

# **INNOVATION AND DIGITALISATION** IN YOUR HOME

# **Clivet Smart Living**







Inspiring Solutions since 1989

## **Clivet Smart Living**



Clivet Smart Living is a complete package for managing the comfort and energy efficiency of individual homes, apartments and small businesses. It incorporates cutting-edge technologies, and focuses on the well-being of people in the settings where they live and work.

### Ventilation and air quality



Real-time air quality monitoring for air exchange with heat recovery

Heating & air conditioning



You can set the ideal temperature in every room, managing up to 12 independent zones with heat fittings, fan coils and radiant panels







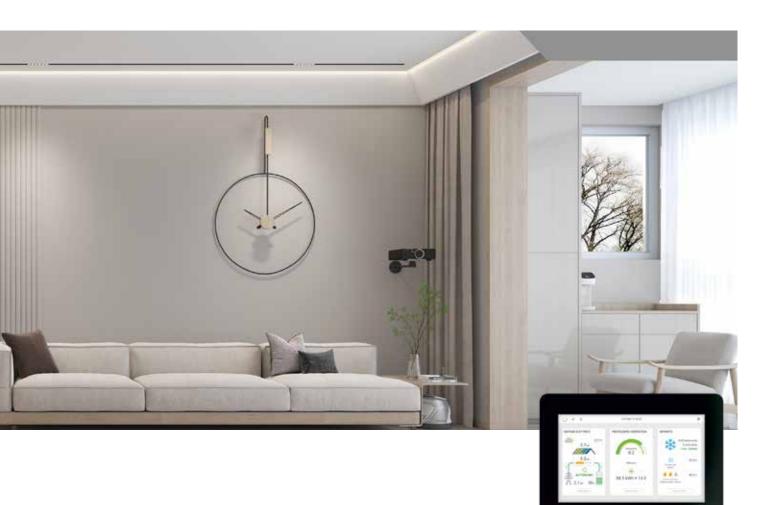
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### **Energy management**



With the use of Sinergy and a photovoltaic system, you can have a totally sustainable home, optimising energy use and always keeping an eye on consumption





### CONTROL4 NRG lie at the heart of Clivet Smart Living

The system allows you to control all the interconnected parts to provide maximum comfort and efficiency, generating just the right amount of energy for every room when required, and to suit the particular needs of all the occupants.

- $\checkmark$  Comfort and well-being for the occupants
- ✓ Energy efficiency and low consumption
- Energy independence



The ideal solution for the residential sector is Clivet Smart Living, a system that combines energy management and comfort, and which includes:

- ✓ Heat pump for heating, cooling and domestic hot water production
- $\checkmark$  An air renewal and purification system with active thermodynamic recovery and electronic filtration
- Clivet Sinergy: the Clivet energy storage unit can be connected to photovoltaic panels, powering a system focused on comfort and supplying energy to every user, and so giving you a home that is totally reliant on renewable energy
- ✓ HID-TSmart thermostats in every zone/room
- $\checkmark$  Quiet, compact room terminals, with stylish design

### **Clivet Smart Living Solutions**



#### **PHOTOVOLTAIC PANELS\***

Energy production through a photovoltaic system

### **SINERGY ESS**

Electricity storage, to ensure maximum efficiency of independent supply during evening hours



### **HEAT PUMP**

Smart modulation of the heat pump and domestic hot water tank charging based on the energy available from the photovoltaic system





### AIR RENEWAL UNIT

Active thermodynamic recovery ventilation system to ensure the highest level of indoor air quality

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### **CONTROL4 NRG**

System energy assistant with electricity and thermal storage management. Remote automatic software updates to keep the system in line with new available functions



### **CLIVET EYE**

Cloud solution for remote system control and management from a single App with display of energy levels produced and consumed by the home



### **SMART THERMOSTATS**

These provide simple, intuitive and immediate access to the home system's main operating parameters (temperature and humidity, air quality, coil charge level, electricity produced by the photovoltaic system)



#### **AIR QUALITY SENSOR**

Acquisition of temperature, humidity, noise, VOC carbon monoxide, carbon dioxide and methane values



### FAN COILS, RADIANT PANELS

Quiet, efficient fan coils, with slimline design and EUROVENT certification



\*not supplied by Clivet

# The importance of air quality in inside space

To ensure a comfortable environment, the new **z-IAQ** sensor monitors air quality in real time, providing readings of the temperature and the levels of humidity, noise, VOCs, carbon monoxide, carbon dioxide and methane. CONTROL4 NRG can then constantly monitor the air quality based on the parameters acquired in the various zones and manage the fresh air to restore health and comfort in the various environments.



#### Relative

This latest advance in technology allows us to monitor the safety of our homes in real time. The z-IAQ sensor can tell us about the quality of the air we breathe, monitoring it for such things as a gas leak, a high level of  $CO_2$ , or the abnormal presence of carbon monoxide.





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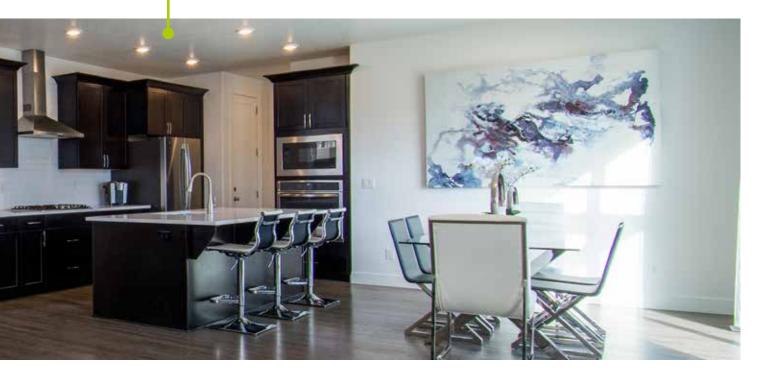
According to a report by the EEA (European Environment Agency), the vast majority of Europe's city-dwellers are exposed to levels of air pollutants which exceed the new guidelines issued by the World Health Organisation (WHO). In this context, indoor air quality has become increasingly important for people's health.

\* Source: https://www.eea.europa.eu/themes/air/urban-air-quality/european-city-air-quality-viewer



### **ELFOFresh EVO**

Better indoor air quality, and greater energy efficiency and comfort with the electronic filtration system and inverter technology.



### Air renewal and purification

An innovative heat recovery system that will meet more than 85% of your home's heating requirements Humidity control Air purification with high-efficiency electrostatic filter Management using CONTROL4 NRG system



# Electricity and energy independence

The advanced control system allows you to maximise energy consumption and achieve energy independence for your home.

The operating principle is based on using two available forms of storage.

- ✓ Electricity storage, available with Clivet Sinergy
- $\checkmark$  Thermal storage, using the heat pump intelligently during sunlight hours

### **Electricity storage**

# Sinergy

It allows you to store electricity for use with electrical appliances

Modular electric tank system with inverter for combination with solar photovoltaic system, compact and stylish, ideal for residential installations.

- 5 kW single-phase 230Vac hybrid inverter
- Modular system with up to 4 storage tanks for capacities of 5/10/15/20 kWh
- Dual MPPT input for 6.2 kW photovoltaic system
- On-grid function and integrated 5 kW back-up output for connecting loads in the event of a power failure
- "Anti-islanding" protection system



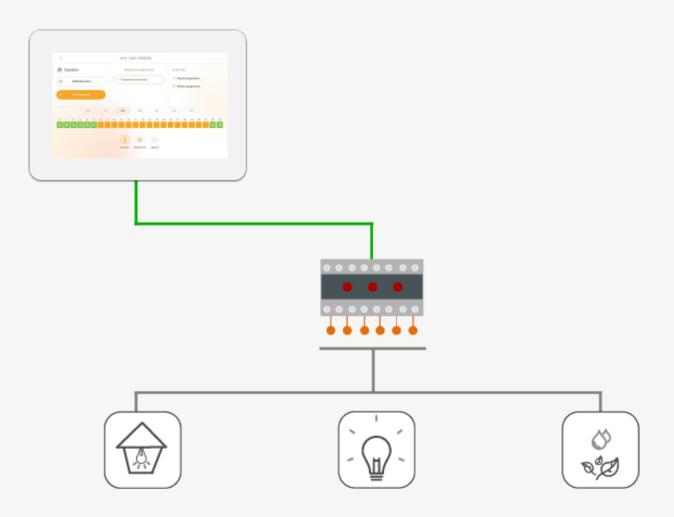
### Heat storage





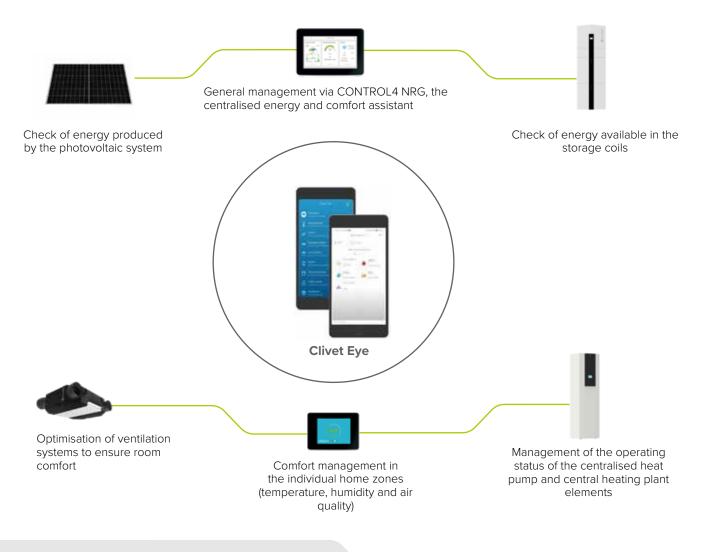
Management of lighting and small electrical loads

The versatility provided by the multiple zone module allows you to activate electrical loads such as outdoor lights or watering systems, also setting times for them to switch on and off.



### Improve your comfort

The Sinergy storage system is Clivet's solution for storing the electricity produced by the photovoltaic system during daylight hours and using it to power the air-conditioning and domestic hot water production system during the night or in the event of a grid power failure. Combined with the CONTROL4 NRG energy assistant, the Sinergy series of electric accumulators ensures maximum self-consumption and energy independence in the home.



### CONTROL4 NRG: the evolution of ELFOControl<sup>3</sup> EVO

The new hardware and software release makes it possible to change from managing the air-conditioning system to managing the comfort and energy in the home or office: it integrates the solar photovoltaic system, simplifies and improves management via the App and introduces numerous other new features. In addition, it is still fully compatible with previous versions of ELFO CONTROL, making retrofitting a very viable solution.



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The correct sizing of the systems, together with favourable climatic conditions, allows CONTROL4 NRG to manage home comfort and domestic hot water production storage completely free of charge, thereby achieving the goal of an energy-independent home.

Simultaneous management of up to 12 different climate zones

The living areas are pre-treated according to the availability of electricity produced by the photovoltaic system in order to prevent electricity consumption peaks on the grid due to the heat pump switching on typically during the night, thus using the Sinergy electricity storage to supply the domestic users.

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#### Athe right comfort for each area

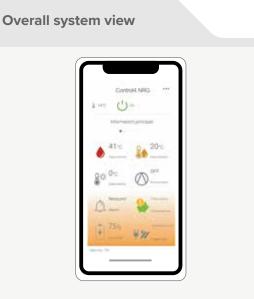
Fast control for every area, or use of automatic programming or manual control that can be set at any time.



### Improve your comfort

#### **Clivet Eye for remote monitoring**

Improve your comfort level and save energy. With the Clivet Eye App and the CONTROL4 NRG energy assistant, you can view details of heat pump consumption and the various electrical loads - such as household appliances; as well as production by the photovoltaic system.



Display of the status of all devices connected to CONTROL4 NRG

### Climate zone management

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Management of the 12 independent zones, with the option of changing the temperature and setting the "energy saving" function, as well as the option of switching the zone on and off

### Scheduler

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Allows you to schedule comfort in different zones of the house from the App

### Energy page

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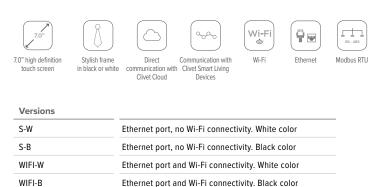
Designed to display the energy data of the last 7 days. Data are acquired by the electricity meters located in the system for the photovoltaic system



# Smart controller

## **CONTROL4 NRG**

#### Energy assistant for Clivet Smart Home





CONTROL4 NRG
Wall mounted by using mounting box (included)
-5~45°C
5~90 %RH
Wi-Fi 2.4GHz/ Ethernet
10 W
+/- power supply RJ-45 Ethernet port Serial EIA-485 connection 1x USB 2.0

Display Panel	7.0" capacitive touch screen
Resolution	800×480
Power supply	12 Vcc
Colour	White / Black
Dimensions	Dimensions = 193 x 132 x 53 mm (L x W x D) Recessed = 192 x 132 x 5 mm (L x W x D)
Weight	1260g (with accessories)
Structure	PS

### A brand new home page

All the information about the system is provided on one page, from the battery charge level to the operating status of the heat pump.

It will also inform you if you are in a state of energy self-sufficiency, making it easier to make full use of your energy savings.





### Smart thermostat

### **HID-TSmart**

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HID-TSmart provides simple, intuitive and immediate access to the system's main operating parameters. Combined with CONTROL4 NRG, you can acquire different types of information from all the electrical elements such as temperature, humidity, electricity consumption, electricity produced by the photovoltaic system, and the Clivet Sinergy electricity storage charge level.





Typical consumption



configuring up to 5 operating contexts

65 mA



Modern gesture navigation for moving between contexts and

a,

setting parameters

Communication with CONTROL4 NRG Modbus RTU

R5 485

General	
Device name	HID-TSmart
Installation	Wall-mounted with mounting box
Operating temperature	-5~45°C
Operating humidity	5~90%
Power supply	12V сс

Communication protocol	Modbus RTU
Connecting cables	Power supply +/-, Serial EIA-485
Display Panel	3.5-inch
Resolution	320*240
Temperature sensor	0 ~ 50°C, Accuracy ± 0.5°C
Buzzer	Yes

Versions		Features	
HTSBWX	White HID-TSmart thermostat with temperature sensor	Colour	White/Black
HTSBBX	Black HID-TSmart thermostat with temperature sensor	Dimensions	Outside dimensions: 112 x 77 x 18 mm (LxWxD)
HTSPWX	White HID-TSmart thermostat with temperature and humidity sensor	Materials	Bottom Cover: PC, Top Cover: ABS+PC
HTSPBX	Black HID-TSmart thermostat with temperature and humidity sensor		







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Scroll across to move between "context" screens





Scroll up/down to change temperature setting



# Indoor air quality sensor

# Z-IAQ

Wall Air Quality Detector is an air quality monitor that provides real-time reading of temperature, humidity, noise, VOC, carbon monoxide, carbon dioxide, methane





General	
Device name	Z-IAQX
Installation	Wall-mounted with mounting box
Operating temperature	-10~55°C
Operating humidity	≤95% (non-condensing)
Power supply	12V direct current
Max consumption	≤100mA
Detection type	VOC, CO, CO2, NO2, CH4, ambient noise, relative humidity and temperature

Features	
Colour	White
Dimensions	110 x 70 x 28 mm (LxWxD)
Weight	172g
Coating	PC,ABS

### Room sensor

# HID-UR

Temperature and humidity sensor, installed in rooms without attachment to any thermostat.





Temperature and In wall humidity sensor with adapter for civil series RJ45

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Features	
Colour	Semi-transparent
Dimensions	22 x 45 x 50 mm (LxWxD)
Materials	Bottom Cover: PC, Top Cover: ABS+PC

#### General

Model name	HID-URX
Installation	To use with RJ-45 Keystone adapter
Operating temperature	-5~45°C
Operating humidity	5~90%
Power supply	12V cc
Max consumption	25 mA

Communication protocol	Modbus RTU	
Connecting cables	12V power supply terminals RS-485 bus terminals (A-, B+)	
Temperature sensor	-10 $\sim$ 50°C, Accuracy $\pm$ 0.5°C	
Humidity sensor	0 ~ 100% RH, Accuracy ± 5% RH	





# Electricity energy meters

# **M1NRGX**

Single-phase electricity meter for monitoring the energy consumption and the energy produced by photovoltaic system



1\_ Installation on DIN bar Communication with CONTROL4 NRG



General			
Model name	M1NRGX	Max consumption	100 mA
Installation	DIN rail	Communication protocol	Modbus RTU
Operating temperature	-5~45°C	Connecting cables	12V power supply terminals RS-485 bus terminals (A-, B+)
Operating humidity	5~90%		
Power supply	12V cc		

# **M3NRGX**

Three-phase electricity meter for monitoring the energy consumption and the energy produced by photovoltaic system





#### General

M1NRGX single-phase version M3NRGX three-phase version DIN rail	
5~90%	
12V сс	

Max consumption	50 mA
Communication protocol	Modbus RTU
Connecting cables	12V power supply terminals
	RS-485 bus terminals (A-, B+)
	3x "split-core" current transformers are included

# Modules for zone management

# BMZRX

Module for managing up to 6 HID-UR thermostats and 6 shut-off valve control outputs supplying radiant panels, radiators or heated towel rails and generic input/output functionality.





General		Features	
Device name	BMZRX	Colour	White/grey
Installation	DIN rail	Dimensions	157 x 90 x 60 mm (LxWxD)
Operating temperature	-10~55°C		9 DIN modules
		Outputs	6 x relay 5A
Operating humidity	≤95% (non-condensing)	ouputs	
Power supply	230 Vac	Inputs	6 x potential-free contacts 2 x temperature sensors
Typical consumption	≤100mA	Weight	172g
		Coating	PC,ABS

# EMRSX

Mixing unit control module for managing a section of the circuit at a different temperature to that of the main system.



		RS - 485
Installation on DIN bar	Communication with CONTROL4 NRG	Modbus RTU

General		Features	
Device name	EMRSX	Colour	White/grey
Installation	DIN rail	Dimensions	105 x 90 x 60 mm (LxWxD)
Operating temperature	-10~55°C		6 DIN modules
Operating humidity	≤95% (non-condensing)	Outputs	2 x relay 5A 1 x 0-10V output
Power supply	230 V ca	Inputs	1x temperature probe
Typical consumption	≤100mA	Weight	172g
		Coating	PC,ABS

## **Clivet: the Company**

ALWAYS READY FOR THE FUTURE

# INSPIRING SOLUTIONS

In over 30 years of working on the design, manufacturing and distribution of air conditioning and handling systems, combining high efficiency with minimal environmental impact, Clivet has developed solutions to ensure sustainable comfort and the well-being of people and the environment. Designing and developing year-round air conditioning solutions with innovative technologies are part of Clivet's DNA, which means the company has always been ready for the future.

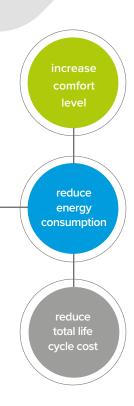


# COMFORT FOR THE PLANET & PEOPLE

# OUR VALUES FOR THE SECTORS

# IN THE RESIDENTIAL, COMMERCIAL AND INDUSTRIAL SECTORS

Increasing comfort, saving energy and providing customers with the best value for the entire life cycle of the system: these are the values that inspire our systems for the residential, services and industrial sectors.



The data contained in this document are not binding and may be changed by the manufacturer without obligation of prior notice. Images may vary depending on the system layout. No part of this publication may be reproduced. Clivet, in compliance with Regulation 517/2014, informs that its products contain or function with the use of fluorinated greenhouse gases FOR OVER 30 YEARS WE HAVE BEEN **OFFERING SOLUTIONS TO ENSURE** SUSTAINABLE COMFORT AND THE WELL-BEING OF PEOPLE AND THE **ENVIRONMENT** www.clivet.com

# MideaGroup





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