controller built by Span Pumps Pvt Ltd. is a revolutionary design in Pump Controllers. The controller not only does enhance the efficiency of the pump but also helps in reducing your carbon footprint by going solar.



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DESCRIPTION



The "Pluto" series of solar pump controllers are designed for three phase AC submersible pumpsets with varied horse power i.e. 3hp, 5hp, 7.5hp. These controllers are essentially inverters that convert solar panel generated DC to 3 phase AC. DC power generated by solar panels is extremely erratic and hence a simple inverter does not suffice in the solar application. An inbuilt MPPT Algorithm is necessary to make sure, that the desired output from the controller comes close to maximum power point to deliver maximum efficiency at the available power input. Pluto makes it extremely convenient for anyone to make his/her pump into a solar pump.

FEATURES



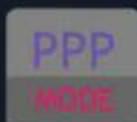
Pluto is carefully crafted by understanding your requirement. Pluto is all you need to make a regular AC pump into a Solar Pump. Simple.



Pluto is designed to work with both types of inputs: ac and dc. The controller automatically detects the presence of ac and switches to grid supply if the solar irradiance is not sufficient.



Pluto has an in built MPPT algorithm that optimizes the dc power generated by the solar panels and enhances the pump performance. MPPT stands for Maximum Power Point Tracking.



The PPP Mode is a unique feature of Pluto as it pushes the pump to perform at its peak by pushing maximum power from both sources.



Pluto has the provision to integrate with Span Eye. Users could then remotely monitor and control the controller using an app from android based smart phone.



Pluto Solar Pump Controller comes with an inbuilt Surge Protection Device (SPD). This enhances the life of the product and the pump many folds.



Pluto can be connected to a float in an overhead tank. This controller will then operate the pump only when tank is empty, reducing wastage/overflow.



Pluto comes with in built voltage boosters and power factor correction algorithms. Perfect for reducing your electricity bills in regions affected with voltage fluctuation.

SOLAR PANEL SELECTION GUIDE

RECOMMENDED PANEL SPECIFICATIONS	PUMP CONTROLLER SOLAR POWER	3HP AC 415V SPC-IN3AD-01 3000W	5HP AC 415V SPC-IN5AD-01 4800W	7.5HP AC 415V SPC-IN7AD-01 7000W	10HP AC 415V SPC-IN10AD-01 9000W
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POWER (W)	185 (W)	300 (W)	220 (W)	300 (W)
NUMBERS (#)	16	16	32	32
SERIES(S)/PARALLEL(P)	16S	16S	16S X 2P	16S X 2P
V_{OC}	44.3V	45.1V	44.5V	45.1V
I_{SEP}	5A	8A	6A	8A

TECHNICAL SPECIFICATIONS

Pump Capacity	3HP	5HP	7.5HP	10HP
Model No.	SPC-IN3AD-01	SPC-IN5AD-01	SPC-IN7AD-01	SPC-IN10AD-01
Solar Pump Controller				
Open Circuit voltage (V)	780	780	780	780
Solar Voltage Range (V)	350 - 780	350 - 780	350 - 780	350 - 780
MPPT Voltage Range (V)	450 - 750	450 - 750	450 - 750	450 - 750
Recommended Input DC voltage (V)	513VDC	513VDC	513VDC	530VDC
Maximum DC Input current (I)	7A	10A	15A	21A
Max Solar Input Power (kW)	3.5	5.5	7.7	10
MPPT Efficiency	99.90%	99.90%	99.90%	99.90%
Motor Power (kW)	2.2	3.7	5.6	7.8
Rated output current (A)	5.5	9.5	14.5	19.5
Input AC Voltage	415V ± 15%	AC 3 Ø 415V ± 15%	AC 3 Ø 415V ± 15%	AC 3 Ø 415V ± 15%
Output Voltage	3Ø AC 0 - 415V	3Ø AC 0 - 415V	3Ø AC 0 - 415V	3Ø AC 0 - 415V
Output Frequency	0 - 50Hz	0 - 50Hz	0 - 50Hz	0 - 50Hz
Solar & Grid change over	Auto	Auto	Auto	Auto
Environment				
Protection		Outdoor (Free from corrosive gases) IP54		
Operating Temperature	0°C ~ +40°C	0°C ~ +40°C	0°C ~ +40°C	0°C ~ +40°C
Storage temperature	-40°C ~ +70°C	-40°C ~ +70°C	-40°C ~ +70°C	-40°C ~ +70°C
Humidity	RH<90%	RH<90%	RH<90%	RH<90%
Altitude	Below 1000m, if the sea level is above 1000m, please derate 1% for every additional 100m.			
Mechanical				
IP Protection	Designed to meet IP54			
Cooling method	Natural Air	Natural Air	Natural Air	Natural Air
Solar Connection	MC4	MC4	MC4	2 X MC4
AC Connection	MCB	MCB	MCB	MCB
Motor Connection	Phoenix Connector	Phoenix Connector	Phoenix Connector	Phoenix Connector
Mounting	Wall / Pole			
Dimension* (W×H×D)	400 x 500 x 210 mm	400 x 500 x 210 mm	400 x 500 x 210 mm	660 X 500 X 340 mm
	* Dimension may vary without prior intimation.			

SOLAR PANEL SELECTION GUIDE

RECOMMENDED PANEL SPECIFICATIONS	PUMP CONTROLLER SOLAR POWER	10HP AC 415V SPC-IN10AD-BD 9600W	15HP AC 415V SPC-IN15AD-BD 14400W	20HP AC 415V SPC-IN20AD-BD 19200W
	POWER (W)	300 (W)	300 (W)	300 (W)
	NUMBERS (#)	32	48	64
	SERIES(S)/PARALLEL(P)	16S X 2P	16S X 3P	16S X 4P
	V _{oc}	45.1V	45.1V	45.1V
	I _{MP}	8A	8A	8A

TECHNICAL SPECIFICATIONS

PUMP CAPACITY MODEL NO.	10HP SPC-IN10AD-BD	15HP SPC-IN15AD-BD	20HP SPC-IN20AD-BD
SOLAR PUMP CONTROLLER			
Open Circuit Voltage (V)	780	780	780
Solar Voltage Range (V)	350 - 780	350 - 780	350 - 780
MPPT Voltage Range (V)	450 - 750	450 - 750	450 - 750
Recommended Input DC Voltage (V)	600	600	600
Maximum DC Input Current (A)	28	36	45
Maximum Solar Input Power (kW)	16	20	24
MPPT Efficiency (%)	99.90	99.90	99.90
Motor Power (kW)	7.45	11.1	14.9
Rated Output Current (A)	16	24	32
Input AC Voltage (V)	415 +-15%	415 +-15%	415 +-15%
Output Voltage (V)	3 phase 0-415	3 phase 0-415	3 phase 0-415
Output Frequency (Hz)	0-50	0-50	0-50
Solar to Grid Changeover	Auto	Auto	Auto
ENVIRONMENT			
Protection	Outdoor	Outdoor	Outdoor
Operating Temperature (°C)	0 - 40	0 - 40	0 - 40
Storage Temperature (°C)	-40 - 70	-40 - 70	-40 - 70
Humidity	RH<- 90%	RH<- 90%	RH<- 90%
Altitude (m)	<1000	<1000	<1000
MECHANICAL			
IP Protection	IP 54	IP 54	IP 54
Cooling Method	Natural Air	Natural Air	Natural Air
Solar Connection	MC4	MC4	MC4
AC Connection	MCB	MCB	MCB
Mounting	Wall / Pole	Wall / Pole	Wall / Pole
Dimensions W x H X D * (mm)	600 X 800 X 300	600 X 800 X 300	600 X 800 X 300

*Dimensions may change without prior intimation.

ABOUT US



Span Pumps Pvt Ltd. has been working in the field of drinking water and sanitation since 1987. Innovation has been one of the core pillars in the work culture at Span. And over the years, the company has churned out some incredible innovations. Right from variations in hand pump technology to the very latest in the renewable energy space, Span has been at the forefront of enhancing the life of the user with experience of over 5,000 solar pumping systems and counting. Span has seen a massive growth in its strength of human resources and intellectual property.

Span is an idea. An idea that sustains by building innovative products, services and systems that would become a game changer in the world. An idea that stays true to its roots and soaks in the ground reality; the pain, the need, the want and the desire. An idea that brings together the brightest brains of the society to work towards improving the quality of life. An idea that pushes people to change the way they think about the world around them. An idea that keeps asking the question 'why not?'. An idea that is set out to create history everyday.

The five pillars, that are integrated in Span's DNA, are Integrity, Attention to Detail, Fun & Health, Customer Centric Focus & Intellectual Property.

WHY US



SUPERIOR
PERFORMANCE



VALUE FOR
MONEY



GENUINE



100% CUSTOMER
SATISFACTION



TRUST



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