

**OPERATING INSTRUCTIONS
MONTRAC COMPONENTS**

LogiBox

BA-100089
starting from serial number 449766
English, edition 08/2009

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Operating Instructions
Montrac Components LogiBox

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1. Important Information

1.1. Introduction

This Instruction Manual describes the mechanical structure, assembly, operation, functions of the module types and the serial interface of the LogiBox.

1.2. Declaration of installation

Pursuant to EC Machinery Directive 98/37/EC, Appendix II B.

Pursuant to EC Machinery Directive 2006/42/EC, Appendix II B.

Manufacturer:

Montech AG, Gewerbestrasse 12 CH-4552 Derendingen

Tel. +41 32 681 55 00, Fax +41 32 682 19 77

1.2.1. Function

The LogiBox is a small control unit with eight digital inputs and eight digital outputs. Two IRMs can be read and written via the RS-232 interfaces. The LogiBox continues with the idea of chaos technology. For example, the LogiBox can control a double switch. Other project-specific solutions can also be realized.

The load limits which have been defined for the LogiBox by technical data must be observed at all times. Overload may cause defects and failure of the device.

The LogiBox is designed to be installed in a Montrac system or installed with other elements of a Montrac system in compliance with EC Machinery Directive 98/37/EG and 2006/42/EG.

1.2.2. Mounting instructions

The mounting instructions in compliance with EC Machinery Directive 2006/42/EG, Appendix VI, are available in the Instruction Manual.

1.2.3. Guidelines fulfilled by the LogiBox

The individual components of the LogiBox are not subject to the regulations of the Machine Directive.

However, we would like to point out that the Montrac System must not be put into operation until it has been determined that the Montrac system in which the LogiBox has been installed conforms to the stipulations of EC Machine Directive 98/37/EG and 2006/42EG.

1.2.4. Validity of the Instruction Manual

Our products are continually updated to reflect the latest state of the art and practical experience. In line with product developments, our operating instructions are continually updated. Every Instruction Manual has an article number e.g. BA-100089. The article number and the date of edition are specified on the title page.

Validity

Full name	Short name	Reference number
LogiBox	-	59172

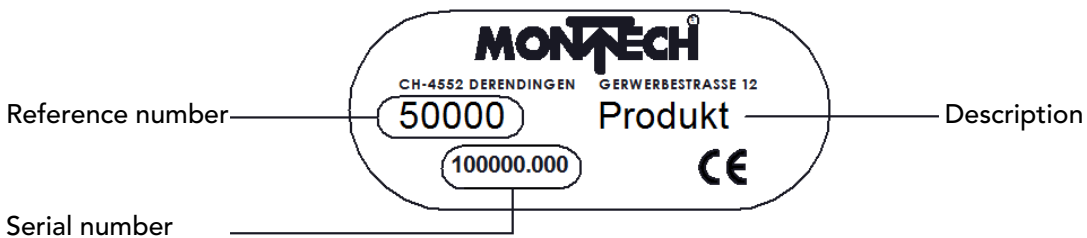
1.2.5. Additional information

This Instruction Manual is intended to allow proper and safe use of your LogiBox. Should any information for your particular application be missing, please contact the manufacturer.

Special technical documentation according to 2006/42/EG, Appendix VII, Part B, can be provided at any time and digitally communicated.

When reordering Instruction Manuals, it is imperative that you quote the serial number. This document is also available on our homepage www.montech.com.

Description type plate



Montech AG
 Management



U. D. Wagner

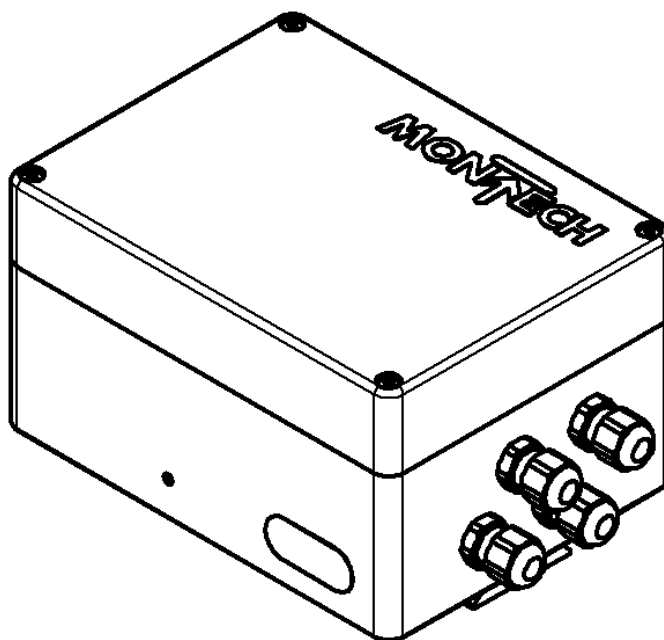


Y. Dicke

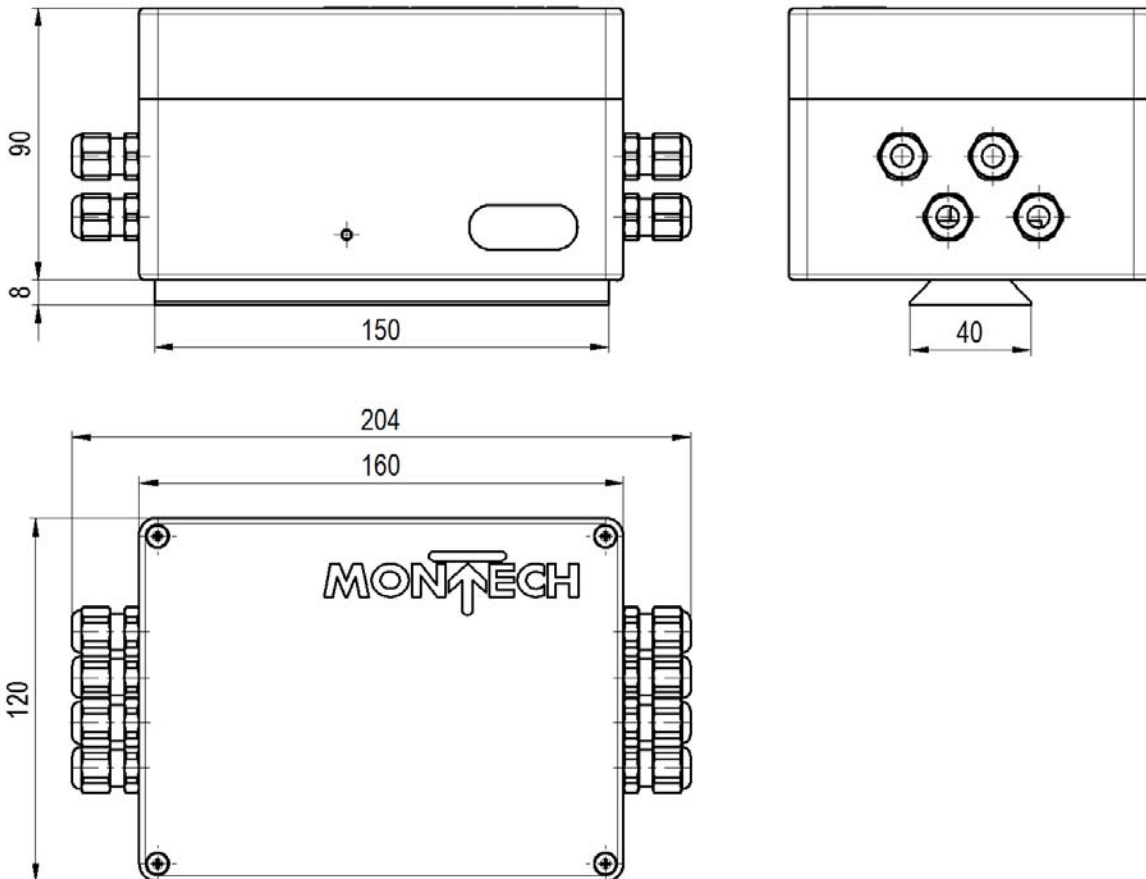
2. Technical Data

Height	[mm]	90
Width	[mm]	160
Depth	[mm]	120
Weight	[kg]	0.6
Material		Aluminum, copper, steel, brass, plastic
Input voltage	[VDC]	24
Current consumption (at 24 VDC, without Outputs)	[mA]	50
Min. input voltage Inputs	[VDC]	20
Max. input voltage Inputs	[VDC]	28
Current consumption per Input	[mA]	5
Output voltage Outputs	[VDC]	Input voltage
Max. output current per Output	[mA]	500
Protective class		IP 20
Ambient conditions: Temperature	[°C]	10 – 40
Rel. humidity		5%-85% (without condensation)
Air purity		Normal workshop atmosphere

LogiBox 59172



2.1. Dimension sheet



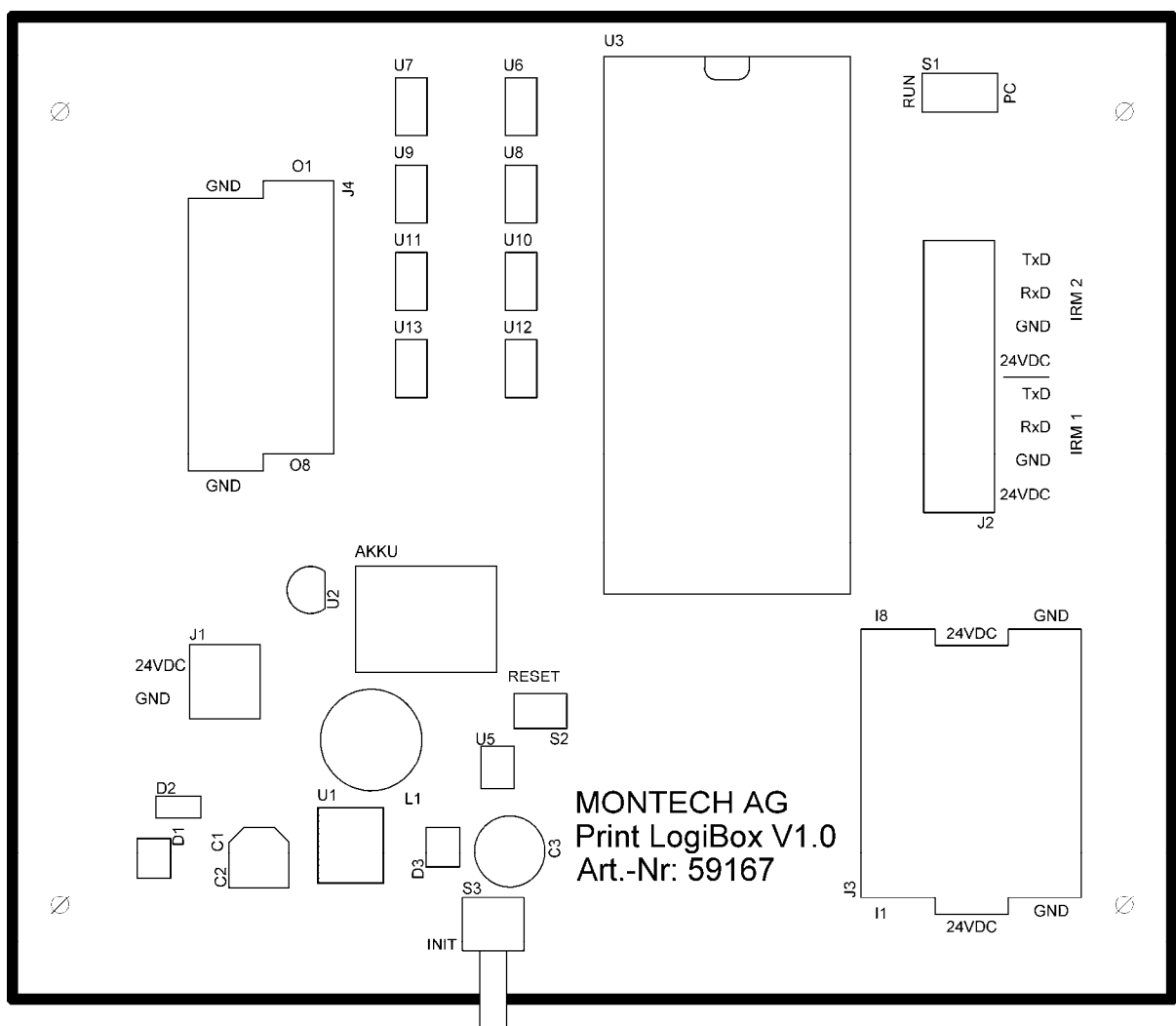
3. Installation

3.1. Mounting position and assembly

The LogiBox can be mounted in any position.

Mounting is performed using Quick-Set fastening elements on the dovetail on the rear side (Pos. 20).

3.2. Connection and cabling



3.2.1. Table connection cable LogiBox

Description	Screw terminal	Connection	Wire lead color
Supply LogiBox (to Trac)	J1	24VDC	
		GND	
Supply IRM 1	J2	IRM1 - 24VDC	white
		IRM1 - GND	black
RS-232 IRM 1		IRM1 - RxD	brown
		IRM1 - TxD	yellow
Supply IRM 2	J2	IRM2 - 24VDC	white
		IRM2 - GND	black
RS-232 IRM 2		IRM2 - RxD	brown
		IRM2 - TxD	yellow
Input 1	J3	I1	according to project- specific specifications
Input 2		I2	
Input 3		I3	
Input 4		I4	
Input 5		I5	
Input 6		I6	
Input 7		I7	
Input 8		I8	
Output 1	J4	O1	according to project- specific specifications
Output 2		O2	
Output 3		O3	
Output 4		O4	
Output 5		O5	
Output 6		O6	
Output 7		O7	
Output 8		O8	

3.2.2. Digital input/output

The digital inputs and outputs are operated in the "active high" mode.

This means:

	Logical 1 (high or TRUE)	Logical 0 (low or FALSE)
Digital Input	20 – 28 VDC	0 – 4.5 VDC
Digital Output	Tension of supply	-

3.2.3. Conductor cross section

The following core cross sections are permitted for the digital inputs and outputs:

	Minimum cross section	Maximum cross section
Fixed	0.14	1.5
Flexible	0.14	1
Flexible with crimp connector without plastic sleeve	0.25	0.5
Flexible with crimp connector with plastic sleeve	0.25	0.5

3.2.4. Tightening torque of screw terminals

	Minimum [Nm]	Maximum [Nm]
Torsional moment	0.22	0.25

4. Operation

4.1. Commissioning

Wire the LogiBox, IRM, TracSwitch etc. according to the project-specific schematic. No shuttle should be in the area to control during startup.

4.2. Starting up

As soon as the LogiBox is supplied with voltage, the program starts up automatically. The LogiBox is then ready to use.

4.3. Reset

The program can be re-started with the Reset button. It functions basically the same as when the voltage supply is switched on.

4.4. Battery backup

It should be noted that when the power is switched on or there is a reset, depending on the program, the global and local variables are not cleared but rather saved. This is due to the backup battery. The variables (e.g. a counter) are retained in the switched off state for up to 200 hours.

4.5. Reinitialization

The button for reinitialization is located on the bottom outside of the box. This reinitializes or clears all variables. Afterwards, all tasks are stopped and restarted similar to resetting the program. No shuttle should be in the area to control during startup.

5. Programming

5.1. PC/RUN mode switch

If mode switch S1 is put into the PC position, the control system is in PC mode. The control system can be programmed in this mode. Before downloading the program, it is necessary to perform a reset.

In the RUN mode position of the slide switch, the control system works independently and programming is not possible.

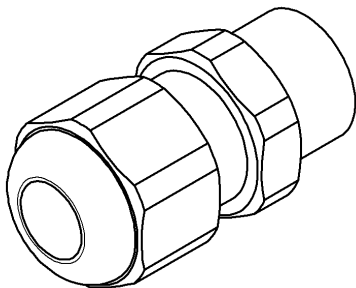
5.2. Serial interface IRM 2

In PC mode the control system can be programmed via the IRM 2 RS-232 interface. In normal operation (RUN mode) it functions as a regular RS-232 interface.

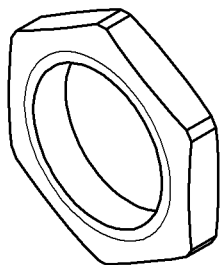
6. Accessories

Number, type and position of the screwed cable glands are determined project-specifically by the project manager!

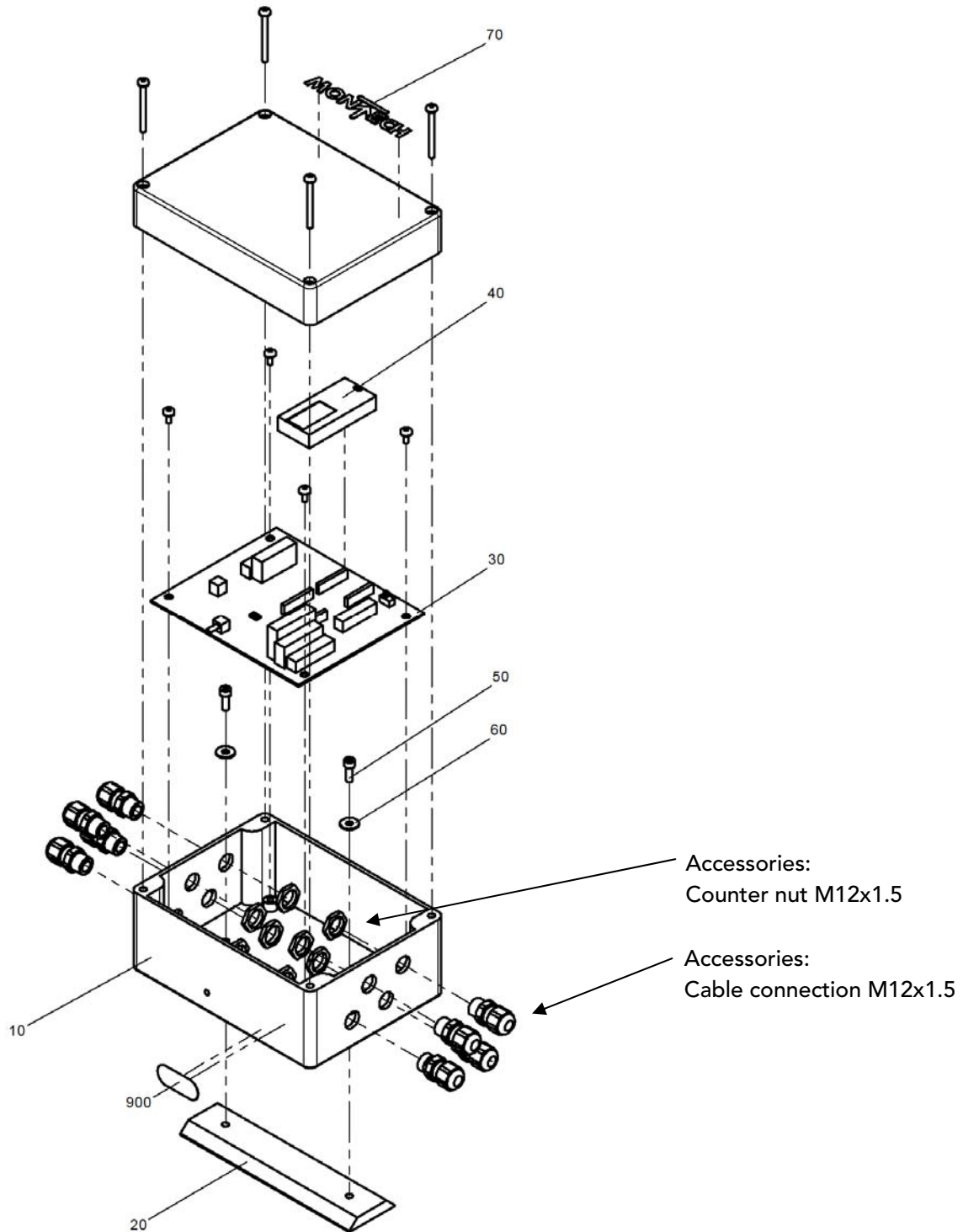
- Cable connection M12x1.5: Article no.. 520630



- Counter nut M12x1.5: Article no. 520631



7. Parts list



Operating Instructions
Montrac Components LogiBox

Pos.	Sym.	Designation	Article no.	Material
	■	LogiBox	59172	Various
10	◇	PC housing M 238	520629	PC
20	◇	AP-40-160	59171	Aluminum
30	●	Print LogiBox	59167	Various
40	●	Controller	520628	Various
50	◇	Cylinder screw M4x12	502506	Steel
60	◇	Disc M4	502570	Steel
70	◇	Montech Logo	41176	Plastic
900	◇	Type plate	41620	Plastic

- These are wearing parts and available ex stock.
- ◇ Not available ex stock individually (upon request)
- Price list articles deliverable ex stock

8. General Information

8.1. Environmental compatibility and disposal

Materials used:

- Aluminum
- Steel
- PC (Polycarbonate)
- Brass
- Copper

Surface finishing:

- Anodization, aluminum
- Nickel-plating steel

Shaping processes:

- Aluminum extrusion
- Machining of aluminum and steel
- Injection molded plastics

Disposal:

A no longer usable LogiBox should not be disposed of as a complete system but rather should be disassembled into parts and recycled by type of material. The type of material of each individual part is included in the replacement parts lists. Non-recyclable materials should be disposed of appropriately.