

HERMES TCR200+

INDUSTRIAL GSM/GPRS REMOTE CONTROL



5-year warranty

ZEUS 6 PLATFORM

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



The Hermes TCR200+ is a full-fledged remote control and telemetry module with communication via mobile networks for simple and effective monitoring of remote stations.

With the integrated set of digital and analogue inputs, MODBUS interface, and relay outputs, the Hermes monitors the installation and provides three basic functionalities:

● Alarms transmission

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

● Data logging

Memory space for more than 90,000 data records and flexibility to generate logs at fixed time interval or input value threshold and reliable transmission to the monitoring platform.

● Automation

PLC like system with a programming language accessible to anyone and tailored for the most common applications such as pump management, lighting, etc.

FEATURES

- 8 opto-coupled digital inputs.
- 4 4/20mA or 0-10v analogue inputs.
- MODBUS RTU interface over RS485 with up to 128 signals acquisition.
- 4 relay outputs.
- Integrated GSM 2G/3G/4G modem.
- 5-year warranty.

APPLICATIONS

- Tanks and pumps in water networks
- Industrial and commercial cooling facilities
- Lighting and energy efficiency
- Domestic hot water installations (DHW)
- Agricultural holdings
- Remote industrial installations

COMMUNICATION OPTIONS

Models	Supported networks	Region	Comments
Hermes TCR200+ 2G/4G-E	2G/3G/4G	Europe, Middle East, and Africa	<ul style="list-style-type: none"> Maximum compatibility with current networks in Europe, Middle East, and Africa.
Hermes TCR200+ 2G/4G-L	2G/3G/4G	Latin American and Australia.	<ul style="list-style-type: none"> Maximum compatibility with current networks in Latin America and Australia.
Hermes TCR200+ 2G/NB-IoT (Available on request)	2G/NB-IoT/Cat.M1	Worldwide	<ul style="list-style-type: none"> Low cost excellent coverage in confined areas. SMS support not guaranteed.

TECHNICAL SPECIFICATIONS

GENERAL

Operating voltage 9 to 30 VDC
 Rated consumption at 12 VDC ... 50 mA + 20 mA (active relay)
 Maximum consumption at 12 VDC 500 mA
 Radio modem 2G/3G/4G (by default)
 2G/NB-IoT/LTE-M (optional)
 Data logger >150.000 data points
 Operating temperature -10 to +75 °C
 Configuration and diagnostics USB Port-typeB
 Dimensions (without antenna) 109 x 90 x 58 mm
 Mounting DIN rail 35 mm

DIGITAL INPUTS

Number 8
 Activation voltage 9 a 30 VDC
 Sampling Frequency 200 Hz
 Impedance 2 kΩ

DIGITAL OUTPUTS

Number 4
 Type Relay, Potential-free contact
 Maximum voltage / current 250 VAC / 3A

ANALOG INPUTS

Number 4
 Range 0-10 VDC or 4/20 mA
 Accuracy 0,25 %
 Resolution 16 bits
 Impedance Voltage mode: 2 MΩ
 Current loop mode: 125 Ω

FIELD BUS

Protocol MODBUS RTU / RS-485
 Maximum channels 128

ACCESORIES



UPS-2415

24 VDC and 15 W uninterruptible power supply with monitoring and automatic switching to backup lead battery.



F100-U SENSOR

Intelligent capacitive sensor for reliable detection of the presence of waste water in spillways.



VEGAPULS C11 / C21 / C22 / C23

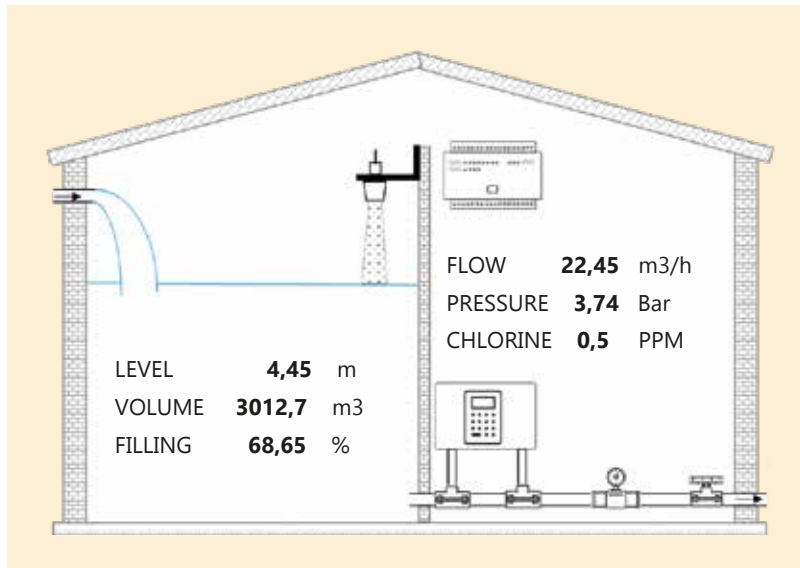
Radar sensor to measure liquid level and bulk solids.



AUTOMATION AND NETWORK ANALYSERS

Connect your PLC to the HERMES TCR200+ via MODBUS to remotely monitor the installation on ZEUSweb.

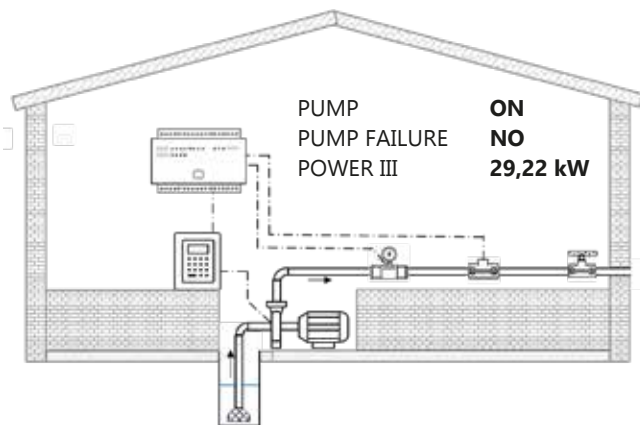
APPLICATIONS



POTABLE WATER STORAGE AND AUTOMATIC FILLING

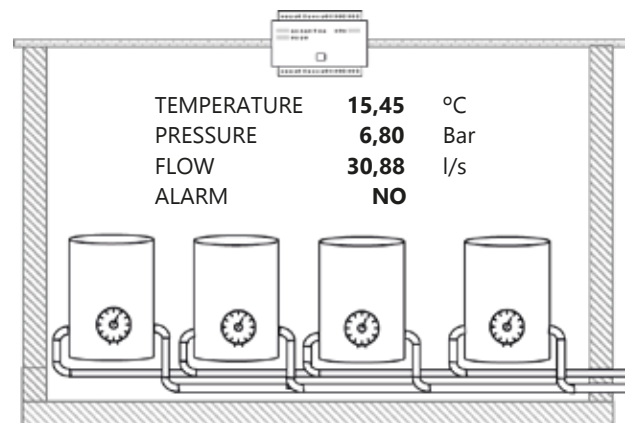
Alarms and remote monitoring of multiple parameters: level, filling percentage, flow rate, pressure, chlorine, pH, etc.

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



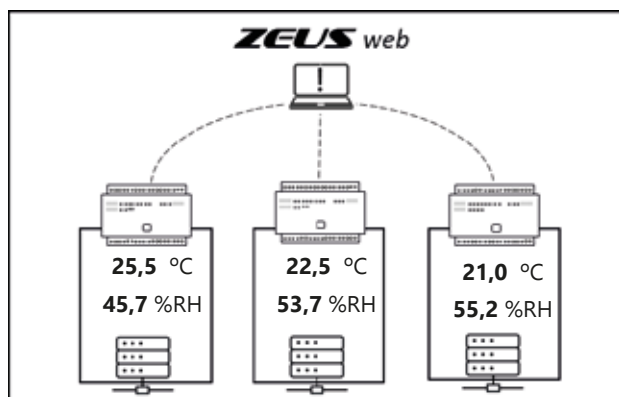
PUMPING STATIONS

Remote manual and automatic control by tank levels and hourly rates.



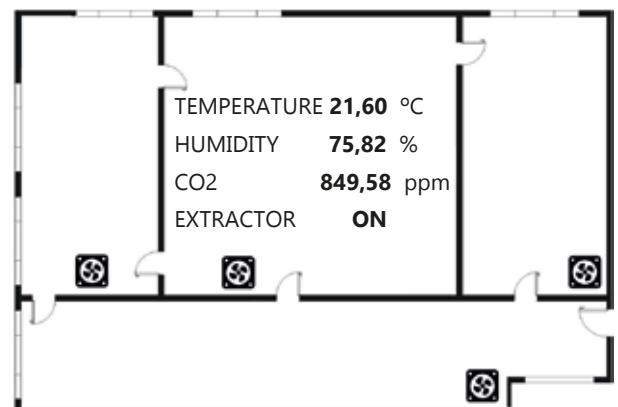
COOLING, AIR CONDITIONING, AND HEAT PRODUCTION FACILITIES

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



REMOTE INDUSTRIAL INSTALLATIONS

Connect your PLC to the HERMES TCR200+ via MODBUS to remotely monitor the installation on ZEUSweb and send technical alarms directly to mobile phones.



INTERIOR AMBIENT QUALITY

Recording of sensors and manual/automatic activation of heaters, air extractors, lighting groups, etc., in offices and livestock holdings.





AUTOMATION - 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

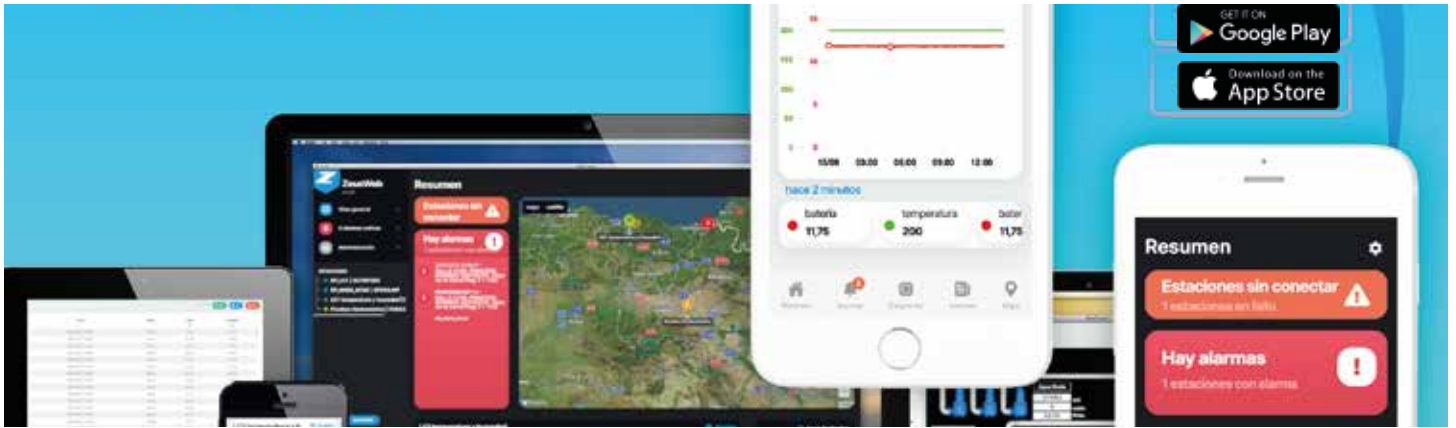


Pump alternation management, start/stop thresholds according to hourly rates and control of fault signals, pump inhibition and low/high level float.

PUBLIC LIGHTING



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



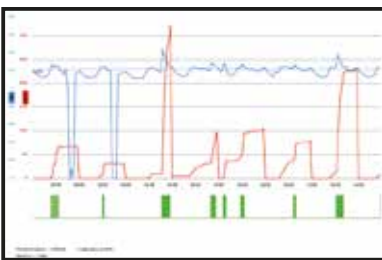
Ease of use, the latest web technologies, and providing an intuitive interface as secure as any online banking service are the most outstanding features of ZEUS, the online SCADA that Microcom makes available to its customers free of charge.

A simple web browser is all you need to access the service and start managing your installations from anywhere. When you are out of the office, the ZEUSmobile application, available for iOS and Android, facilitates, in addition to optimised access for phones and tablets, reception of alarms through PUSH technology, making SMS obsolete in most cases.

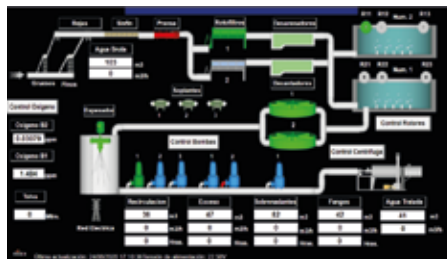
ZEUS is not limited to display, it also enables reconfiguration of remote stations without the need to travel, send commands, or management of users and stations. Integration with other platforms is guaranteed through the most common standards today, such as OPC UA and REST API.

TOOLS AND FUNCTIONALITIES

Graphical display of historical data



Real-time monitoring using synoptics



Geolocation station map



Display example in:
ZEUS mobile



Comprehensive reporting tool



Maximum security thanks to the most advanced web standards: HTTPS / SSL



Advanced user and privilege management



Reception, management, and forwarding of alarms



Remote configuration of Hermes and Nemos devices



Availability of the Zeus Synoptic Builder tool for creating synoptics.



Easy data integration on other platforms via OPC UA and REST API