MICROCOM
Simply More

HERMES TCR210

GSM/GPRS REMOTE CONTROL

3 años GARANTÍA

3-year warranty

The Hermes TCR210 is a remote control and telemetry system based on GSM/GPRS technology for simple and effective monitoring of remote stations.

It is equipped with 8 digital inputs, 4 outputs and a MODBUS RTU interface RS485 that makes it ideal for electrical energy monitoring applications associated with a network analyser. It is powered by 230VAC 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 150,000 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 and 4 digital outputs.
- Acquisition of up to 128 variables through the interface MODBUS RTU RS485.
- 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

- Energy monitoring.
- Remote management of public lighting.
- Monitoring of remote installations.
- Climate control system.
- Agricultural industry.

COMMUNICATION ALTERNATIVES

Models	Supportes networks	Region	Comments
Hermes TCR210 2G/4G-E	2G/3G/4G	Europe, Middle East and Africa	Maximum compatibility with current networks in Europe, Middle East, and Africa
Hermes TCR210 2G/4G-L	2G/3G/4G	Latin America and Australia.	Maximum compatibility with current networks in Latin America and Australia
Hermes TCR210 2G/NB-IoT *(Made upon request)*	2G/NB-IoT/LTE-M	Worldwide	· Low cost and excellent coverage. · Network deployment not completed.. · SMS support nto guaranteed. · Does not allow voice calls

TECHNICAL SPECIFICATIONS

GENERAL

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

DIGITAL INPUTS

Number 8
Sampling Frequency ..... 100 Hz

RELAY TYPE DIGITAL OUTPUTS

Number..... 1
Type ..... Relay. Potential-free contact
Maximum voltage / current ..... 250 VAC / 3 A

OPTOTRIAC TYPE DIGITAL OUTPUTS

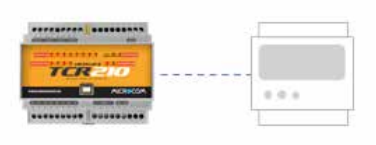
Number 3
Type ..... Optotriac. zero crossing switching.
Maximum voltage / current ..... 250 VAC / 3 A

COMMUNICATION BUS

Protocol ..... MODBUS RTU / RS-485
Maximum channels 128

ACCESSORIES

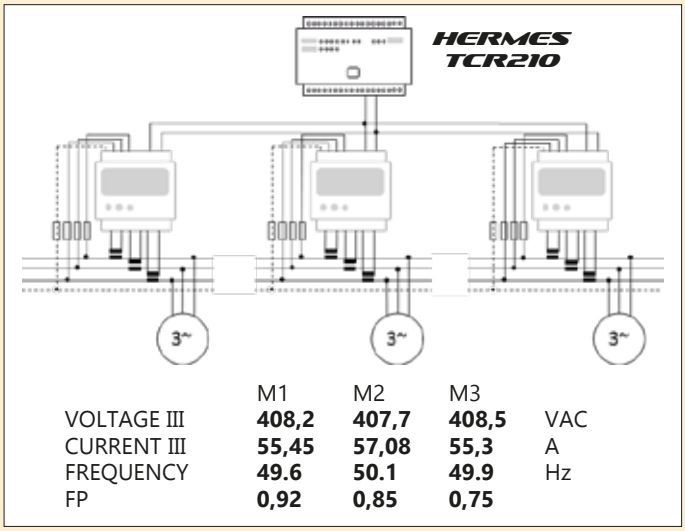
PHASE FAILURE RELAY
Detects voltage drops in the phase for the protection of three-phase electric motors.



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

ANTENNAS AND EXTENSIONS
Antennas with different gains and extension cables.

APPLICATIONS

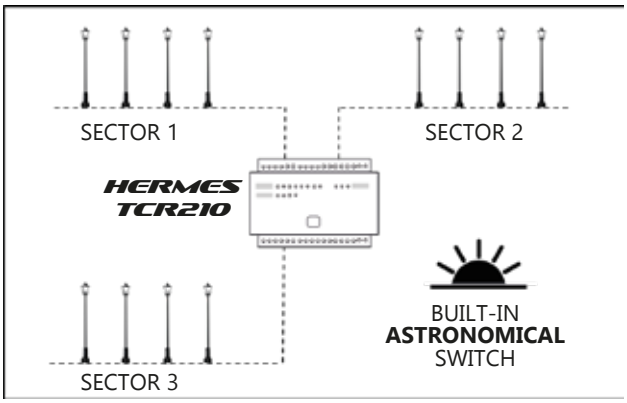


	M1	M2	M3	
VOLTAGE III	**408,2**	**407,7**	**408,5**	VAC
CURRENT III	**55,45**	**57,08**	**55,3**	A
FREQUENCY	**49.6**	**50.1**	**49.9**	Hz
FP	**0,92**	**0,85**	**0,75**	

ENERGY MONITORING

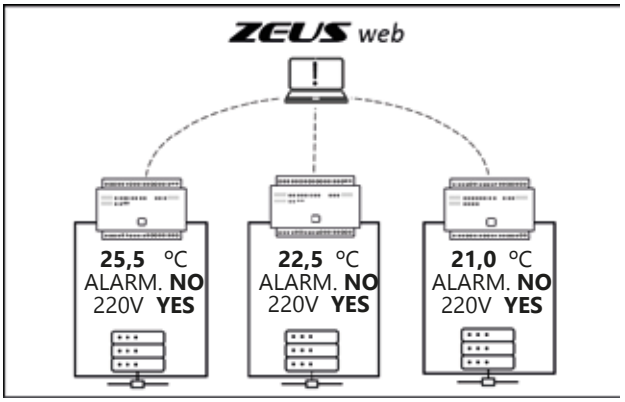
The TCR210 integrates with network analysers via MODBUS RTU / RS485, enabling real-time recording of parameters from any electrical panel: active and reactive power, current, voltage, power factor, number of ignitions, accumulated consumption, etc., as well as their subsequent transmission to the web platform.

Advantages:
- Real time anomaly and failure alarms.
- Detects potential savings and trouble spots.
- Verifies deviations and determines the origin.
- Tests if applied measures save energy.
- Remote resetting of machines.



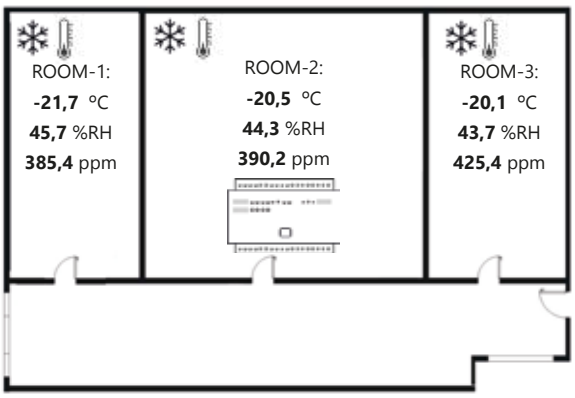
REMOTE MANAGEMENT OF PUBLIC LIGHTING

Manual and automatic control of lighting fixtures by: programmer with preset time, switch with astronomical clock, and motion sensors.



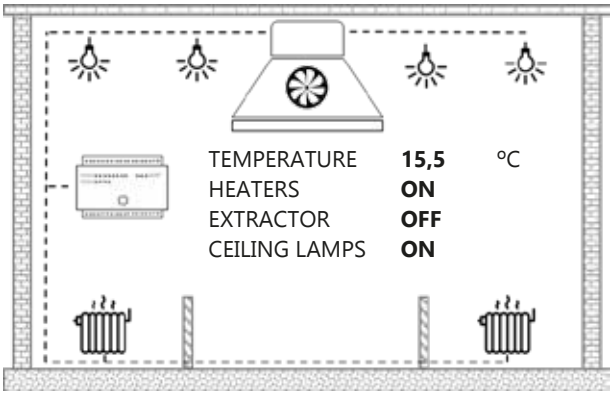
MONITORING OF REMOTE FACILITIES

Real time recording of alarms and sensors for remote installations.



CLIMATE CONTROL SYSTEM

Continual monitoring of air quality parameters: temperature, humidity, pressure, CO2, etc., and of heating and cooling equipment.



AGRICULTURAL INDUSTRY

Real time display and recording of alarms and sensors for remote installations. Recording of sensors and manual and automatic control of heaters, air extractor, and lighting

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

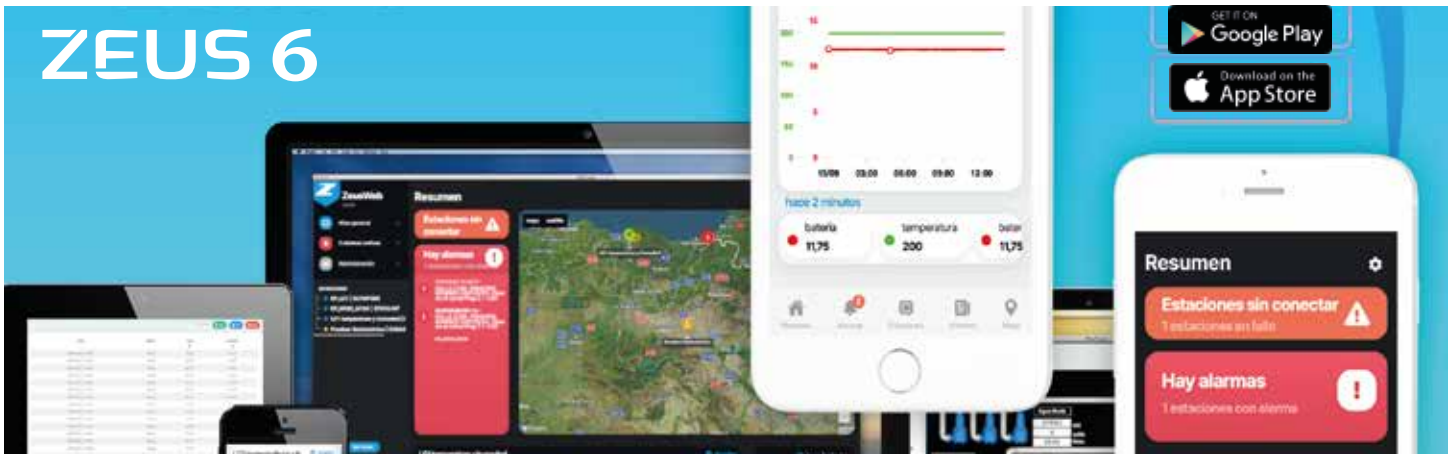
Pump-to-tank communication via GPRS/TCP-IP with SMS redundancy. Pump alternation, start/stop thresholds according to time-of-use rates, and control of pump fault and inhibit signals.

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.



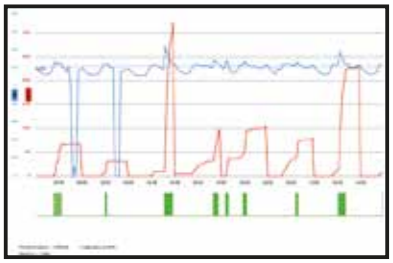
Ease of use and the implementation of the latest web technologies are the most outstanding features of ZEUS, the online SCADA system that Microcom offers its clients free of charge. With an intuitive and secure interface comparable to online banking services, ZEUS allows users to manage their facilities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