3G

alcona
Automation

Healthy
Atmosphere
for Pigs and
Poultry

3G control

Your system for all requirements
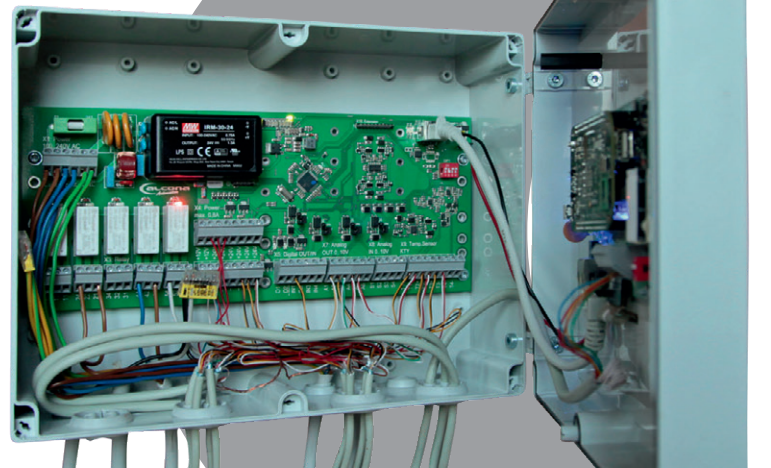
Climate   Alarm   Energy

Our new 3G product range for a healthy climate in stables for pigs and poultry!

The **3G product range** comprises **control systems** to maintain an optimal climate, **alarm systems** to raise alarms in case of accidents as well as **power supply units** to operate shutters and actuators in the animal house.

The products are based on the **latest technology** and **manufacturing processes**. All **products** are **High-Tech made in Germany**! **Many years** of **international experience** lay the groundwork for **sophisticated solutions** in agriculture.
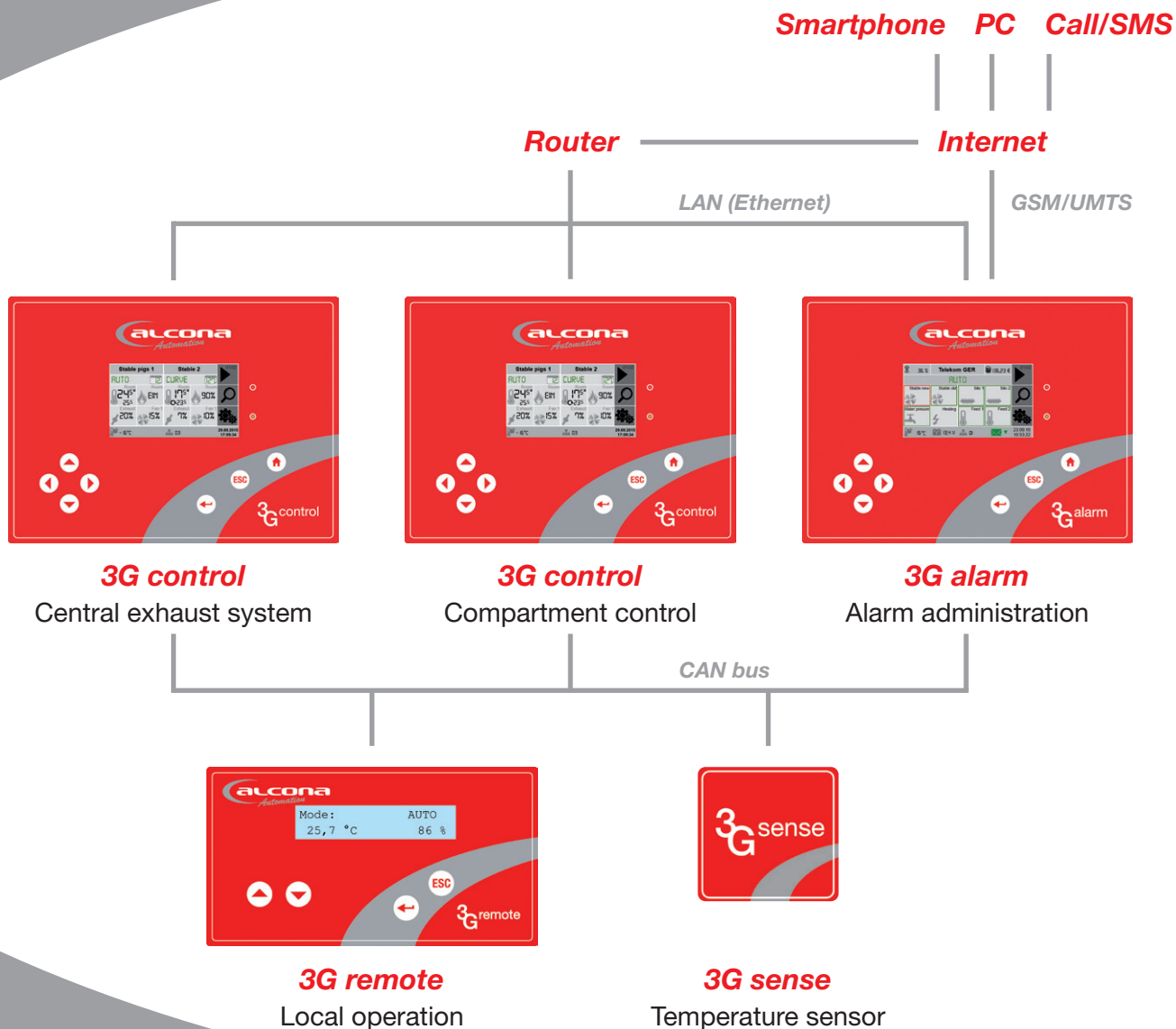
Latest technology – Made in Germany **!**

The products of the 3G range are **compatible** and can be **easily interconnected**. The devices feature a uniform operating concept and **intuitive** and **clearly structured menu navigation**. Large-dimensioned terminals and a spacious connection area ensure the **trouble-free and quick installation** as well as later maintenance of the system.

Splash-proof and **ammonia-resistant housings** contribute to the **long lifetime** of the products.

Smartphone   **PC**   **Call/SMS**

Router —————————— **Internet**

LAN (Ethernet)   *GSM/UMTS*

3G control
Central exhaust system

3G control
Compartment control

3G alarm
Alarm administration

CAN bus

3G remote
Local operation

3G sense
Temperature sensor

Networking Options

All intelligent **devices** in the **3G series** can be **interconnected** via the CAN bus. The **devices exchange information**, like e.g. outside temperature, air rates, alarms, fan rotation speed, and others. Furthermore, all actual and target values, states, and other details of every single device are transmitted to the bus and are thus available to all participants in the system.

In addition to the general alarm function, the alarm computer of the system features superordinate operating functions. It displays all screens of all participants in the bus in a centralized manner.

Operation by means of Smartphone

The products **3G control** and **3G alarm** are easy to operate **from far**. With the **PC** or **smartphone** and a standard web browser (eg Firefox) is simply the homepage of the 3G device called. Here, the representation is identical to the masks directly on the device.

The integrated web server of the device allows direct access **via LAN** to the local network. Alternatively, the 3G alarm can connect **via SIM card** (GSM / UMTS / LTE) to the central server and transfer its masks to it. In this case, the network installation on site is unnecessary.

Simple
Remote
Control

With the product **3G control-single** alcona Automation GmbH offers a slim climate computer for **controlling one compartment**. A two-line display shows the relevant data of the compartment in a simple way.

3G control single

The product benefits from the big brother 3G control: Many functions such as **operating modes, growth curve, outdoor temperature compensation and automatic lowering** were taken over here.

The 3G control-single offers **connection options** for reading of sensors and measuring fans as well as for setting and controlling shutters, fans, heaters and valves.

Optionally, it also has a CAN bus for **networking** with other 3G family products. This provides opportunities for **communication** to central extraction, alarm or similar.

Our Types

ALC-3G-CO-ST1-2L
3G climate controller 1 compartment

ALC-3G-CO-ST1-2L-CAN
3G climate controller 1 compartment with CAN

ALC-3G-CO-ST1-2L-T12
3G climate controller 1 compartment with TRIAC

Technical Data

General

Dimensions:
222 x 184 x 110 mm

Weight:
1.1 kg

Ambient temperature:
0..40 °C

Protection class:
IP 54

Electrical connection

Power supply:
100..240 V, 50..60 Hz

Operation

Display:
2 x 20 characters

Keys:
4 pieces

Networking

Interface:
Optional CAN

Connections

Fan 230 V (Type T12):
1 piece phase angle 12 A

Digital outputs:
2 pieces relays

Digital inputs/counter inputs:
2 pieces (PNP/NPN)

Analog outputs:
2 pieces 0..10 V

Analog inputs:
2 pieces 0..10 V

Temperature probes:
2 pieces KTY

3G control

The **3G climate computer** is designed for **up to four control circuits** and designed especially for agricultural applications. The latest control algorithms provide for the **optimal climate in animal houses** and **constant temperatures** for **healthy and stress-free breeding** and **feeding** of pigs and poultry.

3G control contains a **data storage that records all states, temperatures, and other measurements**. This storage may serve as e.g. proof to authorities. The data are available for **up to 12 months**, can be downloaded simply to an USB flash drive and processed further on the computer. A graphic color display provides for the **simple and intuitive operation at a high level of convenience**. You can operate it via the touchscreen or separate keys.

3G control features **various possibilities to connect** probes, sensors and measuring fans as well as to regulate and control shutters, fans, heaters, valves and many more. All devices can be **interconnected via the CAN bus**, so that all devices of the 3G series can **exchange data to e.g.** enable the centralized control, transmit data to the alarm computer, distribute the imported outside temperature or transmit the air rates to the central exhaust system.

It is also possible to integrate **peripheral sensor modules** into the bus to record temperatures and other analog signals. The device is supplied with a **LAN interface**, which enables you to **remote control** the device **by means of a computer or smartphone** via the integrated web server.

Many functions and configurations can be easily adjusted to the local requirements on the display. This way, you have a **flexible and universal 3G climate controller** at your disposal.
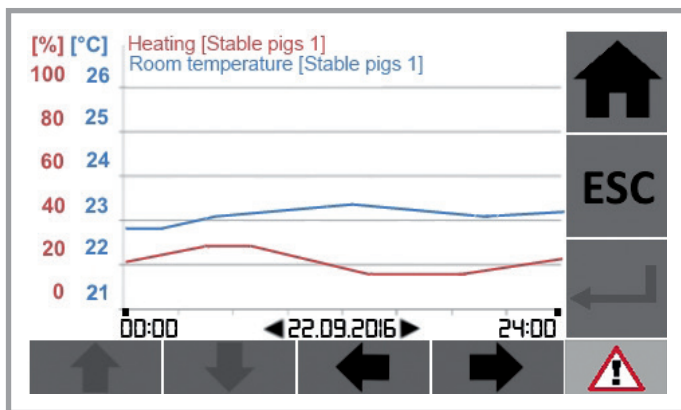
Sample Screens
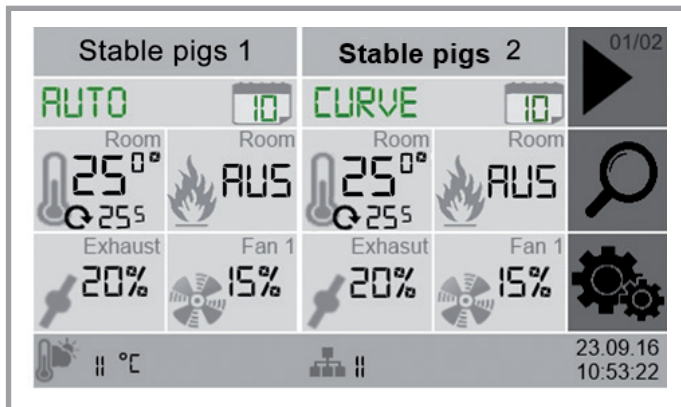
Overview

The **overview screen** shows the **important states** and **values** of the respective compartment in a clearly structured manner. You can open the menu screens from this overview.

Temperature profiles

All **operationally relevant data** are **stored continuously** and **buffered** for up to **two years**. The operator can choose up to three measured values from this range of values to show them simultaneously in a curve chart. By use of the arrow keys you can scroll back in time.

3G remote provides you with the option of realizing **local remote control in front of each compartment**.

It shows only the most important pieces of information required for the compartment. You can adjust the **target temperature** and **change** the **operating mode** (e.g. to clean the compartment). The restricted operating options **prevent misuse by operators**.
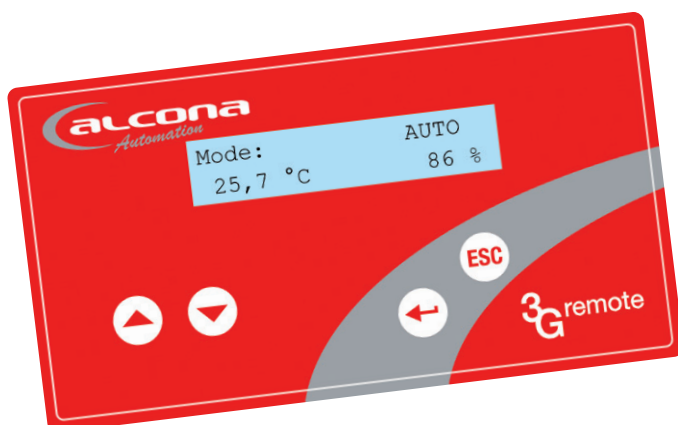
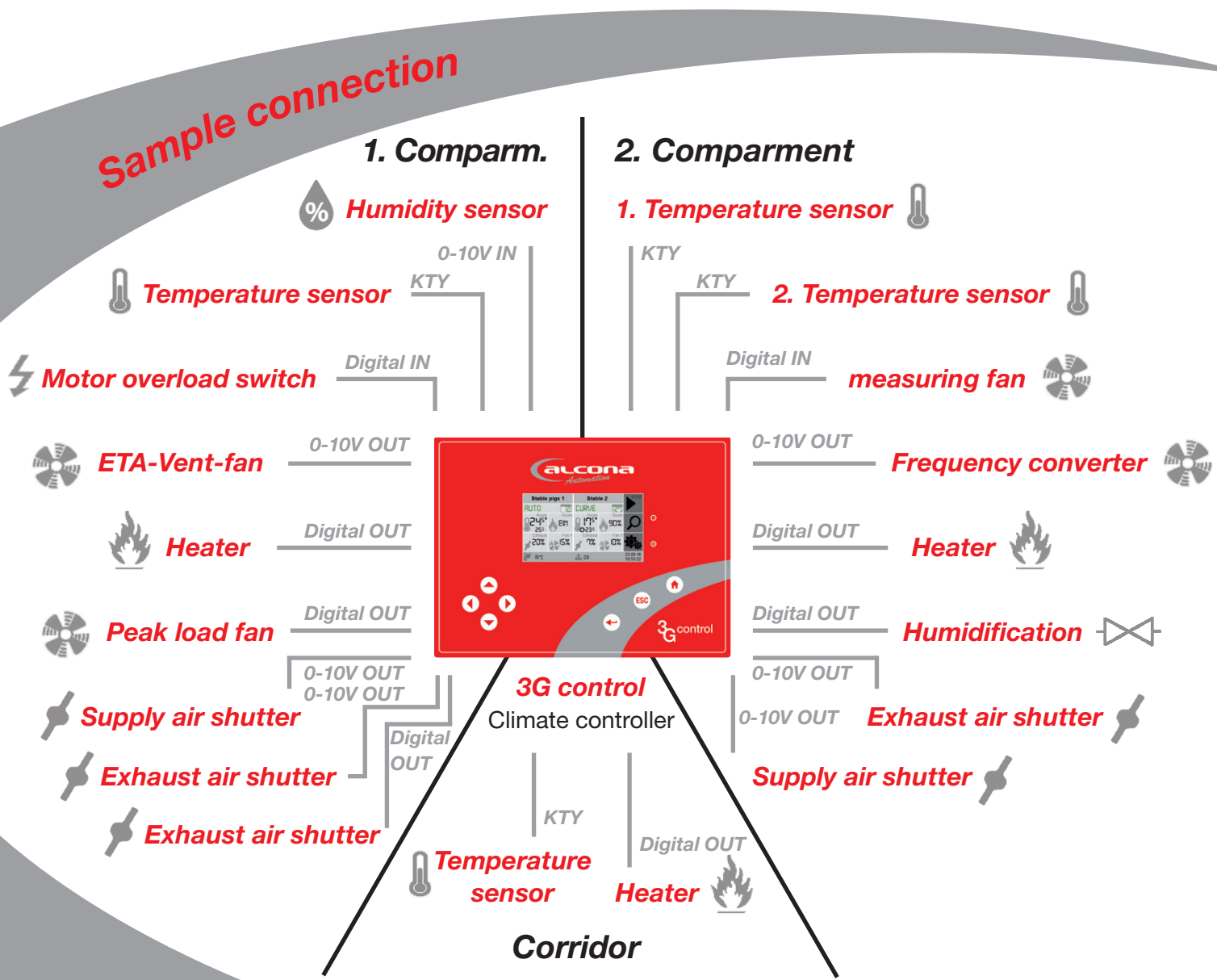3G remote is **connected to the climate controller via the CAN bus**.
The compartment to represent is configured via internal addressing.

Functions

The new 3G climate computer features
a variety of functions, e.g. the following:

3G control

- Simultaneous control of **up to four compartments**
- **Nest and corridor heating**
- **Control of peak load fans**
- **Humidification** and **cooling**
- **Temperature, humidity, and CO_2 measurement**
- **Automated lowering** and **compensation of outside temperature**
- **Automatic adjustment of set-point temperature** based on
  weather forecast (in connection with 3G alarm and weather app)
- **Curve function to adjust** set-point temperatures, air rates etc. **to fattening phase**
- **Various operating modes**, e.g. cleaning, heating, etc.
- **Adjustment of air rates to animal count**
- **Emergency function** in case of processor failure
- Suitable for compartment control and **central exhaust system**
- **Storage** of diagnostic data and measurements for **up to 12 months**
- **Visual representation** of temperatures and other signals

Sample connection

1. Comparm.

% *Humidity sensor*

Temperature sensor

0-10V IN

KTY

⚡ *Motor overload switch*

Digital IN

ETA-Vent-fan

0-10V OUT

Heater

Digital OUT

Peak load fan

Digital OUT

Supply air shutter

0-10V OUT
0-10V OUT

Exhaust air shutter

Digital
OUT

Exhaust air shutter

2. Comparment

1. Temperature sensor

KTY

KTY

2. Temperature sensor

Digital IN

measuring fan

0-10V OUT

Frequency converter

Digital OUT

Heater

Digital OUT

Humidification

0-10V OUT

Exhaust air shutter

0-10V OUT

Supply air shutter

3G control
Climate controller

KTY

*Temperature
sensor*

Digital OUT

Heater

Corridor

Our Types

ALC-3G-CO-ST4-TP5
3G climate controller 4 compartments

ALC-3G-CO-CV4-TP5
3G control central exhaust system
6 fan units

ALC-3G-WEB
3G option web server

All devices are available as built-in devices for control cabinets.

Technical Data

General

Dimensions:
302 x 232 x 110 mm

Weight:
2.0 kg

Ambient temperature:
0..40 °C

Protection class:
IP 54

Electrical Connection

Power supply:
100..240 V, 50..60 Hz
Optional: 24 VDC

Integrated supply voltage:
12 VDC and 24 VDC, 20 W
for sensors, measuring fans,
actuators, etc.

Operation

Display:
5", color, touchscreen

Keys:
7 pieces

LEDs:
2 pieces

Networking

Interfaces:
USB, Ethernet, CAN
Optional: RS485, Stuhl bus

Internet:
Optional web server

Connections

Digital outputs:
5 pieces relays
2 pieces 24 V

Digital inputs/counter inputs:
4 pieces (PNP/NPN)

Analog outputs:
6 pieces 0..10 V

Analog inputs:
4 pieces 0..10 V

Temperature probes:
4 pieces KTY

3G alarm

The **3G alarm computer** is another product in the 3G product range by alcona and designed especially for agricultural applications. It is able to administrate **up to 48 alarms**, including **alarm options by signal horn**, **flashlight**, by **telephone** and **text message** as well as by **e-mail**. The device integrates a modem for telephone alarms, which communicates with the farmer via the mobile phone network.

As an additional message possibility, the alarm computer can also send alarms directly via the **LAN interface**. For this, the device connects to an app on your smartphone and gives an alarm.

A **powerful rechargeable battery** ensures the **operation in case of a possible power failure** for at least three hours. Thus, the power failure and other disturbances can be reported safely. A graphic color display provides for **simple and intuitive operation at the highest level of convenience**. You can operate the device via the touchscreen or separate keys.

Direct Alarm

3G alarm features **various possibilities to read in** probes and sensors directly as well as digital contacts to record external states. Other bus-compliant sensors like 3G sense can be connected to the alarm computer via the CAN bus. This facilitates e.g. the recording of the temperature in the compartments in a redundant way and the generation of additional alarms, if the temperature is too high or too low, depending on the outside temperature. Because of their **interconnection via the CAN bus**, the devices of the 3G series can **exchange data** e.g. to enable the **centralized operation** of all participants connected to 3G alarm. Furthermore, e.g. the outside temperature centrally imported by the alarm computer can be transmitted to the connected participants.
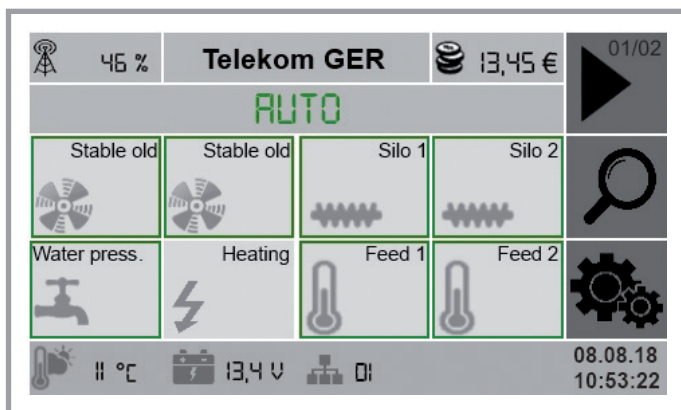
The device is supplied with a **LAN interface**, which enables you to **remote-control** the device by means of a **PC or smartphone** via the integrated web server.

Many functions and configurations can be easily adjusted to the local requirements on the display. This way, you have a **flexible and universal alarm computer** at your disposal.
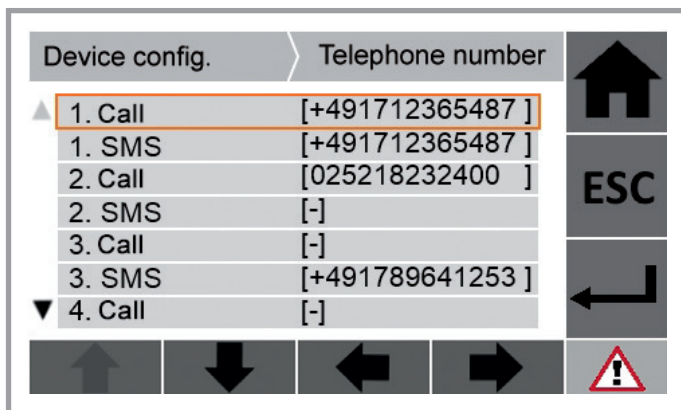
Sample Screens

Overview

The **overview screen** shows the **important states** in a clearly structured manner. You can see the network operator, the mobile signal strength, the credit available on the prepaid card or the battery status. All **configured alarms are shown in different colors, depending on their states**.

Setting of telephone numbers

You can **simply fit** the device **to your personal requirements** by means of a variety of parameters. Telephone numbers, error messages, delays, call loops, signal horn activities, the manual assignment of network operators and many other details can be easily specified.

Safety

The alarm computer features a multitude of **automated monitoring functions** providing you with the **highest level of security**. They include periodic checks of battery status, radio signal strength, prepaid credit, and network operator recognition. **3G alarm informs you directly about noticeable problems.**

In addition, the central monitoring server of alcona Automation GmbH **monitors the alarm computer automatically**, actively **checking the telephone connection**. In case of malfunctions, you receive an automated call or text message by the monitoring server reporting the connection failure.

This **service is free of charge for the first two years** of the device's service life. After this period, you can book this monitoring service against a small annual fee.
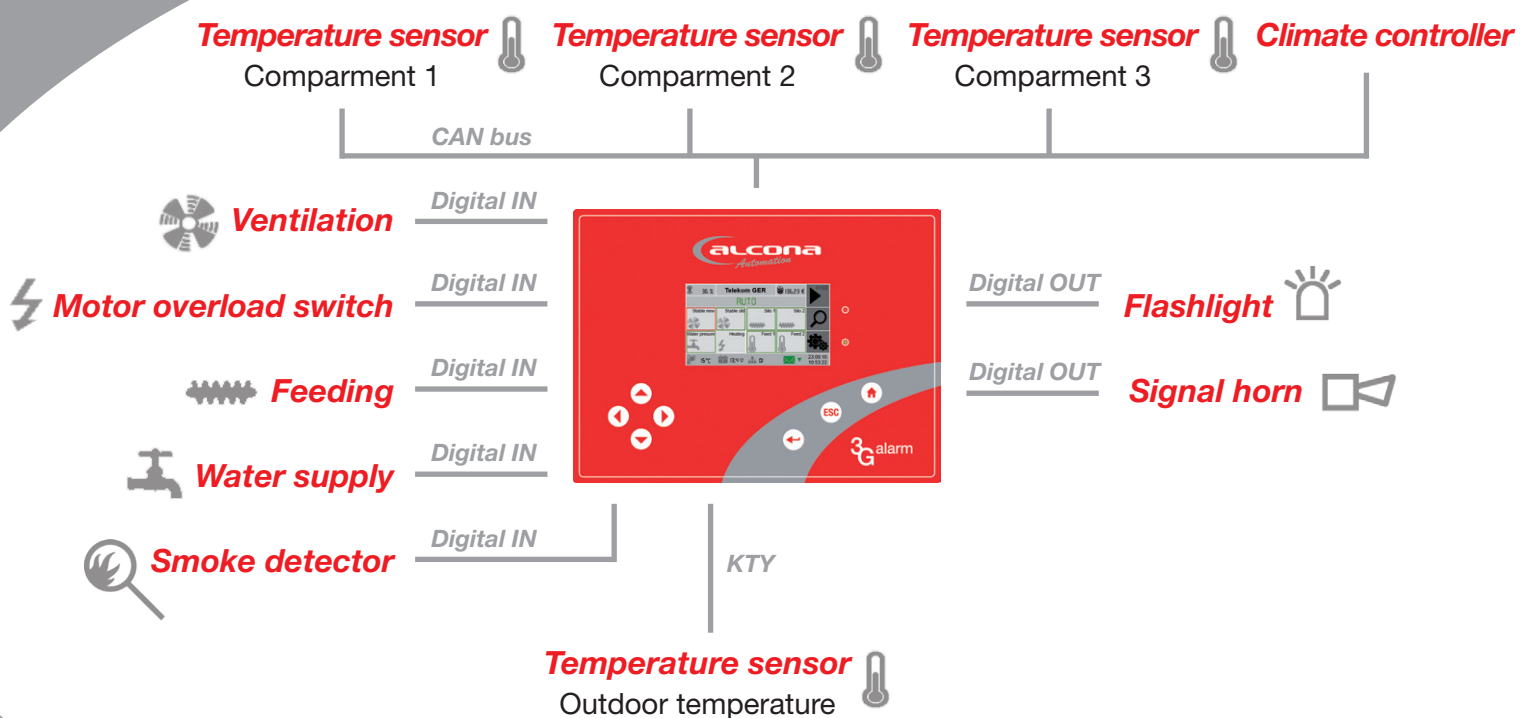
Functions

The new 3G alarm computer features a variety of functions, e.g. the following:

3G alarm

- Alarm administration of **up to 48 alarms**
- Optional **alerting by signal horn**, **flashlight**, **telephone call**, **text message**, and **e-mail**
- **Up to 16 alarm contacts** can be connected directly to the device (configurable as either NCC or NOC) and **up to two temperature probes** with adjustable MIN and MAX temperature limits
- Connection options of **water meters** for recording and displaying **water consumption** incl. alarming by limit value exceeding.
- **Extendable** via external extension devices to **increase the number of alarm contacts**
- **CAN bus** offers possibility to further **record temperatures, states, etc.**
- **Freely configurable alarm messages** and **individual, recordable spoken messages**, separately for each alarm
- **Comprehensive diagnostic indicators**, e.g. mobile network, prepaid credit, battery status, etc.
- **Alarm confirmation directly at device or by telephone or text message**
- Various **automated device monitoring functions** (e.g. rechargeable battery, SIM card, telephone connection) **guarantee a high safety standard**
- **Integrated rechargeable battery including periodic functional checks**
- Scope of delivery includes **separate mobile radio antenna and 5 m connecting cable**

Sample Connection

Temperature sensor Comparment 1	*Temperature sensor* Comparment 2	*Temperature sensor* Comparment 3	*Climate controller*

CAN bus

Ventilation — *Digital IN*

Motor overload switch — *Digital IN*

Feeding — *Digital IN*

Water supply — *Digital IN*

Smoke detector — *Digital IN*

Digital OUT — *Flashlight*

Digital OUT — *Signal horn*

KTY

Temperature sensor Outdoor temperature

Our Types

ALC-3G-AL-LM8-TP5
3G alarm computer GSM/UMTS/LTE
8 contacts

ALC-3G-AL-APP8-TP5
3G alarm computer APP
8 contacts

ALC-3G-AL-EX8
3G alarm extension
8 contacts

ALC-3G-AL-8S
3G alarm option 8 additional
contacts

ALC-3G-WEB
3G option web server

All devices are available as built-in devices for control cabinets.

Technical Data

General

Dimensions:
302 x 232 x 110 mm

Weight:
2.7 kg

Ambient temperature:
0..35 °C

Protection class:
IP 54

Electrical connection

Power supply:
100..240 V, 50..60 Hz
Optional: 24 VDC

Integrated supply voltage:
12 VDC, 20 W

Operation

Display:
4.3", color, touchscreen

Keys:
7 pieces

LEDs:
2 pieces

Modem

Type:
2G (GSM) / 3G (UMTS) / 4G (LTE)

Buffering:

Battery:
1 pieces at 2.3 Ah

Networking

Interfaces:
USB, Ethernet, CAN
Optional: RS485, Stuhl bus

Internet:
Optional web server

Connections

Digital outputs:
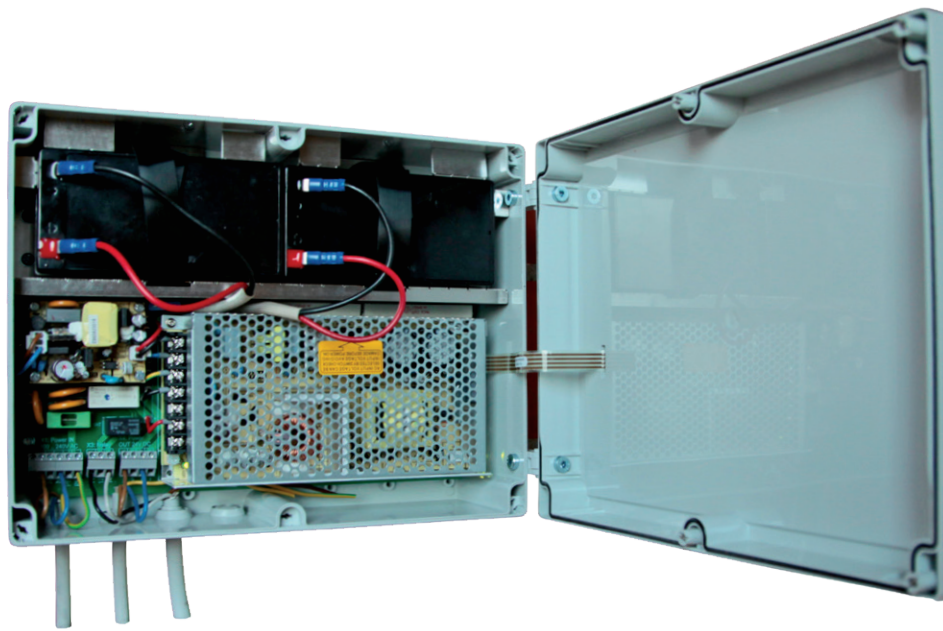1 pieces relay
2 pieces 12 V

Digital inputs:
8 pieces
Optional 16 pieces

Analog inputs:
2 pieces 0..10 V

Temperature probes:
2 pieces KTY

# 3G power

The **power supply series 3G power** provides you with many power supply options to operate actuators and shutters. These products are designed especially for **agricultural applications** and are characterized by **robustness, reliability and simple operation**.

The **UPS types** are supplied with **two large integrated rechargeable batteries**, which continue to supply the output voltage in case of **power failures**. This mode facilitates moving the shutters and actuators once again into the emergency position to ensure the **greatest possible circulation of air** in case of a blackout. The series features a **24 V direct current version** and a **230 V alternating current version**.
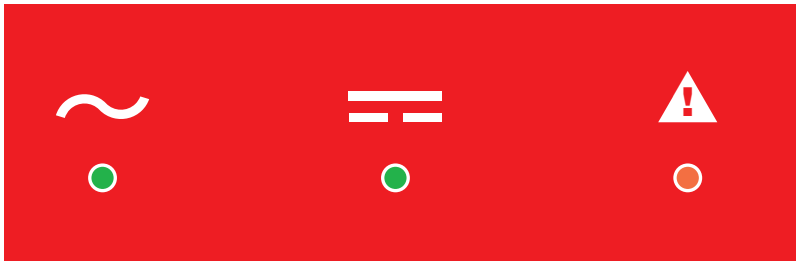
The **LEDs** integrated in the device front inform you about the device status. They indicate visually whether the supply voltage is applied, that the batteries work or possible occurring errors.

When the alarm relay integrated in the device is connected to the alarm computer, you are **automatically alerted by signal horn, telephone** etc. if an error occurs.

Our Types

ALC-3G-PO-24V
3G power 24 V power supply unit

ALC-3G-PO-UPS-24V
3G power 24 V UPS power supply unit

ALC-3G-PO-UPS-230V
3G power 230 V UPS power supply unit

All devices are available as built-in devices for control cabinets.

Technical Data

General

Dimensions:
302 x 232 x 110 mm

Weight:
230 V-USV / 24 V-USV: 5.1 kg
24 V: 2.0 kg

Ambient temperature:
230 V-USV / 24 V-USV: 0..35 °C
24 V: -10..50 °C

Protection class:
IP 54

Electrical connection

Power supply:
100..240 V, 50..60 Hz

Electrical output power

Power/voltage:
230 V-USV: 300 W, 230 V
24 V-USV: 160 W, 24 V
24 V: 160 W, 24 V

Operation

LEDs:
230 V-UPS / 24 V-UPS: 3 pieces

Buffering

Rechargeable battery:
230 V-UPS / 24 V-UPS: 2 pieces 3 Ah

Connections

Digital outputs:
230 V-UPS / 24 V-UPS: 1 relay
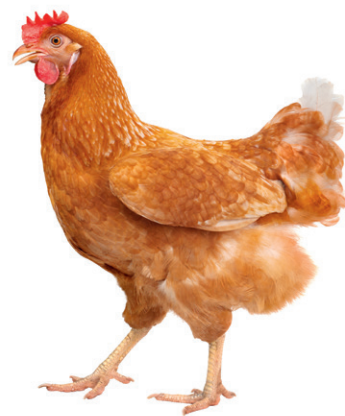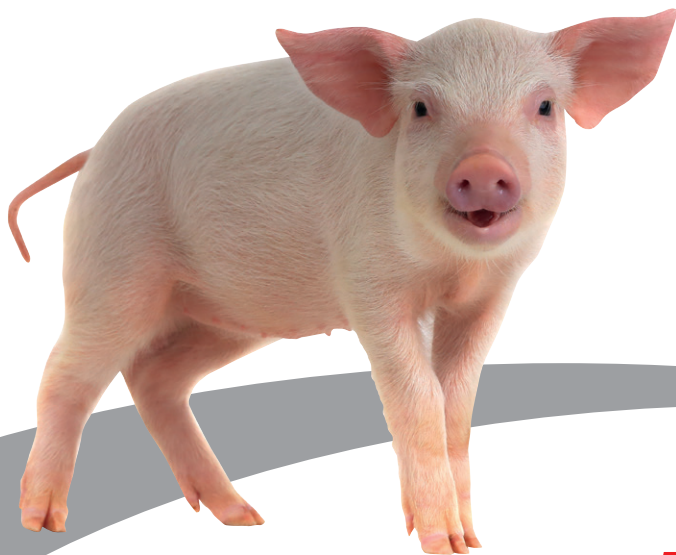
In use all over
the World
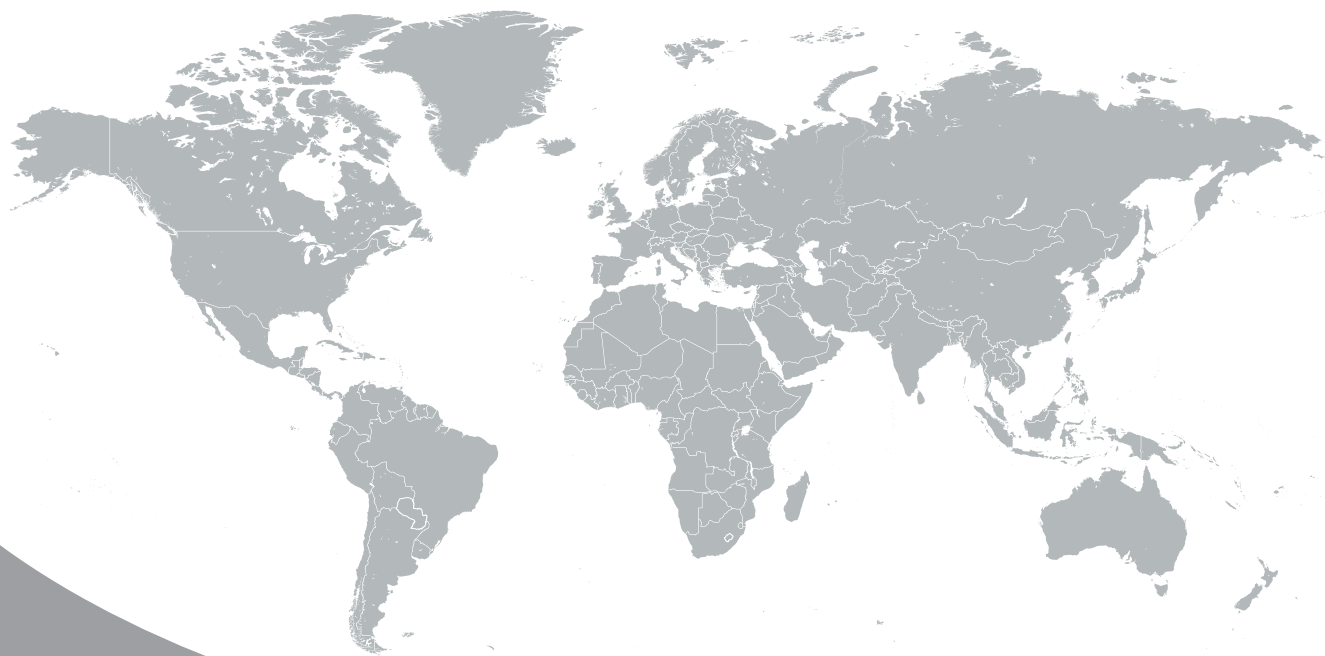
You can buy the 3G series at your local specialized retailer.
We will be pleased to assist you in choosing your local partner.

Dealer

alcona
Automation

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