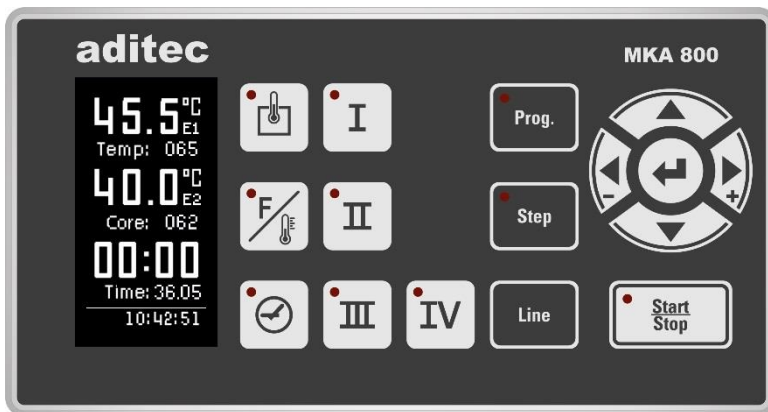


» OVERVIEW



MKA 800 (figure 50%)

The controller **MKA 800** is suitable for **cooking, baking, kettle units, autoclaves and much more**. The device is freely adjustable, flexible and can be adapted for many applications.

The controller has **4 configurable measurement inputs** and **10 potential free output relays**. The controller regulates the **temperature for heating or cooling and for humidification and dehumidification**. **Switch-off condition you can choose between operating time and/or core temperature**. **Delta-T cooking and F-value** are possible with according encoding.

Free assignment of the relays to the processes. Each relay can be pre-programmed as **leading or lagging, with delayed start-up or delayed switch-off or pulsating**.

The **serial interface** enables you to transfer data between the MKA 800 and a computer. The controller is easier to program via PC with installed **aditec service program**.

The connection is made using **Mini-USB (exclusively for programming, configuration and firmware update)** or optionally via **LAN (necessary for VisuNet recording)** or **serial interface RS 485**.

A Data Logger function is possible via an **optional USB-Host interface**.

The visualization programme **aditec "VisuNet"** offers the possibility of linking the controller to a super-ordinate programme-surveillance and of logging temperature trends, treatment types etc. It thereby ensures a comprehensive quality control of the products treated in the units in accordance with HACCP and IFS (ISO 9000).

Use the **remote maintenance system/telecontrol system aditec control** to not only run and monitor the **VisuNet programme** but to also make changes to the system, from anywhere you happen to be.



» FEATURES

- Number of programs and steps individually adjusted. **Max. 99 steps total, but max. 30 programs selectable, 1 manual program**
- **Adjustable program names** (max. 8 characters)
- Easy and systematic adjustment of configuration data
- **5 programmable processes**
- **Adjustable process names** (max. 8 characters)
- **10x potential-free relay outputs, programmable**
- **4x galvanically isolated analogue inputs** programmable as: PT100, three-wire connection and all thermocouples (according to standard DIN EN 60584) or digital inputs. Programming of 2 additional inputs as current/voltage inputs.
- **Mini USB connection** (mini-USB Port for programming, configuration and firmware update)
- **10x button-LED** (red) for status display
- **OLED-Display** with 128 x 64 pixel and 16 grey scales, 2,7"
- **Robust stainless steel housing** (1.4016)
- Programmable nominal value limits
- Program memory will be retained during a power cut
- Programs that were interrupted through a power cut are resumed at the point where they stopped when power is restored.
- Process runtimes in adjustable in h : min or min : s or continuous operation
- **Preselecting time** (starting time) adjustable via real-time clock/date
- Detection of sensor defects (break or short circuit)
- **5 value alarms (limit values)**
- **Change-over of the measurement °C - °F**

» OPTIONS

- **Ethernet LAN** for connection to a PC or network via **additional board ZSL**
- **USB-Host** via via **additional board ZSU**
- **RS485** for connection to a PC via **additional board ZS4**
- **2 analogue outputs** (4...20mA/0...10V) via **additional board ZA2**
- **2 analogue inputs** (freely adjustable) via **additional board ZE2**
- **2 analogue outputs** (4...20mA/0...10V) + **1 vacuum input** via **additional board ZAV21**
- Possibility of networking for visualisation and recording according to HACCP with **aditec-VisuNet**

Programmable controller MKA 800

» für cooking, baking, kettle units and autoclaves

aditec
CONTROLS for
FOODTECHNOLOGY

» TECHNICAL DATA

General data						
Dimensions	(WxHxD) 207 x 111 x 70 mm		Depth with terminals: 83 mm			
Mounting dimensions (recess size)	(WxH) 185 x 90 mm					
Material	Robust stainless steel housing (1.4016)		According to DIN standard / Industry norms			
Own weight	750 g					
Operating temperature	-20 to +65°C					
Storage temperature	-50 to +75°C					
Protection class	IP 65 from the front side / IP 20 from the back		According DIN EN 60529			
Electrical data						
Power supply	85~260V AC/120~370V DC		Optional:18-36 VDC			
Residual ripple	5%					
Current consumption	78 mA at 230V AC					
Power consumption	18 VA					
Contact load of the relay	Max. 250V AC 4A					
Electrical safety	According to DIN EN 61010-1 overvoltage category III					
Electromagnetic compatibility	According to DIN EN 61326-1 emitted interference		Class A for industrial use			
	Interference immunity		For industrial requirements			
Battery lifetime (for real-time clock)	8-10 years					
Display	OLED-Display with 128 x 64 pixel, 16 grey scales, 2,7"					
Connection for relay outputs and power supply	Removable lift terminals with screws		Wire min. 0,5 – max. 2,5 mm ²			
Connection for dig./analogue inputs	Removable terminals in Push-in-technology (spring terminals)		Min.0,14 mm ² - max.1,5 mm ² wire cross-section with 10 mm wire end sleeves			
4x analogue inputs (plus 2x optional via additional board ZE2)						
Sensor	Type	Additional settings	Measuring area	Measuring unit	Accuracy	Ambient temperature effect
E1 + E2 E3 + E4 (E5 + E6 optional)	Pt100	-	-100... 500 °C (-148... 932 °F)	°C / °F	≤ 0,1%	≤ 100ppm/°C
	Typ K: NiCr-Ni	-	-200...1372 °C (-328...2501 °F)	°C / °F	≤ 0,4%	≤ 100ppm/°C
	Typ J: Fe-CuNi	-	-210...1200 °C (-346...2192 °F)	°C / °F	≤ 0,4%	≤ 100ppm/°C
	Typ T: Cu-CuNi	-	-200... 400 °C (-328... 752 °F)	°C / °F	≤ 0,5%	≤ 100ppm/°C
	Typ B: Pt30Rh-Pt6Rh	-	250...1820 °C (482...3308 °F)	°C / °F	≤ 0,4%	≤ 100ppm/°C
	Typ E: NiCr-CuNi	-	-200...1000 °C (-328...1832 °F)	°C / °F	≤ 0,4%	≤ 100ppm/°C
	Typ N: NiCrSi-NiSi	-	-200...1300 °C (-328...2372 °F)	°C / °F	≤ 0,4%	≤ 100ppm/°C
	Typ R: Pt13Rh-Pt	-	-50...1768 °C (-58...3214 °F)	°C / °F	≤ 0,4%	≤ 100ppm/°C
	Typ S: Pt10Rh-Pt	-	-50...1768 °C (-58...3214 °F)	°C / °F	≤ 0,4%	≤ 100ppm/°C
	Increment	D1 - D4	Up to 3 Hz (180 pulses/min) Number of pulses - 9.999...30.000	variable		
TFG80H	-	0...100 % relative humidity	%			
Power	0(4)...20 mA	-9.999...30.000	variable	≤ 0,3%	≤ 100ppm/°C	
Voltage	0...1 V 0(2)...10 V	-9.999...30.000	variable	≤ 0,1%	≤ 100ppm/°C	
E70 - ZAV 21	Vacuum AG4	ADW	0...100 %	variable	Optional via additional board ZAV21	
4x digital inputs						
D1, D2, D3, D4	Via analogue inputs		Adjustable			
2x analogue outputs optional via additional board ZA2						
A1 and A2	Output areas: 0(2)-10V with R _{Last} ≥ 1000 Ω oder 0(4)-20mA with R _{Last} ≤ 500 Ω		Optional via additional board ZA2			
10x relay outputs						
R1...R10	Potential free contacts, switching capacity 250V AC, 4A		4 change-over contacts 6 close contacts			

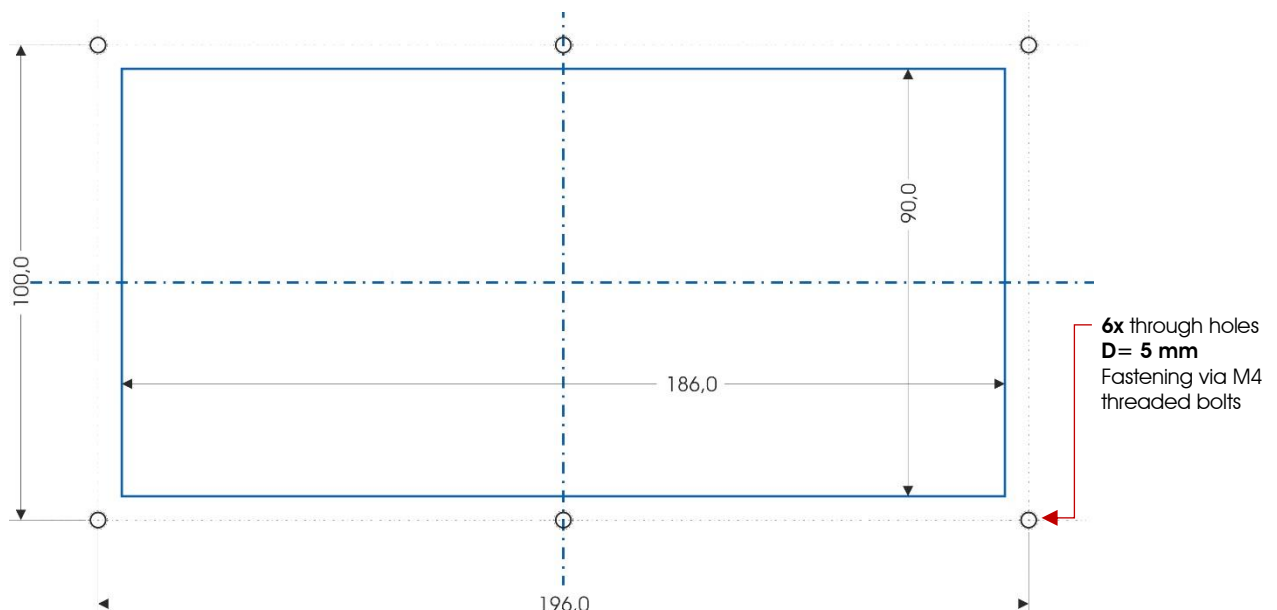
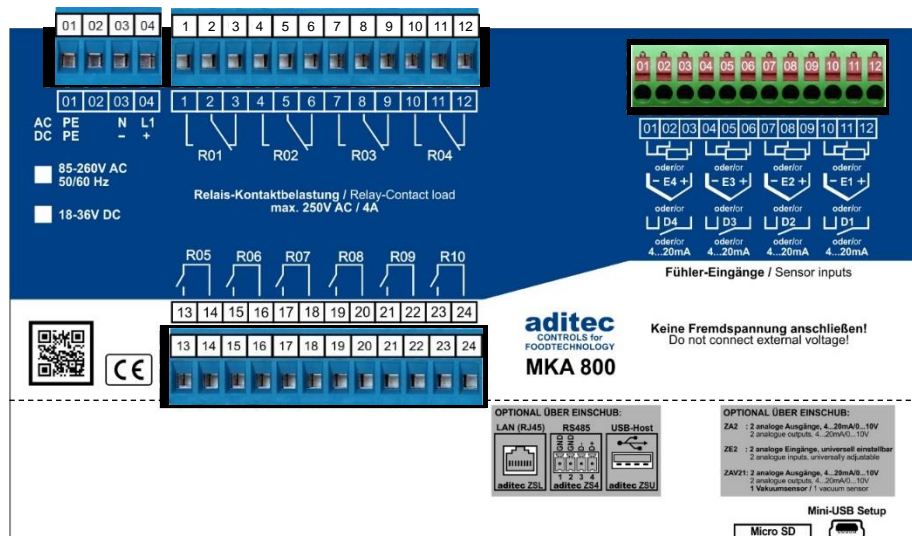
Programmable controller MKA 800

» für cooking, baking, kettle units and autoclaves

» TECHNICAL DATA

Serial interfaces		
1	Mini-USB	
1 Memory	µSD Card Slot	For Micro-SD card to 32 GB
1	USB-Host	Optional: additional board ZSU
1	LAN	Optional: additional board ZSL
1	RS485	Optional: additional board ZS4
Galvanic isolation		
Mains input 85~264VAC/120~370VDC	1,5 kV AC/1Min	Optional: Power input 18-36VDC -> 2,5kV test 1 minute and 1mA max.
Sensor inputs (analogue inputs)	1 kV	
Serial interfaces: - USB (mini) - LAN - RS485	----- 1,5 kV 1 kV	Optional: additional board ZSL Optional: additional board ZS4

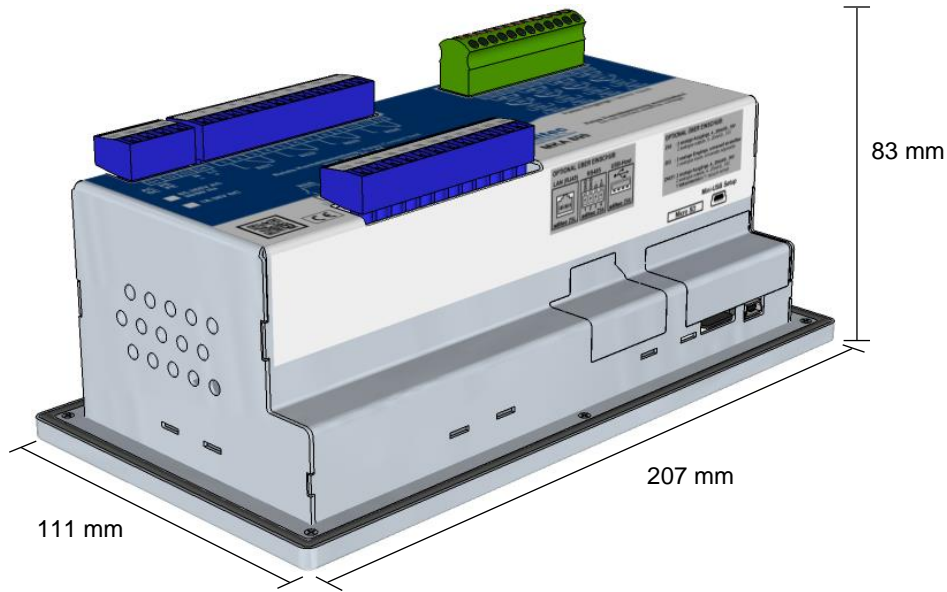
» CONNECTION DIAGRAM + CUT OUT



Programmable controller MKA 800

» für cooking, baking, kettle units and autoclaves

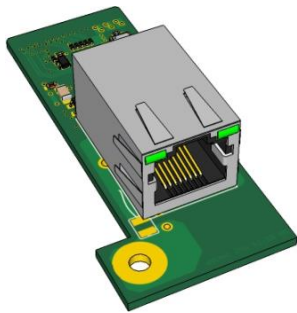
» DIMENSIONS



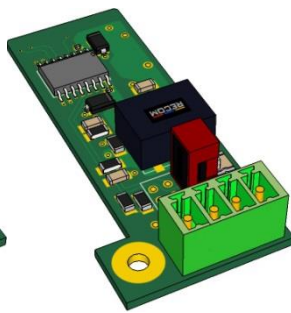
» ADDITIONAL BOARDS / OPTIOS SUITABLE FOR SUBSEQUENT INSTALLATION

Slot left:

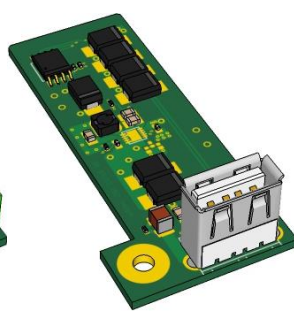
► **ZSL**
Additional board
Ethernet



► **ZS4**
Additional board
RS485



► **ZSU**
Additional board
USB-Host



Slot right:

► **ZE2** (on request)
Additional board
2 analogue inputs,
freely adjustable



► **ZA2**
Additional board
2 analogue outputs
4...20mA/0...10V



► **ZAV21**
Additional board
2 analogue outputs +
1 vacuum sensor
freely adjustable

