

## combo control master CM1xx



Compact combo master I/O module with integrated soft SPC

- Freely programmable acc. to IEC 61131-3/CoDeSys
- Up to 32 digital I/O- signals or 16 digital und 8 analogue I/O-signals within one module
- Expandable by
  - pluggable combo CE extension modules
  - combo CS slave modules
- Onboard interface for programming, diagnostic and communication
  - Ethernet, CAN, RS232/485
- Remote maintenance over modem and Ethernet
- Integrated webserver
- Visualization possibilities by
  - visio terminals and control panels
  - visio web – via Internet Explorer
  - visio PDA– via WLAN

### Specifications

Memory	2 MB RAM, 4 MB Flash , 2 kByte EEPROM
Memory expansion	combo extension modul CF-Card
Data buffering	persistent data in flash, real-time clock and retain data battery-buffered
Operating system	µE
PLC programming	IEC61131-3 / CoDeSys
Onboard interface	1 x CAN0 acc. to ISO 1898 galvanically isolated (RJ45) (ESB or CANopen) 1 x Ethernet 10 BaseT (RJ45) 1 x RS232 / RS485 (RJ45) 1 x CAN1 acc. to ISO 1898 galvanically isolated (RJ45)
Optional Interface	Combo extension module
Ethernet TCP/IP-Stack	HTTP Web Server, SMTP Email, FTP Filetransfer, TCP-Modbus
Diagnostic	LEDs for operating and status messages; LED Power; LED Status I/O

### Digital input

Input voltage	24 V <sub>DC</sub>
Frequency max.	1000 Hz ; counting input: 10 kHz
Overtoltage	43V
Dissipation loss typ.	0,2 watt per channel

### Digital output

Output voltage	24 V <sub>DC</sub> / 0,5 A
Total current (acc. to. DIN)	max. 5 A (with 50 % duty ratio)
Resistive load	10W
Switching frequency ohm / induktive	100 Hz / 0,5 Hz / step motor control max. 10 kHz
Short circuit / thermal protection	Current limiting typ. 0,7 A per channel / 150°C, 5A fuse for total current

Reverse battery protection	included
Wire length max.	600m (unshielded), 1000m (shielded)
Dissipation loss typ.	0,2 Watt per channel

## Analogue input

Working range	Refer to table
A/D converter	12 Bit
Measurement categories	Current, voltage, temperature (PT100)
Sensor type	2-wire
Processing time per channel	10 ms

## Analogue output

D/A converter	12 Bit
Voltage	0 – 10V, optional -10 – +10 V <sub>DC</sub>

## General

EMC examinations	EN61000-6-2, EN61000-6-4
Housing	IP20
Mounting	Snap -fit on top hat rail DIN50022
Outside dimension in mm (W x H x D)	80 x 130 x 28,5
Weight approx.	100 g
Operating temperature	0° to 50°C

## Working range

measure	type	range
Voltage		0...10V
Current		0...20 mA
Temperature	PT100	-30 ... 500°C

**Note: Do not separate plugs under load!**

## Overview: combo master modules

	DIN/DOUT alternatively	DIN	DOUT	AIN 0-10 V / 0-20 mA, Pt100	AOUT 0-10 V	AOUT -10 V / + 10 V (Axis)	DMS	CF-Card
<b>CM100</b>	-	<b>16</b>	<b>16</b>	-	-	-	-	-
<b>CM101</b>	<b>32</b>	-	-	-	-	-	-	-
<b>CM110</b>	<b>16</b>	-	-	<b>4</b>	<b>4</b>	-	-	-
<b>CM111</b>	<b>16</b>	-	-	<b>4</b>	-	<b>4</b>	-	-

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