

# 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

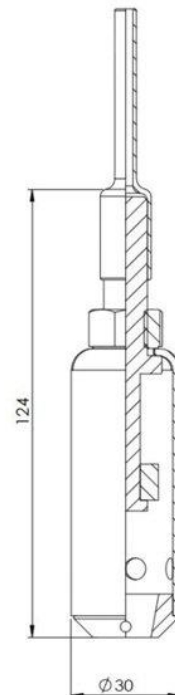
- Reliable dry run protection
- Simple to install
- Trouble free operation
- Corrosion-free
- Splicing kit included

### 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

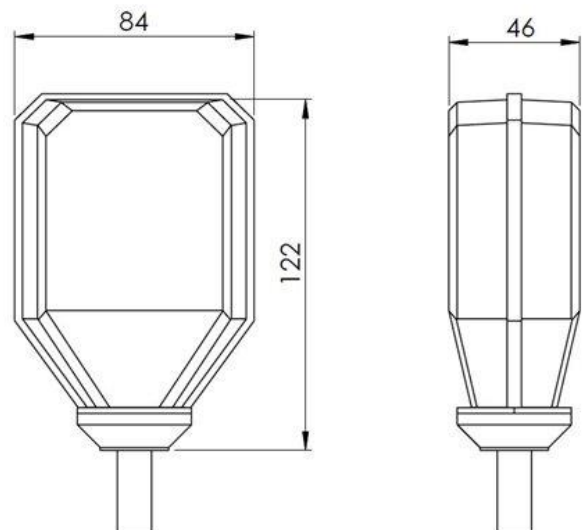


### TECHNICAL DATA

- 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

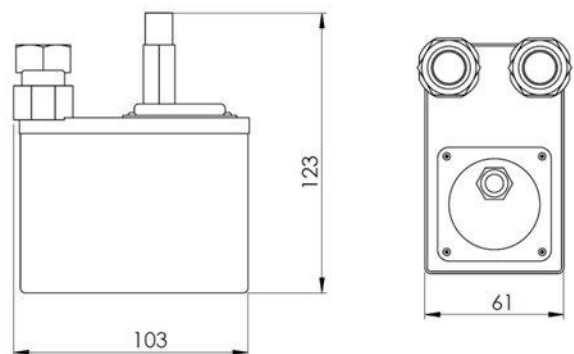


### TECHNICAL DATA

- Pressure range between 1 and 5 bar
- 2x cable gland  $\varnothing$  5-9mm
- G 1/4" 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



# Liquid Level Sensor

Sensor for measuring the level of liquid in a well or tank

## USE / PURPOSE

The range of liquid level sensors use pressure to measure the liquid level in a well or tank. The sensors can be used for collection of long term liquid level monitoring and also for pump control in applications where a well probe cannot be used. The liquid level sensor must be used with a compatible LORENTZ Controller (see requirements).

## FEATURES

- Gauge pressure sensor, pressure measurement relative to atmosphere
- For measuring levels of liquid in a well or tank
- Accurate, robust sensor
- For use with LORENTZ PumpScanner and pumpMANAGER

## REQUIREMENTS

- LORENTZ PS2 controller, LORENTZ PSk2 controller or PS Controller equipped with a licensed PS DataModule
- The cable contains a capillary tube to balance the sensor against atmospheric changes. The sensor must be ordered with the required cable length for the application as it cannot be spliced. Further cable lengths are available on demand, please contact LORENTZ.



## TECHNICAL DATA

- Sensor type: 2 wire gauge sensor
- Enclosure class: IP68
- Sensor housing: stainless steel
- Connects to LORENTZ PS DataModule
- Oil resistant cable with capillary tube
- Overpressure: 2x full scale
- Output signal :4-20mA output
- Voltage : 12-28VDC
- Application temp.: -10 to 80°C  
14 to 176°F
- Accuracy class :0.5% FS
- Meets the requirements for CE

## DIMENSION/WEIGHT

- Packing dimensions:
  - 19-005040: 350 x 350 x 100 mm / 13.8 x 13.8 x 3.9 in
  - 19-005050: 350 x 350 x 100 mm / 13.8 x 13.8 x 3.9 in
  - 19-005080: 350 x 350 x 100 mm / 13.8 x 13.8 x 3.9 in
  - 19-004395: 350 x 350 x 180 mm / 13.8 x 13.8 x 7.1 in
- Weight:
  - 19-005040: 4 kg / 8.8 lbs
  - 19-005050: 5 kg / 11.0 lbs
  - 19-005080: 7 kg / 15.4 lbs
  - 19-004395: 11 kg / 24.3 lbs

## ORDER INFORMATION

Item #	Product	Pressure range	Cable length
19-005040	Liquid Level Sensor, 0-10m/33ft, 30m/100ft Cable	0-100 kPa 0 to 10 m / 0 to 33 ft 0 to 1 bar / 0 to 14.5 psi	30 m / 100 ft *
19-005050	Liquid Level Sensor, 0-20m/66ft, 40m/130ft Cable	0-200 kPa 0 to 20 m / 0 to 66 ft 0 to 2 bar / 0 to 29 psi	40 m / 130 ft *
19-005080	Liquid Level Sensor, 0-50m/164ft, 60m/200ft Cable	0-500 kPa 0 to 50 m / 0 to 164 ft 0 to 5 bar / 0 to 72.5 psi	60 m / 200 ft *
19-004395	Liquid Level Sensor, 0-100m/328ft, 140m/460ft Cable	0-1000 kPa 0 to 100 m / 0 to 328 ft 0 to 10 bar / 0 to 145 psi	140 m / 460 ft *

\*Further cable length is available on demand. Please contact LORENTZ.

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# Liquid Pressure Sensor

Sensor for measuring the pressure of liquid in a pipe or vessel

## USE / PURPOSE

The sensors are commonly used to measure the pressure in the delivery pipeline or in a vessel. The pressure signal is used with a suitable LORENTZ pump controller to measure pressure and for pressure switching or constant pressure applications. The liquid pressure sensor must be used with a compatible LORENTZ Controller (see requirements).

## FEATURES

- Gauge pressure sensor, pressure measurement relative to atmosphere
- For measuring pressure in a pipe or vessel
- Accurate, robust sensor
- For use with LORENTZ PumpScanner and pumpMANAGER

## REQUIREMENTS

- LORENTZ PS2 controller, LORENTZ PSk2 controller or PS Controller equipped with a licensed PS DataModule
- Care must be taken to position the sensor without turbulent water to ensure accurate measurement
- G1/4" or G1/2" female threaded filling / air vent hole is required to mount the sensor



## TECHNICAL DATA

- Sensor type: 2 wire gauge sensor
- Enclosure class: IP65
- Sensor housing : stainless steel
- Connects to LORENTZ PS DataModule
- 5m/10m (16ft/33ft) cable length
- Overpressure: 1.5x full scale
- Output signal : 4-20 mA
- Voltage : 11-28 VDC
- Application temp.: -30 to 80°C  
-22 to 176°F
- Accuracy class : 0.5% full scale
- Thread type: G1/2" male (G1/4" with adapter)
- Meets the requirements for CS

## ORDER INFORMATION

Item #	Product	Pressure range
19-004450	Liquid Pressure Sensor, LPS-500	0-500 kPa 0 to 5 bar / 0 to 72.5 psi
19-004460	Liquid Pressure Sensor, LPS-1000	0-1000 kPa 0 to 10 bar / 0 to 145 psi
19-002760	Liquid Pressure Sensor, LPS-2000	0-2000 kPa 0 to 20 bar / 0 to 290 psi

## DIMENSION/WEIGHT

- Packing dimensions: 190 x 180 x 80 mm  
7.5 x 7.1 x 3.2 in
- Weight: 0.6 kg / 1.3 lbs

# Water Meter

Device to measure the water flow rate

## ORDER INFORMATION

- **Item no.:** 19-002160    **product name:** Water Meter, WP-DN40, 0.1cbm/p
- **Item no.:** 19-002165    **product name:** Water Meter, WP-DN50, 0.1cbm/p
- **Item no.:** 19-002170    **product name:** Water Meter, WP-DN65, 0.1cbm/p
- **Item no.:** 19-002180    **product name:** Water Meter, WP-DN80, 0.1cbm/p
- **Item no.:** 19-002190    **product name:** Water Meter, WP-DN100, 0.1cbm/p
- **Item no.:** 19-002200    **product name:** Water Meter, WP-DN125, 0.1cbm/p
- **Item no.:** 19-002210    **product name:** Water Meter, WP-DN150, 1cbm/p
- **Item no.:** 19-002202    **product name:** Water Meter, WP-DN200, 1cbm/p

## FEATURES

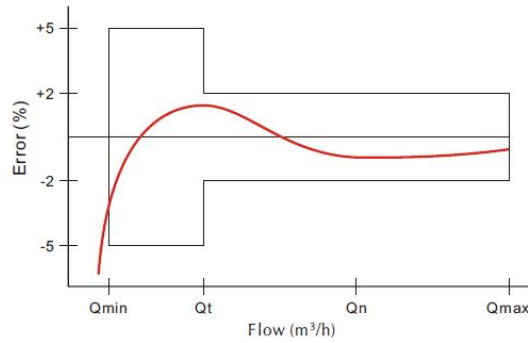
- Dry dial register ensures clear reading
- Low pressure loss, long working life
- Easy to install
- **Only for use in combination with DataModule:**
  - The water meter is equipped with a reed switch assembly which can be connected to the DataModule



## TECHNICAL DATA

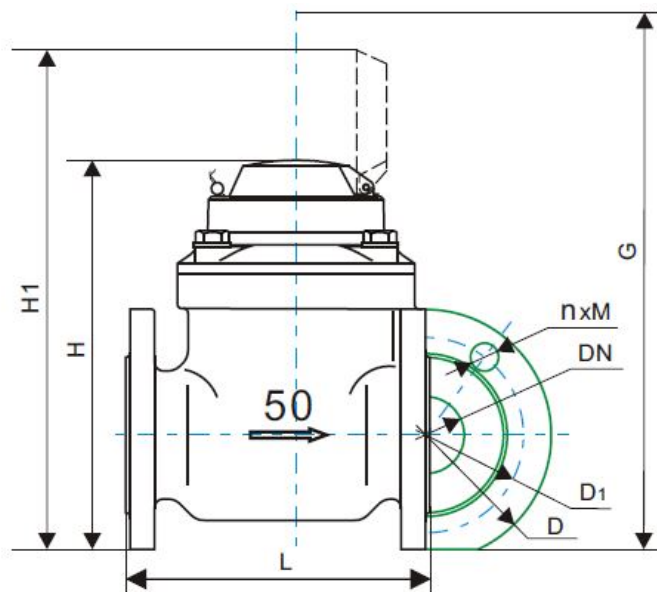
- Water temperature:            max. 40°C
- Water pressure:                max. 16 bar
- IP64
- Meets the requirements for CE

Nominal Diameter	DN	40	50	65	80	100	125	150	200
Max. flow rate [m <sup>3</sup> /h]	Q <sub>max</sub>	20	30	50	80	120	200	300	500
Nominal flow rate [m <sup>3</sup> /h]	Q <sub>n</sub>	10	15	25	40	60	100	150	250
Transition flow rate [m <sup>3</sup> /h]	Q <sub>t</sub>	3.0	3.0	5.0	8.0	12	20	30	50
Minimum flow rate [m <sup>3</sup> /h]	Q <sub>min</sub>	0.7	0.7	0.75	1.2	1.8	3.0	4.5	7.5



## DIMENSION/WEIGHT

Nominal Diameter	DN	40	50	65	80	100	125	150	200
Length [mm]	L	260	200	200	225	250	250	300	350
Height [mm]	H	225	232	242	252	262	275	325	355
Working height [mm]	H1	303	303	313	323	333	346	396	426
Height [mm]	G	360	360	360	360	360	360	420	420
Outside diameter [mm]	D	150	165	185	200	220	250	285	340
Circle diameter [mm]	D1	110	125	145	160	180	210	240	295
Connecting bolt quantity		4xM16	4xM16	4xM16	8xM16	8xM16	8xM16	8xM20	12xM20
Weight [kg]		12	12	13	16	18	20	42	74



# 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 1000-40-5

Five string connection box with DC Disconnect Switch

## ORDER INFORMATION

- Item no.: 19-000115
- Product name: PV Disconnect 1000-40-5

## FEATURES

- Simple and cost effective unit to connect up to five module strings
- Includes an appropriate DC rated disconnect switch
- Designed for PSk2 / PSk pump systems
- Used as part of a professional system installation



## TECHNICAL DATA

- Wiring of up to 5 PV-strings in parallel
- DC rated disconnect switch enclosed
- Enclosure class IP 54
- Meets the requirements for CE

### PV Disconnect 1000-40-5

Max. voltage	1,000 V DC (Uoc) 880 V DC (Ump)
Max. current per string	40 A
Max. total current	40 A
Max. no. of strings	5
String cable size	4 - 10mm <sup>2</sup>
Output cable size	4 - 16mm <sup>2</sup>

## RELATED PRODUCTS

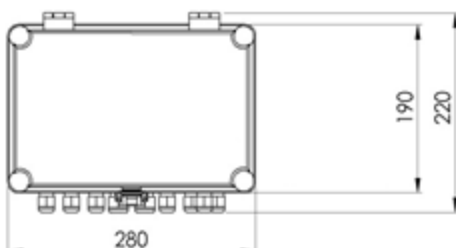
### PV Combiner 1000-125-4

- Connection Box for parallel wiring of two or more PV Disconnect 1000-40-5
- Item no.: 19-000116

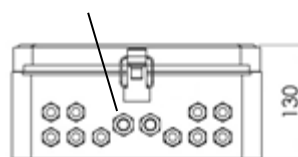
### PV Protect 1000-125

- Surge protection device for PV systems
- Item no.: 19-000117

## DIMENSION/WEIGHT [mm]



PG cable glands  
(2x PG11 10x M16)



Net. Weight: 2,50kg

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# PV Combiner 1000-125-4

Connection box for parallel wiring

## ORDER INFORMATION

- Item no.: 19-000116
- Product name: PV Combiner 1000-125-4

## FEATURES

- Designed for PSk pump systems
- For professional installation of pumping Systems



## TECHNICAL DATA

- Wiring for up to 4 input-strings in parallel
- Combine two or more PV Disconnect 1000-40-5 units
- Enclosure class IP 54
- Meets the requirements for CE

### PV Combiner 1000-125-4

Max. voltage	1,000 V DC
Max. current per string	125 A
Max. total current	125 A
Max. no. of strings	4
String cable size	10 - 35mm <sup>2</sup>
Output cable size	10 - 35mm <sup>2</sup>

## RELATED PRODUCTS

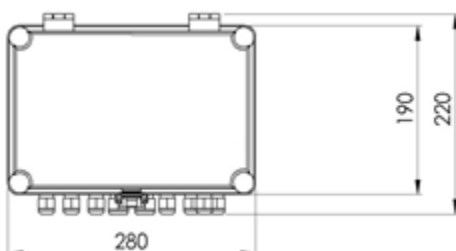
### PV Disconnect 1000-40-5

- Five string connection box with DC Disconnect Switch
- Item no.: 19-000115

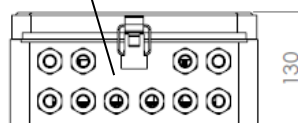
### PV Protect 1000-125

- Surge protection device for PV systems
- Item no.: 19-000117

## DIMENSION/WEIGHT [mm]



PG cable glands  
(10x PG16)



Net. Weight: 2,0kg

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# PV Protect 1000-125

Surge protective device for PV systems

## ORDER INFORMATION

- Item no.: 19-000117
- Product name: PV Protect 1000-125

## FEATURES

- Provides enhanced level of protection to the PSK controller from electrical surges (indirect lightning)
- Designed for PSk2 / PSk pump systems
- Used as part of a professional system installation
- Installed on the DC input line close to pump controller
- Requires a reliable ground connection to operate



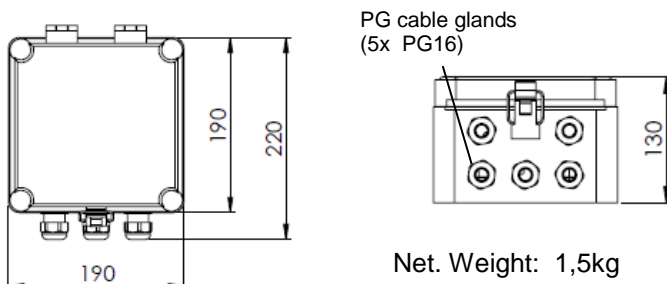
## TECHNICAL DATA

- Connects between PV Generator and Controller
- Enclosure class IP 54
- Meets the requirements for CE

### PV Protect 1000-125

Max. voltage	1,000 V DC
Max. current	125 A
Input cable size	10 - 35mm <sup>2</sup>
Output cable size	10 - 35mm <sup>2</sup>
Grounding cable size	16 mm <sup>2</sup>

## DIMENSION/WEIGHT [mm]



## RELATED PRODUCTS

### *PV Disconnect 1000-40-5*

- Five string DC connection box with DC disconnect
- Item no.: 19-000115

### *PV Combiner 1000-125-4*

- Combiner box for parallel wiring of two or more PV Disconnect 1000-40-5 units
- Item no.: 19-000116

# SmartPSUk2

**AC/DC Converter to Supply PSk2 Pump Systems with Power from a Generator or Grid Supply**

## ORDER INFORMATION

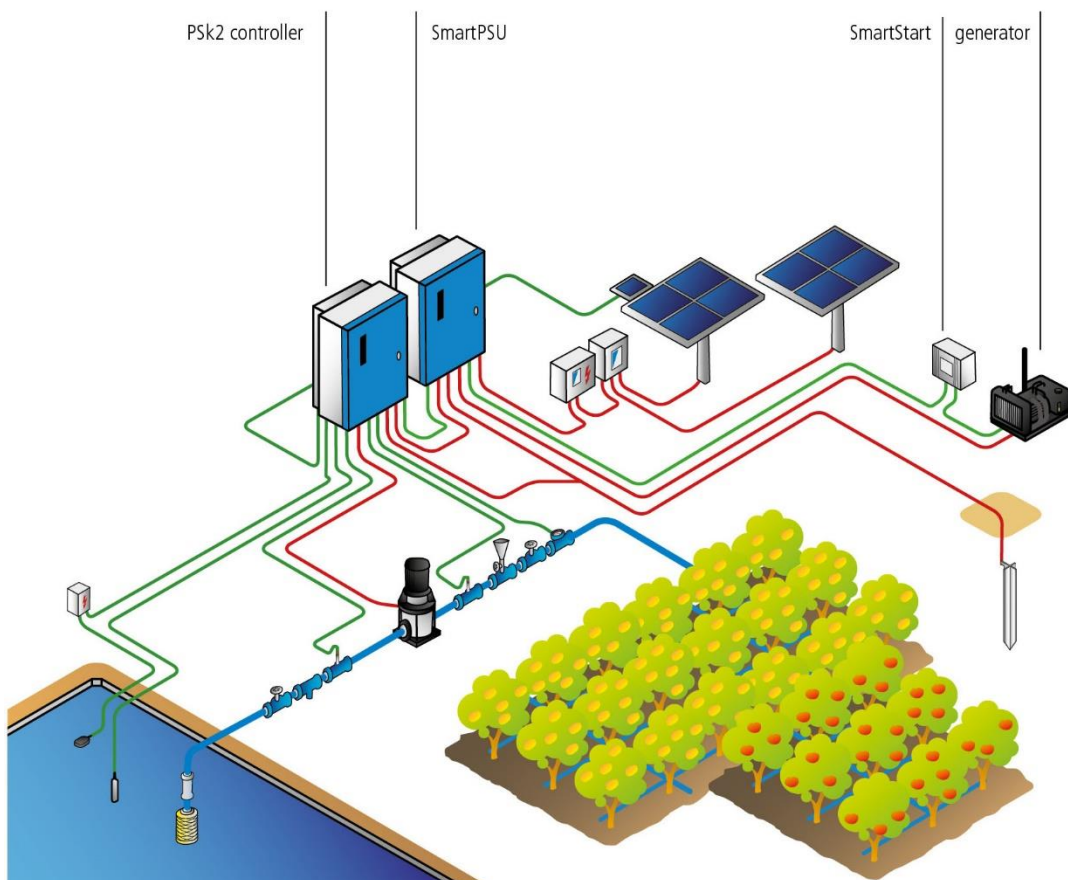
- Item no.: 19-002585    Product name: SmartPSUk2

## FEATURES

- Provides DC power to PSk2 pump controllers from AC and DC sources
- Blends solar power (DC) with AC power from the grid or generator
- Part of the PSk2 SmartSolution for hybrid powering of water pumping systems
- Data link to PSk2 for control and monitoring
- Integrated overheat protection and active cooling



## SmartSolution OVERVIEW



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## TECHNICAL DATA

- Compatible with PSk2-xx pump controllers (from July 2016)
- 3-Phase AC input: 380 – 415 V ( $\pm 10\%$ ), 50Hz/60Hz
- PV max open circuit voltage: 850 V DC
- DC output
  - $U_{max} = 850$  V DC
  - $I_{max} = 70$  A
- Enclosure class: IP54, stainless steel powered coated case
- Ambient temperature: -10 to 50°C

## PRODUCT CONTENT

The SmartPSU comes with a cable to connect to the PSk2 Controller. (1,00m) and a back plate for mounting on non-flat surfaces.

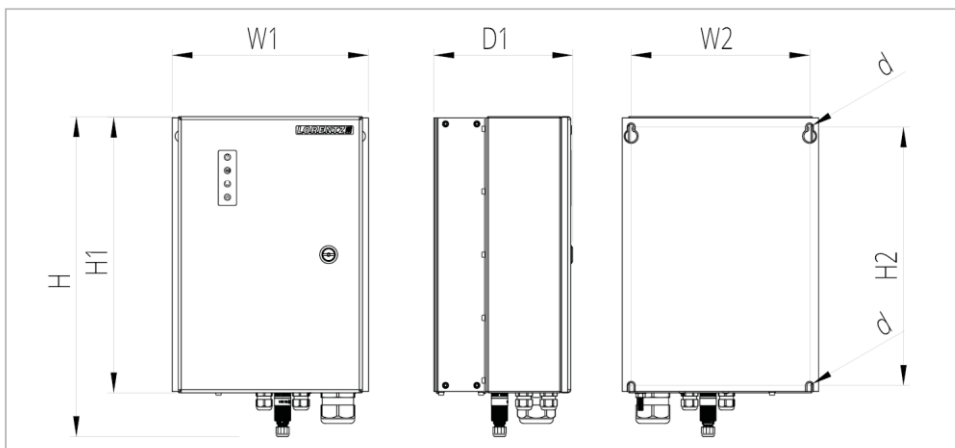
## STANDARDS

- Meets the requirements for CE



## DIMENSION/WEIGHT

- Packing dimensions : 560 x 400 x 340 mm ; 22.0 x 15.7 x 13.4 in
- Net weight: 18 kg / 39 lbs



Model	Dimension [mm]							Net Weight [kg]
	W1	W2	H	H1	H2	D1	d	
all	320	290	500	450	421	226	9	18

