SAIA BURGESS CONTROLS

Control solutions for water systems with Saia PCD®

Be inspired by flexibility

Guiding water in the right direction

With SBC, water systems grow as your needs do.

Every one of us uses water and counts on it being delivered reliably and in perfect quality. Drinking water from the tap, service water for swimming pools or industrial processes. The degree of purity is strictly defined and is guaranteed by water treatment plants. In water distribution, you always need to keep an eye on pressures.

Whether you simply want to control one valve or automate the entire water supply for towns and communities – Saia PCD is suitable for both ends of the spectrum. Especially when simple applications become highly complex over time.

The security that operators need

In fact, all of the aforementioned water systems are designed for growth. Drinking water, service water and sewerage systems grow with the communities they serve. New distribution stations need to be integrated with every residential area or industrial estate that is connected. New systems, new information technologies need to be harmonised with the existing controllers.
This is precisely where Saia PCD scores with its openness for all freely available standards and its support for multiple protocols on the same interface. The modular systems can communicate with the field level and are suitable for any type of station and system. Communication with the field devices is analogue or serial. Both integration of additional systems and energy monitoring are possible.
All data can be time-stamped, saved and retrieved anywhere at any time via integrated web functions. In the event of an alarm, notification is given by e-mail, SMS or SNMP.

Wide area automation around Lake Garda

25 wells, 45 springs, 6 lake extraction points, 1,500 km of fresh water pipes and 20 million cubic metres of drinking water per year for 250,000 consumers: wide area automation around Lake Garda.
The operator of the local water company opted for more flexibility – and for Saia PCD. Why? The former supplier was unable to offer the freedom to network with any third-party equipment and the ease of service without long training and expensive software tools.

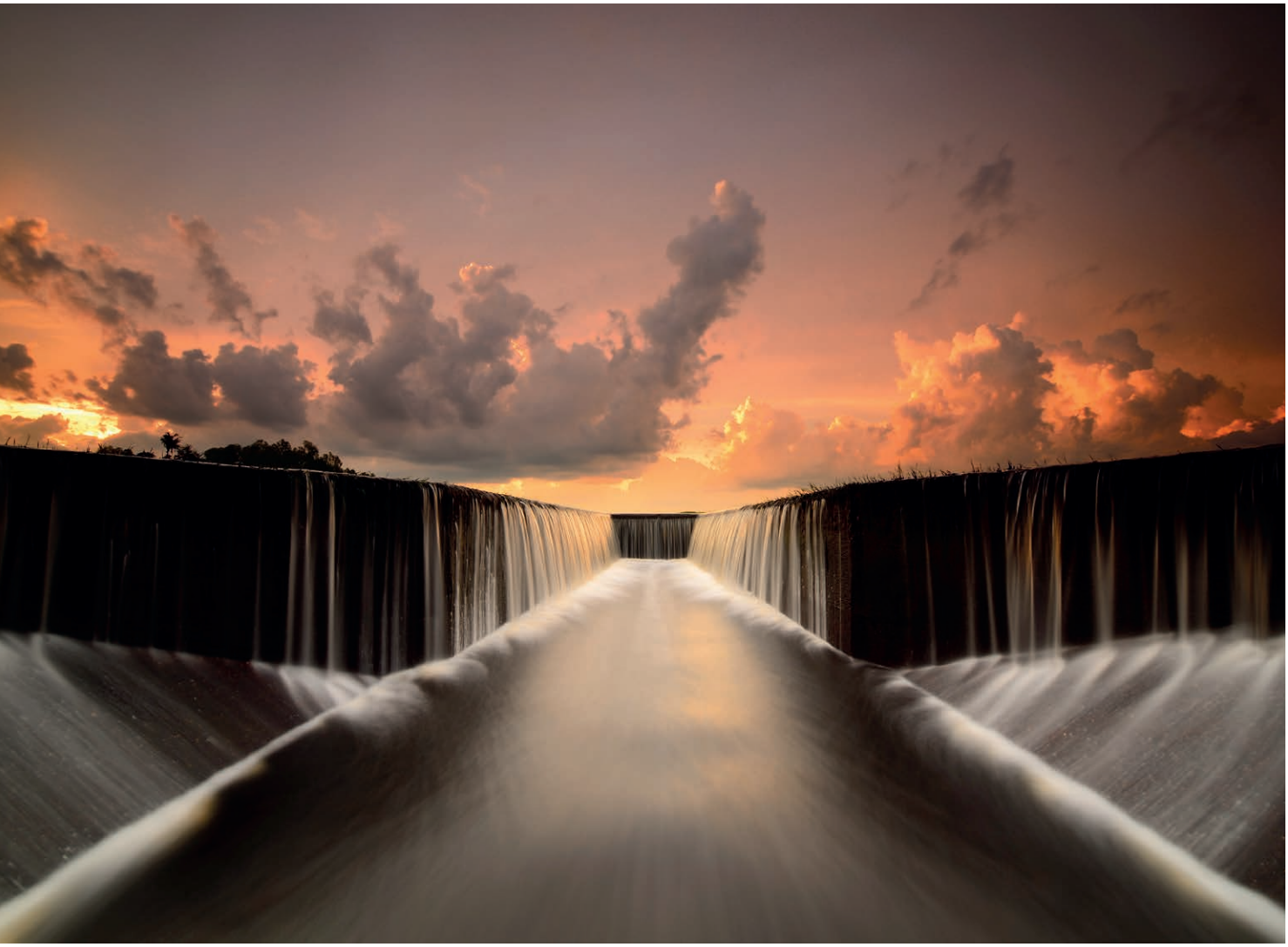
Saia PCD® – ideal for automating:

- Water treatment plants
- Drinking and service water supplies
- Industrial water systems
- Fresh water and sewage pumping stations
- Pumping systems
- Hydroelectric power plants
- Water parks, swimming pools and spas

Find out more about this application by scanning theQR code or going to http://sbc.do/Kr8zENrQ

A strong connection

We have been part of the Honeywell Group since 2013 and operate autonomously in the area of Home and Building Control Technologies (HBT). A strong connection with synergies that also benefit our customers and their customers around the world. Financially, because with this partner at our side, we can supply major projects anywhere at any time. Logistically, with our global presence and our complementary product lines. For example, not only do we supply the control technology, but also the field devices.



PLC as a basis:
nothing but benefits for users

All SBC controllers are based on PLCs – even specific applications such as RTU for remote control. Why is PLC technology used for such applications? PLCs offer lasting benefits for users. Because the devices are designed for long-term production, the availability of spare parts and repair services is guaranteed for decades. The freely programmable devices and their modular hardware and software allow us to meet all the current and future needs of users with our solutions. Even existing systems can easily be adapted to meet new requirements. Because our program codes are interpreted and not compiled, a high level of portability for various processors is possible – even across generations. As a result, you get maximum benefit from your investments.

Web technology + IT:
proven tools

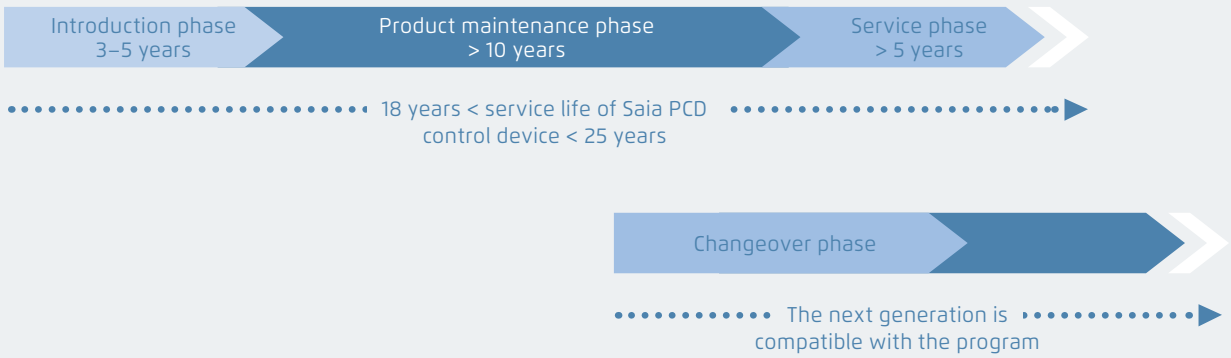
Why does SBC use web technologies and IT on all Saia PCD platforms? The answer is simple: the user of a system can learn how to operate it quickly, easily and safely if they are already familiar with the processes involved: initiating communication from any web browser, navigating through a website and reading and processing data in an Excel workbook. Most people are already familiar with all of this and do not require any further specialist knowledge. At no point does the investor need to factor in expenditure for hardware or maintenance that would otherwise be necessary for implementing a new system, for updating and adjusting to new standards or for other changes. The use of IT technology also allows stable and reliable connections as well as lower infrastructure costs. This is particularly beneficial for remote control applications and distributed networks.

From a communication-based approach
to remote control

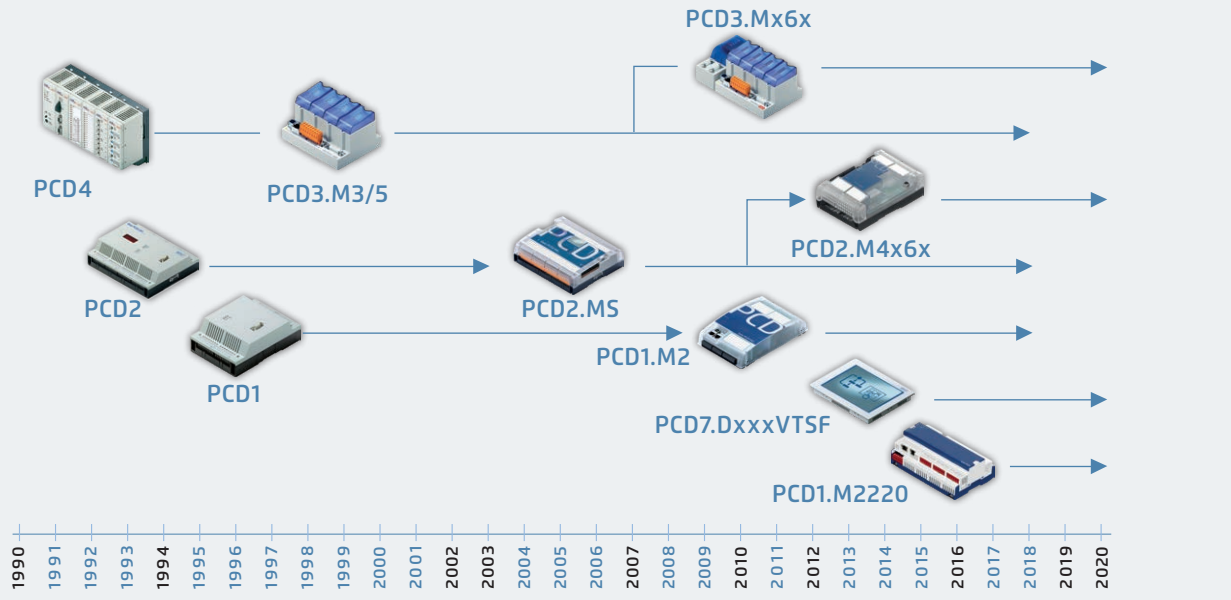
At the end of the 1970s, SBC developed the first PLC – even then it had an integrated and freely programmable serial interface! Since then, the controllers from SBC have been famed for their openness and the communication options that they offer. Nowadays, up to 15 communication interfaces (each with an independent protocol) can be used on the same PCD. The most popular industrial standard protocols (Modbus, IEC870, Profibus) are also available and standardised IT communication protocols and services (Ethernet TCP/IP, HTTP, DHCP, DNS, FTP, e-mail SMTP, SNTP, SNMP, PPP) are fully integrated. At the same time, a number of separately configurable serial interfaces as well as various backup communication channels (Ethernet+GSM, RF+GSM, PSTN+RF, GSM+RF+Ethernet) ensure secure data transmission.

A standardised software – for all device types – now and in the future

The control electronics should have the same service life as the systems technology. It must be possible to adapt and expand at any point in this cycle. The compatibility and free portability of systems/ machine software is guaranteed for 18–25 years across the entire product generation. This can only be achieved if we develop all the engineering software ourselves and systematically use "interpreted program code". This requires more hardware resources, but enables the portability of user software across multiple generations of controllers.



Service life planning of Saia PCD control devices. Enables maximum profitability of your investment in expertise and systems. Long service life without expensive reinvestment and no high service costs.



Old application programs can be used with new Saia PCD controllers and further edited with Saia PG5.

IEC EN 61131-2

This industry standard stipulates how electronics should be developed and manufactured to meet the quality requirements of PLCs. It also means that maintenance can be carried out without expert intervention. Pay close attention to part «-2»; many suppliers only work to PLC 61131-3 standards, but this standard only defines the programming mode regardless of the quality of the hardware and design. Moreover, standard 61131-3 does not specify the portability of the application software from one series of devices to another, or from one hardware version to later versions.

Projects that speak for themselves

How to achieve safety, efficiency, accessibility and adaptability in your plants.

WAA (Wide Area Automation) applications that provide monitoring and control with automation distributed over extensive areas and coordinated remotely from central stations. Lifting systems are typical features in water infrastructures installed in distribution plants, water-works and agricultural waters. Communication capacity, reliability and adaptability are crucial when various and numerous remote control units (RTU) are integrated into a single plant, but that's not all…

Open to Communication

- Adaptability with the existing communication infrastructure and with the existing SCADA
- Safety assured by the back-up of the carriers
- Multimode accessibility at the stations (Modbus, HTTP, IEC, FTP)
- Multiple overlapping protocols
- Communication between the different stations

Interfaces to the field

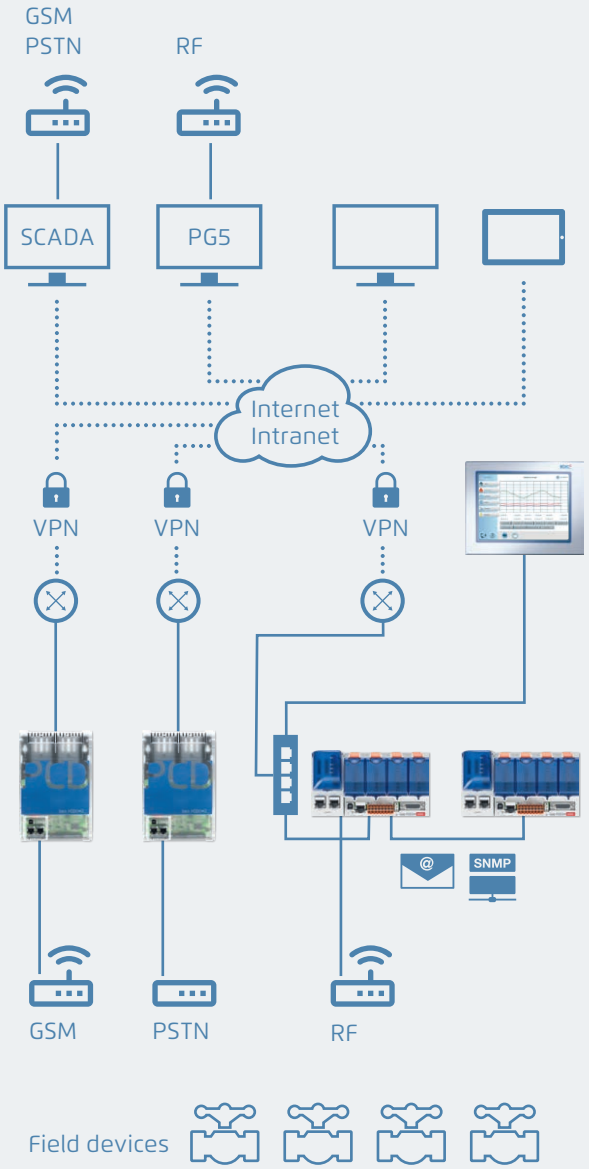
- Modular systems for every type of lifting system
- Communication with the devices in the field (inverters) either in analogue or serial form
- Integration of access systems (badge)
- Energy monitoring

Storage of historic data

- ntegrated RTC
- Large basic memory with the option to expand up to 4 GB
- Trend functions integrated in the CSV file
- Integrated history of alerts and events

Operator alerts and interface

- Development environment, operator interface, integrated web and WYSIWYG
- Integrated alert functions: Email, SMS, SNMP



End-to-end connection of control level with field devices: Saia PCD technology.

Benefits

Safety

- PLC-based: robust and reliable
- Multiple communication carriers
- Software portability between generations
- All standard and non-standard protocols!
- Email and SMS alerts

Efficiency

- Single platform PLC+RTU
- Optimisation of plant operation
- Monitoring and energy efficiency
- Cost optimisation in the service life of the plant

Adaptability

- Programmable
- Expandable
- Modular
- Speed and confidence in implementing modifications and updates to plants

Accessibility

- Integrated web server
- Integrated file system and integrated servers
- Sending emails via tablets and/or smartphones

PLC for treatment plants, purification and water treatment

From a small lifting system to a large purifying plant, any application offers ample opportunity to build in efficiency, savings and profits.

In the water sector, the purifying and treatment applications for white and waste water require increasingly complex installations. Management capacity for numerous I/Os, solutions with a high level of reliability and availability are common requirements for plants with significant levels of complexity and performance.

Open to communication

- High volumes of data traffic (dual-stack Ethernet)
- Use of common industry standards (Profibus, Modbus, etc.)
- Multiple overlapping protocols

Functionality adapted to purifying plants

- Up to 1,023 local I/Os
- Up to 255 remote modules (Ethernet), each with a max. 256 I/Os
- BACKUP-WARM function integrated into the system
- Power, flexibility and reduced maintenance costs using decentralised intelligence via Smart-RIO

Interfaces to the field

- Integrated RTC
- Large basic memory with the option to expand up to 4 GB
- Trend functions integrated in the CSV file
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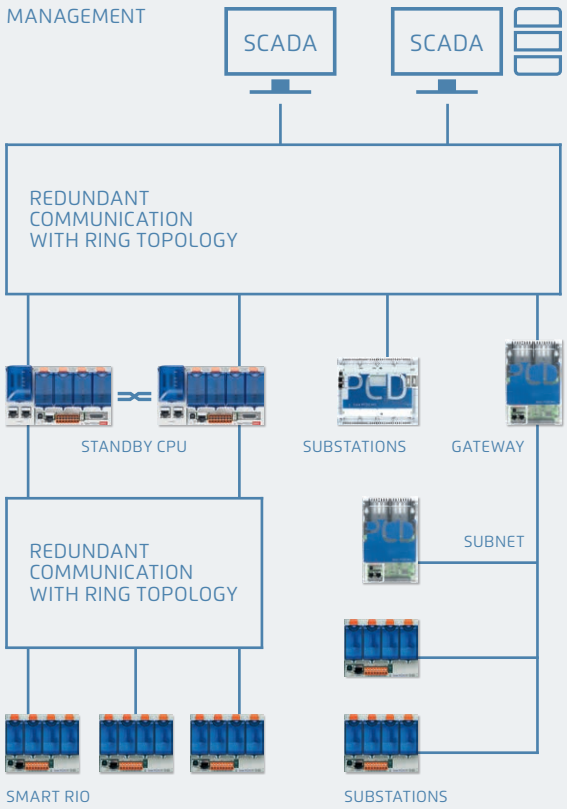

Seamless, redundant and lean: Saia PCD provides integrated control of all applications in tunnels and traffic systems.

Security

In addition to the strict IEC 61131-2 hardware standards for the PLC, the Saia PCD control technology also meets the most stringent requirements of various marine engineering test labs.

Too often, application environments do not meet the relevant standards, so we made the control technology in the PCD 1, 2, 3 devices much more robust than stipulated by the «CE» standard, to withstand any interference. We set very high standards, which provides greater security and peace of mind for our customers.

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