

Eliminate Down-time and Improve Quality



Adroit
Technologies

Adroit Technologies concerns itself mainly with R&D, Production, Sales & Marketing, Training and Support of software products for Automation, SCADA, MIS and MES solutions. In addition, Adroit Technologies has a professional services arm, known as Adroit Technologies Technical Services that consults in and develops customised industrial IT, MIS and MES solutions for customers.

The **Agriculture Sector** is a vast and complex one and the Adroit SCADA is ideally suited to assist in the efficient monitoring and control of even the most complicated production plant.

The rigid and quality driven nature of this industry is ideally suited to the Adroit SCADA/HMI product. The time tested and proven reliability of the product sees Adroit being used by large producers to safely run these valuable and strategic assets.

The Adroit architecture and openness offers companies a unique capability of not only traditional SCADA/HMI functionality but the ability to integrate all aspects of their operations. By adopting a more holistic approach to Operations Management significant savings and operational efficiencies can be realised.

In this sector, Adroit is uniquely placed to ensure a superior quality of supply in all aspects of the operations and management of these facilities.

Adroit SCADA Capabilities and Benefits:-

- Process Visualisation
- Process Events and Alarming Management
- Quality Management
- Historical Data Logging and Trending
- Fully Object orientated
- Process Improvement / Built in Auditing functionality
- Reporting and Analysis
- Integration into Business Applications

Agriculture

Target Areas

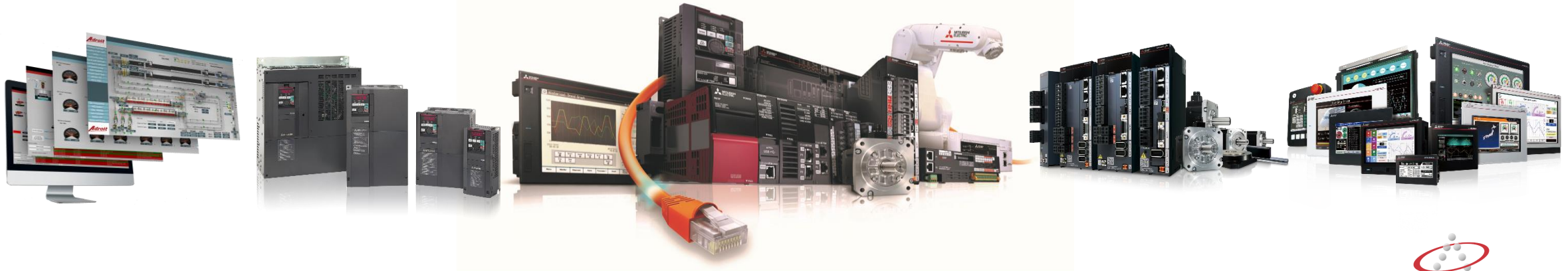
- Crops / Vegetables
- Chickens
- Dams / Reservoirs
- Irrigation
- Greenhouses

Challenges

- Management Systems
- Efficiency Monitoring
- Remote Monitoring
- Reporting

Solutions

- SCADA
- Adroit Connect
- PLC / HMI
- VSD / Solar VSD
- RTU



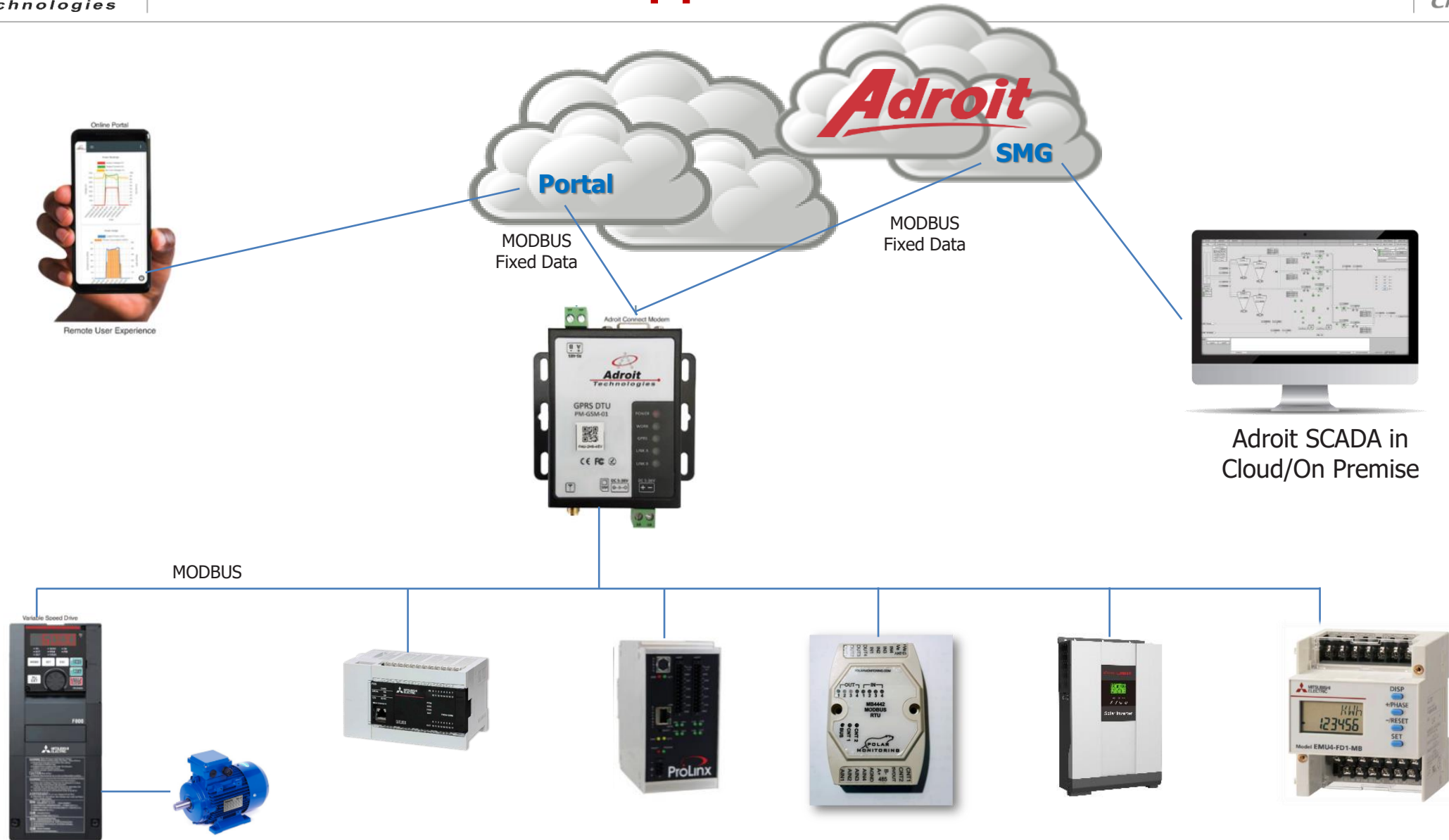
Adroit Technologies' ultra-intuitive **Adroit Connect** modems seamlessly connect and integrate with any device using the Modbus Serial protocol, giving you the power to remotely monitor and control your device from our online Cloud Platform.

The Adroit Cloud Portal is easy-to-use, it also allows you to remotely control and program all the parameters of your device, while also being able to view all current and historical data.

The portal can be accessed on any Smartphone, PC or Tablet device from any location with an internet connection.

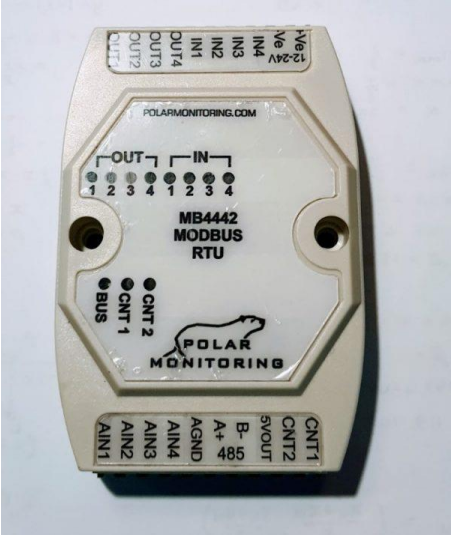
- BASIC** - Simple app only. (App access via portal)
- SCADA** - All the functionality of the BASIC package, with remote SCADA polling.
- Low Resolution - 30 min poll times (App access via portal)
 - High Resolution - 5 min poll times (App access via portal)







Adroit Connect - RTU



- 4 * Analogue Inputs (4-20mA)
- 4 * Digital Inputs
- 4 * Digital Outputs
- 2 * Pulse Counters
- 12-24v dc powered.

Subscription	Combo Cost	
	Modem + Contract term per unit	
	1 Year	2 Years
Basic	Please contact your Sales Representative for the latest prices.	
- Portal Remote Access		
Adroit SCADA		
- Portal + Adroit SCADA		

Possible to use the RTU with the same Modem as device so that IO can be monitored
 e.g. In a remote pump application you can wire back other signals such as Security sensors, flow sensors, valve position etc.
 Pricing on application

Mitsubishi Electric has developed a solar power operated Pump Controller, which converts DC power to drive the AC induction motor of a water pump and control its functioning. Its current offerings, the E12 series of drives, are more efficient, compact, and easy to maintain. These models have simple operational functions and built-in application-specific dedicated features. The operation capacity of these pump controllers (the FR-D 700 & FR-E 700 series) range from 3hp to 10hp. Mitsubishi Electric also offers operation capacity of up to 60 hp with its FR- A800 series of drives.

With an ability to work on solar and grid supply, these controllers have advanced built-in features including MPPT (Maximum Power Point Tracking)/ optimized output frequency control, automatic restart functions, dry-run detection, flow rate monitor and remote monitoring functions.



Three-phase power is often unavailable in rural and remote locations, which is a primary reason why farmers struggle to grow their operations.

Any farm looking to run larger fans and motors to help increase storage and handling capacity have thus far been forced into using traditional solutions such as rotary phase converters, which are costly, have big capacitor banks and a high amp draw, running up electricity bills and erasing profits.

Mitsubishi Electric VSDs allow a three-phase motor to run from a single-phase electric supply without a phase converter, facilitating greater power and lower energy consumption.



Various VSD Applications



Adroit recently started a project with a well known large agricultural enterprise in Mpumalanga, South Africa that supplies around 15% of the South African market with bananas.

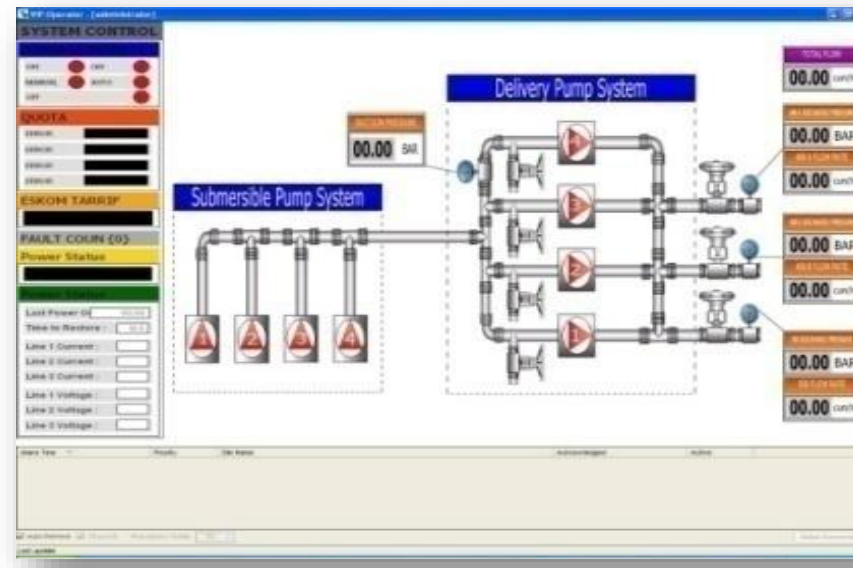
The total SA banana market is approximately 250 000 tons annually based on an average of 25 tons per hectare with 10 thousand hectares presently under banana plantations.

The estate has had a significant impact on the regional socio-economic conditions and is a large-scale employer in the agricultural sector in Mpumalanga.

When looking for a SCADA solution they turned to Adroit Technologies to fulfill their monitoring and control system needs.

Using the implemented Adroit system and the Adroit Notify and Command Agent they now have alarms at each plant house and should any disturbances occur, the associated farm manager would be notified immediately via SMS.

Stand Alone Configuration
– 25 000 Scan Points



Golden Macadamias is a traditional company, with a unique approach that combines active involvement from leading macadamia farmers with a forward-thinking focus on quality and the consumer. As part of their ethos, all of their shareholders are high-quality macadamia farmers. They currently have a state-of-the-art production facility, with an annual capacity of 6000 tons dry-in-shell. Quality control is at the heart of their cultivation production process. Their customers are amongst the largest nut processors and users in the world.

Golden macadamia approached Adroit to replace the existing Rockwell RSView32 SCADA with an Adroit system, enabling the system to communicate to various PLC systems. The project entailed the re-engineering of the existing graphics to the Adroit system as well as to do the engineering for an extra drying room that was added to accommodate the growing delivery of the product from the farmers.

Stand Alone Configuration
- 25000 Scan Points



Nestled in a valley, between the towns of Clanwilliam and Vredendal lies the small farming community of Klawer. Winemaking in the area with its rich soils and south-facing slopes that receives a cool nightly breeze from the nearby Atlantic Ocean, is a tradition that Klawer Wine Cellar continues with pride. Ana-Digi Systems and Adroit Technologies teamed up for the Klawer project in 2005 to ensure that Klawer remains one of the major players in Cape Town as a leading producer of quality wines.

Klawer required a no-nonsense, easy to use, reliable solution for their wine tank control system and required world class support and back-up, as it was vitally important to the client who felt a bit vulnerable, due to past experience with poor services. Klawer is situated in the southern part of Namaqualand, 260 km from Cape Town. Ana-Digi assured the client of their complete support, a promise which they have kept to this day

Stand Alone Configuration

– 300 Scan Points and 1 Remote Client Connections

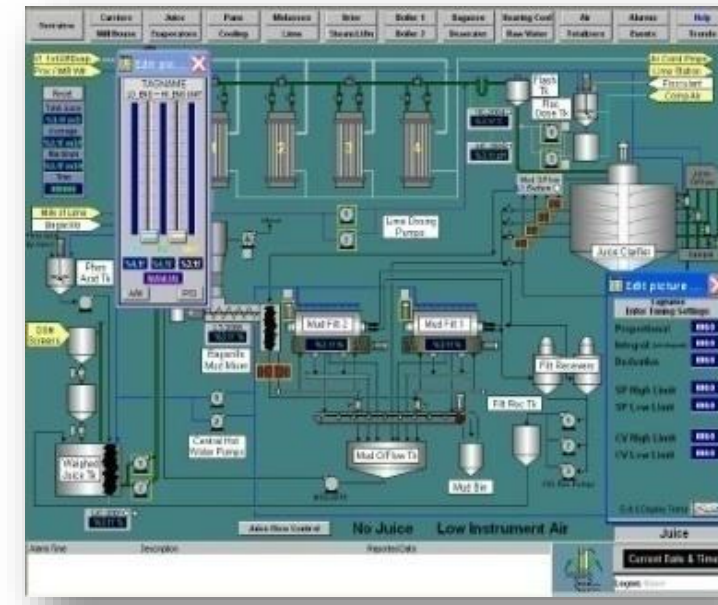
TANK COOLING CONTROL								
FERMENTATION TANKS			FERMENTATION TANKS			COMBI TANKS		
	COOLING ON / OFF	SOL. VALVE		COOLING ON / OFF	SOL. VALVE		COOLING ON / OFF	SOL. VALVE
TANK 1	LOW LEVEL		TANK 13			TANK 1		
TANK 2	LOW LEVEL		TANK 14			TANK 2		
TANK 3	LOW LEVEL		TANK 15			TANK 3		
TANK 4	LOW LEVEL		TANK 16			TANK 4		
TANK 5	LOW LEVEL		TANK 17			TANK 5		
TANK 6	LOW LEVEL		TANK 18			TANK 6		
TANK 7	LOW LEVEL		TANK 19					
TANK 8	LOW LEVEL		TANK 20					
TANK 9	LOW LEVEL		TANK 21					
TANK 10	LOW LEVEL		TANK 22					
TANK 11	LOW LEVEL							
TANK 12	LOW LEVEL							

Located in the North-Western part of Tanzania (close to the Tanzania-Uganda border) was offered for privatization by the Government of Tanzania in December 2001. Since then, KSL became another member in the Super Group of Companies. Sugarcane growing and sugar production are KSL's main activities. KSL takes advantage of its geographical location along River Kagera, using it as a source of water in their irrigation scheme. KSL has heavily invested on the Centre Pivot Irrigation System, use of high-tech Reel Irrigators as well as Overhead Sprinklers

The plant has a total of about 8,000 tags and 3,500 scanned I/O. Approximately 80 PID (Proportional Integral Derivative) controllers with associated tuning parameters / trends are monitored by the Adroit system. Trending is used extensively in the plant system. Operators view trends per plant area and this data is used for control adjustments. Printers are installed at each of the three control rooms specifically for generating event and trend printouts.

Stand Alone Configuration

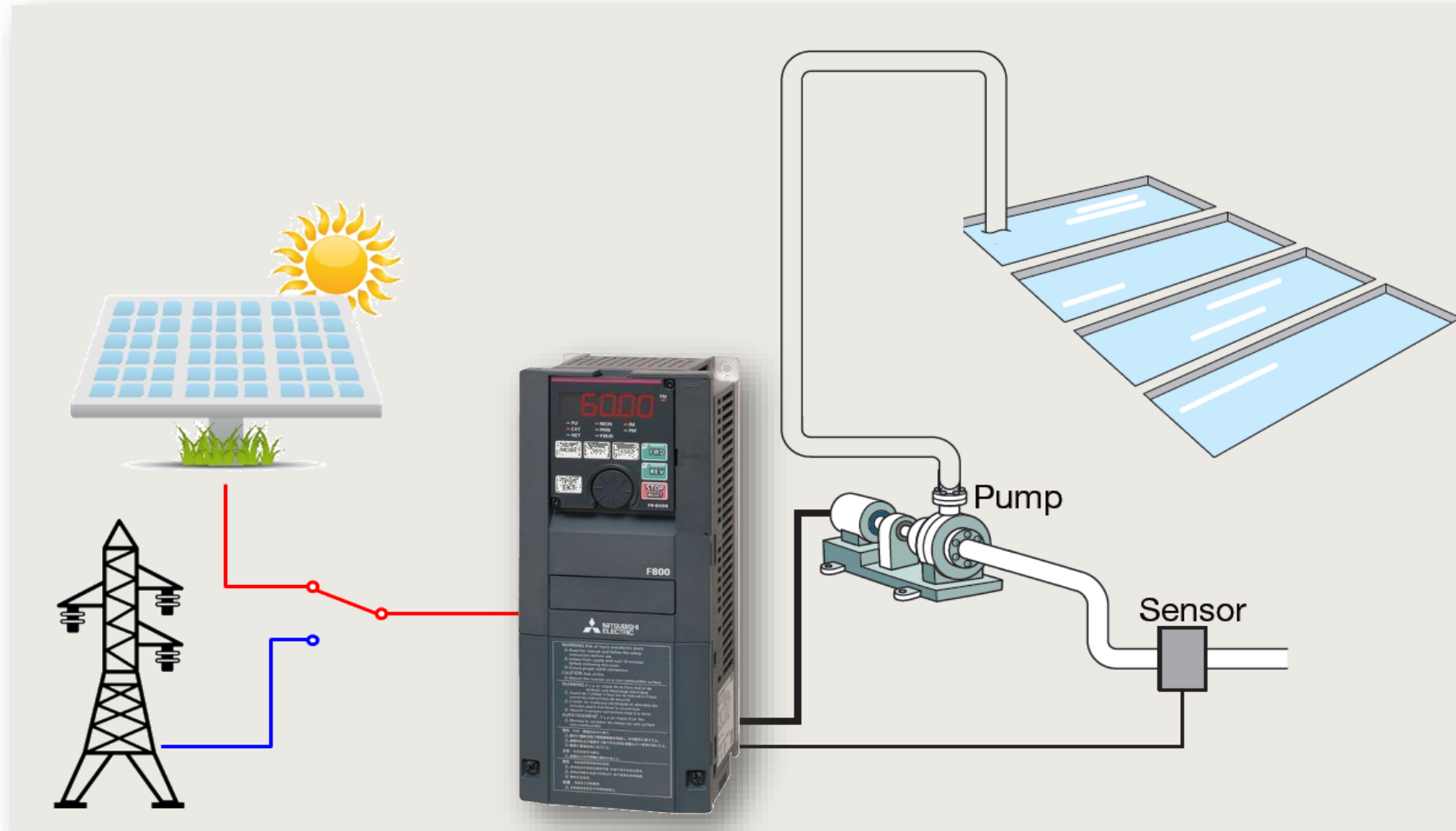
– 5000 Scan Points and 4 Remote Client Connections



Why Mitsubishi Electric Inverters?

- ✓ Embedded logic control (PLC): More simple architecture
- ✓ Special functionality: Double PID to keep constant the DC voltage on the panels and the pressure of the pipe, at the same time.
- ✓ Lower power consumption (OEC)





Possibility to feed the inverter via DC or AC voltage