User manual 4511 PPS PR Process Supervisor



TEMPERATURE | I.S. INTERFACES | COMMUNICATION INTERFACES | MULTIFUNCTIONAL | ISOLATION | DISPLAY



No. PPSV102-UK

6 Product Pillars to meet your every need

Individually outstanding, unrivalled in combination

With our innovative, patented technologies, we make signal conditioning smarter and simpler. Our portfolio is composed of six product areas, where we offer a wide range of analog and digital devices covering over a thousand applications in industrial and factory automation. All our products comply with or surpass the highest industry standards, ensuring reliability in even the harshest of environments and have a 5-year warranty for greater peace of mind.



Our range of temperature transmitters and sensors provides the highest level of signal integrity from the measurement point to your control system. You can convert industrial process temperature signals to analog, bus or digital communications using a highly reliable point-to-point solution with a fast response time, automatic self-calibration, sensor error detection, low drift, and top EMC performance in any environment.



We deliver the safest signals by validating our products against the toughest safety standards. Through our commitment to innovation, we have made pioneering achievements in developing I.S. interfaces with SIL 2 Full Assessment that are both efficient and cost-effective. Our comprehensive range of analog and digital intrinsically safe isolation barriers offers multifunctional inputs and outputs, making PR an easy-to-implement site standard. Our backplanes further simplify large installations and provide seamless integration to standard DCS systems.



We provide inexpensive, easy-to-use, future-ready communication interfaces that can access your PR installed base of products. All the interfaces are detachable, have a built-in display for readout of process values and diagnostics, and can be configured via push-buttons. Product specific functionality includes communication via Modbus and Bluetooth and remote access using our PR Process Supervisor (PPS) application, available for iOS and Android.



Our unique range of single devices covering multiple applications is easily deployable as your site standard. Having one variant that applies to a broad range of applications can reduce your installation time and training, and greatly simplify spare parts management at your facilities. Our devices are designed for long-term signal accuracy, low power consumption, immunity to electrical noise and simple programming.



Our compact, fast, high-quality 6 mm isolators are based on microprocessor technology to provide exceptional performance and EMC-immunity for dedicated applications at a very low total cost of ownership. They can be stacked both vertically and horizontally with no air gap separation between units required.



Our display range is characterized by its flexibility and stability. The devices meet nearly every demand for display readout of process signals, and have universal input and power supply capabilities. They provide a real-time measurement of your process value no matter the industry, and are engineered to provide a user-friendly and reliable relay of information, even in demanding environments.

4511 PPS getting started manual

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PR Process Supervisor - PPS app

PR electronics 'PR Process Supervisor' - PPS - app enables remote unit monitoring, calibration and programming of PR electronics signal conditioning devices mounted with the 4511 communication enabler, i.e. devices in system 4000 and 9000 series.

The app shows live data – directly from your device – anywhere at any time. It is designed for technical and maintenance staff as well as plant operators. All you need is to download the app, manually or auto-connect to your device, and you have a user friendly, remote interface for monitoring and programming of your devicees.

App download

If you will be downloading the PR electronics PPS app for the first time, follow the instructions for IOS below. The Android download process will be similar.



Go to the App store or scan the QR code (the code works for both IOS and Android).





Search for "PR electronics PPS", and install the free application.



Tap the newly created PPS icon.



Create an account by typing in your e-mail address and a password.

Select "Create account".



You will then see the following confirmation pop-up.

Open your email program and find the acknowledgement e-mail. Check your spam folder if you cannot find it.

ad 🗢 Indbakke 🔺 🔻	28.39 1 of 1	ha	(i)		14 % E
PR electronics To: pps.test.email@gmail.com					Details
PPS Signup - Please Confirm 26. jun. 2013 23.28					
Hello pps.test.email@gmail.com					
Please verify and proceed with your	new PR electronics acc	ount by cl	icking or	the link	below:
https://www.pps.prelectronics.com/v	//UILHVMME8SqpdHp/	oqyaxg			
PR electronics					

Tap the confirmation link.



You will see this verification message in your browser.

Now open the PPS app again. Type in your email and password.



Tap the "Sign in" button.

Please note: the iOS device must be connected to the internet the first time you sign in because a certificate must be downloaded to the iOS device for each new PPS user.

Discovery view

This is the **auto discovery function** - If your smart device and model 4801 gateway is on the same LAN (same network ID) the 4801 gateway will appear here after you click the "Refresh" button.

iPad 🗟	23.40	14 % 🖵
	Discovery	
No devices four Recent devices: demo.pps.pr	nd Refresh relectronics.com Prepare offline access Remote access	This is the demo fun Here you can see som functions without cor real 4511 & 4801 gat The only requirement connection. Check page 13 for fur

ction e of the PPS necting to a eway setup. is an internet ther info.

This is for accessing a remote 4801 gateway - that is connected to a network with a different address than the iOS device. Enter [serial number].pps.prelectronics.com - of the remote 4801 gateway here, then tap the "Remote access" button to access the 4801 gateway via PPS.

However if the 4801 gateway is connected to a network that does not have internet access (offline) - then enter [serial number].pps.prelectronics.com here, and then tap the "Prepare offline access" button. Check page 15 for connecting to a gateway in offline mode.

The 4801 gateway device drivers will be downloaded from the PR electronics server to your iOS device, allowing you to communicate with the 4801 gateway via Wi-Fi.

If you are having problems connecting, check your user rights.

Internet Explorer / Firefox browser PPS application - downloading and installation



Connect your Computer to the internet.

20 20	∩ ★ ¤
Download Plugin for this Browser> Ge to Discover> Need another Fireflox or IE version? <u>All plugin downloads</u> Notes on offline Use If you need to use the plugin in an offline configuration (that is, without Internet connection), you must create a local protein first. The happens administrativity the first image vulness of a download first of through installation. Through installation:	

Enter www.pps.prelectronics.com.

Download and install a browser plugin for your specific platform.

Configuration for remote access requires an account on the PR central server - Click "Create Account".

Create an account by typing in your e-mail address and a password.

< 🕣 🖉 pre://self/irotall/signup?urhtpre://self	- C 🧭 Syn Up For Account 🛛 🗙	o× ∩ ★ 0
	Menu	PR electronics
	Sign Up For Account Image: A state of the st	

Open your email program and find the acknowledgement mail. Check your spam folder if you cannot find it.

	PPS Signup - Please Confirm	
	PR electronics (noreply@prelectronics.com) Add to contacts 10.45 To: prspantest@outlook.com ¥	
	Hello prspamtest@outlook.com	
	Please verify and proceed with your new PR electronics account by clicking on the link below:	
\triangleleft	https://www.pps.prelectronics.com/v?CozAmpKLaz1 VOAvTAgl6w Click the conf	irmation link.
	Thank you,	
	PR electronics	

You will see this verification message in your browser.



Now go to www.pps.prelectronics.com.

Click the button "Go to Discover", to enter the plugin "pre://self/discover"

← → 🖭 http://pps.prelectronics.com/	- C M PR electronics PPS ×	n + ¤
	PPR electronics	
	PR electronics PPS plugin	
	 Download and install a browser plugin for your specific platform (see below). IOS users can download a dedicated app form App Store. Once installed, your may proper your PPS sateway for connected to the same locat area network as the device. Configuration for remote access requires an account on the control to the same locat area network as the device. Configuration for remote access requires an account on the control environment (Exet and exet). When the plugin or app is installed you can use [Discover] for local network discovery and remote access. This browser is: Windows - Internet Explorer 10.0 	
	Download Plugin for this Browser >	
	Go to Discover >	
	Need another Firefox or IE version? All plugin downloads	

Please note: The computer must be connected to the internet the first time you sign in, because a certificate must be downloaded to the computer for each new PPS user.

The Discovery view page is now entered.

If your computer and 4801 gateway is on the same LAN (same network ID) - the 4801 gateway name will appear here.

← → Ø gret/velt/discoverh=133320132164 • C Ø Discovery ↑ ★
Discovery
No devices found
Refresh
Recent devices:
demo.pps.prelectronics.com
Remote annexs. Enter address
Prepare offline access
Remote access

This is the demo function. Here you can see some of the PPS functions without connecting to a real 4511 & 4801 gateway setup.

The only requirement is an internet connection.

This is for accessing a 4801 gateway that is connected to a network with a different ID than the computer. Enter [serial number].pps.prelectronics.com - of the remote 4801 gateway here - then tap the Remote access button to access the 4801 gateway via PPS.

However if the 4801 gateway is connected to a network that does not have internet access (offline) - then please enter [serial number].pps.prelectronics.com and then tap the "Prepare offline access" button. Check page 15 for connecting to a gateway in offline mode.

The 4801 gateway device drivers will be downloaded from the PR electronics server to your computer, allowing you to communicate with the 4801 gateway.

If you are having problems connecting, check your user rights.

Demo functionality for the PPS Application

	ps.prelectronics.	com			
39290003.pps.prel	ectronics.com				
		Refres	h		
ent devices:					
emo.pps.prelectro	nics.com				
/edemo1.pps.prel	ectronics.com				
		co m			
39475005-config.p	ps.prelectronics.	com.			
note access - Enter	address				
	>-				
	Р	repare offlin	e access		
	6	Remote ac	cess	<u> </u>	5
				/	

Go to the Discovery view page.

Select or type in "demo.pps.prelectronics.com" (if it is not already in the recent device list) to enter the device demo function.

Press Remote access to enter demo devices view.



After a few moments you should see this device screen shot.

Tap any of the available demo devices and go to the summary view for that device.

Connecting to the PPS application in offline mode

lo devices found		
	Refresh	
Recent devices:		
demo.pps.prelectronics.co	m	•
temote access - Enter address	s	
\sim	Prepare offline access	$\overline{\boldsymbol{\lambda}}$
	Remote access	

If the 4801 gateway is connected to an offline network - meaning a wireless network with no internet access - you have to prepare the PPS and the 4801 gateway for offline access first.

Before preparing for offline access make sure the computer or tablet device is connected to the internet.

Open the PPS application and type in "[serialno].pps.prelectronics.com" of the used 4801 gateway in the "Remote access" field.

Tap "Prepare offline access".

PPS will now receive the needed data and drivers from a PR electronics server to allow offline access.

Now go to "Settings - Wi-Fi" on your computer or tablet device and select and connect to the same wireless network that the 4801 gateway is connected to.

Go back to the discovery view page in the PPS application and tap the refresh button. You should now find your 4801 gateway listed. Select the found 4801 gateway to monitor and configure your system 4000 / 9000 devices via Wi-Fi.

If the PPS hasn't been prepared for offline access, you will get error message: 2000049 – "No Internet Access". d Support Release) 32-bit.

	Refresh	
lecent devices:		
demo.pps.prelectro	onics.com	•
temote access - Enter 139290003.pps.prete	r address ctronics.com	
	Prepare offline access	
	Remote access	

Connecting to the PPS application in offline mode



PPS application - user functions

By tapping the 4801 gateway found in the Discovery view list, you will now see a view of all system 4000 and/or 9000 devices connected on this gateway segment.

Please note:

If no devices appear the first time you access the discover view list, check the communication settings of your gateway and all 4511 devices. PR recommends a baud rate of at least 57.6 k for running the PPS application.

At the top of the PPS application the number of devices connected to the segment is indicated.



Any devices with an error have a flashing red background.

The red "PR flow" symbol appears when you tap a specific device. The 4511 backlight on that device will begin flashing to provide a local indication that the device has been selected.

By tapping the same device again, the screen will display the summary view for that device.

	4110	Input	
- 33	T 180.0 %C	Input Type	POTM
	180.0 °C	Disolar	
	18.40 mA	Display Upit	/ •/
	PPS	Decimal Point	XXXX
		Display Low	0.0
-		Display High	200.0
k 999	13	Relay	L
	A G O	Relay Function	OFF
	Location	Relay	2
Rus	Cocation	Relay Function	OFF
Addres	is 11	0.1	
		Outpu	
Θ	Configure	Output Type	CURREN
		Current Range	4 20m/
0	Simulate	Simulation	
0	Calibrate	Calibration	
		Graph	
200			20
150 -			16
100 -			- 12
50-	input		- 8
1	output		
0			4

Device view and programming

In the summary view you can view and change most configuration parameters, monitor the process values, and manually control the device I/O.



Configuration function page

	Intet SIM-kort 🗢	10.01	64 % ■
	C Back	4116 Configure	
	Input		
	Input Type	CURR	0
	Current Range	4 20mA	0
	🔿 Display		
	🔿 Relay 1		
Press the SEND	Relay 2		
configuration	💿 Output		
hutton to send the	🗢 General		
new setup to the specific device.	•	Send	

Calibration function page (only products 4104, 4114, 4116 & 4131)

Back 4116 4116 Input 1840 °C 1840 mA PPS Displa Displa Displa Displa Displa Displa Displa	Input Type PO Display ay Unit hal Point XXX by Low O ay High 200 Relay 1
4116 Input 1840 °C 1840 mA PPS Displa	Input Type PO Display ay Unit Ial Point XXX Iy Low C Iy High 200 Relay 1
4116 Input 18.0 °C Input 18.0 mA Displa Displ	Input Type PO Display ay Unit XXX hal Point XXX hy Low C hy High 200 Relay 1
the second	Type PO Display y Unit stal Point XXX y Low Q y High 200 Relay 1 Euroclion 0
16.40 mA 16.40 mA Displa Di	Display ay Unit XXX al Point XXX y Low t y High 200 Relay 1
PPS Displa Displa Displa Displa Displa Displa	ay Unit XXX Ial Point XXX Iy Low (1 Iy High 201 Relay 1
Decim Displa Displa Displa	lai Point XXX ly Low C ly High 200 Relay 1 Eurocian C
Displa Displa Displa Displa	ay Low I ay High 200 Relay 1 Function 0
Displa	Relay 1
Telay	Relay 1
🗇 🗇 🔂 🗛 🛛 Relay	Eulerion
	1010001 0
t and a	Relay 2
Location	Function C
Address 11	
11001200	Output
O Configure	ut Type CURRE
Currer	nt Range 4201
Simulate Sir	mulation
🖉 Calibrate 🔵 🚺 Ca	alibration

Access to calibration menu.

Two-point process calibration: The unit can be process-calibrated in 2 points to fit a given input signal.

Calibrate	Calibration		
	Low	XXX.X	
	High	XXX.X	
	₿	Restore factory calibration	
		Enter new calibration values	Tap to enter new
			calibration values.

A low input signal (not necessarily 0%) is applied and the actual value is entered via the PPS app.

0W	XXX.X	XXX.X	
	🕃 Skip	Next	

Then a high signal (not necessarily 100%) is applied and the actual value is entered via the PPS app.

High	XXX.X
	Skip Next

The unit will now work according to this new adjustment.

Calibrate	Calib	ration	
		Calibration enabled	
	Low	XXX.X	
	High	XXX.X	
	$\overline{\mathbf{S}}$	Restore factory calibration	
		Enternew calibration values	

If you later tap "Restore factory calibration" or choose another type of input signal the unit will return to factory calibration.

Admin control access



Options = Admin PR Refresh Front Page 4116 4131 0 Rescan Modbus ▲ 4.01
 ▲ 0.00
 ▲ TAG 0 Show Login TAG 0 Access Control Configuration 0 0 About фф0<u>А</u>. 0 m m v2.14894

Press Options to enter the Admin menu.

Press "Access Control".

User list ashows you the users that have access to your 4801 gateway, and what level of access they have.

- 0 = Only local access
- 1 = Local and remote access
- 2 = Administrator access

Only administrators have the right to change user access level.



This section allows the administrator(s) to add new users to the user list by typing in their email address.

An administrator can select level of access for new users.

A user can also be removed from the user list here.

This button selector tells the 4801 gateway whether or not remote access is allowed.

This button selector allows **anyone** connected to the same network to access the 4801 gateway, even if they are not on the user list.

The first user will automatically be assigned as administrator.

Admin control menu

4801 gateway Modbus parameter configuration



Tapping the "Configuration" button opens the Configuration screen.

This allows you to configure the 4801 gateways serial connection, which needs to match the 4511 configuration.

No SIM 🗢	10.30	🕒 Not Charging 🔳
C Back	Configuration	
	Gateway	
Baudrate	57600	0
Stopbit	1	0
Parity	Even	0
0	Apply	

Please note: By default, the 4801 gateway is configured to a 57.6 k baud rate, even parity and 1 stop bit. PR recommends a baud rate of at least 57.6 k.

The 4511 units need to be configured to the same baud rate as the 4801 gateway. By default the 4511 is configured to a 19.2 k baud rate, even parity and 1 stop bit.



Tapping the "List view" button opens a list of devices connected to the specific 4801 gateway bus segment.

This allows you to get an easy-to-read overview of all the connected devices on the segment. The individual Modbus node address of each device is also shown on this list.

Discover 14 devices - 3 errors Electronics	Options 🚍
PR	
Filter items	
BUS 0	
BUS 0 / ADDR 2 / TYPE 9107B2B	Θ
BUS 0 / ADDR 4 / TYPE 4131	0
BUS 0 / ADDR 7 / TYPE 9116B1	۲
BUS 0 / ADDR 8 / TYPE 4116	0
BUS 0 / ADDR 10 / TYPE 9203B1B	0
BUS 0 / ADDR 173 / TYPE 9113BA	Θ
BUS 0 / ADDR 176 / TYPE 4222	Θ
BUS 0 / ADDR 182 / TYPE 9113BB	Θ
BUS 0 / ADDR 186 / TYPE 4114	۲
BUS 0 / ADDR 188 / TYPE 4104	0
BUS 0 / ADDR 243 / TYPE 9202B1B	0
BUS 0 / ADDR 244 / TYPE 4222	Θ
BUS 0 / ADDR 245 / TYPE 9106B2B	۲
BUS 0 / ADDR 247 / TYPE 910782A	Ø
PRelectronics.com	

If a device line is shown in red, this indicates a device or signal error.

Tapping a specific item line takes you directly to the device programming view, and allows you to easily configure and simulate a device.

Back	4116 Summary	
4116	Inout	
4110	Input Type	CUR
1.366 °C	Current Panne	4 20m
💼 (2.73 mA	Content tunge	
BEPG	Display	v
• DERO	Display Unit	•
	Decimal Point	X.XX
	Display Low	
	Display High	9.99
A A C M Th	Relay	1
φ w C III III	Relay Eupction	SETPOIN
	Relay Seteciet	8
Location	Relay Hysteresis	7
Bus	0 (new righter cas	
Address Z	Relay	2
	Relay Function	SETPOIN
 Configure 	Relay Setpoint	7
	Relay Hysteresis	2
Simulate	Outou	•
	Output Type	CURREN
	Current Range	020m
	Simulation	
	Graph	
9.9990 -r	•	20
7.4992 -		- 15
4.9995 -		10
2.4998 input		***************************************
- 16EDLE		

Document history

The following list provides notes concerning revisions of this document.

Rev. ID	Date	Notes
100	1349	initial release of the product
101	1642	Calibration functionality for 4101, 4114, 4116 & 4131 added
102	1910	Firefox version updated

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All our devices are backed by expert service and a 5-year warranty. With each product you purchase, you receive personal technical support and guidance, day-to-day delivery, repair without charge within the warranty period and easily accessible documentation.

We are headquartered in Denmark, and have offices and authorized partners the world over. We are a local business with a global reach. This means that we are always nearby and know your local markets well. We are committed to your satisfaction and provide PERFORMANCE MADE SMARTER all around the world.

For more information on our warranty program, or to meet with a sales representative in your region, visit prelectronics.com.

Benefit today from PERFORMANCE MADE SMARTER

PR electronics is the leading technology company specialized in making industrial process control safer, more reliable and more efficient. Since 1974, we have been dedicated to perfecting our core competence of innovating high precision technology with low power consumption. This dedication continues to set new standards for products communicating, monitoring and connecting our customers' process measurement points to their process control systems.

Our innovative, patented technologies are derived from our extensive R&D facilities and from having a great understanding of our customers' needs and processes. We are guided by principles of simplicity, focus, courage and excellence, enabling some of the world's greatest companies to achieve PERFORMANCE MADE SMARTER.