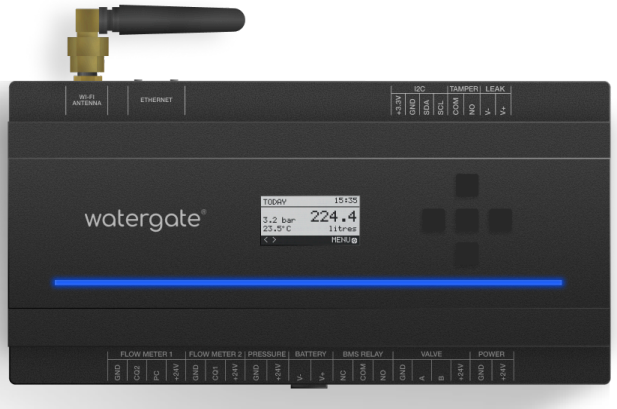
watergate®

SERVER

Enterprise-grade smart water management controller

WD01A A-01



Key benefits and features

- Central water management controller for system monitoring and leak detection
- Continuous monitoring of flow, pressure, temperature and water quality parameters
- Easy integration with BMS for leak and system status reporting
- Web-based dashboard for system status, diagnostics and historical data
- Mobile application for configuration, alerts and remote access
- DIN rail-mounted form factor for installation in control panels and plant rooms

The Watergate Server is a DIN rail-mounted control and monitoring unit designed for ongoing oversight of a building's water infrastructure. It acts as the central processing and communications node, aggregating data from connected sensors and field devices, running local analysis, and sharing system status with external platforms.

The device is intended for installation inside DIN-rail technical enclosures and is powered by an external 24 V DC supply. Optional 24 V battery backup support can help maintain operation during power outages. Connectivity options include Ethernet, Bluetooth, Wi-Fi and Modbus to support integration with building networks.

Watergate Server supports both cloud-based services and local system integration. Data and events can be exchanged with cloud platforms for remote monitoring, analytics and mobile access. A local API enables direct on-site communication with building management systems and third-party controllers without reliance on external connectivity.

A dedicated BMS interface enables integration with building automation systems, allowing water system alarms, status signals and operational states to be incorporated into wider building control. Continuous monitoring of water flow, pressure, temperature and conductivity is supported. AI-assisted analysis helps identify leaks, abnormal conditions and operational risks.

Designed for professional installations, the Server supports over-the-air (OTA) firmware updates, configurable operating modes and modular sensor expansion. This makes it suitable for new build projects and retrofit deployments that need scalable, data-led water management.

Device info	
Model name	WD01A A-01
Dimensions (WxHxD)	Without Antenna: 180 mm x 89.8 mm x 68.1 mm 7.1 inch x 3.54 inch x 2.68 inch With Antenna: 180 mm x 115.3 mm x 68.1 mm 7.1 inch x 4.54 inch x 2.68 inch
Mounting	DIN-rail, 10DIN size
Weight	322 g 0.71 lbs
Ingress protection	IP54
User interface	RGB LED indicator 1.3” OLED display Button-controlled interface Buzzer
Compliance	UKCA, CE, RoHS

Operating conditions	
Temperature	Ambient temperature: 0-40°C Water temperature: 5-70°C *(dependent on sensors used)*
Humidity	0-90%

Power	
Power requirements	24 V DC, 1.5-2 A
Power consumption	3 W (not including sensors)
Battery backup	24 V external battery (optional)

Communication	
Ethernet	10BaseT/100BaseT
Bluetooth	Bluetooth 5 (LE)
Modbus	Modbus RTU
Wi-Fi	802.11 b/g/n @ 2.4 Ghz
Wi-Fi security	WPA/WPA2

Connectors	
WI-FI ANTENNA	Connector: SMA Antenna gain: 2 dBi
ETHERNET	10BaseT/100BaseT RJ-45 Ethernet port LED Link LED Active
I^2C	Digital output for additional Watergate modules. Voltage: 3.3 V DC Frequency: 400 kHz

Connectors	
	Internal pull-up 2.2k Ohm Max cable length: 25 cm Protection: Reverse polarity, Overvoltage, Overcurrent (max 50 mA), TVS diodes, ON / OFF output voltage AWG: Max. 14, Min. 30
TAMPER	Digital input for the enclosure door tamper switch. Voltage: 3.3 V DC Max cable length: 1 m Protection: TVS diodes, internal pull-up 10k Ohm, Schmitt-trigger for noise reduction AWG: Max. 14, Min. 30
LEAK	Analog input for a leak detection wire. Voltage: 3.3 V DC Max cable length: 10 m Protection: TVS diodes AWG: Max. 14, Min. 30
FLOW METER 1	Digital IO for IO-LINK devices. Voltage: 24 V DC Current: Max. 0.4 A Max cable length: 3 m Protection: Reverse polarity, overvoltage, reverse current blocking, TVS diodes, and ON / OFF output voltage AWG: Max. 12, Min. 30
FLOW METER 2	Digital IO for IO-LINK or Pulse devices. Voltage: 24 V DC

Connectors	
	Current: Max. 0.4 A Max cable length: 3 m Protection: Reverse polarity, overvoltage, reverse current blocking, TVS diodes, and ON / OFF output voltage AWG: Max. 12, Min. 30
PRESSURE	Analog input for Pressure Sensor. Voltage: 24 V DC Current: Max. 0.05 A Max cable length: 3 m Protection: Reverse polarity, overvoltage, TVS diodes, resettable fuse protection, and ON / OFF output voltage AWG: Max. 12, Min. 30
BATTERY	Analog input for monitoring external battery voltage. Voltage: Max. 29.2 V DC Max cable length: 1 m Protection: Reverse polarity, overvoltage, TVS diodes AWG: Max. 12, Min. 30
BMS RELAY	Relay output for BMS purpose Voltage: Max. 300 V DC / 400 V AC Load capacity: 8 A 230 V AC 8 A 30 V DC Protection: RC snubber arc suppression across coil contacts AWG: Max. 12, Min. 30

Connectors	
MODBUS	Smart valve port. RS485 for MODBUS purpose Voltage: 24V DC Current: Max. 1A Impedance: 120 Ohms Speed: Up to 115200 baudrate Fuse: 1 A for supply, 0.05 A for signals Protection: Reverse polarity, overvoltage, overcurrent, resettable fuse protection, TVS diodes, and ON / OFF output voltage AWG: Max. 12, Min. 30
POWER	DC Power Input Voltage: 24V DC Current: Min. 1.5A, Max. 2A Fuse: 2 A Protection: Reverse polarity, overvoltage, overcurrent, fast fuse protection, TVS diodes AWG: Max. 12, Min. 30

For a list of compatible third-party components, see Reference Guide: Works with Watergate Server.