



 Extremely long service-life batteries for power supply


 Easily accessible, colour-coded terminals


 Configuration and maintenance via USB and Bluetooth


 SSL/TLS-encrypted data transmission




 Data transmission now also via 4G / LTE

 Energy-saving data transmission with LoRa module

 Integrated sensors for humidity, temperature and light

 Very large data storage, e.g. for long-term measurement campaigns

 Very wide range of input parameters and power supply for sensors

NEW

SCHRAML FWD Advanced energy self-suff. data logger w/ remote transmission

With the new data logger FWD *Advanced* SCHRAML brings the next generation of the successful, energy self-sufficient data logger FWD onto the market. Important innovations include:

- ▶ New **batteries with a very long service-life**, which enable the device and the sensors to be supplied with power for a period of four years.*
- ▶ Communication via **4G/LTE or LoRa** is also possible in addition to the previous GPRS data transmission path.
- ▶ Due to the **modular structure** of the FWD Advanced, a subsequent change from GPRS to 4G / LTE or LoRa is possible, for example.
- ▶ In the data logger **integrated sensors** measure air humidity, temperature and light and can therefore automatically detect problems in the operating environment and an opening in the housing.
- ▶ The data logger can be conveniently configured and maintained via **USB and Bluetooth**.
- ▶ **Very large storage** for high-resolution measured value archives and long-term data recording (e.g. measurement campaigns over several months).
- ▶ The input current or voltage can be configured **flexibly for each analog input** (0-2.5 V, 0-5 V, 0-10 V, 0-20 mA, 4-20 mA).
- ▶ The **power supply for sensors** can be flexibly set between 8 and 24 V DC.
- ▶ The data logger is easy to wire thanks to robust, **colour-coded and easily accessible terminals**.
- ▶ The tested **IP67 Polypropylene housing** of the FWD Advanced (with battery) ensures max. robustness and easy accessibility.
- ▶ The data transfer can be **SSL/TLS encrypted** and secured with **device-specific certificates**.

Ideal areas of application for the FWD Advanced

With the remote control data logger (FWD), alarms can be triggered at any location without an external power supply in the event of faults or limit value violations, and data (e.g. counter and measured values) can be recorded and archived. The FWD is designed in such a way that it collects and saves data with the lowest possible energy consumption and transmits it to the AQASYS process control system from SCHRAML in flexibly adjustable rhythms via GPRS, LTE, LoRa or radio data transmission. The data and messages can be visualised, documented and evaluated here. Alternatively, the data logger can also be used independently for on-site recordings and measurement campaigns (also mobile).

The FWD Advanced remote control data loggers are especially suitable for the requirements of water and wastewater management:



Remote monitoring of remote system parts without own power supply



Object and fault monitoring



Remote meter reading



Broken pipe and leak detection



Water level/elevation monitoring



CSO tank monitoring

* Battery service-life depends on sensors, measurement frequency and data transmission path

Technical specifications



FWD Advanced battery



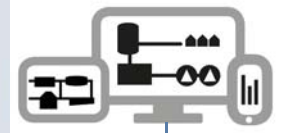
FWD Advanced solar

General information	FWD Advanced battery	FWD Advanced solar
Data transfer (optional)	- GPRS - LTE / GPRS - LoRa	- GPRS - LTE / GPRS - LoRa
Power supply	Battery	Rechargeable battery / solar
System Requirements	AQASYS V9.3	AQASYS V9.3
IT security (optional)	SSL / TLS encryption device-specific certificates	SSL / TLS encryption device-specific certificates
Digital inputs (pulse, fault or status inputs)		
Number (*standard scope of delivery)	4* / max. 8 in total	
flexibly configurable	mechanical switch (e.g. reed contact) or digital voltage input (3.3-24 V DC)	
Analogue inputs		
Number (*standard scope of delivery)	0* / max. 4	
flexibly configurable	0-2.5 V / 0-5 V / 0-10 V / 0-20 mA / 4-20 mA	
adjustable supply voltage for sensors	8-24 V DC	
Interfaces		
Interfaces (e.g. for configuration and maintenance)	USB, Bluetooth	
Bus interface optional module	RS485 Modbus RTU	
Casing		
Casing	PELI-Case polypropylene waterproof and dustproof, break-proof	Rittal glass fibre reinforced Polyester, all-round foamed-in PU sealing in the door, integrated rain protection strip
can be opened independently	●	●
sealable	●	-
integrated pressure compensation	●	●
Protection class	IP 67	IP 66
Installation	flexible attachment via housing handle or edge holes; also for mobile use in exposed areas	Wall or pole mounting
Use in Ex areas e.g. with Zener barriers	●	●
External dimensions (Width x height x depth in mm)	170 x 213 x 100	250 x 350 x 150
Operating temperature	-20 °C to +55 °C	-15 °C to +50 °C
Humidity (non-condensing)	max. 90% r. F.	max. 90% r. F.

Option 1: Process control system as a local installation

Treatment plant/waterworks

SCHRAML process control system



MIP security server (optional)

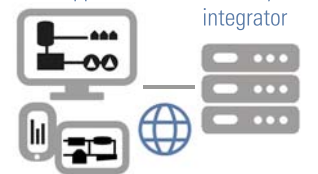
Data transfer via GPRS, LTE, LoRa



Data logger FWD Advanced

Option 2: Process control system as a hosting solution

Full visualisation and monitoring via web and app



Data transfer via GPRS, LTE, LoRa



Data logger FWD Advanced

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