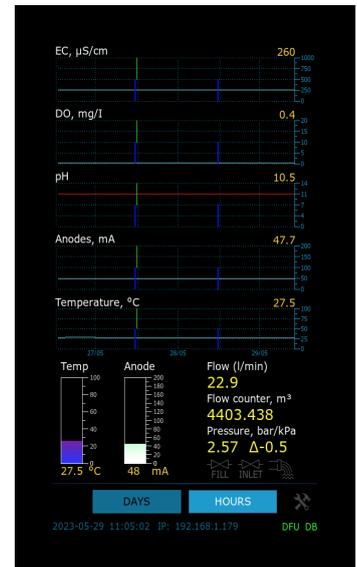


# Protector Digital Standalone Data Sheet



Protector Digital not only protects your water system, but constantly collects a lot of data, which can be used to analyze what happens in the system and perform preventive maintenance, thus saving your time and money.

You can either connect the Protector to your building control system using one of the Protector's built-in protocols, or connect it to the Internet and let it send the data to IWT Database, which can be monitored and analyzed both by your and our specialists.



Protector is equipped with a large touch-screen, allowing you to see the data even without connecting the Protector to any network.

## Specifications

### Values measured

#	Value	Range
1	Water flow	3..100 l/min
2	Flow counter	0..9999 m3
3	Water temperature	0..110 °C
4	Electro conductivity (EC)	0..2000 µS/cm
5	Anode current	0..200 mA
6	Pressure	0..10 bar
7	Pressure difference	0..100kPa
8	PH, optional	0..14
9	Dissolved oxygen (DO), optional	0..20 mg/l
10	Fill water amount, optional, requires Digital Filling Unit (DFU)	0..9999m3
11	Fill water electro conductivity (EC), optional, requires DFU.	0..2000 µS/cm

### Functions

1	Automatic drain (sludge back flush). Requires drain/inlet valves.
2	Automatic pressure control. Requires fill valve.

## Communication ports and protocols

Port	Protocol	Usage
RS485 1	MODBUS RTU/Master	1. MODBUS/RTU sensors (pH, DO, ORP) 2. Digital Filling Unit
RS485 2	MODBUS/RTU Slave	Connect to a building control system
4..20mA input	-	1. 4..20mA pH/DO/ORP sensors 2. Pressure sensors
4..20mA out	-	Connect to a building control system
Ethernet RJ-45	MODBUS/TCP	Connect to a building control system
	BACNet/IP	Connect to a building control system
	HTTPS (out)	Send data to IWT CRM.
	HTTP (in) on local port 80	Local web-server. View data on the Protector built-in web page.
	MQTTs to port 8883	IoT protocol for sending realtime data.

### Details

- 1. Modbus-RTU master (over RS485).** Used to communicate with RS485 sensors and Digital Filling Unit.
- 2. BACNet/IP.** Used to connect Protector to a Building Control System (BCS).
- 3. Modbus-RTU slave (over RS485).** Connect Protector to different gateways or building control systems using RS485 interface. Instant values from all sensors are provided by Modbus-RTU.
- 4. Modbus-TCP.** The most convenient way to connect Protector to a building control system. Many systems support Modbus-TCP, and Protector allows getting instant values from all the sensors by this protocol.
- 5. Built-in web-server.** Using the IP address on screen, you can connect to Protector using any Internet browser. You will see a nice web-page showing all instant and historic data in charts.

