



Installation and operating instructions

MAD 6 – Coin machine for door opening – control of light, ventilator and SOS signalling

MAD 6 INV – Coin machine for door opening – control of light, ventilator and SOS signalling, with Euro key

BASIC TECHNICAL SPECIFICATIONS

Coins accepted:	1, 2, 5, 10, 20, 50 CZK, tokens ZT 2 € 0.1, 0.2, 0.5, 1, 2
Admission price:	Settable within the range CZK 1 ÷ 250; € 0.1 ÷ 25
Maximum time of closet use:	15 minutes (20 minutes when opened with an Euro key)
Power supply:	12V, 50Hz
Coin machine input power:	4 VA, or 10 VA when accepting a coin, or 15 VA when opening the door
Voltage input load:	According to the power source used, max. 5 A.
No-potential output load:	Max. 24 V, 5 A – no output may be connected to mains voltage
Recommended power supply device:	ZAC 1/20 (max. 1 x MAD 6) ZAC 1/50 (max. 2 x MAD 6)
Ambient temperature:	0 ÷ 50 °C – or -20 ÷ 70°C to order
Time of lock connection in the mode without door blocking:	1 ÷ 255 s
Weblink:	MAD 6 MAD 6 INV

Coin machine function

- Coin machine MAD 6 is designed for paid door unlocking or for control of a device conditioning admission by payment of a preset credit (such as turnstile). The device is able to control light and ventilator in the closet, as well as to provide for door opening and alarm start after SOS button pressing inside the closet. The automat accepts Euro and Crown coins. The admission price may be set separately in CZK and in EUR. Admission free when euro key is used. Payments may not be combined (i.e. it is not possible to pay part in one currency and the rest in the other currency). If the payment is commenced in one currency and then coins of the other currency are used for balancing the amount then the amount paid in the first currency will be lost and the whole payment will have to be completed in the other currency.
- Operation mode switch may be used for setting two different functions - switching may only be performed with the power off.
- **1) without door blocking** - This setting is used if the automaton controls common entry to the sanitary facility and the door will open whenever the required amount is inserted.
- Switch 1 (next to the programming button) in the off position.
- After connection to power the control will flash green and then red and stays illuminated in green. If the control flashes red and green permanently, then switch 2 is in the on position and the door is open. After inserting coins in the amount of the preset credit relay 1 connects to measure the preset time (if switch 2 is in the off position) or the lock is under voltage until the door opens (if switch 2 is in the on position) - at this time the control is illuminated in orange. This mode does not support light and ventilator switching and the SOS button.



- **2) with door blocking** - This setting is used if the automaton controls entry to the closet and when the closet is occupied the entry is blocked.
- Switch 1 (next to the programming button) in the on position, switch 2 in any position.
- After connection to power the control will flash green and then red and stays illuminated in green, if the door is closed - the door contact is connected. If the door is open - the door contact is off and the control flashes red and green until the door is closed. When you insert coins in the amount of the preset credit the relay connects and both colours illuminate the control together, i.e. the control is illuminated in orange. When the door is opened the output is switched off and the control continues to be illuminated in orange. The light is switched on and the ventilator connects. If the door does not open within 15 seconds from the coin insertion then the automaton returns to the default state and the inserted credit is lost. When the door is closed the control is illuminated in red, the light in the closet is on and the ventilator is running. The coin machine is blocked and does not accept coins. Now the door must be closed for at least 30 seconds. If the door opens within this period then the opening will be ignored. If the door opens between 30 s and 15 min. from the door closing by the coin insertion the green and the red control flash in turns, the light is switched off and the ventilator stops after 3 minutes. After the door is closed the control will be illuminated in green and the automaton will be ready to accept more coins. If the door is closed permanently in the period from 30 s to 15 minutes then after elapse of the 15 minutes (or 20 minutes when using the Euro key) the red control goes off and the green control goes on. The light goes off and the door opens. The user is timely notified about this by flashing light in the course of the last minute of operation before the light is switched off. Pressing the SOS button will unlock the lock and activate the alarm for help summoning. The alarm is active until the door opening. The coin pass through the automaton will be indicated by a red flash of the control. When the red control is on the coin machine will be blocked.
- When using Euro key the automat functions are the same as if the preset credit was inserted (but the equipment may also be used free of charge) with the only difference in the maximum time for the closet use extended from 15 to 20 minutes.
- The automat may be supplied with a coin register, PM 4

Installation

Pre-installation preparedness

1. A niche for building in the coin machine, size 110 x 290 x 110 mm
2. The coin machine's walled-in box at the level of the tiles or up to 20 mm underneath. The input opening of the box must be at the top.

**electromagnetic door lock with
switcher - Connecting detail**

12 V, 50 cable from MAD 6

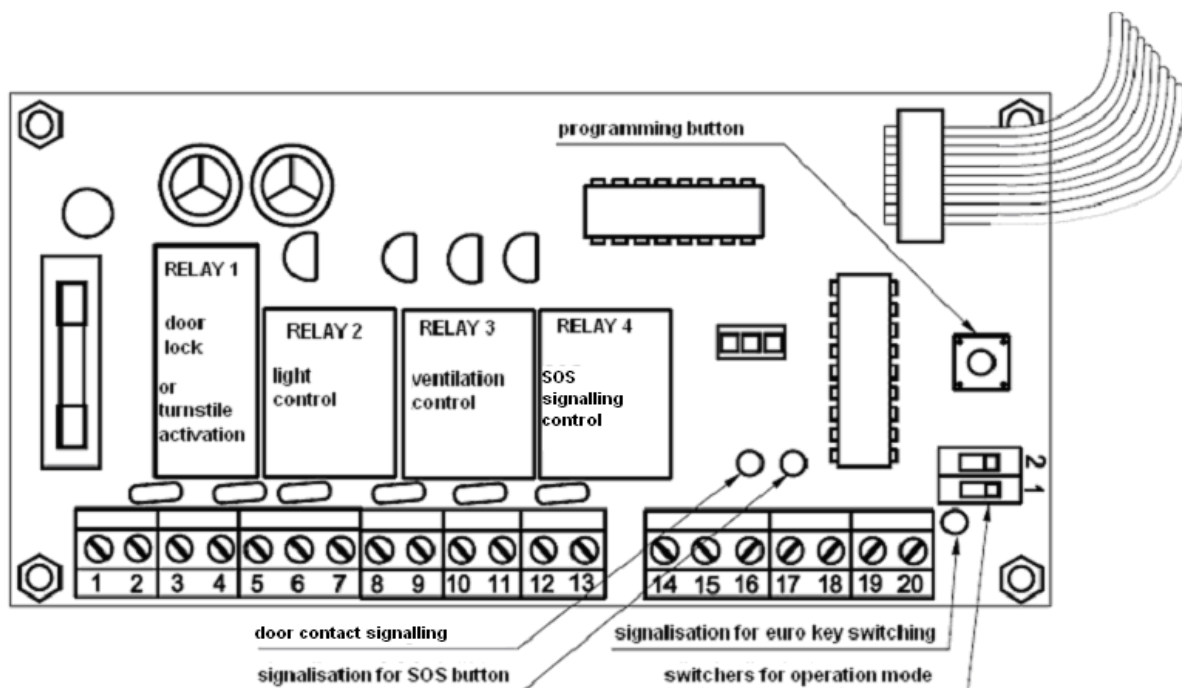


12 V, 50 Hz cable from MAD 6
**contact of switcher - connected only
when door blocking function is required**

3. Prepared power cable for voltage input and cables for connection of the automaton outputs (connection of the electrical lock with the automaton, connection of the other outputs used)
4. Connection between the power source and the coin machine.
5. Installed door lock and connection between the coin machine and the electrical lock with a door switch with a suitable cable (either 2 tw-vein or 1 four-vein cable may be used). Loose ends of the cables in the coin machine box must be left at least 250 mm long.
6. Connection between the coin machine and the light control switchboard, or ventilator (if the function of their control is used).
7. Connection between the coin machine and the SOS button and between SOS signalling and the automaton (if the SOS function is used).
8. The box is covered with assembly sheet as protection against impurities from finishing works and tiling completed.



9. For easier handling of the electronics all conductors are recommended to be in the string wire embodiment.

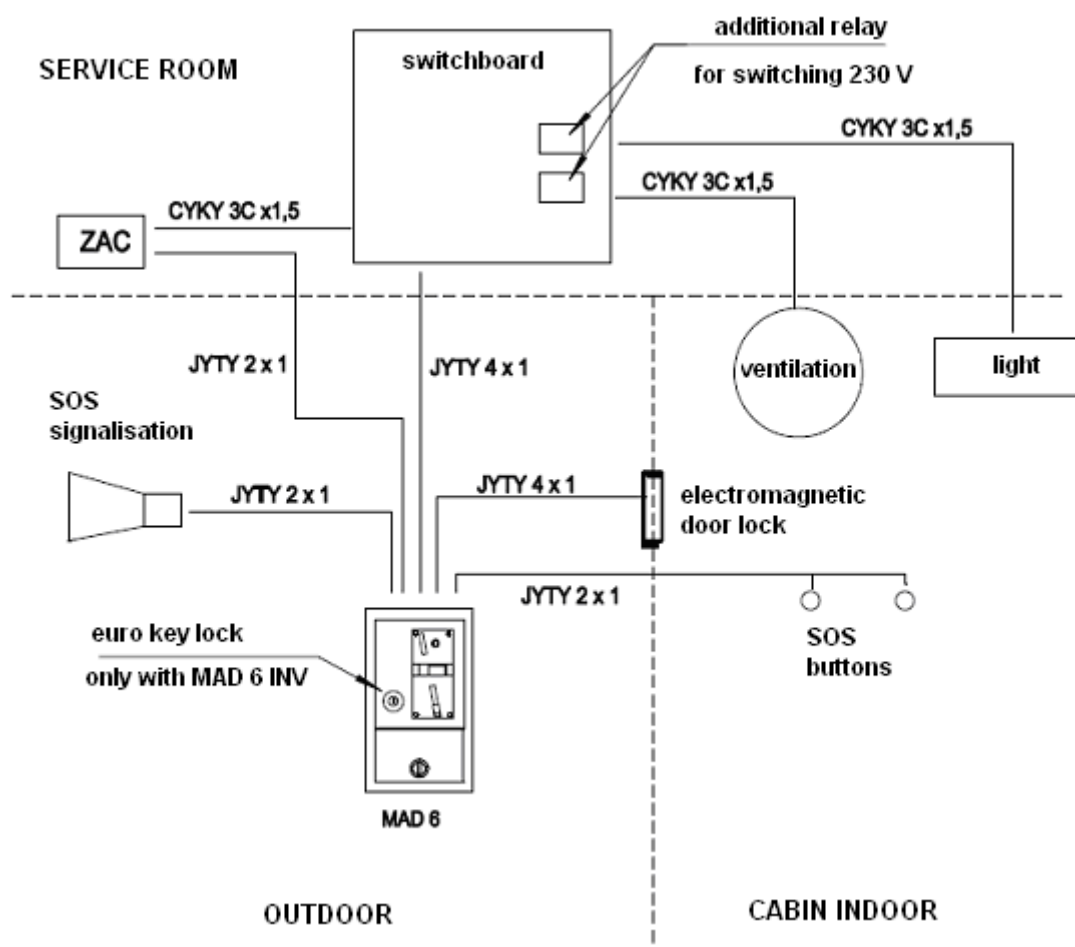


Terminal description

- 1 – 2 power voltage 12V, 50 Hz from ZAC source – polarity does not matter
- 3 – 4 relay output 1 – 12 V, 50 Hz for door lock opening – polarity does not matter
- 5 – 7 no-potential switch relay 1 contact for turnstile control (5 – disconnecting, 6 – connecting, 7 – middle)
- 8 – 9 no-potential switch relay 2 contact for light control
- 10 – 11 no-potential switch relay 3 contact for ventilator control
- 12 – 13 no-potential switch relay 4 contact for SOS signalling control
- 14 – 16 closed door signalling – auxiliary contact on the electric switch – polarity does not matter connected between 15 and 16 terminal. Terminal 14 is +12 V with use of induction sensor instead of the door contact
- 17 – 18 SOS button – any switch button may be used including piezo-electric
- 19 – 20 connection of the contact euro lock (only for variant MAD 6 INV)

Coin machine assembly

1. Dismantle the cover sheet metal of MAD box
2. Unlock the door, remove it, unscrew the two cross screws in the frame crossbar, shift the coin box including the load-bearing sheet metal to the end stop on the crossbar and take the set off.
3. Attach the frame to the box by means of the crews supplied; use the flat-head screws for the top beam.
4. Connect the individual cables according to the terminal descriptions - attention - all outputs except the output for the lock opening - (terminals 3 and 4) are of no-potential type. Attention must be paid to the lock connection – control voltage 12 V, 50 Hz (i.e. terminals 3 and 4 of the control electronics) to be connected to the two-screw lock terminals. The triple terminal box on the other side of the lock is the door switch contact. The terminals with arrows to be connected to terminals 15 and 16 of the control electronics.
5. Use the coin collection switches to set the coin values to the accepted.
6. Use switches 1 and 2 on the electronic board for selection of the operation mode – see functions of the coin machine.



Accepted coin type setting:

The accepted coin types are set by switching of the buttons according to the table below:

group 1 – CZK coins								group 2 – EUR coins							
1	2	3	4	5	6	7	8	1*	2	3	4	5	6	7	8
1 CZK	2 CZK	5 CZK	10 CZK	20 CZK	50 CZK	token	Token CZK	0,05 €	0,1 €	0,2 €	0,5 €	1,0 €	2,0 €	token	token-€
off	off	off	off	off	off	20 CZK	off	off	off	off	off	off	off	0,5 €	off
on	on	on	on	on	on	10 CZK	on	on	on	on	on	on	on	1,0 €	on

Key

1* - do not switch on, electronic is not work with value 0,05 €.

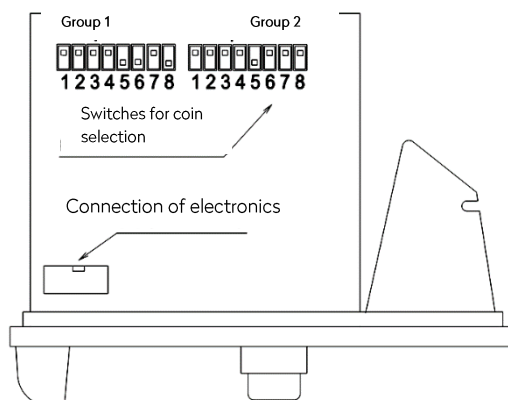
- Switches 1 – 6 in group one set lati coin types while switch 7 choose the value of the token 10 OR 20 CZK, 8 select the token in CZK value.



- Switches 1–6 in group two set euro coin types while switches 7, choose the value of the token, 8 select the token in EUR value.

Example

- The machine will accept 20 CZK coins if switch 5 / group 1 is ON. The machine will accept € 1 coins if switch 5 / group 2 is ON. In addition the switch no 7 may be switched to the lower position for the automaton to also accept tokens with the allocated value of 20 CZK. Coins/tokens that have not been selected by means of the switches will not be accepted.



Setting

- In 20 minutes from the power on press the "program" button to call up the setting mode – the control will start flashing green. If the credit setting needs to be changed fill the coin box with coins whose value corresponds to the required credit amount. End the credit setting mode by a new depressing of the button or by elapse of the time of 10 seconds from the last accepted coin. Credit setting must be performed for each currency separately.
- Now the control will flash orange in quick succession of the flashes. It is possible to set the relay connection time (lock deblocking) for the version without door blocking. Another depressing the button connects the relay and the control will start flashing orange in slow succession of the flashes – during the button depressing time. This time of the relay connection will be saved in memory. If you do not wish to change the credit then do not insert any coins while the control flashes green. Similarly if you do not want to change the relay connection time do not depress the button while the control flashes orange. The setting mode will end after 10 seconds.

Maintenance and cleaning

- A failure consisting in the coin machine not accepting coins is largely due to impurities on the sensors at the coin path. After taking out the front panel with the coin box the white button on the front side of the coin box needs to be depressed. The door on the coin box side will partly open. Open the door fully, i.e. perpendicularly to the box wall. You can clean the area behind the door and the inner door surface with a cloth which is slightly moist but not wet.
- Never use any aggressive solvent (acetone, toluene)!**
- Be sure to disconnect the machine from its power supply prior to cleaning the coin box.