MICROCOM
Simply More

HERMES LC2+

GSM/GPRS REMOTE CONTROL

3-year warranty

The HERMES LC2+ is a remote control and telemetry system based on GSM/GPRS technology for simple and effective monitoring of remote stations.

It has 8 digital inputs, 4 relay outputs and capable of reading up to 8 temperature and humidity sensors. It is powered by 230V and incorporates an internal battery that allows it to operate for several hours without external power, thus triggering alarms due to power failure. It offers three well-defined functionalities:

Transmission of alarms

The advanced alarm detection logic, by threshold, time out of range, logical combinations, etc. triggers the transmission of alarms via SMS, voice call, or PUSH notification to configured phones.

Data logging

Memory for more than 90,000 registry points and flexibility to generate logs by time or input value events for transmission to the monitoring platform.

Automation

Programmable system using a programming language accessible to anyone and with the necessary power for the most common applications such as pump management, lighting, etc.

ZEUS 6 PLATFORM

The solution is complemented by the free online monitoring platform ZeusWeb and mobile applications for iOS and Android.

FEATURES

- 8 digital inputs.
- 4 relay outputs.
- Reads up to 8 temperature/humidity sensors.
- 230 VAC power supply with integrated uninterruptible power supply.
- Data log function with memory for >150,000 points.
- Modem options GSM / 2G / 3G / 4G / NB-IOT / CAT.M1
- 3-year warranty.

APPLICATIONS

- Tanks and pumps in water networks.
- Monitoring of remote installations.
- Industrial and commercial cooling facilities.
- Domestic hot water boilers (DHW).
- Agricultural holdings.

COMMUNICATION ALTERNATIVES

Models	Supported networks	Region	Comments
Hermes LC2+ 2G/3G/4G-E	2G/3G/4G	Europe, Middle East, and Africa	· Maximum compatibility with current networks in Europe, Middle East, and Africa.
Hermes LC2+ 2G/3G/4G-L	2G/3G/4G	Latin American and Australia.	· Maximum compatibility with current networks in Latin America and Australia.
Hermes LC2+ 2G/NB-IoT *(Available on request)*	2G/NB-IoT/Cat.M1	Worldwide	· Low cost excellent coverage in confined areas. · SMS support not guaranteed.

TECHNICAL SPECIFICATIONS

GENERAL
Operating voltage ..... 230 VAC
..... 110 VAC (Manufactured to order)
Battery type/capacity ..... LiPo 3.7 VDC / 400 mAh
Rated consumption ..... 2 W
Maximum consuption ..... 5 W
Radio modem ..... 2G/3G/4G (by default)
..... 2G/NB-IoT/LTE-M (optional)
Data logger ..... > 150.000 logs
Operating temperature ..... 0 to +50 ºC
Configuration and diagnosis ..... USB Type B Port
Dimensions (without antenna) ..... 109 x 90 x 58 mm
Mounting ..... Carrier rail 35 mm

DIGITAL INPUTS
Number 8
Type ..... Activated in contact with GND
Sampling Frequency ..... 200 Hz

DIGITAL OUTPUTS
Number 4
Type ..... Relay. Potential-free contact
Rated voltage / current ..... 250 VAC / 3 A

TEMPERATURE/HUMIDITY SENSORS
Channels 8
Maximum cable length ..... 300 m

ACCESSORIES

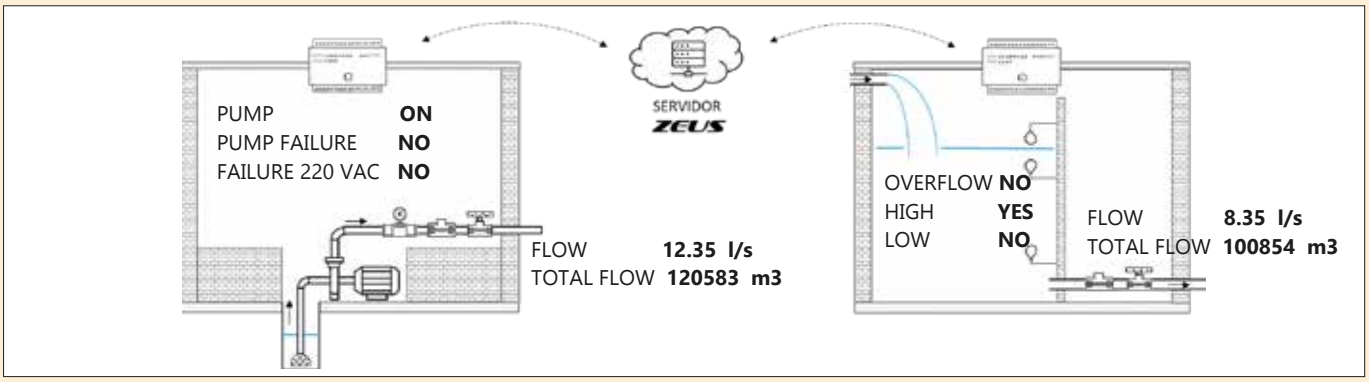
STDV01
Ambient temperature sensor.

STDV02
Ambient temperature and humidity sensor

F100-U SENSOR
Intelligent capacitive sensor for reliable detection of the presence of discharges in spillways.

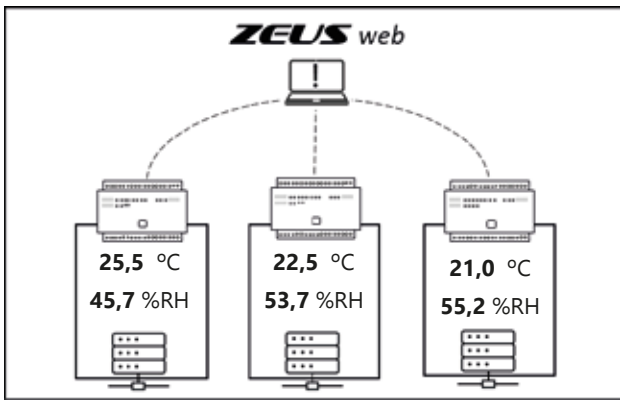
ANTENNAS AND EXTENSIONS
Antennas with different gains and extension cables..

APPLICATIONS



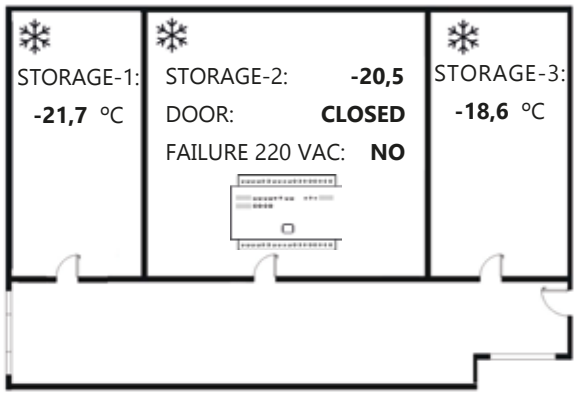
MANUAL AND AUTOMATIC CONTROL OF TANK FILLING VIA GPRS

The PUBLISH/SUBSCRIBE functionality makes it possible to exchange data between different HERMES and NEMOS stations via mobile networks (2G/3G/4G/NBIOT/CAT.M1). The station that controls the pumping will have constant data indicating the level of the tanks to be filled. Accordingly, automatic activation of the pump is programmed to maintain the tank within established levels.



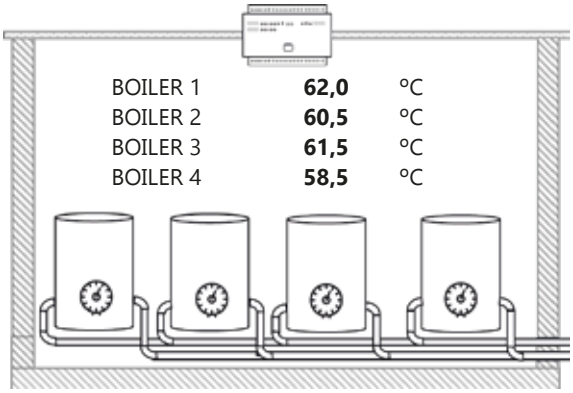
MONITORING OF REMOTE FACILITIES

Real time display and recording of alarms and sensors for remote installations.



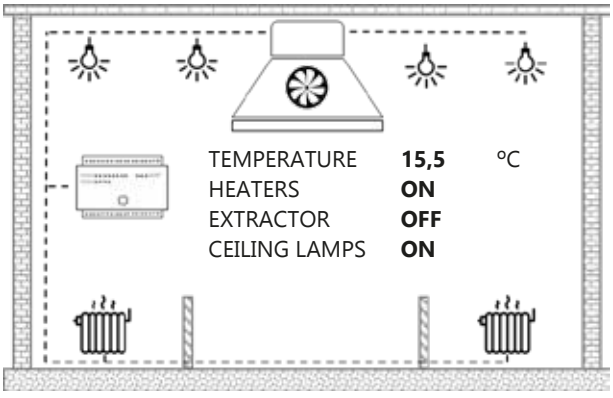
COLD ROOMS

Monitoring and alerts for temperatures out of range, open door, and power outages.



DOMESTIC HOT WATER BOILERS (DHW)

Temperature monitoring and control to ensure service continuity and optimisation of energy costs.



AGRICULTURAL INDUSTRY

Recording of temperatures and manual and automatic control of heaters, air extractor, and lighting groups.

AUTOMATION - MICRO PLC II

MICRO PLC II

```
L1    #INIT
L2    REM EXAMPLE CONFIGURATION SECTION
L3    AI0 : TANK_LEVEL
L4    DO0 : PUMP
L5    #END_INIT

L6    REM EXAMPLE MAIN PROGRAM LOOP
L7    IF TANK_LEVEL >= 3.5 ; PUMP = 0
L8    IF TANK_LEVEL <= 1.5 ; PUMP = 1
```

MicroPLC-II, Microcom's new programming language for PLCs, stands out for its ease of use and unparalleled efficiency in the industry. Its simplified syntax and comprehensive set of logic modules that address the most common problems are key to this usability. The language's mathematical-logic engine supports a complete set of arithmetic, trigonometric, and logical operators, providing powerful computational capabilities. Among its most notable features are:

Pump control module

Logic module for the control of up to 6 pumps, managing alternation, hour meter, start counter, maximum continuous operating time and pump inhibition inputs.

Communication module between units

Redundant system for data exchange between stations. In case of failure of the main GPRS/TCP-IP channel, a secondary channel is established via SMS.

Twilight clock

Calculation of sunrise and sunset times based on configured geographical coordinates.

Timers

Native support for six types of timers: on, off, accumulator, pulse, weekly and cyclic.

APPLICATION LIBRARY

Microcom offers a complete set of libraries for the most common cases; some examples are:

AUTOMATED PUMPING SYSTEM – STORAGE TANK

Pump-to-tank communication via GPRS/TCP-IP with SMS redundancy. Pump alternation, start/stop thresholds according to time-of-use rates, and control of pump fault and inhibit signals.

WASTEWATER PUMPING

Pump alternation management, start/stop thresholds according to hourly rates and control of fault signals, pump inhibition and low/high level float.

PUBLIC LIGHTING

Lighting control according to an astronomical clock with configurable offset for working and non-working days.

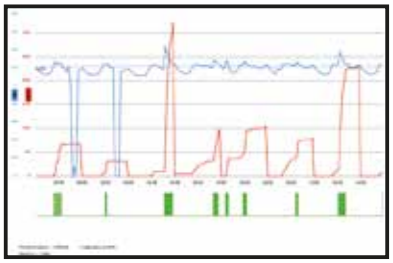
Ease of use and the implementation of the latest web technologies are the most outstanding features of ZEUS, the online SCADA system that Microcom offers its clients free of charge. With an intuitive and secure interface comparable to online banking services, ZEUS allows users to manage their facilities through a simple web browser from anywhere.

For those working remotely, the ZEUSmobile app, available for iOS and Android, provides optimized access for phones and tablets, as well as receiving alerts via push notifications, replacing traditional SMS in most cases.

ZEUS not only allows for the visualization but also the reconfiguration of remote stations, the sending of commands, and the management of users and stations, all without requiring on-site visits. Furthermore, its integration with other platforms is guaranteed thanks to common standards such as OPC UA and REST APIs.

TOOLS AND FEATURES

Visualization of historical data in graphical format



Real-time monitoring using synoptic displays

Geolocated map of stations

Display example in: ZEUS mobile

- Complete reporting tool
- Receiving, managing and forwarding alarms
- Maximum security thanks to the most advanced web standards: HTTPS / SSL
- Remote device configuration Hermes and Nemos
- Advanced user and privilege management
- Availability of the Zeus Synoptic Builder tool for creating synoptics.
- ZeusAPI / OPC UA SERVER — Easy data integration with other platforms via OPC UA and REST API