

# Well Probe

## Mechanically Activated Device for Dry Run Protection in Applications with LORENTZ Solar Pump Systems

The switch can be used to detect the water level within a well. When the water level in the well dropped below the level of the well probe, the LORENTZ Controller will stop the pump and indicates Source Low LED.

### ORDER INFORMATION

- **Item no.:** 19-000000    **product name:** Well probe sensor

### FEATURES

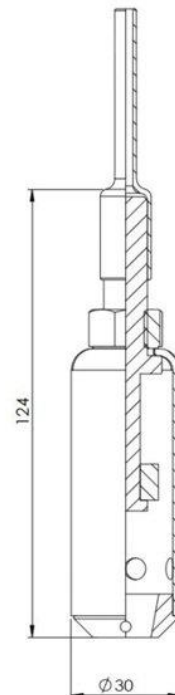
- Reliable dry run protection
- Simple to install
- Trouble free operation
- Corrosion-free
- Splicing kit included

### TECHNICAL DATA

- Max. operating temperature 55 °C
- Enclosure class: IP68  
Submersion depth: max 50 m
- Cable length: 1.5m
- Wire size: 2x 0.75mm<sup>2</sup> or AWG 19, waterproofed
- Mounted in vertical position
- Meets the requirements for CE

### DIMENSION/WEIGHT

- Packaging dimensions: 260 x 170 x 40 mm  
10.3 x 6.7 x 1.6 in
- Total weight: 0.1 kg / 0.2 lbs



# Float Switch

## Mechanically Activated Device for Water Level Detection in Applications with LORENTZ Solar Pump Systems

The switch can be used to detect the water level within a tank. When the water level in the tank reaches the maximum, the LORENTZ Controller will stop the pump and indicates Tank Full LED.

### ORDER INFORMATION

- Item no.: 19-000030    product name: Float Switch

### FEATURES

- **N.O.** (normally open) and **N.C.** (normally closed) function
- Reliable water level detection
- Simple to install
- Trouble free operation
- Not sensitive to rotation
- Corrosion-free

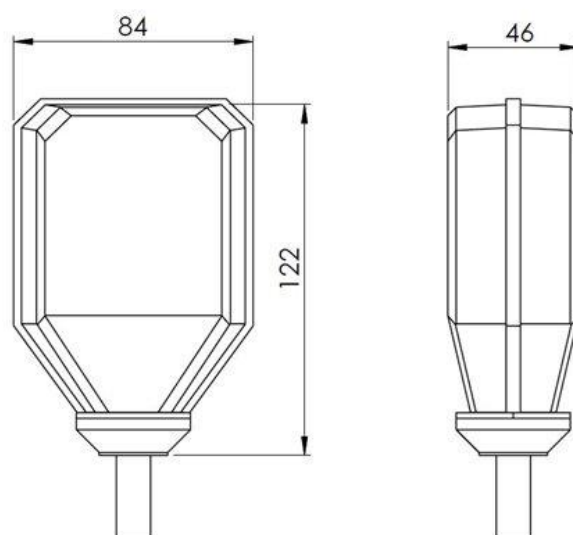


### TECHNICAL DATA

- Operating temperature: -10°C to 55°C
- Storage temperature: : -10°C to 55°C
- Enclosure class: IP68
- Cable length: 3m, waterproof
- Wire size: 3x 1.0mm<sup>2</sup> or AWG 18
- Meets the requirements for CE

### DIMENSION/WEIGHT

- Packaging dimensions: 230 x 160 x 55 mm  
9.1 x 6.3 x 2.2 in
- Total weight: 0.8 kg / 1.8 lbs



# Pressure Switch

## Device for Water Pressure Detection in Applications with LORENTZ Solar Pump Systems

The switch can be used to detect the water level within a tank. When the water level in the tank reaches the maximum, the pressure will increase and the LORENTZ Controller will stop the pump and indicates Tank Full LED.

### ORDER INFORMATION

- **Item no.:** 19-000310    **product name:** Pressure Switch 1-5bar

### FEATURES

- Reliable water pressure detection
- Simple to install
- Trouble free operation
- Corrosion-free

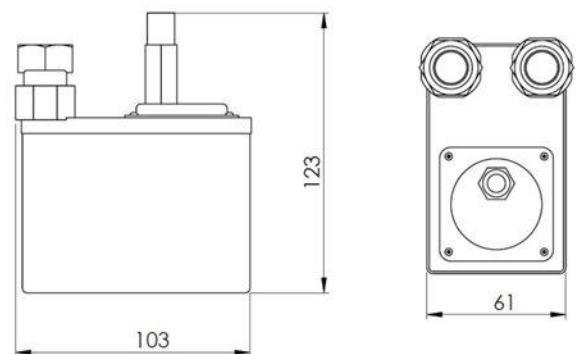
### TECHNICAL DATA

- Pressure range between 1 and 5 bar
- 2x cable gland Ø 5-9mm
- G ¼" pipe thread
- Meets the requirements for CE



### DIMENSION/WEIGHT

- Packaging dimensions: 130 x 105 x 65 mm  
5.1 x 4.2 x 2.6 in
- Total weight: 0.5 kg / 1 lbs



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# Water Meter

Device to measure the water flow rate

## ORDER INFORMATION

- |                       |  |
|-----------------------|--|
| • Item no.: 19-002160 | <b>product name:</b> Water Meter, WP-DN40, 0.1cbm/p  |
| • Item no.: 19-002170 | <b>product name:</b> Water Meter, WP-DN65, 0.1cbm/p  |
| • Item no.: 19-002180 | <b>product name:</b> Water Meter, WP-DN80, 0.1cbm/p  |
| • Item no.: 19-002190 | <b>product name:</b> Water Meter, WP-DN100, 0.1cbm/p |
| • Item no.: 19-002200 | <b>product name:</b> Water Meter, WP-DN125, 0.1cbm/p |
| • Item no.: 19-002210 | <b>product name:</b> Water Meter, WP-DN150, 1cbm/p   |
| • Item no.: 19-002202 | <b>product name:</b> Water Meter, WP-DN200, 1cbm/p   |

## FEATURES

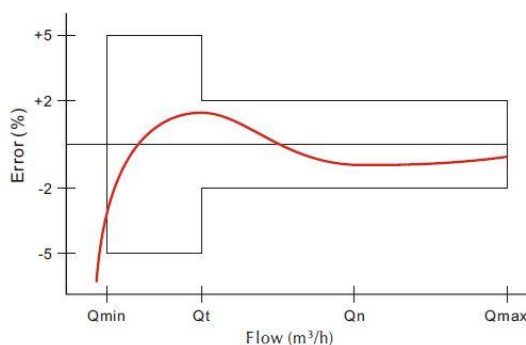
- Dry dial register ensures clear reading
- Low pressure loss, long working life
- Easy to install
- **Only for use in combination with DataModule:**
  - The water meter is equipped with a reed switch assembly which can be connected to the DataModule



## TECHNICAL DATA

- Water temperature: max. 40°C
- Water pressure: max. 16 bar
- Meets the requirements for CE

Nominal Diameter	DN	40	65	80	100	125	150	200
Max. flow rate [m³/h]	$Q_{\max}$	20	50	80	120	200	300	500
Nominal flow rate [m³/h]	$Q_n$	10	25	40	60	100	150	250
Transition flow rate [m³/h]	$Q_t$	3.0	5.0	8.0	12	20	30	50
Minimum flow rate [m³/h]	$Q_{\min}$	0.7	0.75	1.2	1.8	3.0	4.5	7.5



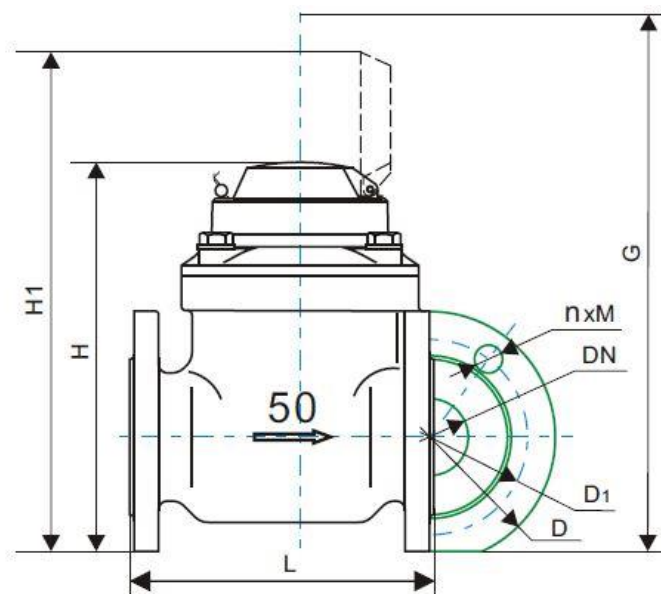
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## DIMENSION/WEIGHT

Nominal Diameter	DN	40	65	80	100	125	150	200
Length [mm]	L	260	200	225	250	250	300	350
Height [mm]	H	225	242	252	262	275	325	355
Working height [mm]	H1	303	313	323	333	346	396	426
Height [mm]	G	360	360	360	360	360	420	420
Outside diameter [mm]	D	150	185	200	220	250	285	340
Circle diameter [mm]	D1	110	145	160	180	210	240	295
Connecting bolt quantity		4xM16	4xM16	8xM16	8xM16	8xM16	8xM20	12xM20
Weight [kg]		12	13	16	18	20	42	74



# SunSwitch

## Automatic Solar Level Switching Device

The SunSwitch can be used for any application where you need to switch depending on the solar intensity. It is an autonomous working unit that supplies itself with power from the PV-module on its rear side.

## ORDER INFORMATION

- Item no.: 19-000050    product name: SUN SWITCH Light-Sensor

## FEATURES

- Trouble free operation
- Pump will only run when minimum flow rates or pressure levels can be achieved which are required by certain applications
- Reduced wear on the pump and motor since the pump only starts when it will continue to run

## TECHNICAL DATA

- Contact rating:
  - Max. voltage 250 VAC / 220 VDC
  - Max. current 2A
  - Max. power 60 W / 62.5 VA
- Enclosure class: IP54
- Cable length: 4 m
- Wire size: 3x 1.0mm<sup>2</sup> or AWG 18, waterproofed
- Mounted close to the solar array
- Manual with further informations is available in PartnerNet
- Meets the requirements for CE

## DIMENSION/WEIGHT

- Packaging dimensions: 230 x 115 x 90 mm  
9.1 x 4.5 x 3.5 in
- Total weight: 1.2 kg / 0.6 lbs



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# Surge Protector

Device to Protect LORENTZ Pump Accessories from Voltage Spikes

## ORDER INFORMATION

- Item no.: 19-000280    product name: Surge Protector

## FEATURES

- Reliable surge protection for all LORENTZ pump accessories
- Can be installed inside the PS Controller

## TECHNICAL DATA

- Max. voltage: 14 VDC
- Max current 8/20 $\mu$ s: 500 A
- Enclosure class: IP65
- Ambient temperature: max. 50°C
- Wire size: 2x 1.5mm<sup>2</sup> or AWG 16
- Meets the requirements for CE



## DIMENSION/WEIGHT

- Packing dimensions: 70 x 45 x 20 mm  
2.8 x 1.8 x 0.8 in
- Total weight 0.1 kg / 0.2 lbs

# PV Disconnect 440-40-1

Box with DC Disconnect Switch and optional lightning surge protection

## ORDER INFORMATION

- Item no.: 19-000137    **product name:** PV Disconnect 440-40-1
- Item no.: 19-002120    **product name:** MNSPD-115
- Item no.: 19-002130    **product name:** MNSPD-300
- Item no.: 19-002140    **product name:** MNSPD-600

Lightning surge protectors must be ordered separately

## FEATURES

- Designed for PS150 – PS4000
- For professional installation of pumping systems

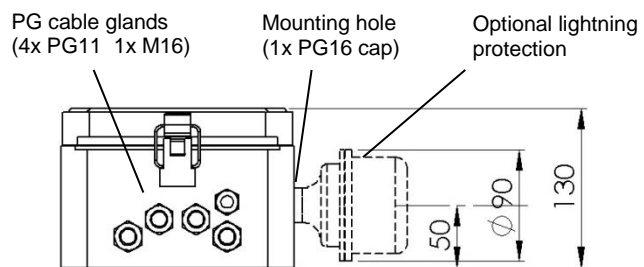
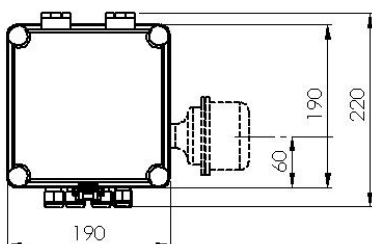
## TECHNICAL DATA

- DC rated disconnect switch enclosed
- Enclosure class IP 54
- Meets the requirements for CE

### PV Disconnect 440-20-1

Max. voltage	440 V DC
Max. current	40 A
String cable size	4 - 10 mm <sup>2</sup>
Output cable size	4 - 10 mm <sup>2</sup>

## DIMENSION/WEIGHT [mm]



Net. Weight: 1,4kg (+0,35kg)



### Optional lightning surge protector

- Connects through an existing mounting hole in the PV connect housing
- Proper grounding of the device is mandatory to achieve protection

### Controller

### MidNite surge protector

PS150 – PS200	MNSPD115
PS600 – PS1800	MNSPD300
PS4000	MNSPD600

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# PV Disconnect 440-40-6

Connection box with DC Disconnect Switch and optional lightning surge protection

## ORDER INFORMATION

- Item no.: 19-000136    **product name:** PV Disconnect 440-40-6
- Item no.: 19-002120    **product name:** MNSPD-115
- Item no.: 19-002130    **product name:** MNSPD-300
- Item no.: 19-002140    **product name:** MNSPD-600

Lightning surge protectors must be ordered separately

## FEATURES

- Designed for PS150 – PS4000
- For professional installation of pumping systems

## TECHNICAL DATA

- Wiring up to 6 PV-strings in parallel
- DC rated disconnect switch enclosed
- Enclosure class IP 54
- Meets the requirements for CE

### PV Disconnect 440-40-6

Max. voltage	440 V DC
Max. current per string	10 A
Max. total current	40 A
Max. no. of strings	6
String cable size	2,5 - 4mm <sup>2</sup>
Output cable size	4 - 10mm <sup>2</sup>



### Optional lightning surge protector

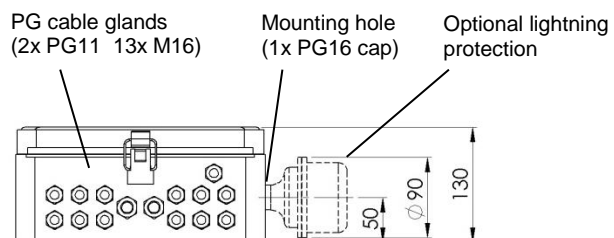
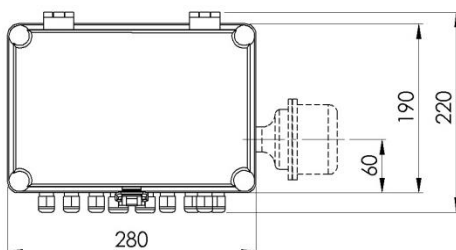
- Connects through an existing mounting hole in the PV connect housing
- Proper grounding of the device is mandatory to achieve protection

### Controller

### MidNite surge protector

PS150 – PS200	MNSPD115
PS600 – PS1800	MNSPD300
PS4000	MNSPD600

## DIMENSION/WEIGHT [mm]



Net. Weight: 2,15kg (+0,35kg)

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# Stilling Tube for C Pump

## Device to protect the pump from dirt

Where water sources contain sand or have the potential for dirt falling into them (uncapped wells) a stilling tube is recommended to protect the pump from the dirt.

## ORDER INFORMATION

- **Item no.:** 19-000230    **product name:** Stilling Tube for Centrifugal Pump
- **Item no.:** 19-000250    **product name:** Stilling Tube Adaptor for Centrifugal Pump

## FEATURES

- Due to the large inner diameter of the stilling tube the water rises very slow, the dirt settles down at the bottom of the well
- Pump has to handle less sand, which will increase the pump's life span
- Trouble free installation
- Can be used with PS150-PS4000 C-SJ 4" Pumps
- Min. borehole diameter of 6 in (150mm) needed

## SCOPE OF DELIVERY

- (1) 1x stilling tube adapter
- (2) 2x hose clamp
- (3) 2x cable straps
- (4) 1x PVC tube:  $\varnothing 140 \times 4$ , 500 mm length

Product can be ordered without the PVC tube, then the tube must be purchased locally

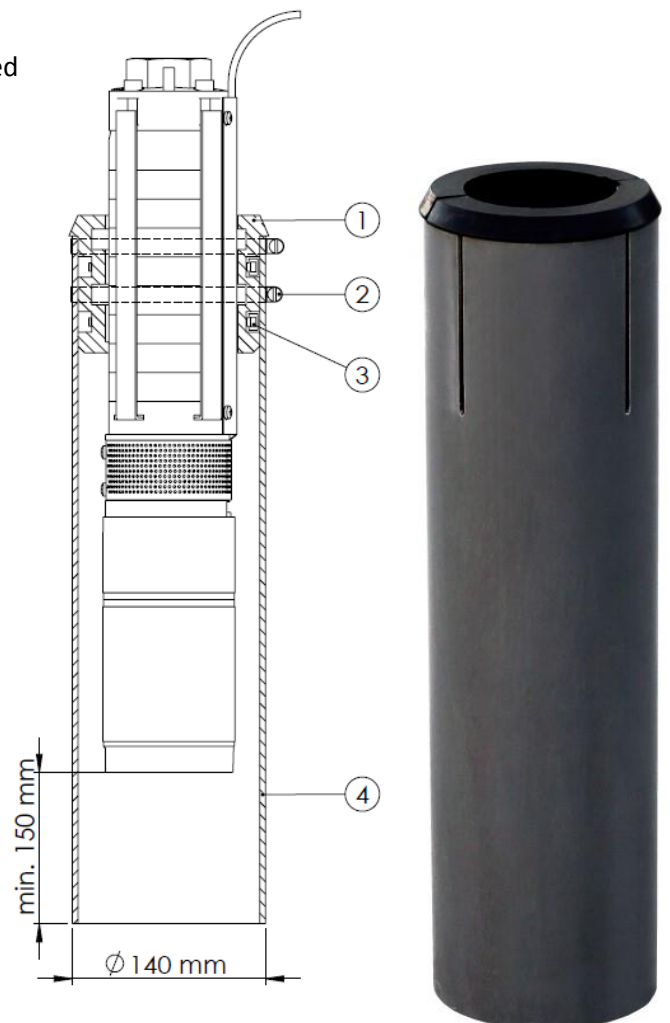
## DIMENSION/WEIGHT

### Complete Stilling Tube device:

- Packaging dimensions: 650 x 160 x 140 mm  
25.6 x 6.3 x 5.5 in
- Total weight: 3.0 kg / 6.61 lbs

### Stilling Tube Adaptor (without PVC tube):

- Packaging dimensions: 300 x 160 x 140 mm  
11.8 x 6.3 x 5.5 in
- Total weight: 1.0 kg / 2.20 lbs



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# PP150AC PowerPack

**AC/DC Converter to Supply PS2-150 Pump Systems with Backup Power from a Generator or Mains Supply**

## ORDER INFORMATION

- Item no.: 19-004240 / 19-004260      product name: Power Pack 150, UL

## TECHNICAL DATA

Product name	<b>Power Pack 150</b>	
Item no.	19-004260	19-004240
Pump System	PS2-150	
<b>AC input</b>		
Nominal voltage	120 VAC	240 VAC
Max. current	10 A	6 A
Frequency	50-60 Hz	50-60 Hz
<b>DC output</b>		
Max. voltage	24 VDC	24 VDC
Max. current	19.0 A	19.0 A

- AC input: 120/240 V ( $\pm 15\%$ ) as factory setting, 50 to 60 Hz
- DC output: max. 24 V DC (no load), 450 W
- Enclosure: steel, gasket-sealed, indoor-use, hinged front cover with key-lock
- Must be protected from direct mid-day sun
- Enclosure class: IP22
- Ambient temperature: max. 45 °C / 113°F
- PV cable length 2 m, with Y MC4 plugs to connect in parallel to PV-generator
- Main supply AC input cable length 1.8 m, pre-connected grid main supply plugs
- Manual with further information is available on partnerNET
- Meets the requirements for CE



## DIMENSION/WEIGHT

- Packaging dimensions: 390 x 270 x 160 mm / 15.4 x 10.6 x 6.3 in
- Total weight: 6.4 kg / 14 lbs

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# PM Accessory bracket

Kit for mounting LORENTZ PS Controller / PV-Disconnect to the Pole Mount PM-1-X

## USE / PURPOSE

The PM Accessory bracket is designed for use with the LORENTZ POLE MOUNT-1-X.

The Set allows an easy and flexible mounting of LORENTZ PS Controllers and PV-Disconnect on the Pole of the LORENTZ PM-1-X.



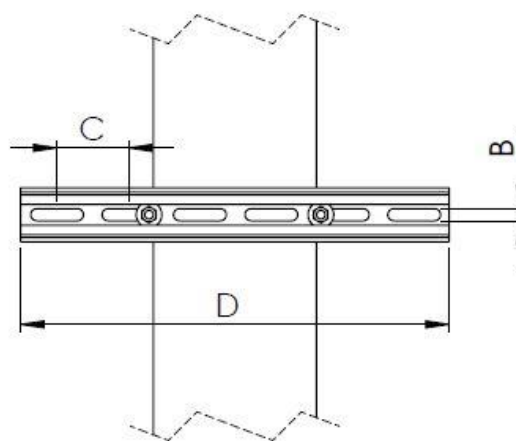
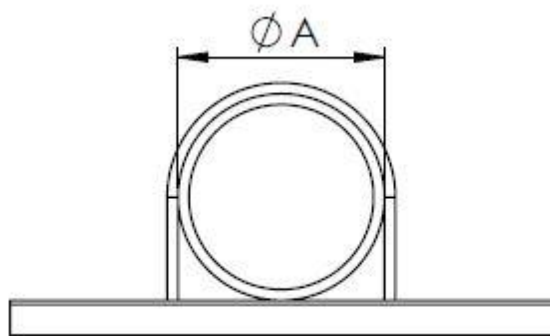
## ORDER INFORMATION

Part	Item No.	PM-1-1	PM-1-2	PM-1-3	PM-1-4	PM-1-5	PM-1-6
PM Accessory bracket 2.5-1	19-004220	x	x				
PM Accessory bracket 4-1	19-004210			x	x	x	x

## FEATURES

- Simple and cost effective mounting possibility for LORENTZ Controller and PV-Disconnect
- Designed for LORENTZ Pole Mount 1-X

## TECHNICAL DATA



	A	B	C	D	Weight	Item no.
PM-1- 1/2	70 -73 mm 2.5 " SCH40	8.5 x 37 mm 0.33 x 1.4 "	50 mm 2 "	300 mm 11.8 "	0.35 kg 0.77 lbs.	19-004220
PM-1- 3/4/5/6	114.3 mm 4 " SCH40				0.4 kg 0.88 lbs.	19-004210

## Packing dimensions

305x170x25 mm  
12x7x1 inch

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# Sun Sensor

## Irradiation measurement module and software

The LORENTZ Sun Sensor module and software allow the PS2 controller to accurately estimate irradiation levels and control the pump based on this.

The Sun Sensor function can be configured to offer the pump mechanical protection from repeated stop starts. The Sun Sensor function can also be configured to switch external devices via the PS2 output terminals.

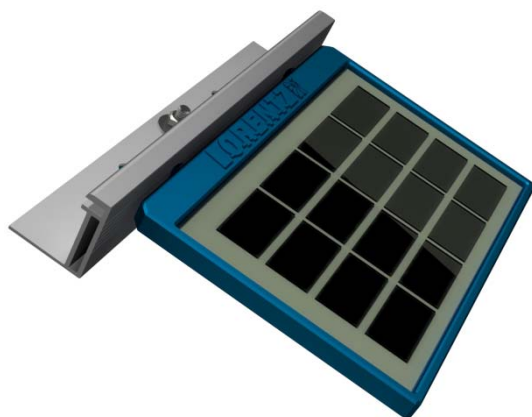
Each module is tested and specially calibrated for use with the PS2 system. The Module also includes a software license to use the features which is accessed via the item serial number.

This Sun Sensor module is included with any PS2-1800 or PS2-4000 controller.

For PS controllers (non PS2) refer to the SunSwitch Datasheet.

## ORDER INFORMATION

- **Item no.:** 19-005030
- **Product name:** Sun Sensor module



## TECHNICAL DATA

- Open circuit voltage  $V_{oc} = 10.2 \text{ V}$
- Short circuit current  $I_{sc} = 0.19 \text{ A}$
- Wire size: 3x 1.0mm<sup>2</sup> or AWG 18, waterproofed
- Mount close to the solar array
- PS2 manual with further information is available in PartnerNet
- Meets the requirements for CE

## DIMENSION/WEIGHT

- Packaging dimensions: 180 x 205 x 60 mm  
7.08 x 8.07 x 2.36 in
- Total weight: 0.6 kg / 1.33 lbs