MultiCon CMC-99

- **compact multichannel controller with data logging capabilities**
- **48 analog / digital inputs max.**
- **24 thermocouple / 12 RTD inputs max.**
- **8 current or 16 relay / SSR outputs max.**
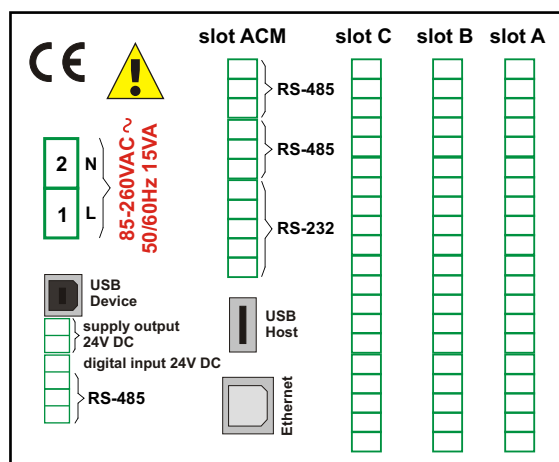- **touchscreen 3,5" TFT, 320 x 240 pixels**

The **Multicon CMC-99** is a powerful and versatile compact-multichannel-controller with a capability to record data, if the recording function is requested and activated. Thanks to that it is one of the first industrial devices which integrates advanced control functions (PID, ON/OFF, time & profiles etc.) and logging of setpoints, excitations and current state of controlled objects. Based on Linux firmware, is stable and the touch screen makes configuration easy and comfortable and data presentation also readable and attractive. Although the **Multicon CMC-99** is build in a quite small housing, it can integrate up to 48 inputs, and its construction allows user almost free configuration by choosing up to 3 from 16 available input/output modules. The device can simultanously record all build-in logical channels (60), and is capable to record data with maximum speed 10Hz (ten samples per second, with some limitation of number of recorded channels). 1.5GB of internal data memory is enough for continuous recording of all channels with a speed of 1 sample per second (each channel) for over 50 days (250 000 000 samples in total!).
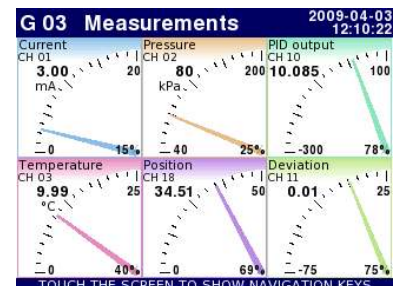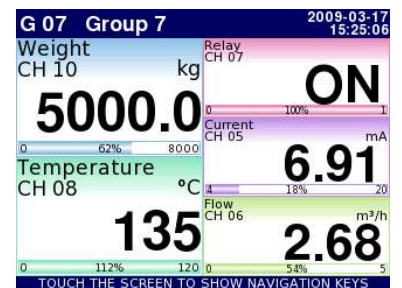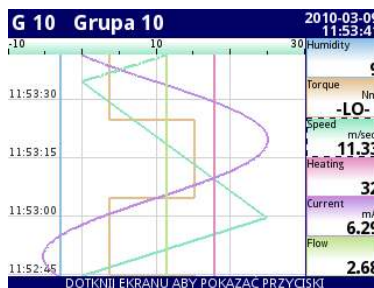
An operator can download stored data using a USB flash disk or via Ethernet.

- 3.5" TFT display, 320 x 240 pixels,
- Linux operating system,
- control of multiple outputs from a single input value,
- control of outputs from logical combination of several inputs,
- direct connection of external sensors,
- direct connection of external actuators,
- PID process control,
- flexible display modes: numeric, bargraph, graph,
- programming via touchscreen, PC mouse or a keyboard.

Examplary pin assignment

An example of what the display looks like

Technical data

Power supply voltage: 19V to 50V DC; 16V to 35V AC, or 85 to 260V AC/DC
Power consumption: 15 VA typical; 20 VA max.
Display: 3.5" graphic TFT, 16-bit colour, 320 x 240 pixels, with touchscreen
Measuring inputs:
- 48 analogue inputs (0/4-20 mA, 0/1-5V or 0/2-10V) max.
- 48 digital inputs max.
- 24 Thermocouple inputs (J, K, S, T, N, R, B, E) max.
- 12 RTD inputs max.

Digital input: 1 x 24V DC, optocoupled
Sensor supply: 24 V DC ± 5% (200 mA max. for version with current inputs)
Outputs: - 8 analog (4-20 mA)
- 16 relay (1A/250V) / SSR outputs or 4 relay 5A/250V max.
Remote inputs and outputs available, via RS-485/Modbus RTU
Communication interface:
standard: RS-485 (Modbus RTU), 1 x USB Host, USB Device
enhanced version (incl. ACM module): 2 x RS-485, 1 x RS-485/232, 1 or 2 x USB Host, 1 x USB Device, 1 x Ethernet 10 MB (Ethernet available Q3/2010)
Protection:
standard version: a) IP 40, b) IP 42 (when fitted with STD-99 transparent door, see: optional accessories), c) IP 65 (front side when an additional frame is fitted);
version with front USB: d) IP 40, e) IP 42 (when fitted with STD-99 transparent door, see: optional accessories)
Data memory: internal 1.5 GB, over 50 days (250 000 000 samples)
Working temperature: 0°C to +50°C
Storage temperature: -10°C to +70°C
Case style: panel mounting
Case material: NORYL - GFN2S E1
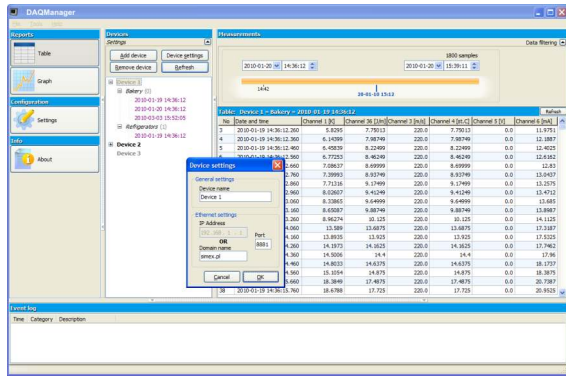**Case dimensions**: 96 x 96 x 100 mm
Panel cut-out dimensions: 90.5 x 90.5 mm
Installation depth: 102 mm min.
Panel thickness: 5 mm max.

Optional PC software

DAQ Manager Software

The **DAQ Manager** software allows visualization of recorded measurements in the form of graphs or tables, collecting results into groups, creating and printing reports and also exporting data to external files. The **DAQ Manager** Software can be delivered on CD (Software Box)

Each CMC-99 is delivered as a multichannel controller with 1 month free licence for data logging, what allows you to use the device fully functional. For unlimited use of CMC as a data logger an individual licence key is required (a sequence of numbers and letters) for each device.

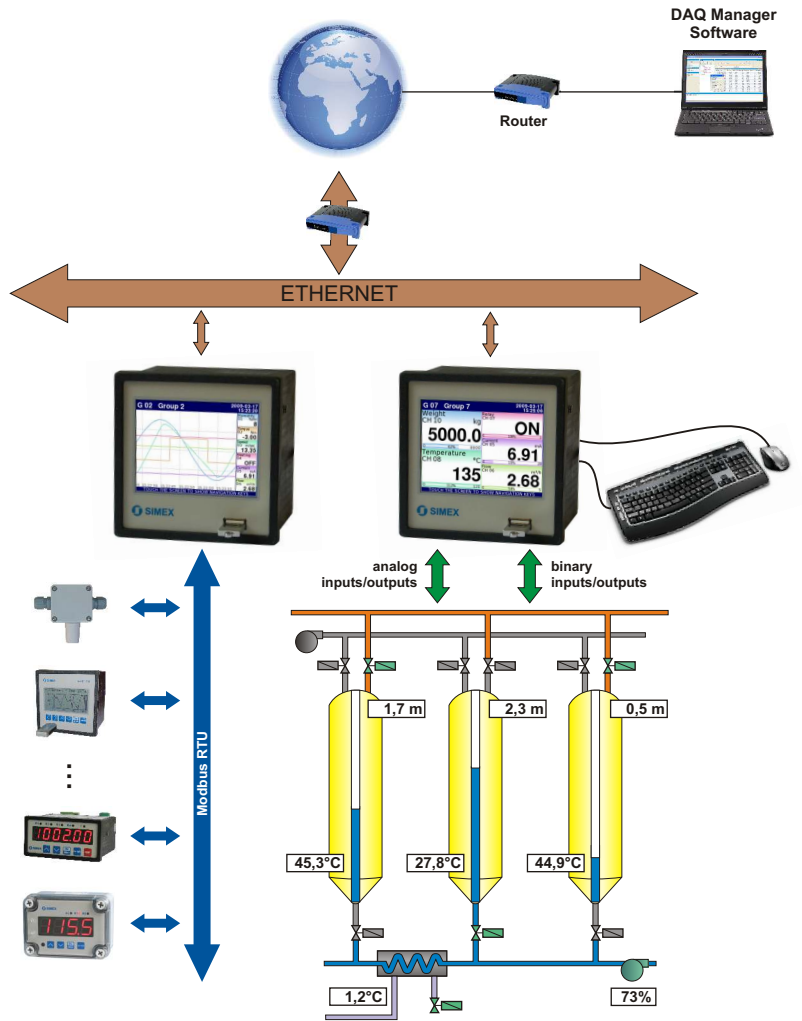## Ordering

MultiCon CMC-99-A/B/C-1-X-XX1

slot A:
E
UI4
UI8
U16
I16
RT4
TC4
TC8
D8
D16

slot B:
E
UI4
UI8
U16
I16
RT4
TC4
TC8
D8
D16
R81
IO2
IO4

slot C:
E
UI4
UI8
U16
I16
RT4
TC4
TC8
D8
D16
R81
R45
S8
S16
IO2
IO4

options:
00 : no options
(rear USB Host, IP 40)
01 : IP 65 (rear USB Host)
0B : front USB Host (IP 40)
0C : 2 x USB Host (IP 40)
0G : ACM module (IP 40)
0H : IP 65 + ACM module
(rear USB Host)
0K : front USB Host + ACM
module (IP 40)

power supply:
3 : 19V ÷ 50V DC,
16V ÷ 35V AC
4 : 85V ÷ 260V AC/DC

Specification:
E : empty
UI4 : 4 x voltage input + 4 x current input
UI8 : 8 x voltage input + 8 x current input
U16 : 16 x voltage input
I16 : 16 x current input
RT4 : 4 x RTD input
TC4 : 4 x TC input
TC8 : 8 x TC input
D8 : 8 x digital input
D16 : 16 x digital input
R81 : 8 x SPST relay 1A
R45 : 4 x SPDT relay 5A
S8 : 8 x SSR output
S16 : 16 x SSR output
IO2 : 2 x 4-20 mA outputs
IO4 : 4 x 4-20 mA outputs
ACM: advanced communication module
(not yet available)

Typical applications

- central temperature measurement and control system,
- multi zone heater controler,
- intermediate pumping station control system,
- spraying and heating control system for glasshause.

Optional accessories

STD-99

Transparent door with moulded frame acc. to DIN 43700, lockable with security key.
Door and frame are made by injection moulding thus assuring an exact fit, an optimal choice of a material which is very strong and with no risk of corrosion; perfect seal-protective system IP 42 acc. to DIN 40050 provided by all-round soft rubber sealing the moulding; due to the special door mountings, the door does not swing in or out sideways on opening; door-frame and front-frame can be exchanged. The ready-assembles units cannot be opened by unauthorised persons without using force or special equipment.

Mini USB stick

The mini USB memory stick is an ultra small flash drive offering up to 8GB data storage. Measuring just 31.3 x 12.4 mm, the mini USB drive is ideal for transporting data and **fits inside the optional STD-99 lockable door**.

DAQ Manager Software Box