

mardi 21 janvier 2020

Projet de pompage solaire

Remarque: PS4000 + 5000Wc
Hypothese HMT=60m + 1300m tuyau DI60

Paramètre

Emplacement:	Mauritania, Nouakchott (18° Nord; 16° Ouest)	Température de l'eau:	25 °C		
Rendement quot. requis:	60 m³; Dimensionnement pour mois moyen	Perte par saletés:	5,0 %	Câble moteur:	60 m
Type de tuyau:	steel, weldless, new neatly galvanized: 0,100 mm	Perte de pression statique:	60 m	Longueur du tuyau:	1 300 m

Produits

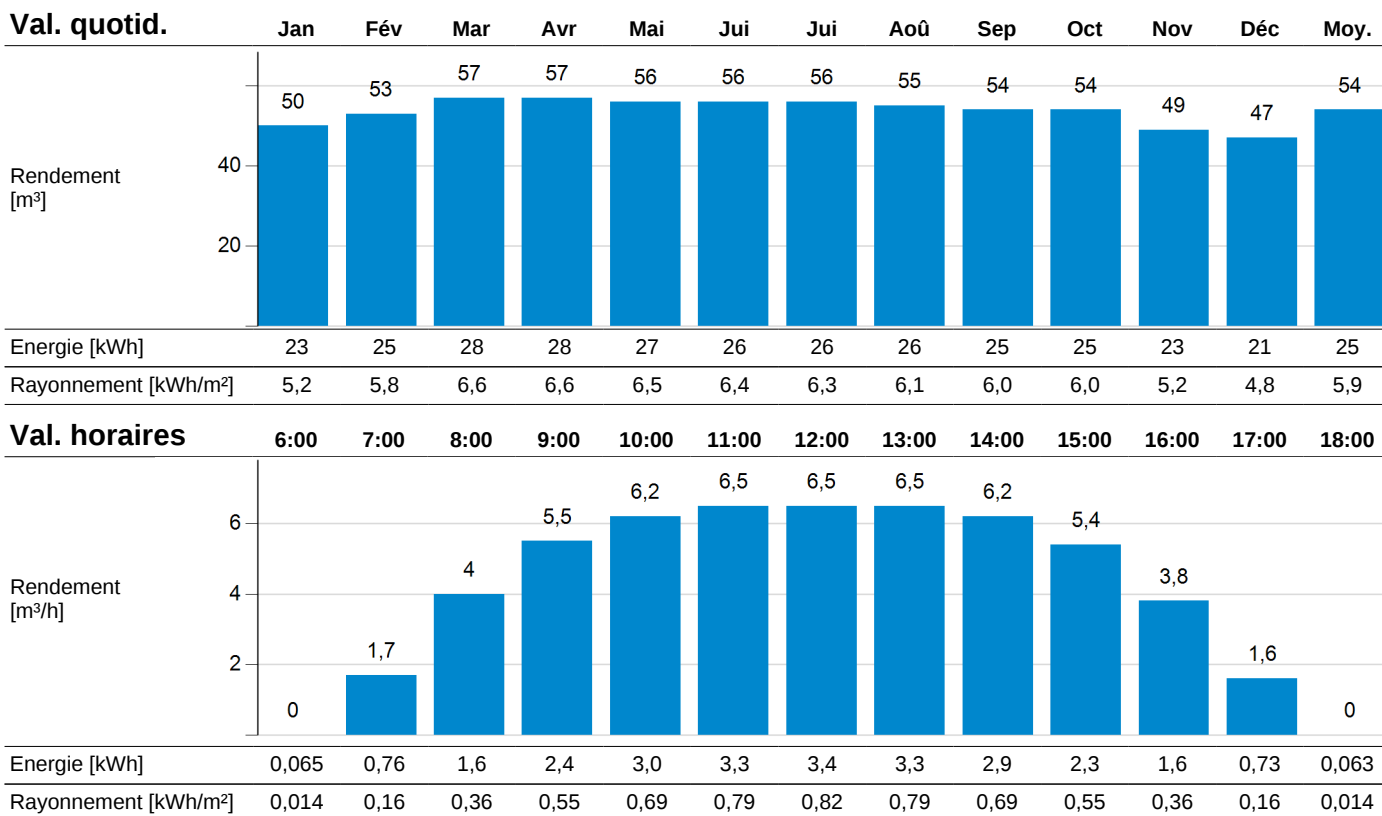
Produits	Quantité	Détails
PS2-4000 C-SJ5-25	1 pce	Système de pompe immergée comprenant contrôleur avec DataModule, moteur et extrémité de pompe
PV280 P Solar F	18 pce	5 040 Wp; 9 x 2 modules; 18 ° incliné
Câble moteur	60 m	4 mm² Câble triphasé pour le courant et câble monophasé pour la mise à la terre
Canalisation	1 300 m	60 mm (diamètre intérieur) Canalisation
Accessoires	1 ensemble	Well Probe V2, Liquid Pressure Sensor, PV Disconnect 440-40-3, PP4000 AC PowerPack, Surge Protector2

Sun Sensor setting in PumpScanner

min. 100 W/m²

Rendement quotidien en mois moyen

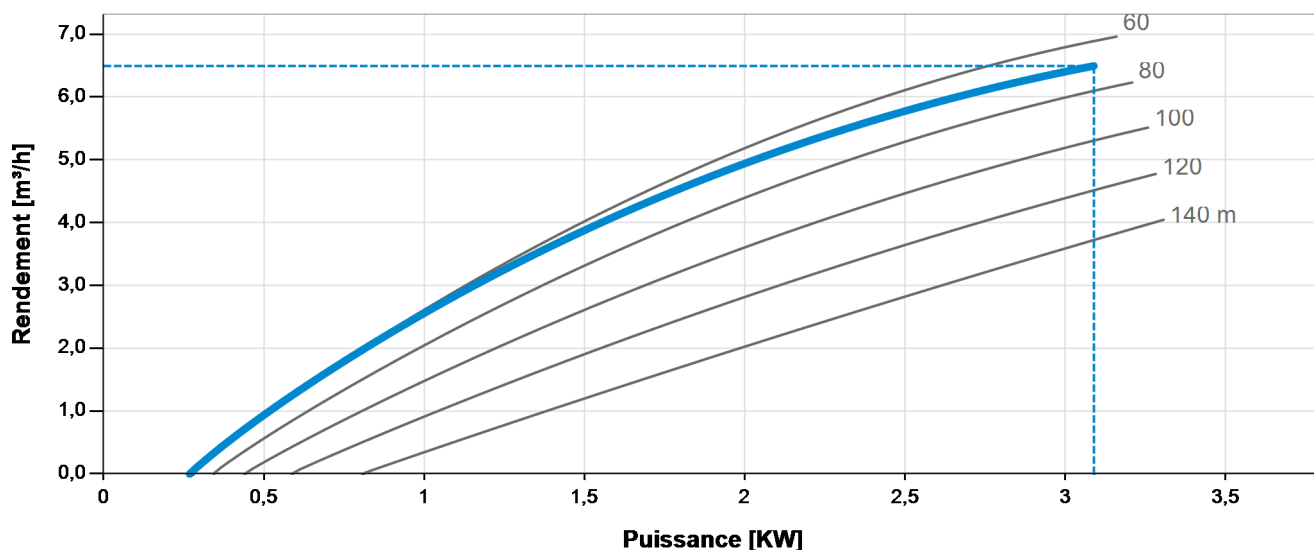
54 m³



mardi 21 janvier 2020

Projet de pompage solaire

Caractéristique du système



			Min.	800 W/m², 20 °C	Max./STC*
Générateur PV	Température des cellules	[°C]		46	25
	Perte de température	[%]		9,0	-
	Perte par saletés	[%]		5,0	-
	Pmax	[Wp]		3 485	5 040
	Vmp	[V]		255	280
	Imp	[A]		14	18
	Voc	[V]		321	351
	Isc	[A]		14	19
	Pout	[W]		3 220	-
	Vout	[V]		273	-
	Iout	[A]		12	-
Câble moteur	Perte de puissance	[%]	1,3	3,3	3,4
Systèmes de pompe	Puissance du moteur	[W]	269	3 090	3 090
	Tension du moteur	[V EC]	106	221	221
	Intensité du moteur	[A]	2,6	14	14
	Vitesse du moteur	[rpm]	1 895	3 190	3 190
	Débit	[m³/h]	0	6,5	6,5
	Efficacité	[%]	0	39	44
Canalisation	Vitesse de flux	[m/s]	0	0,64	0,64
	Perte de charge	[m]	0,000	10,0	10,0

*STC: Modules photovoltaïques en condition de test standard, rayonnement 1 000 W/m², température des cellules 25 °C

PS2-4000 C-SJ5-25

Système de pompe solaire immergée pour puits 4"

Gamme de systèmes

Chute	max. 140 m
Débit	max. 7,0 m³/h

Données techniques

Contrôleur PS2-4000

- Commande et surveillance
- Entrées de commande pour protection contre le fonctionnement à sec, commande à distance, etc.
- Protection contre inversion de polarité, surcharge et surchauffe
- MPPT (Maximum Power Point Tracking) intégré
- Sun Sensor intégré

Puissance	max. 4,0 kW
Tension d'entrée	max. 375 V
Optimal Vmp**	> 238 V
Intensité du moteur	max. 14 A
Efficacité	max. 98 %
Temp. ambiante	-40...50 °C
Classe de protection	IP68

Moteur ECDRIVE 4000-C

- Entretien minimal, moteur DC sans balais
- Rempli d'eau
- Matériel de haute qualité, acier inoxydable: AISI 304/316
- Moteur sans électronique à l'intérieur

Puissance nominale	4,0 kW
Efficacité	max. 92 %
Vitesse du moteur	900...3 300 rpm
Classe d'isolation	F
Classe de protection	IP68
Submersion	max. 150 m

Extrémité de la pompe PE C-SJ5-25

- Clapet anti-retour
- Matériel de haute qualité, acier inoxydable: AISI 304
- Centrifugal pump

Efficacité	max. 54 %
------------	-----------



Pompe PU4000 C-SJ5-25 (Moteur, Extrémité de la pompe)

Diamètre de forage	min. 4,0 in
Température de l'eau	max. 50 °C

Normes



2006/42/EC, 2004/108/EC, 2006/95/EC

IEC/EN 61702:1995, IEC/EN 62253 Ed.1

Les logos indiquent les autorisations obtenues pour cette gamme de produits. Les produits sont commandés et livrés selon les autorisations propres aux exigences du marché.

**Vmp: Tension MPP en condition de test standard (STC) : rayonnement solaire 1 000 W/m², température des cellules 25 °C

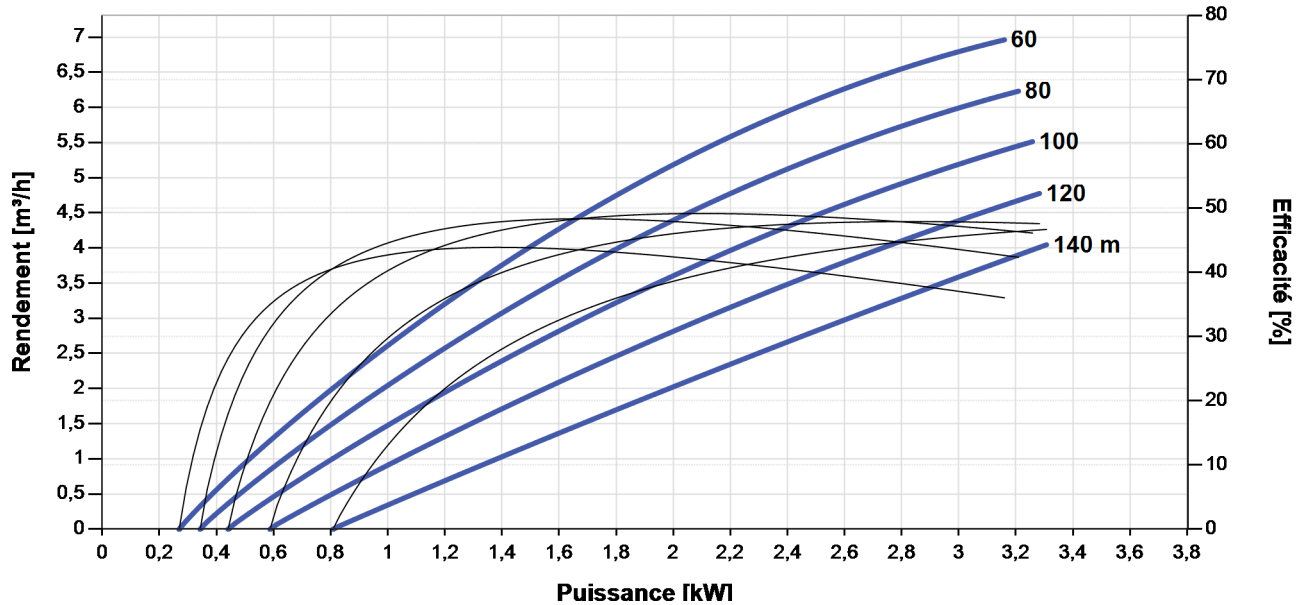


PS2-4000 C-SJ5-25

Système de pompe solaire immergée pour puits 4"

Graphique de la pompe

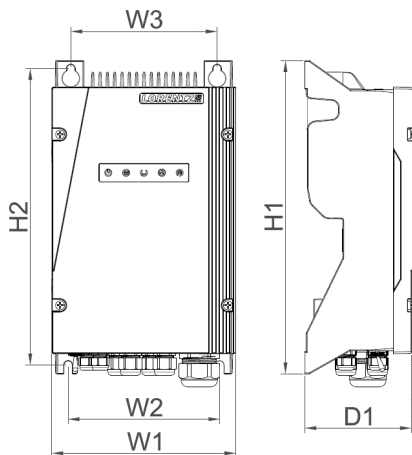
V_{mp}* > 238 V



Dimensions et poids

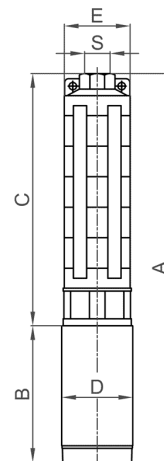
Contrôleur

H1 = 352 mm
H2 = 333 mm
W1 = 207 mm
W2 = 170 mm
W3 = 164 mm
D1 = 124 mm



Pompe

A = 941 mm
B = 245 mm
C = 696 mm
D = 96 mm
E = 98 mm
S = 1,5 in



	Poids net
Contrôleur	6,1 kg
Pompe	18 kg
Moteur	10 kg
Extrémité de la pompe	8,0 kg

*V_{mp}: Tension MPP en condition de test standard (STC) : rayonnement solaire 1 000 W/m², température des cellules 25 °C

Well Probe V2

Mechanical float switch for dry run protection of LORENTZ solar pumps

The well probe provides a reliable method of run dry protection for LORENTZ pumps. The well probe detects that water is present within a well, tank or other water source. The well probe is typically attached to the riser pipe above the pump and connected to the controller. When the well probe becomes dry (water level is below the probe) the pump switches off to avoid dry running.

Order Information

Item no.: 19-000005 **Product name:** Well probe sensor V2

Features

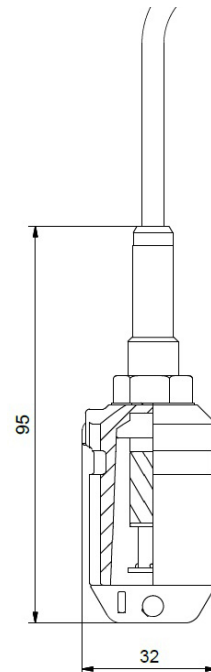
- Reliable dry run protection
- Simple to install using 3 cable ties
- Improved tolerance to dirt
- Splicing kit and cable ties for fixing are included

Technical Data

- Max. operating temperature 55°C
- Enclosure class: IP68
- Submersion depth: max 50 m (164 ft)
- Cable length: 1.5 m
- Wire size: 2 x 0.75 mm² or AWG 19, waterproofed
- Must be mounted in a vertical position
- Meets the requirements for CE

Dimensions / Weight

- Packaging dimensions: 255 x 170 x 40 mm
10.0 x 6.7 x 1.6 in
- Total weight: 0.1 kg / 0.2 lbs



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

PV Disconnect 440-40-3

Box with DC Disconnect Switch and optional lightning surge protection

ORDER INFORMATION

- Item no.: 19-000138 **product name:** PV Disconnect 440-40-3
- 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

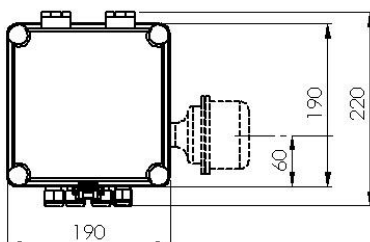
- Designed for PS2-150 to PS2-4000
- For professional installation of pumping systems

TECHNICAL DATA

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

Max. voltage	440 V DC
Max. current per string	15 A
Max. total current	40 A
Max. no. of strings	3
String cable size	2,5 - 4 mm ²
Output cable size	4 - 10 mm ²

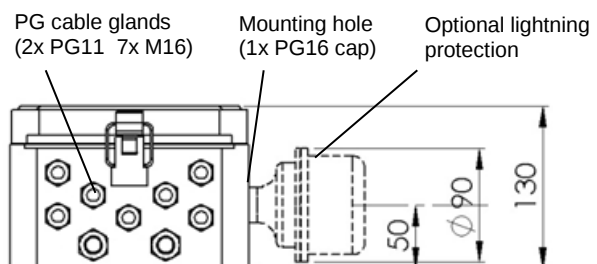
DIMENSION/WEIGHT [mm]



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
PS2 150 – PS2 200	MNSPD115
PS2 600 – PS2 1800	MNSPD300
PS2 4000	MNSPD600



Net. Weight: 1,6kg (+0,35kg)

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

Sun. Water. Life.

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

PP4000 AC PowerPack

AC/DC Converter to Supply PS4000 Pump Systems with Backup Power from a Generator or Mains Supply

ORDER INFORMATION

- Item no.: 19-000180 **Product name:** Power Pack 4000 380 V AC
- Item no.: 19-000181 **Product name:** Power Pack 4000 460 V AC

TECHNICAL DATA

Power Pack 4000 380 V AC

3-Phase AC input 380 V ($\pm 20\%$)
45 to 65Hz

DC output: 180-286 V DC
5.7 kW

DC output rated current:
20 A at 230 V DC

Power Pack 4000 460 V AC

3-Phase AC input 460 V ($\pm 15\%$)
45 to 65Hz

DC output: 230-330 V DC
6.6 kW

DC output rated current:
20 A at 330 V DC

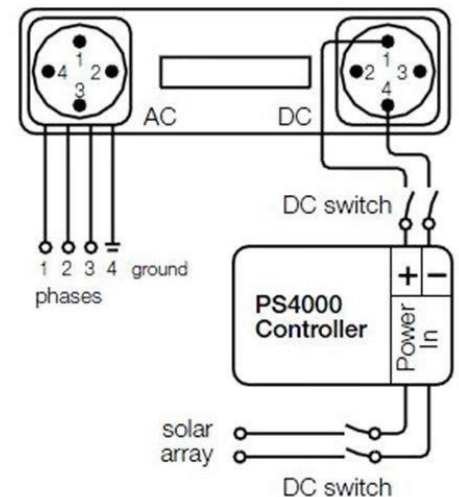
- Must be protected from direct mid-day sun
- IP42
- Ambient temperature: -5 to 45°C
- Efficiency up to 94%
- Passive cooling, no fan
- All wires must be #14 AWG (2.5 mm^2) or larger
- Manual with further information is available on PartnerNet
- Meets the requirements for CE

DIMENSION/WEIGHT

- Packaging dimensions: 332 x 210 x 202 mm
15.7 x 8.7 x 8.3 in
- Total weight: 14.5 kg / 30 lbs



photo may differ from actual product



Surge Protector2

Device to Protect LORENTZ Pump Accessories from Voltage Spikes

ORDER INFORMATION

- Item no.: 19-005210 product name: Surge Protector2

FEATURES/COMPATIBILITY

- Reliable surge protection device for any switched, pulse or analogue (4-20 mA) inputs sensors including:
 - Well Probe Sensor 19-000000
 - Water Sensor 19-000001
 - Float Switch 19-000030
 - Pressure Switch 19-000310
 - Liquid Level (all types, e.g. 19-005040)
 - Liquid Pressure Sensor (all types, e.g. 19-004460)
 - Water Meter (all types, e.g. 19-002160)
 - Sun Switch (19-000050)
- The device must be installed inside the PS2 or PSk2 controller.



TECHNICAL DATA

- Max. voltage: 30 V DC
- Max current 8/20μs: 500 A
- Enclosure class: IP20
- Ambient temperature: max. 80°C (176°F)
- Wire size: 2 x 1.5mm² (AWG 16)
- Meets the requirements for CE

DIMENSION/WEIGHT

- Packing dimensions: 56 x 26 x 120 mm
 2.2 x 1.02 x 0.47 in
- Total weight 0.1 kg / 0.2 lbs

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

Sun. Water. Life.

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.