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
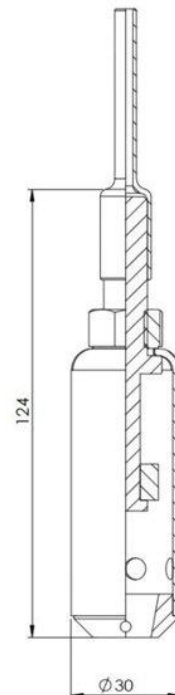
FEATURES

- 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 0.75mm² 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

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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
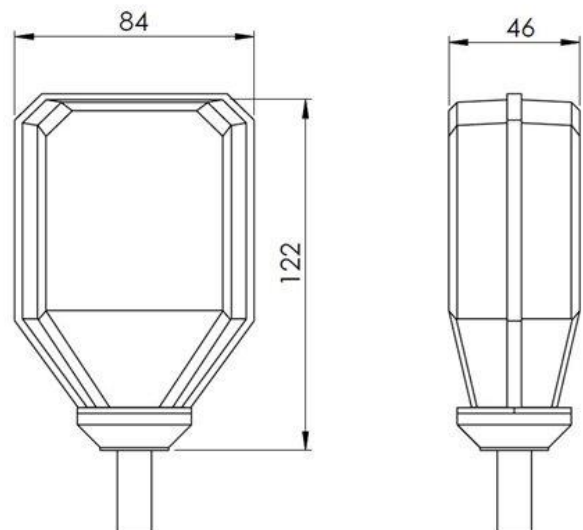- Not sensitive to rotation
- Corrosion-free

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 1.0mm² 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

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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
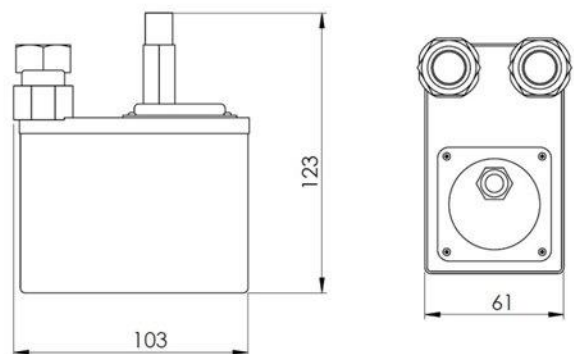- Simple to install
- Trouble free operation
- Corrosion-free

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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V180904

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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V180822

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 presure 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

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V181608

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
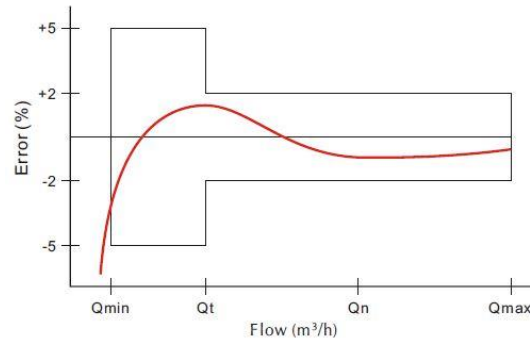- **Item no.:** 19-002202   **product name:** Water Meter, WP-DN200, 1cbm/p

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
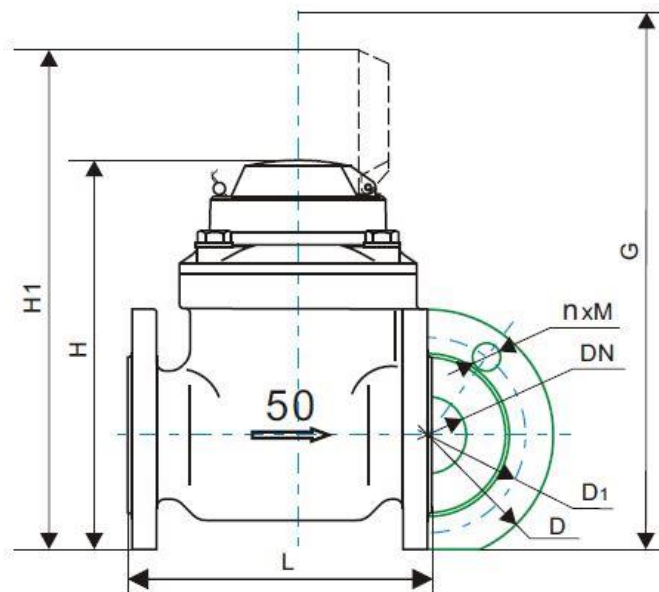
TECHNICAL DATA

- 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 [m³/h]	Q_{max}	20	30	50	80	120	200	300	500
Nominal flow rate [m³/h]	Q_n	10	15	25	40	60	100	150	250
Transition flow rate [m³/h]	Q_t	3.0	3.0	5.0	8.0	12	20	30	50
Minimum flow rate [m³/h]	Q_{min}	0.7	0.7	0.75	1.2	1.8	3.0	4.5	7.5

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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

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All specifications and information are given with good intent, errors are possible and products may be subject to change without notice.
Pictures may differ from actual products depending on local market requirements and regulations.

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 8/20µs: 500 A
- Enclosure class: IP65
- Ambient temperature: max. 50°C
- Wire size: 2x 1.5mm² 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

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V180904

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

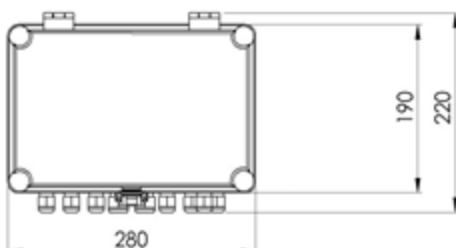|	
Max. voltage	1,000 V DC (Uoc) 880 V DC (Ump)
Max. current per string	40 A
Max. total current	40 A
Max. no. of strings	5
String cable size	4 - 10mm²
Output cable size	4 - 16mm²

RELATED PRODUCTS

PV Combiner 1000-125-4

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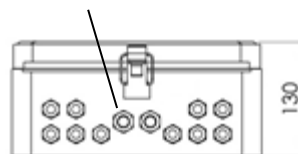- Item no.: 19-000116

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

BERNT LORENTZ GmbH & Co. KG
Siebenstuecken 24, 24558 Henstedt-Ulzburg, Germany
Tel +49 (0)4193 8806-700, www.lorentz.de

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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

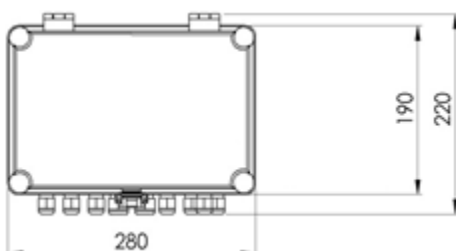|	
Max. voltage	1,000 V DC
Max. current per string	125 A
Max. total current	125 A
Max. no. of strings	4
String cable size	10 - 35mm²
Output cable size	10 - 35mm²

RELATED PRODUCTS

PV Disconnect 1000-40-5

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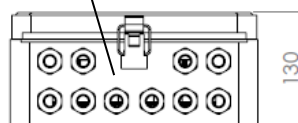- Item no.: 19-000115

PV Protect 1000-125

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

DIMENSION/WEIGHT [mm]

PG cable glands
(10x PG16)

190

220

130

280

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

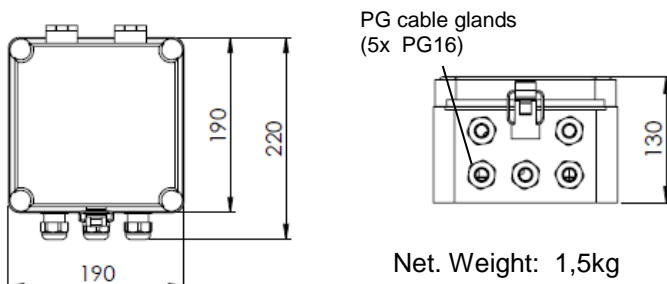| PV Protect 1000-125	
Max. voltage	1,000 V DC
Max. current	125 A
Input cable size	10 - 35mm²
Output cable size	10 - 35mm²
Grounding cable size	16 mm²

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

DIMENSION/WEIGHT [mm]

PG cable glands
(5x PG16)

Net. Weight: 1,5kg

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SmartPSUk2

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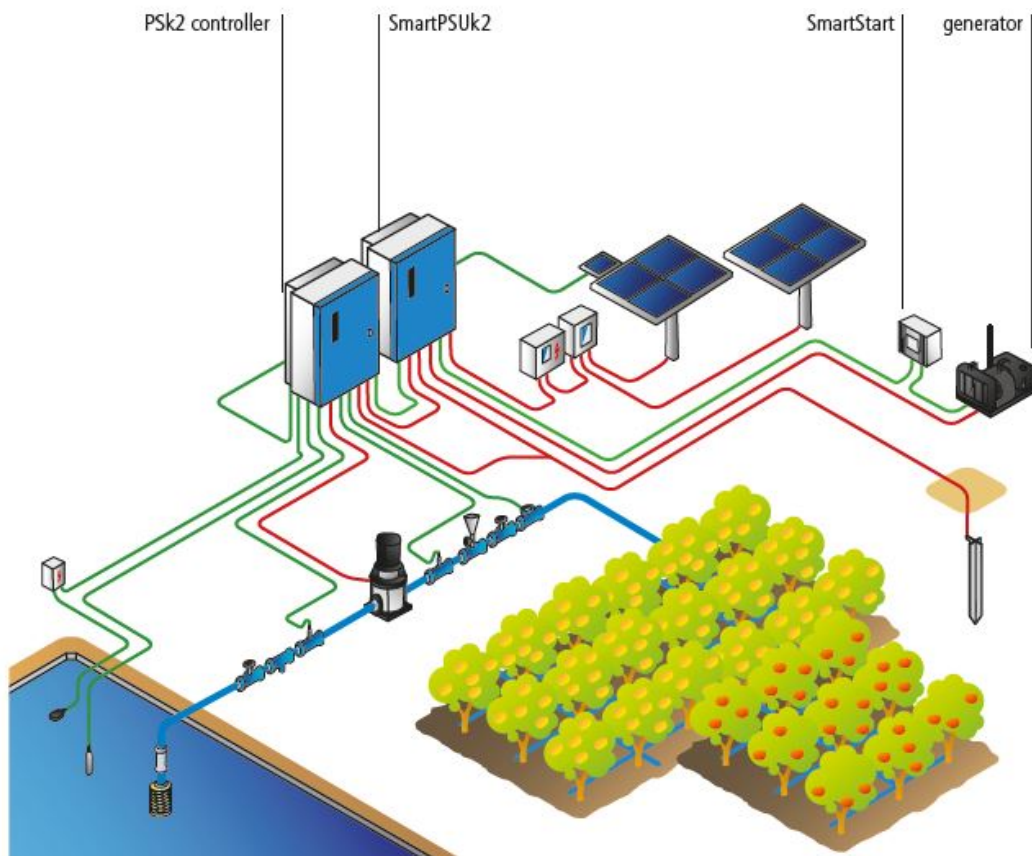
ORDER INFORMATION

- 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 (± 10 %)
    - 50 Hz/60 Hz
    - max. 38 kW (48 kVA)
- 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 SmartPSUk2 comes with a cable to connect to the PSk2 Controller (1.00 m) and a back plate for mounting on non-flat surfaces.
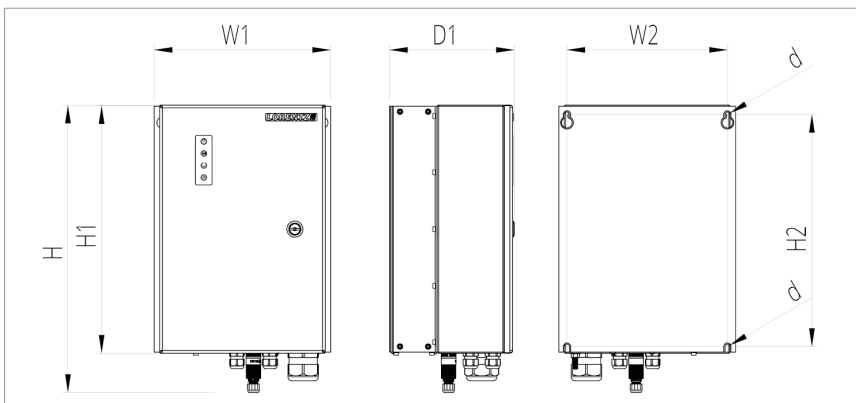
STANDARDS

- Meets the requirements for CE

$C\epsilon$

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

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SmartStart

Automatic Remote Diesel Generator Switching Device

The SmartStart can automatically and remotely start and stop diesel generators for hybrid solar pumping. It has a secondary ancillary output for switching other devices. It connects to the PSk2 Controller and to the remote switch input of the diesel generator.

ORDER INFORMATION

- Item no.: 19-004280   Product name: SmartStart

FEATURES

- Automatically switches on/off diesel engines equipped with remote start input (NO)
- SmartStart provides power to the PSk2 systems for night time logic operation such as early morning pump starting
- Battery charging from PSk2 Controller
- Shows system status via LEDs
- Ancillary output for switching other devices

TECHNICAL DATA

- Max. contact rating: 277 V AC / 30 V DC / 3 A
- Enclosure class: IP54
- Nominal cross section for GEN Link cable 1.5 mm²
- Further information is available in the PSk2 manual on partnerNET

PRODUCT CONTENT

The SmartStart comes with a cable to connect to the PSk2 Controller. (1.50 m) The required battery must be ordered separately. The battery must meet the following requirements:

- Sealed 12 V AGM lead acid battery Min capacity: 7 Ah

DIMENSION/WEIGHT

- Packaging dimensions: L x W x H 270 x 250 x 230 mm (10.6 x 9.8 x 9.1 in)
- Total weight (without battery):   2.8 kg (6.2 lbs)
- Battery case: L x W x H 151 x 70 x 95 mm (5.94 x 2.56 x 3.74 in)

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