

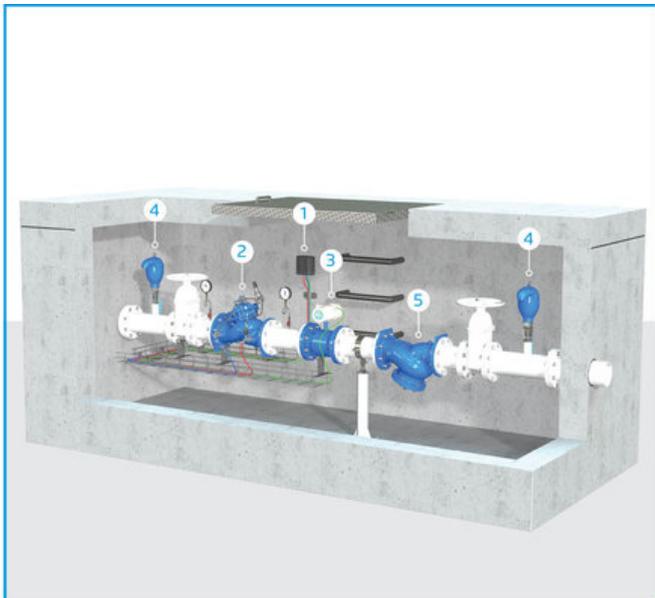


EPSILON CONTROLLER

Model EPSILON-C

The EPSILON-C is advanced controller for pressure management, intermediate water supply and more. It allows monitoring and system analysis which is essential part of implementing digital twin approach, and thus achieving system optimization and improved efficiency. The end result is a reliable water supply and better service for the client.

The EPSILON-C is a fully remote controlled battery operated controller. The EPSILON-C logs the data and uses cyber secured technology to transmit the data to a user-friendly cloud platform.



- [1] EPSILON-C - Advanced Controller for Pressure Management
- [2] Pressure Reducing Valve Model 720
- [3] Electromagnetic Flowmeter Model MUT2200
- [4] Combination Air Valve Model C70
- [5] Strainer Model 70-F

Features & Benefits

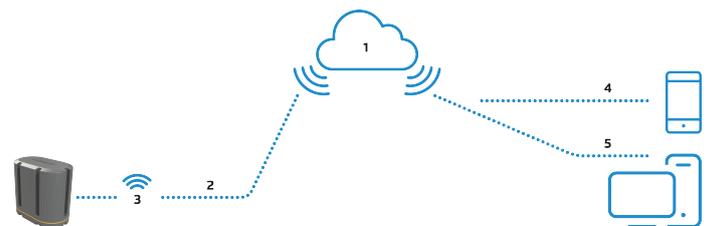
- 5 years internal battery operated (1 daily connection and correct use) or external power
- Large capacity data logging
- Full communication to Bermad cloud or to other platforms via API or FTP for monitoring and remote setting
- Intuitive and user friendly platform
- Advanced modern graphs and reports
- Alert and notifications via Mail
- Build-in 2 internal pressure sensors with accuracy of +/-0.5%

Typical Applications

- 2 pressure regimes by switching between "Low" to "High" set points according to flow rate or time window (Day/Night)
- Monitoring and data logger in critical points of the DMA for pressure management
- Monitoring and data logger for counting flow rate, accumulated volume and make easier water balance calculations

Operation Modes:

- Online mode: 24/7 connection between controller and cloud (require external power source)
- Offline mode:
 - Autonomous control operation, predefined cloud communication and real time alerts
 - Designed for power saving when using internal batteries



| Num | Description |
|-----|---------------------|
| 1 | Secured Internet |
| 2 | Cellular |
| 3 | NB-IoT, CAT-M, GPRS |
| 4 | Smartphone App |
| 5 | Management Software |



Controller Features

Main features:

- Local Inputs & Outputs:
 - 1 digital input for metering and discrete sensors
 - 2 Latch outputs (16V DC; 100 mS pulse) for Day/Night control or fully open the valve by venting the valve chamber
- Sensors calibration for all physical units
- Internals
 - 2 0-20 bar internal pressure sensors +/- 0.5%

Connectivity:

- Built in 4G Modem with 2G fallback
 - Global data sim card for worldwide plug-and-play internet connectivity
 - Supports GPRS, 4G communication
- Bluetooth communication for technician mode tasks

Power source:

- Lithium battery for operation in offline mode
- 9-17VDC external power input for online mode operation (solar panel, grid power, etc.)

Integral data logger with more than 150K records, enables comprehensive log registry that can cover long periods of offline operation

Periodic over the air firmware upgrades (FOTA)

Outdoor Installation: IP68 rated with UV protection

Standard Compliance: CE & FCC

Industrial grade Electronic components: -35°C to 75°C

Push type connectors for quick and easy wiring without need for special tools

BERMAD Cloud Features

Cyber protected login:

- Multi-user connectivity for enhanced management and technical support
- Individual access level authorization (Edit settings, Read only)

Global Account management:

- Language and time zone selection
- User privileges
- Unit selection (Metric, Imperial)

Dynamic dashboard:

- Geo-referenced map with global view of your pressure management project
- Current status of EPSILON controllers
- Up-to-date sensors data
- Quick access to the EPSILON management tools: Setup and programming, Wizard for guided unit config

Alert control:

- Alert status log and Mail notification
- Alert management tools:
- Thresholds of several levels for each of the measured values
- Alert notifications per user level of authorization and position

Log information:

- System state, operation events & alerts
- Periodic sensor data acquisition:
- Watermeter flow & accumulations
- Pressures
- Analogue sensor data
- Battery voltage level

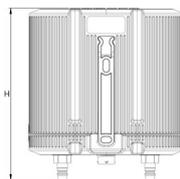
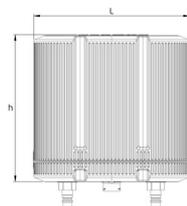
Report generator:

- Personalized reports for operation and traceability
- Export to Excel file

Technical Data

Technical Specifications

For other patterns and end connection types, Please refer to [BERMAD](#) full engineering page.



| Model | Type | L (mm) | H (mm) | h (mm) | W | Local I/O | | Internal Pressure Sensors | Cellular | Bluetooth |
|-----------|------|--------|--------|--------|-----|----------------|-----------------|---------------------------|----------|-----------|
| | | | | | | Digital Inputs | Digital Outputs | | | |
| EPSILON-C | E4 | 176 | 196 | 167 | 113 | 1 | 2 | √ | √ | √ |