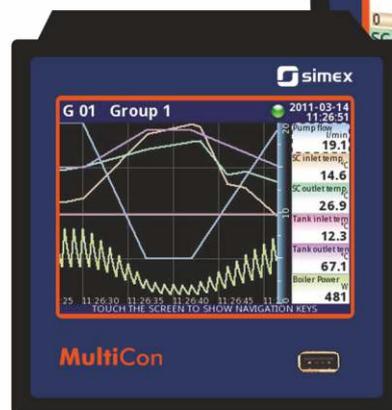# MultiCon

simex

Measure,
Control and Log Data

The MultiCon series includes advanced controllers and recorders with great potential closed in small casings. MultiCon CMC can be equipped with three isolated RS-485 interfaces which make it a perfect solution for distributed systems to work as CPU. Thanks to Ethernet interface the device can be monitored via the Internet. A wide range of input and output modules allows to customize CMC precisely as the customer requires it. Thanks to a colour touchscreen working with the user interface becomes a pleasure, while MultiCon operation playing the role of HMI is intuitive and comfortable.
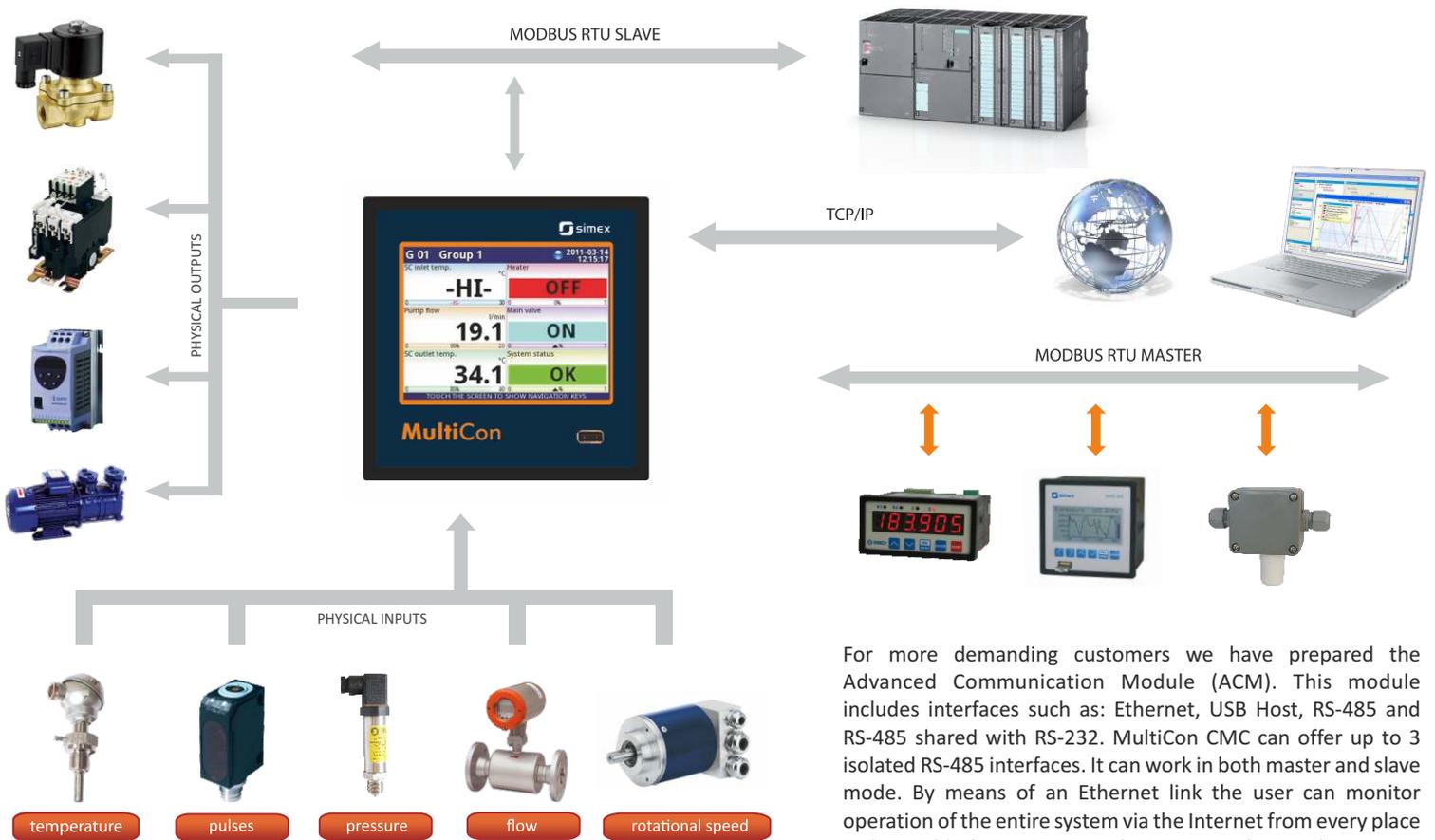
CMC-99

CMC-141

- 3.5" / 5.7" LCD colour touchscreen,

- up to 72 analog / digital inputs,

- MultiModbus - up to 3 x RS-485 interfaces,

- profiles / timers / math functions,

- visualisation as digits, needles, bargraphs, graphs,

- PID process control,

- logging functions - max. 10Hz,

- easy way to implement control process algorithms,

- free DAQ Manager Software

- free Java Applets on-line visualisation.

Control and manage a network of devices

MODBUS RTU SLAVE

PHYSICAL OUTPUTS

TCP/IP

MultiCon

G 01 Group 1 2011-03-14 12:15:17

SC inlet temp. °C | Heater
-HI- | OFF
0%
Pump flow l/min | Main valve
19.1 | ON
SC outlet temp. °C | System status
34.1 | OK

TOUCH THE SCREEN TO SHOW NAVIGATION KEYS

MODBUS RTU MASTER

PHYSICAL INPUTS

| temperature | pulses | pressure | flow | rotational speed |

For more demanding customers we have prepared the Advanced Communication Module (ACM). This module includes interfaces such as: Ethernet, USB Host, RS-485 and RS-485 shared with RS-232. MultiCon CMC can offer up to 3 isolated RS-485 interfaces. It can work in both master and slave mode. By means of an Ethernet link the user can monitor operation of the entire system via the Internet from every place in the world where an Internet browser is within reach.
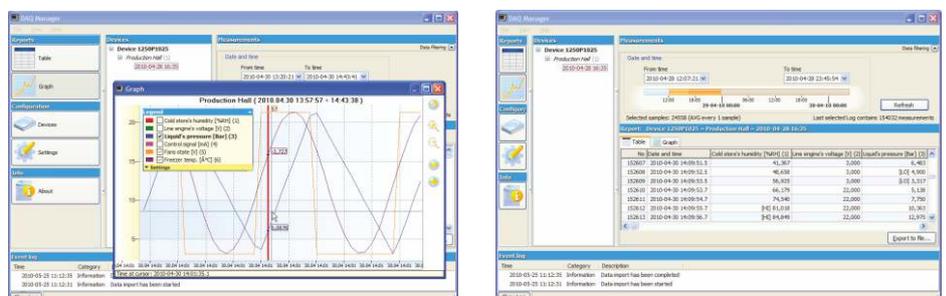
Recorder in the same package

Every MultiCon can also work as a data recorder. Its internal memory of 1.5 GB can store over 125,000,000 samples. It can log from every 0,1 sec. up to several hours period. Recording is available after purchase of a licence key but you can try it out before you buy it. Every CMC gives you one month of free trial to see how the recorder works for yourself and then you can decide whether it is worth it.

recording mode	intense (every 1 sec.)	medium (every 10 sec.)	economy (every 1 min.)
60 channels	20 days	6 months	3 years
48 channels	30 days	8 months	4 years
24 channels	50 days	15 months	7 years

DAQ Manager

To manage such vast amount of data we have designed the DAQ Manager software to help you. It is free of charge and helps to manage all the data. The software allows to visualize data in the form of graphs and tables, group measurement results, create reports and export data into other files.

Really easy update

Thanks to the cooperation with our customers we can continue to develop the software and provide it with new useful functions. Interesting suggestions and needs of our customers have been contributing to better firmware. MultiCon CMC update means three easy steps: download the update free of charge form the website, send it to a pen drive, start the procedure and it is done.

Accessories

STD-99, STD-141

A transparent door with IP54 rate and a key. The door and its frame are manufactured using the injection moulding technology which ensures that they fit perfectly. The material has been selected to eliminate corrosion and ensure maximum durability. The IP54 rate has been obtained by using a soft rubber seal placed around the casing. A special assembly method makes the door stop in a determined position after opening. The door cannot be opened by unauthorized people without force or tools.

Mini pendrive

An unusually small and light pendrive has been designed with easy storage and transport in mind. It fits perfectly the CMC-99 controller's casing with closed IP 54 rate door.

SRH-99, SRH-141

Assembly holders for installation of the MultiCon devices e.g. in control cabinets with typical 35 mm bus bars.

P130 portable case

MultiCon CMC built-in a **P130** portable case manufactured by PELI is useful when it is not possible to mount a typical controller/recorder in a safe way. The case is durable and is certified with the IP 65 rate - the CMC inside is safe. Multi-pin sockets on side walls for connecting sensors and interfaces are designed according to the customer's requirements.
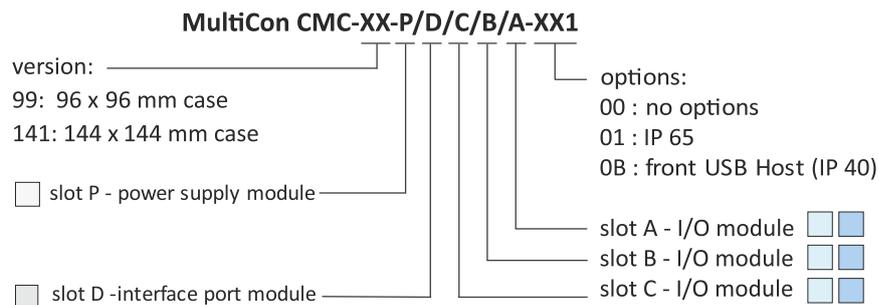
Specification

	CMC-99	CMC-141
Power supply	19V ÷ 50V DC; 16V ÷ 35V AC or 85 ÷ 260V AC/DC, all separated	19V ÷ 50V DC; 16V ÷ 35V AC or 85 ÷ 260V AC/DC, all separated
Power consumption	15 VA typical; 20 VA max.	15 VA typical; 20 VA max.
Display	3.5" graphic TFT, 16-bit colour, 320 x 240 pixels, touchscreen navigation	5,7" graphic TFT, 16-bit colour, 320 x 240 pixels, touchscreen navigation
Measuring inputs	- up to 48 analogue inputs (0/4-20 mA, 0/1-5V or 0/2-10V) - up to 24 TC inputs (J, K, S, T, N, R, B, E) - up to 12 RTD inputs - up to 9 universal inputs (U/I/RTD/TC/mV) - up to 48 digital inputs - up to 12 counter inputs - up to 12 flowmeter/ratemeter inputs	- up to 72 analogue inputs (0/4-20 mA, 0/1-5V or 0/2-10V) - up to 36 TC inputs (J, K, S, T, N, R, B, E) - up to 18 RTD inputs - up to 15 universal inputs (U/I/RTD/TC/mV) - up to 72 digital inputs - up to 18 counter inputs - up to 18 flowmeter/ratemeter inputs
Digital inputs	1x 24 V DC, optocoupled	1x 24 V DC, optocoupled
Outputs	- up to 8 analog outputs (4-20 mA) - up to 16 relay outputs 1 A/250 V - up to 4 relay outputs 5 A/250 V - up to 16 SSR driver	- up to 18 analog outputs (4-20 mA) - up to 36 relay outputs 1 A/250 V - up to 18 relay outputs 5 A/250 V - up to 72 SSR driver
Sensor supply	24 V DC ± 5% (200 mA max.)	24 V DC ± 5% (200 mA max.)
Communication interface	- standard: RS-485, USB Host, USB Device (service) - enhanced version (incl. ACM module): 2x RS-485, 1x RS-485/RS-232, 1 or 2x USB Host, 1x USB Device (service), 1x Ethernet 10 MB	- standard: RS-485, USB Host, USB Device (service) - enhanced version (incl. ACM module): 2x RS-485, 1x RS-485/RS-232, 1 or 2x USB Host, 1x USB Device (service), 1x Ethernet 10 MB
IP rate protection	- IP65 (front), available additional frame IP65 for panel cut-out sealing - version with front USB: IP40, IP54 (when fitted with STD-99 transparent door)	- IP65 (front), available additional frame IP65 for panel cut-out sealing - version with front USB: IP40, IP54 (when fitted with STD-99 transparent door)
Data memory	internal 1,5 GB	internal 1,5 GB
Working temperature	0°C ÷ +50°C	0°C ÷ +50°C
Storage temperature	-10°C ÷ +70°C	-10°C ÷ +70°C
Case dimensions	96 x 96 x 100 mm	144 x 144 x 100 mm
Panel cut-out dimensions	90,5 x 90,5 mm	138,5 x 138,5 mm
Installation depth	102 mm min.	102 mm min.
Panel thickness	5 mm max. (optional 45 mm max. using SPH-45 holders)	5 mm max. (optional 45 mm max. using SPH-45 holders)

MultiCon CMC-XX-P/D/C/B/A-XX1

version:
99: 96 x 96 mm case
141: 144 x 144 mm case

slot P - power supply module

slot D - interface port module

options:
00 : no options
01 : IP 65
0B : front USB Host (IP 40)

slot A - I/O module
slot B - I/O module
slot C - I/O module

Module type	Description	MultiCon CMC-99					MultiCon CMC-141				
		slot P	slot D	slot C	slot B	slot A	slot P	slot D	slot C	slot B	slot A
PS3	power supply 19÷50V DC, 16÷35V AC	•					•				
PS4	power supply 85÷260V AC/DC	•					•				
E	no communication module (available for 0B option only)		•					•			
USB	port USB (rear)		•					•			
ACM	Advanced Communication Module includes 1 x RS-485, 1 x RS-485/232, 1 x USB Host, 1 x Ethernet 10 MB		•					•			
E	empty slot			•	•	•			•	•	•
UN3	3 universal inputs, isolated (U/I/RTD/TC/mV)			•	•	•			•	•	•
UN5	5 universal inputs, isolated (U/I/RTD/TC/mV)								•	•	•
UI4	4 x voltage input + 4 x current input			•	•	•			•	•	•
UI8	8 x voltage input + 8 x current input			•	•	•			•	•	•
UI12	12 x voltage input + 12 x current input								•	•	•
U16	16 x voltage input			•	•	•			•	•	•
U24	24 x voltage input								•	•	•
I16	16 x current input			•	•	•			•	•	•
I24	24 x current input								•	•	•
RT4	4 x RTD input			•	•	•			•	•	•
RT6	6 x RTD input								•	•	•
TC4	4 x TC/mV input			•	•	•			•	•	•
TC8	8 x TC/mV input			•	•	•			•	•	•
TC12	12 x TC/mV input								•	•	•
D8	8 x digital input			•	•	•			•	•	•
D16	16 x digital input			•	•	•			•	•	•
D24	24 x digital input								•	•	•
CP4	4 x pulse input (universal counters)			•	•	•			•	•	•
FT4	4 x pulse input (flowmeters / ratemeters) + 4 x current input			•	•	•			•	•	•
FI4	4 x current input (flowmeters) + 4 x current input			•	•	•			•	•	•
R81*	8 x SPST relay 1A			•	•				•	•	•
R121	12 x SPST relay 1A								•	•	•
R45*	4 x SPDT relay 5A			•					•	•	•
R65	6 x SPDT relay 5A								•	•	•
S8	8 x SSR driver			•					•	•	•
S16	16 x SSR driver			•					•	•	•
S24	24 x SSR driver								•	•	•
IO2	2 x 4-20 mA output			•	•				•	•	•
IO4	4 x 4-20 mA output			•	•				•	•	•
IO6	6 x 4-20 mA output								•	•	•

* R81 and R45 output modules for CMC-99 must be installed in slot C only.
If 2 of the relay outputs are needed, than the modules must be installed in slots C and B.

An example: MultiCon CMC-99-PS4/USB/R81/UI8/TC8-0B1