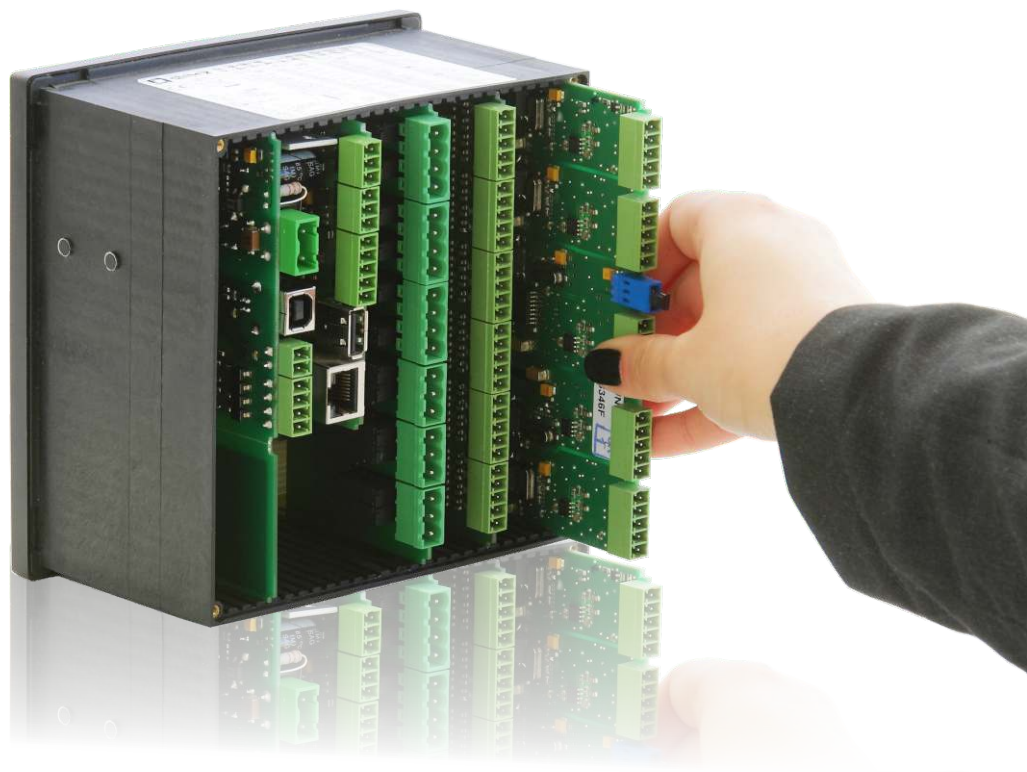




INPUT / OUTPUT / POWER SUPPLY / COMMUNICATION MODULES

MultiCon CMC-99/141



Measure,
Control and Log Data



The MultiCon line includes advanced controllers and data recorders with great potential closed in small casings. MultiCon has been specifically designed for advanced applications in industrial automatic control engineering. It does not mean, however, that the device cannot be applied in smaller systems. MultiCon 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. Our devices are LINUX-based products to ensure stable operation.



The biggest advantage of all devices from the MultiCon line is a big number of built-in inputs / outputs accessible in one compact device. The most developed version **CMC-99** has up to 48 measurement or digital inputs and 60 virtual channels whereas **CMC-141** has 50% more inputs / outputs and virtual channels.

Thanks to a well-thought-out module design you can choose among a wide range of modules and connect them to slots in the way you wish but you do not have to use all slots. You can also decide on your own how to use virtual channels, if they are going to be used for direct measurement readings, mathematical functions, timers, profile creation, set points or virtual objects.

What if one day you want to change your configuration, add new modules or change their slots? That's not a problem! All you have to do is to send your device to an authorized distributor who will perform the changes you require.

TECHNICAL DATA

	CMC-99	CMC-141
Power supply/consum.	19 - 50V DC, 16 - 35V AC or 85 - 260V AC/DC, typ. 15 VA, max. 20 VA	19 - 50V DC, 16 - 35V AC or 85 - 260V AC/DC, typ. 25 VA, max. 35 VA
Display	3.5" graphic TFT, 16-bit colour, 320 x 240 pxs, touchscreen navigation	5.7" graphic TFT, 16-bit colour, 320 x 240 pxs, touchscreen navigation
Measurement inputs	- up to 9 universal, isolated: 0/4÷20 mA, 0/1÷5V, 0/2÷10V; thermocouples: J, K, S, T, N, R, B, E (PN-EN), L (GOST); -10 ÷ 25 mV, -10 ÷ 100 mV, 0 ÷ 600 mV, Pt100, Pt500, Pt1000 (PN-EN), Pt'50, Pt'100, Pt'500 (GOST), Ni100, Ni500, Ni1000 (PN-EN), Cu50, Cu100 (PN-83M-53852), Cu'50, Cu'100 (PN-83M-53852); resistance 0 ÷ 300 Ω, resistance 0 ÷ 3 kΩ - up to 48 analogue: 0/4 ÷ 20 mA, 0/1 ÷ 5V, 0/2 ÷ 10V - up to 24 thermocouples: J, K, S, T, N, R, B, E (PN-EN); L (GOST); ± 25 mV, ± 100 mV, -10 ÷ 25 mV, -10 ÷ 100 mV - up to 12 RTD: Pt100, Pt500, Pt1000 (PN-EN); Pt'50, Pt'100, Pt'500 (GOST); Ni100, Ni500, Ni1000 (PN-EN); Cu50, Cu100 (PN-83M-53852); Cu'50, Cu'100 (PN-83M-53852); resistance 0 ÷ 300 Ω, resistance 0 ÷ 3 kΩ - up to 24 NTC: 0 ÷ 100 kΩ - up to 12 counters / flowmeter / ratemeter: 0/4 ÷ 20 (1/sek.), 0/4 ÷ 20 (1/min.), 0/4 ÷ 20 (1/godz.)	- up to 15 universal, isolated: 0/4÷20 mA, 0/1÷5V, 0/2÷10V; thermocouples: J, K, S, T, N, R, B, E (PN-EN), L (GOST); -10 ÷ 25 mV, -10 ÷ 100 mV, 0 ÷ 600 mV, Pt100, Pt500, Pt1000 (PN-EN), Pt'50, Pt'100, Pt'500 (GOST), Ni100, Ni500, Ni1000 (PN-EN), Cu50, Cu100 (PN-83M-53852), Cu'50, Cu'100 (PN-83M-53852); resistance 0 ÷ 300 Ω, resistance 0 ÷ 3 kΩ - up to 72 analogue: 0/4 ÷ 20 mA, 0/1 ÷ 5V, 0/2 ÷ 10V - up to 36 thermocouples: J, K, S, T, N, R, B, E (PN-EN); L (GOST); ± 25 mV, ± 100 mV, -10 ÷ 25 mV, -10 ÷ 100 mV - up to 18 RTD: Pt100, Pt500, Pt1000 (PN-EN); Pt'50, Pt'100, Pt'500 (GOST); Ni100, Ni500, Ni1000 (PN-EN); Cu50, Cu100 (PN-83M-53852); Cu'50, Cu'100 (PN-83M-53852); resistance 0 ÷ 300 Ω, resistance 0 ÷ 3 kΩ - up to 24 NTC: 0 ÷ 100 kΩ - up to 12 counters / flowmeter / ratemeter: 0/4 ÷ 20 (1/sek.), 0/4 ÷ 20 (1/min.), 0/4 ÷ 20 (1/godz.)
Digital inputs	up to 49 digital *	up to 73 digital *
Outputs	- up to 8 analogue, isolated: 4-20 mA - up to 16 relay 1A/250V - up to 4 relay 5A/250V - up to 48 SSR	- up to 24 analogue, isolated: 4-20 mA - up to 36 relay 1A/250V - up to 18 relay 5A/250V - up to 72 SSR
Sensor supply output	1 x 24V DC ±5%, 200 mA max.	1 x 24V DC ±5%, 200 mA max.
Communication interface	Basic version: RS-485, 1 x USB Host (front or back), ETU : 1 or 2 x USB Host, 1 x Ethernet 10 Mb/s ACM : 2 x RS-485, 1 x RS-485/232, 1 or 2 x USB Host, 1 x Eth. 10 Mb/s Protocols: Modbus RTU Master or Slave, Modbus TCP Server, HTTP	Basic version: RS-485, 1 x USB Host (front or back), ETU : 1 or 2 x USB Host, 1 x Ethernet 10 Mb/s ACM : 2 x RS-485, 1 x RS-485/232, 1 or 2 x USB Host, 1 x Eth. 10 Mb/s Protocols: Modbus RTU Master or Slave, Modbus TCP Server, HTTP
IP rate protection	IP 65 or IP 40 (version with front USB), options: frame IP 65 for panel cut-out sealing and transparent door with key (IP 54)	IP 65 or IP 40 (version with front USB), options: frame IP 65 for panel cut-out sealing and transparent door with key (IP 54)
Data memory	internal 1.5 GB	internal 1.5 GB
Data recording speed	available from 0,1 s to 24 h with resolution 0,1 s	available from 0,1 s to 24 h with resolution 0,1 s
Operating temperature	0°C ... +50°C (optional -20°C ... +50°C)	0°C ... +50°C (optional -20°C ... +50°C)
Storage temperature	-10°C ... +70°C (optional -20°C ... +70°C)	-10°C ... +70°C (optional -20°C ... +70°C)
Case dimensions	96 x 96 x 100 mm	144 x 144 x 100 mm
- panel cut-out	90,5 x 90,5 mm	137 x 137 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)

* one digital input is available in standard, integrated with PS32 or PS42 power supply modules

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

version:

99 : 96 x 96 mm case

141 : 144 x 144 mm case

slot P - power supply module

slot D - communication module

slot A - I/O module

slot B - I/O module

slot C - I/O module

available modules listed below

options:

001: no options

00C: PCB conformal coating

011: IP 65 frame

01C: IP 65 frame + PCB conformal coating

081: operating temp. -20°C ÷ +50°C

+ PCB conformal coating

0B1: front USB Host (IP 40)

0BC: front USB Host (IP 40) + PCB conformal coating

0P1: IP 65 + operating temp. -20°C ÷ +50°C

+ PCB conformal coating

0K1: front USB Host (IP 40) + operating temp. -20°C ÷ +50°C

+ PCB conformal coating

Optional: LKS-99/141 Data logging licence key

MLS-99/141 MultiLevel Access licence key

ENS-99/141 „E-mail notifications” licence key

Module type	Description	MultiCon CMC-99					MultiCon CMC-141				
		P	D	C	B	A	P	D	C	B	A
PS32	power supply 19 ÷ 50V DC, 16 ÷ 35V AC	•					•				
PS42	power supply 85 ÷ 260V AC/DC	•					•				
E	no communication module (available for 0B option only)			•				•			
ETU	communication module: 1 x USB Host, 1 x Ethernet 10 Mb/s			•				•			
ACM	advanced communication module: 1 x RS-485, 1 x RS-485/232, 1 x USB Host, 1 x Ethernet 10 Mb/s			•				•			
USB	USB port (back)		•					•			
E	empty slot			•	•	•			•	•	•
UN3	3 x universal inputs U/I/RTD/TC/mV, isolated			•	•	•			•	•	•
UN5	5 x universal inputs U/I/RTD/TC/mV, isolated								•	•	•
I16	16 x current inputs			•	•	•			•	•	•
I24	24 x current inputs								•	•	•
IS6	6 x current (4 ÷ 20 mA) inputs, isolated			•	•	•			•	•	•
U16	16 x voltage inputs			•	•	•			•	•	•
U24	24 x voltage inputs								•	•	•
UI4	4 x voltage inputs + 4 x current inputs			•	•	•			•	•	•
UI8	8 x voltage inputs + 8 x current inputs			•	•	•			•	•	•
UI12	12 x voltage inputs + 12 x current inputs								•	•	•
UI4N8	4 x voltage inputs + 4 x current inputs + 8 x NTC inputs			•	•	•			•	•	•
UI4D8	4 x voltage inputs + 4 x current inputs + 8 x digital inputs			•	•	•			•	•	•
UI8N8	8 x voltage inputs + 8 x current inputs + 8 x NTC inputs								•	•	•
UI8D8	8 x voltage inputs + 8 x current inputs + 8 x digital inputs								•	•	•
RT4	4 x RTD inputs			•	•	•			•	•	•
RT6	6 x RTD inputs								•	•	•
TC4	4 x TC inputs			•	•	•			•	•	•
TC8	8 x TC inputs			•	•	•			•	•	•
TC12	12 x TC inputs								•	•	•
D8	8 x digital inputs, isolated			•	•	•			•	•	•
D16	16 x digital inputs, isolated			•	•	•			•	•	•
D24	24 x digital inputs, isolated								•	•	•
CP2	2 x pulse inputs, universal counters, isolated			•	•	•			•	•	•
CP4	4 x pulse inputs, universal counters, isolated			•	•	•			•	•	•
HM2	2 x hourmeters, isolated			•	•	•			•	•	•
HM4	4 x hourmeters, isolated			•	•	•			•	•	•
FT2	2 x pulse inputs (flowmeter/ratometer), isolated + 2 x current inputs			•	•	•			•	•	•
FT4	4 x pulse inputs (flowmeter/ratometer), isolated + 4 x current inputs			•	•	•			•	•	•
FI2	2 x current inputs (flowmeter/ratometer) + 2 x current inputs			•	•	•			•	•	•
FI4	4 x current inputs (flowmeter/ratometer) + 4 x current inputs			•	•	•			•	•	•
R81	8 x SPST relay 1A outputs			•	•*				•	•	•
R121	12 x SPST relay 1A outputs								•	•	•
R45	4 x SPDT relay 5A outputs			•					•	•	•
R65	6 x SPDT relay 5A outputs								•	•	•
S8	8 x SSR driver outputs			•	•	•			•	•	•
S16	16 x SSR driver outputs			•	•	•			•	•	•
S24	24 x SSR driver outputs								•	•	•
IO2	2 x 4 ÷ 20 mA outputs, isolated			•	•				•	•	•
IO4	4 x 4 ÷ 20 mA outputs, isolated			•	•				•	•	•
IO6	6 x 4 ÷ 20 mA outputs, isolated								•	•	•
IO8	8 x 4 ÷ 20 mA outputs, isolated								•	•	•

* The installation of the R81 module in slot B only in the case where in the slot C another relay module (R81 or R45) was installed.