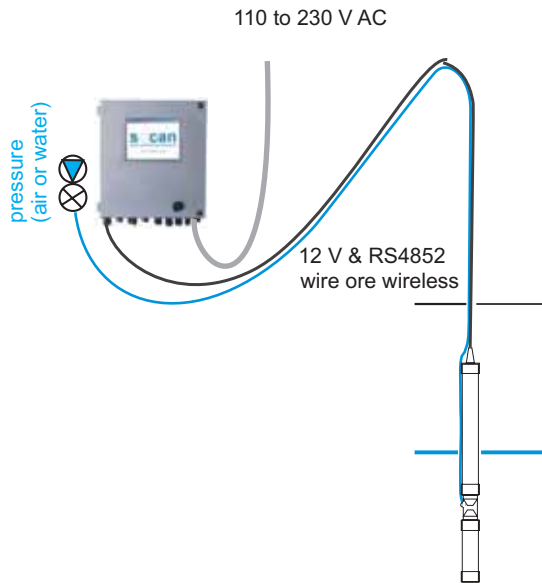


How to achieve highest possible long-term stability



Compensation of temperature, deposits and bio-growth on windows

s::can instruments are methodically designed for highest process stability. Dual-beam measurement enables all changes in the measuring system to be captured and compensated. Together with spectral compensation of biological growth on windows and/or turbidity fluctuations, the dissolved substances sought can be measured with exceptional long-term stability, enabling continuous monitoring of water quality and the control of treatment processes.

When is automatic cleaning necessary ?

If it is wanted to measure dissolved substances and turbidity at the same time in polluted waters, it can be necessary to regularly clean the windows. This can be done manually (instructions see user manual), or automatically with the help of a pressurised medium (water or air, preferably air). Any drinking - or other pressurised clean water as well as oilfree compressed air (3 - 5 bar) will do. Also, the s::can 12V miniature compressor with 2l pressure tank can be used.

At long term process installations, either pressurised medium will be provided by the plant, or a compact unit of mini compressor / tank, valve, and control IPC should be built. In this case, only a 12/24V DC or 110 to 230V AC power supply is necessary. The unit can be interconnected with the central control room via wireless data transmission, thus no extra wiring must be done.



The **cleaning nozzles** are integrated into the instrument, the **connector** is a standard pneumatic EloxAl item. The nozzles were developed after intensive hydraulic studies and can produce a sharp water/air pulse that keeps the windows free from biological fouling and also from fat (diary waste water), oils etc. After many weeks of operation, no interfering deposition could be identified under all experienced conditions.

The other function of the air/water pulse is to **prevent clogging** of the open mouth by larger particles like toilet paper.

To optimise the **efficiency** of the cleaning system and to prevent damage of the windows by abrasion, the best mixture from pressure, frequency and duration of the cleaning process must be found. For most waste waters, the presetting (5 sec. cleaning always 10sec. before measurement, and 30sec. intensive cleaning every hour, at 4 bar) is adequate and will not harm the windows over years of operation, as long as no high quartz sand contents are present. For other media, less intensive procedures are sufficient. I.e. for rivers and lakes, monthly cleaning would be sufficient.

automatic cleaning of windows



connector

- › necessary for cleaning when the spectrolyser is operated from a laptop, PC or in data-logger mode
- › 12 V valve for pressurised cleaning medium (water or air)
- › 110 to 230 V AC / 24 V DC converter for valve and spectrolyser™
- › trigger relais for valve control (cleaning trigger impulse comes from instrument)
- › optional 12 V battery pack for field operation of spectrolyser™
- › to be connected to external pressure medium
- › optional radio modem available
- › connect to 12 V miniature compressor or CO2 tank
- › standard case IP 67