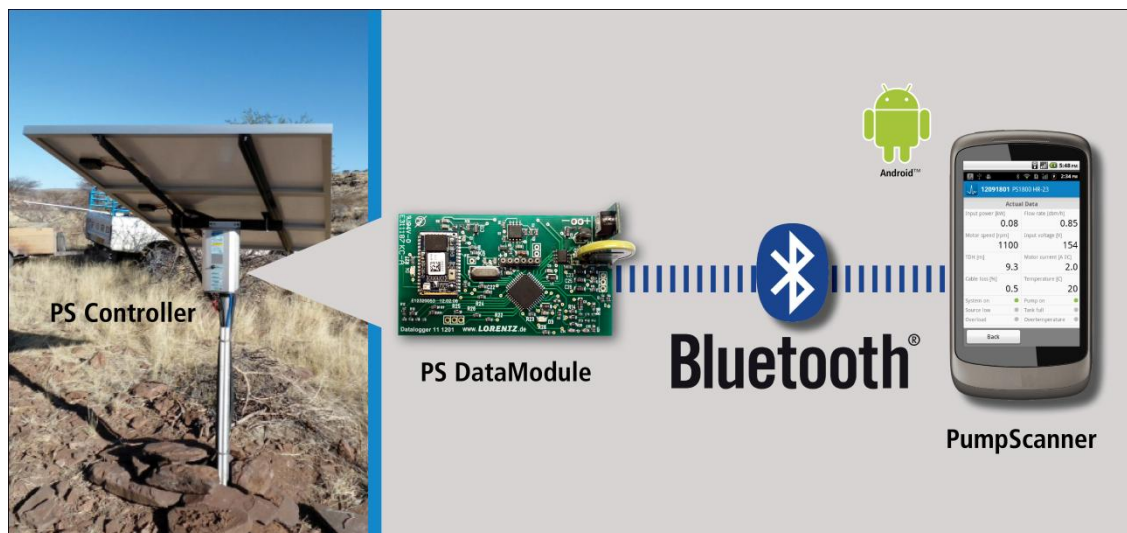


New PS DataModule and PumpScanner for Android™ App

Introduction

LORENTZ will shortly introduce the PS DataModule (data logger) and PumpScanner Android App.

This combination of an enhanced PS controller and an application which runs on Android telephones/tablets brings a new level of control and monitoring to LORENTZ PS solar pump systems.



The PS DataModule is pre-installed in the PS Controller. The PS DataModule measures the key data from the pump system and stores it in on-board memory. Depending on the sample rate up to 10 years of data can be stored.



To view real-time data or to collect historic data from the PS DataModule an application called “PumpScanner” is used. PumpScanner runs on the Android Operating System (smartphone or tablet) and communicates with the PS DataModule via Bluetooth. The communication distance is approximately 10 m (30 ft). Pump setting changes such as on/off timers and speed control can also be made.

Positioning and target markets

This development opens up some new opportunities. Firstly this positions LORENTZ as a technology leader; this is a very advanced solution when compared to others in the solar pump industry and even in the wider general pumping industry.

There are two drivers for the introduction of this development.

- Firstly PumpScanner is as a very productive service aid. In high labour economies the PS Data Module and PumpScanner application combination can greatly reduce time on site. Before getting out of the truck the engineer can look at the recent data, check the input voltages, change the pump speed and understand what is wrong. This saves time that would normally be spent and time spent discussing the performance with customers.
- Second driver is performance monitoring. The PS DataModule offers information rich data to customers that was previously very difficult to keep track of in a cost effective way.

Tools such as PumpScanner enhance the message that LORENTZ operates a professional channel model. The engineer on the customers' site is now seen as having tools that the average farmer / well owner does not. Customers clearly see that solar pump installation and servicing is a professional business.

Partners should consider local market applications for this technology. Government, education and NGO projects where accountability is desired have all expressed interest in this technology.

Alternative funding and asset sharing models have also been discussed. In Africa models have discussed using the technology to offer pre-pay water services and share ownership (with metering) between multiple farmers. The models may be the start of alternative models in other countries.

Pricing and commercial model

Versions of PS Controllers are available with the PS DataModule included.

The PumpScanner software is available for download for LORENTZ approved partners (partnerNET users). The PumpScanner software will remain free of charge for the first year. A license fee may be introduced for additional features in future versions. A customer (client) version of PumpScanner is also available with limited functionality. PumpScanner has a license ID and is controlled in the same way as COMPASS to approved LORENTZ partners.

The PS DataModule must be activated to get the unique eight-digit pairing PIN number. This activation is a one off lifetime cost for the PS DataModule. The activation gives you the pairing code for a specific PS DataModule so this can then be shared between multiple PumpScanner versions (eg if you have more than one service technician that will visit site).

The activation PINs can either be pre-purchased and used to activate any PS DataModule or purchased online (partnerNET) via credit card for instant activation. The price for activation is US\$ 100.

In summary, to use these new features you must purchase a controller equipped with the PS DataModule hardware and an activation PIN .

Differentiation/Additional sales arguments

Why is this different from any other data loggers.

1. It is very cost effective. US\$ 200 provides an advanced data logging solution, proprietary data loggers (even for flow) start in the range of US\$ 500-US\$ 1000.
2. Using a low cost Android handset means that partners do not need to equip their engineers with a single use piece of hardware
3. The PS DataModule has been designed to allow connection to other devices in the future. Using Bluetooth we have a long term roadmap for development.
4. This solution is designed for off-grid. In keeping with the LORENTZ design philosophy our design uses very low power and requires no additional power supply. Integrating it into the pump controller means we can keep costs down and reliability up.
5. The PS DataModule can communicate two ways, it collects data from the pump controller and can also control pump functions. On/off timers and speed can be controlled by the PS DataModule.

Pricing and availability

PS DataModule equipped controllers have now begun shipping and will be available in larger quantities during March 2013.

Additional information – Frequently Asked Questions

Why did we choose Android as the operating system?

Smartphone handsets that are Android based have a large market share. Using an Android handset as a service tool is a low cost platform (US\$ 99) with a lower cost of ownership than even a PC. Simply an Android Smartphone is something that can be considered an engineering tool.

Will PumpScanner be available for Apple iPhone/iPad?

Currently due to restrictions in the IOS development tools, applications can only use the Bluetooth connection may only be used for audio streaming. IOS devices are also quite expensive.

Is a customer version of PumpScanner available?

A customer version of the PumpScanner App with reduced features will be available in the future. Feedback on which features should be included / excluded are being collected.

Can I access data over longer distances than 10m?

We will be adding an additional product to the portfolio in 2013 called PS Communicator. This is a standalone unit that will communicate with the LORENTZ PS controller via Bluetooth and then onward communicate via the cellular network. We will also introduce a web based application for remote monitoring and pro-active communication of faults and alarms.