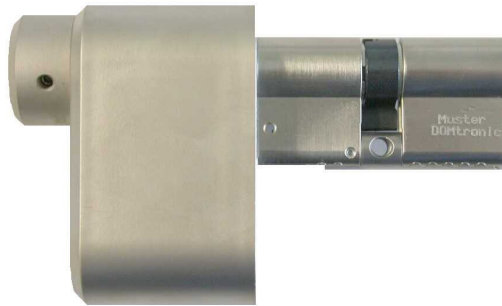


# DOM Motorised cylinder II



**System description**

**Operating instructions**

**Assembling notes**

Valid from processor version 3.XX

Technical changes reserved!

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## DOM Motorised cylinder II

### Overview

The DOM motorised cylinder is a motor-operated locking cylinder, suitable for the actuation of PZ-DIN-mortice lock with and without change-over, as well as multipoint-locks. It is controlled by a release button, a clock timer (day/night changeover) or an access control system. A door contact is necessary for the recognition of the door state.

The DOM motorised cylinder II supports the operating modes day mode and night mode. In the day mode the door is locked/unlocked by the latchbolt only, in the night mode by the latchbolt and the lock bar.

## System components

### Motor-gearbox unit

The motor-gearbox unit and the special locking cylinder form an electrically operated knob cylinder. The movements of the cylinders are electronically controlled by the integrated sensor technology. An inserted key is recognised via a contact in the motor-gearbox unit and the start of motor activities is prevented.

The locking aid (turn on automatic) automatically finishes any locking actions started on the knob manually.

### Locking cylinder

The locking cylinder is inside prepared to take up the motor-gearbox unit. Outside the locking cylinder is furnished with the mechanical locking function.

### Control

The control unit is connected to a separate mains adapter 24VAC and supplies the necessary power to the motor-gearbox unit. The control has five different potential-free inputs to set the different operating modes.

The control offers two relay outputs, which can operate signal transmitters, to display the states ERROR and locked state (LS).

## Description of functions

### Knob

The DOM motorised cylinder II can be operated via the inner knob at any time. In case of the locking aid function (turn on automatic) the manual turning effects that the motor automatically finishes this action.

In the event of lacking power supply the door can be opened manually (mechanically) via the knob.

### Control

The control has five control inputs, which receive the incoming commands and turns them into functions:

Command	Function
TA	unlock door
TZ	lock door
TDA	door permanently unlocked
TN	day/night mode
TK	door contact

The control has two outputs:

Output	Function
ERR	error display
VZ	display "latchbolt opened" or door contact opened

**Note!** The VZ output is only reset approx. 4 seconds after the detection of door closing. This makes registration of the door status by devices connected in series more reliable, as the time for which the "door open" display is active is always at least 4 seconds.

### Command operation and error handling

The movements of latchbolt and lock bar are effected depending on the operating mode and the current start conditions. These are the door state (open/closed) and the key state (inserted/not inserted). Additionally the movements are controlled regarding their complete realisation and in the event of failure the action is repeated up to three times. If a command could not be realised successfully, the relay output is set to ERROR. A reset can be done with an executable command or by interrupting the power supply.

## Day/night mode

After the changeover to the day mode the lock bar is engaged.

Command	Description
TA	Latchbolt and lock bar are opened. After the door is opened or at least after 10 seconds the latchbolt is closed again.
TZ	If the door contact is closed, the lock bar is extended. If the door is not closed, the command will be released after the door was closed.
TDA	Latchbolt and lock bar are permanently opened. The latchbolt is extended when the command is gone.

The lock bar is extended after the changeover to the night mode.

Command	Description
TA	Latchbolt and lock bar are opened. After opening the door the latchbolt is extended again and 5 seconds after closing the door the lock bar is extended. If the door is not opened within 10 seconds, latchbolt and lock bar are extended again.
TZ	No action. If the door is closed, the standard position of the lock bar is „extended“.
TDA	Latchbolt and lock bar are permanently opened. The latchbolt is extended when the command is gone. The lock bar is extended after closing the door and a waiting time of 5 seconds.

## Command TA (unlock door)

**Start conditions** This command is realised when the door is opened or closed, but only when there is no key inserted.

**Course of action** The latchbolt and, as the case may be, also the lock bar are opened. After opening the door or after 10 seconds, the latchbolt is extended again, also when a key has been inserted in the meantime. In the night mode the lock bar is also immediately extended when the door is closed. In the night mode the lock bar is extended again when the door is opened, 5 seconds after closing the door. This is also the case when a key is inserted.

**Caution: risk of injury!**

## Command TDA (unlock door permanently, fix latchbolt)

- Start conditions This command is realised when the door is opened or closed, but only when there is no key inserted.
- Course of action The latchbolt and, as the case may be, also the lock bar are opened. The latchbolt is only extended after the command has gone. In the night mode and when the door is closed the lock bar is extended 5 seconds later. In the night mode and when the door is opened the lock bar is extended again 5 seconds after closing the door. If a key has been inserted in the meantime, the latchbolt is extended immediately.

**Caution: risk of injury!**

## Command TZ (extend lock bar)

- Start conditions This command is realised, if the door is closed. If the door is opened, the command is realised after closing the door, but only if no key is inserted.
- Course of action The lock bar is extended.

## Command T/N (Day/night changeover)

- Start conditions This command is realised, if the door is closed. If the door is opened, the command is realised after closing the door, but only if no key is inserted.
- Course of action The lock bar is extended in the night mode and opened in the day mode.

## What to do in case of power outage

No commands are realised anymore in the event of power outage. However, the initialisation to the conditions of the door remain. An unexecuted command or an error message is deleted. If the latchbolt is opened when the power supply is interrupted, it will now be extended.

When the power supply is there again, the motor goes in the position according to the operating mode (day/night) and the door position. An inserted key will also be turned. If the command is „door permanently open“, the latchbolt is opened, if no key is inserted.

## For your safety

**Please do always consider the notes and security information!**  
Some chapters in this assembling and operating instruction are highlighted with picture signs.

**Please note these picture signs and their meanings:**



**Caution!** This sign indicates an action, which can cause a damage on the cylinder.



**Note!** This sign indicates useful information for assembling and operation.

## Important Notes



**Caution!** Material damage caused by inappropriate electro-installation. The mains adapter of the motorised cylinder is operated with 230V / 50Hz. According to VDE 0100 works on the 230 V net have to be done by trained specialists only.

**Caution!** Incorrect electrical installation can result in material damage. The power supply module of the motor cylinder is operated with 230V / 50Hz. Work on the 230 V mains supply may only be carried out by trained specialised personnel in accordance with VDE 0100.

**Caution!** All control inputs must be connected exclusively with potential-free contacts. Connection of an external voltage is not permitted and in case of doubt can result in damage to the control.

**Caution!** Material damage caused by wrong storing. If you store the motorised cylinder for a long time before assembling it, please store it in the original package in a dry and dust-free place.

**Caution!** Material damage caused by inappropriate assembly and operation. Read this instruction completely and carefully before assembling the cylinder. Follow the instructions step by step. The manufacturer is not liable for damage caused by inappropriate assembly or operation.

**Caution!** Material damage caused by inappropriate use. Never throw or drop the DOM motorised cylinder II. Never use force during assembly.

**Caution!** Material damage caused by rough-running locks or blocked doors. Maintain old locks or, if necessary, replace them with new locks and adjust tensioned doors. Before installation, check the doors for perfect closure and smooth running of latch and bolt.

**Caution!** The motorised cylinder must not be used in explosive areas.

**Caution!** The delivered connecting cable has to be used for the use in the door only. If different cables are used, DOM does not give a function guarantee.

**Caution!** Material damage caused by fixing screws too tight.

**Caution!** Risk of injury!





It is not possible to eliminate any risk of injury, due to the huge turning moment, when the key is inserted and Activating the motor drive at the same time. Never try to keep hold of a turning key!

Caution! If a door is ungrounded, the shielding has to be installed.



Note! For the initial operation it is necessary to mount wires in or on the door. Unauthorised modifications to approved doors (fire or smoke protection etc.) can lead to the loss of the approval.

Note! The DOM motorised cylinder has to be seen as a knob cylinder regarding the locking technology. In connection with locks and anti-panic-function you have to consider the information of the lock manufacturer before. Knob cylinders are not approved for some panic locks on the market. Their use in panic locks is therefore at your own risk.

Note! The motor cylinder does not perform any escape route protection function in panic locks.

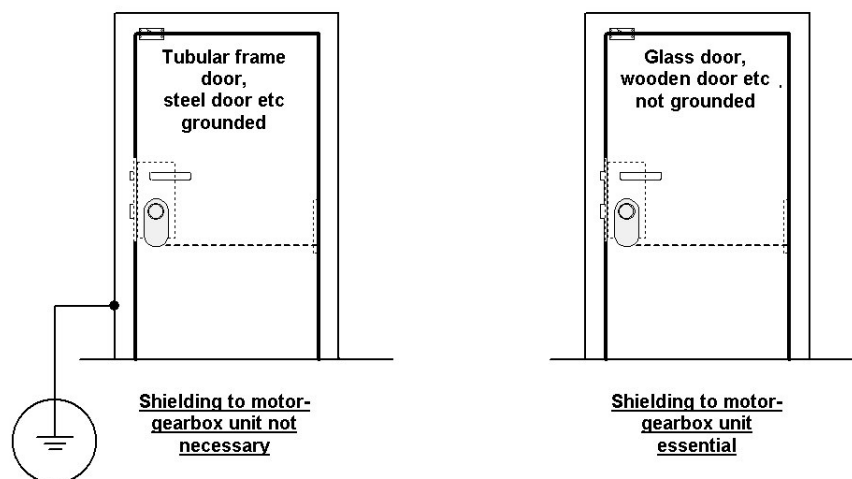
In night operation, the locking status of the door is checked every 15 minutes. If the door has been unlocked with the latch-key, relocking will occur automatically.

Note! Special regulations apply for doors in escape and emergency routes. Ensure compliance with the regulations before installing the components.

Note! The wrong installation of the motorised cylinder impedes the desired locking function.

Note! The connecting cable is a shielded cable. If an extension is necessary, you have to use equal cables. Please consider the necessary cable section. (recommended JY(St)Y 10(min.)x2x0,6 or 0,8).

## Notes for grounding the doors.



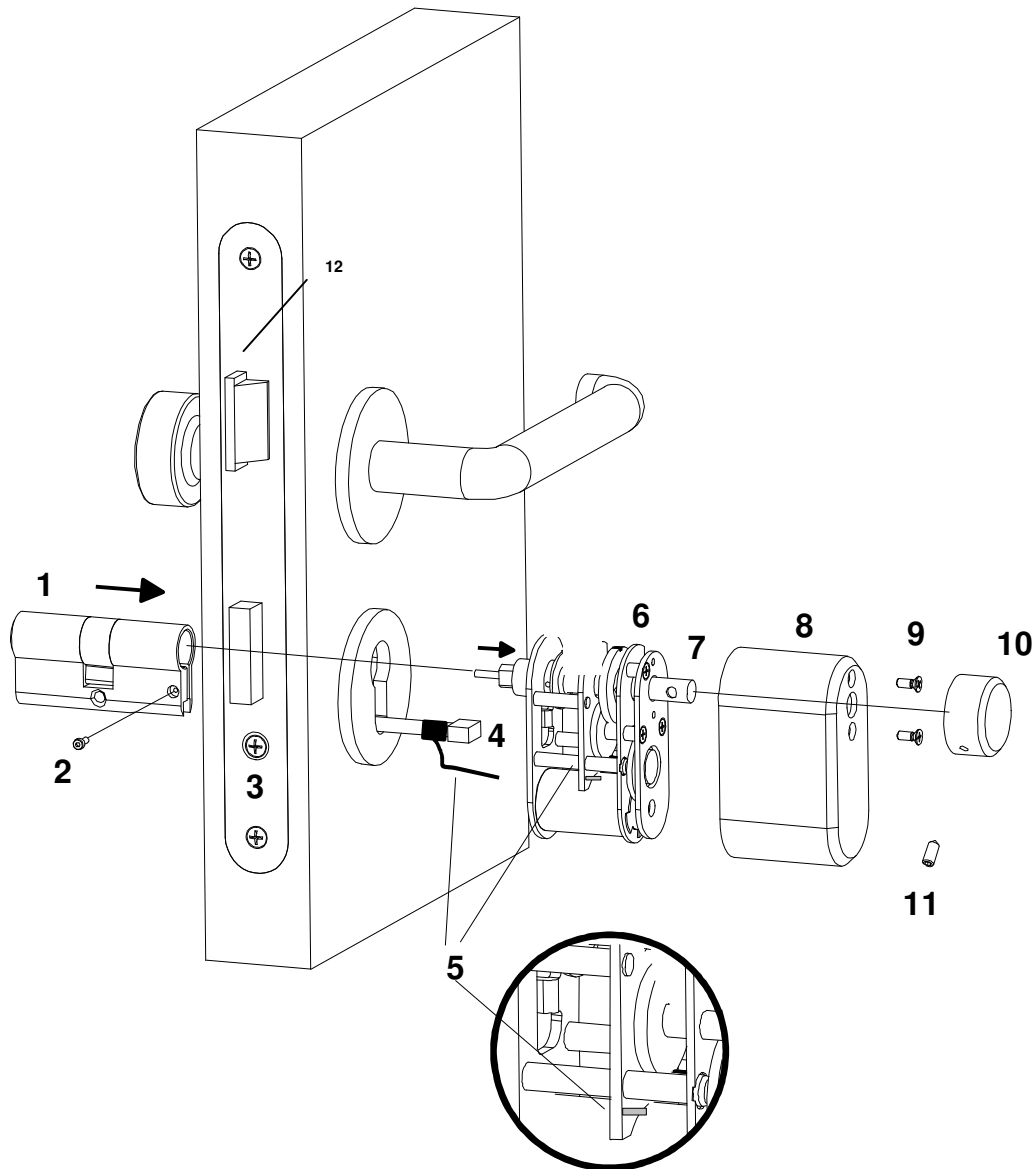
Pic.1

## Preparation Works

**Recommendation:** The doors to be equipped should always be fitted with a perfectly functioning (top) door closer.

1. First check if the door closes properly. Check with a locking cylinder, if the lock bar (in case of multipoint-locks: all lock bars and bolts) and the latchbolt can be moved without friction when the door is closed. Correct the defects, if necessary.
2. If no preparations have been made by the contractor, install the control cable in such a way that the plug on the inside of the door runs outside through the PZ hole. The cable has to be movable in the area of the lockcase, so that you can push it back into the door when mounting the motor-gearbox unit. The plug end of the cable should protrude at least 2.6 cm over the fitting.
3. Mount the door contacts and the cable transition on the suitable sites. Check in any case, if the contact closes when closing the door and opens when opening the door. Therefore please use an ohmmeter. Please consider the assembling instructions for the door contacts.
4. Mount the control in the secured area and lead all connecting cables to that point. If there is no Schuko socket-outlet available for the 230 V connection, you should have an electrician install a 230 V connection to the mounting site of the power supply. Make sure that this connection is not under electrical power supply during assembly.
5. If you have to extend the control line, please note that the shielding of the line does also have to be connected (see also Important notes on page 8 of these instructions!)

## Assembly:



Pic. 2

### Motorised cylinder components

- |                         |                              |
|-------------------------|------------------------------|
| 1. cylinder             | 7. driveshaft                |
| 2. fixing screw (M3x6)  | 8. motor housing             |
| 3. Retaining screw      | 9. housing screws            |
| 4. control cable (7m)   | 10. knob or cover            |
| 5. earthing / shielding | 11. slug (with knob version) |
| 6. motor-gearbox unit   | 12. plunger                  |

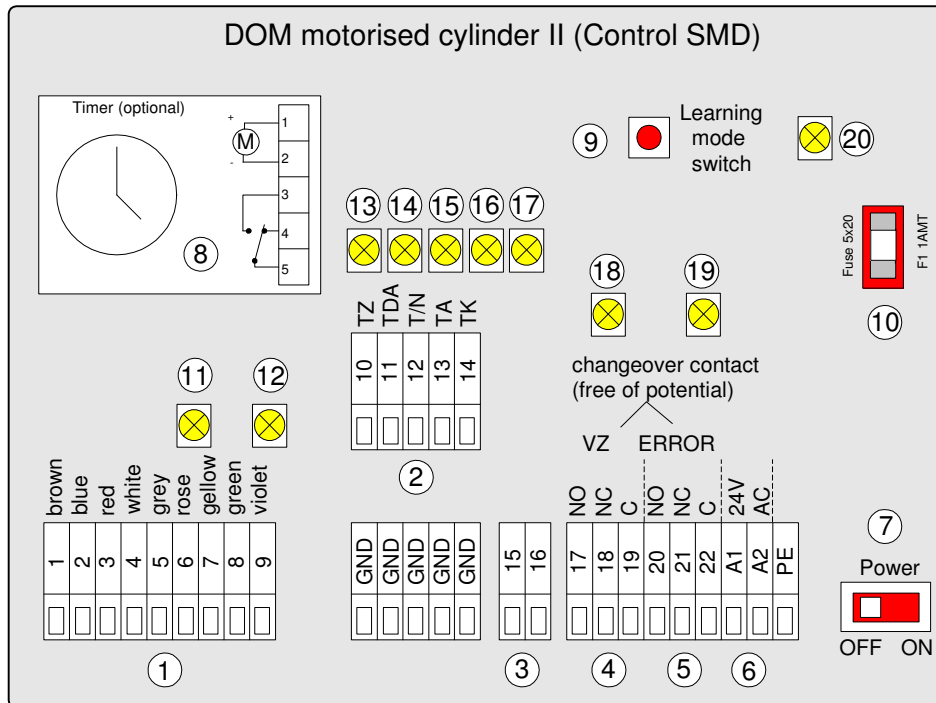
## Assembly of the components

Conditions: Assembling preparations have been finished. Motor housing with knob or cover has been disassembled (see pic. 2 page 10)

1. Put the connector of the control line (4) and the shielding through the opening in the mounting plate of the motor-gearbox unit and put the rectangular connector in the bushing on the sensor circuit board in the motor-gearbox unit (6) (connector and bushing are coded, Polarisation not possible).
2. If the door is not grounded, put the shielding (5) of the control line in the bushing in the steel panel of the motor-gearbox unit (5). If the door is grounded, the shielding is not needed and can be cut off. Make sure that the wires do not touch or block any movable parts. Shielding should be carried out for use between motor and stud bolt.
3. Put the cylinder (1) through the PZ opening from outside. Use the key for the positioning of the locking nose. Make sure that the slot on the inner bottom side of the cylinder unit is pushed over the control line (4) without force and that no damage is caused. Push the cylinder inside as far as possible. This will give you more space when you screw the parts together.
4. Now insert the plunger (12) into the intended drilling in the squared socket on the cylinder. The direction of insertion of the plunger is freely selectable.
5. Now push the gearbox unit (6) in the opening of the cylinder unit (1). If the sockets are aligned towards each other beforehand, they can be joined more easily. The parts will also snap into each other better when you turn the key slightly. Fix the parts with the M3x6 - screw (2) and push the unit back so far that you can insert the retaining screw (3). Make sure that the control line (4) is also led back into the door and that it is not clamped or damaged. Check the locking nose runs properly (catch) by turning the key in both directions. If it runs properly, please fix the retaining screw hand-screwed.
6. Now push the motor housing (8) over the gearbox unit (6) and fix it with the housing screws (9). Finally please put the knob (10) over the driveshaft (7) and fix it with the slugs (11). Please consider the drill hole in the driveshaft. The slug has to be fixed in the drill hole. This is the only way to ensure that the knob is not twisted.
7. **Upon completion, please check again that the components operate smoothly in the lock.**

## Control

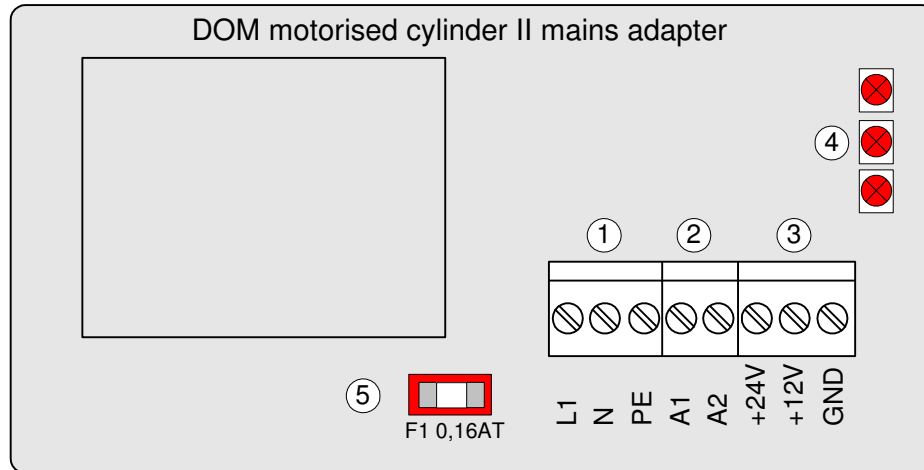
### Overview DOM motorised cylinder II control



- (1) Connection of motor transmission unit
- (2) Command inputs
- (3) Power supply for timer (16 = +24VDC ;15 = GND)
- (4) Door status switching output (changeover contact)
- (5) Error switching output (changeover contact)
- (6) Connection of 24VAC operating voltage
- (7) On / off switch
- (8) Timer (optional)
- (9) Learning mode switch
- (10) Fuse F1 (1A MT)
- (11) LED indicator: key inserted
- (12) LED indicator: signal transmitter
- (13) LED indicator: door closed command
- (14) LED indicator: door permanently open command
- (15) LED indicator: day / night operation
- (16) LED indicator: door contact
- (17) LED indicator: door open command
- (18) LED indicator: door open
- (19) LED indicator: error
- (20) LED indicator: operational display

## Mains adapter

### Overview DOM motorised cylinder II mains adapter

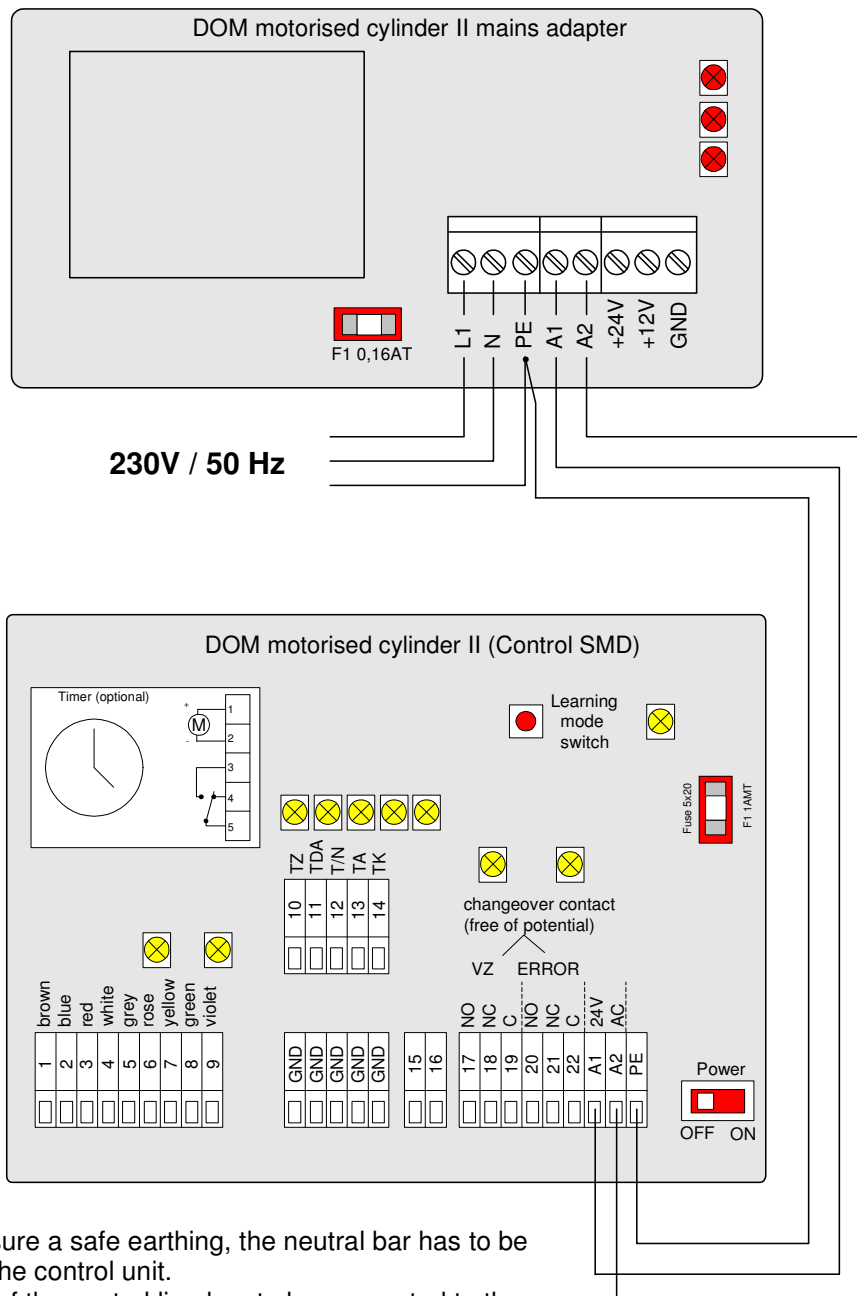


- (1) Power supply 230V /50HZ
- (2) Operating voltage supply 24VAC (control)
- (3) Additional power supply  
24VDC (unstabilised); current carrying capacity 300mA  
12VDC (stabilised); current carrying capacity 500mA
- (4) LED's operating voltage o.k.
- (5) Fuse F1 (0.16AT)

## Cabling / electrical connection

### Security advises

The cabling of the components has to be done in a power-off state. Make sure that the 230V connection is not under electrical power. If you are not sure, safe the belonging automatic cutout against resetting. There is danger of life during the works on the 230V net! For your safety please pull the schuko socket-outlet out of the power outlet.



In order to ensure a safe earthing, the neutral bar has to be connected to the control unit.  
The shielding of the control line has to be connected to the neutral bar.

## Requirements

The components from the door are mounted, the control is mounted in the safe area, the cables are linked up to the control unit.

### 1. Connection of the control line

The DOM motor cylinder II control unit is equipped with pluggable screw-type terminal strips. For an easy cabling you can draw these strips off and re-insert them easily after the consequential mounting.

Please realise the connection according to the drawing below.

In order to avoid malfunctions, please make sure that the stranded wire and not the insulation of the individual conducting wires is fixed inside the screw-type terminal.

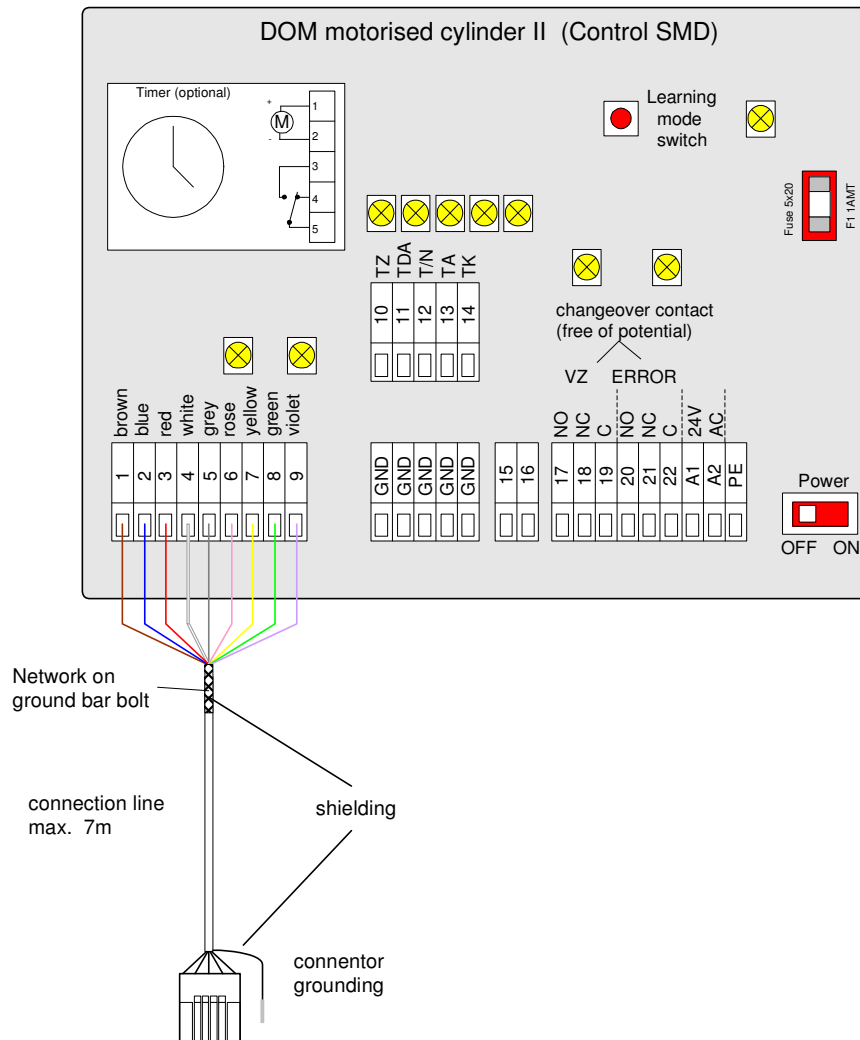


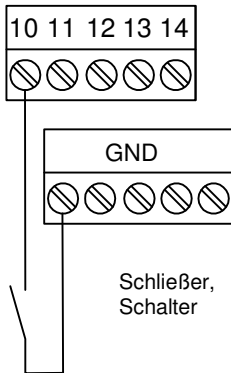
Abb. 4



## Connection of the control inputs (clamp 2)

The command inputs only have to be connected, if the respective functions are used. The exception is the input TK. In this case the correct function of the system does always require a connected door contact.

### Input 10 – TZ (door closed)



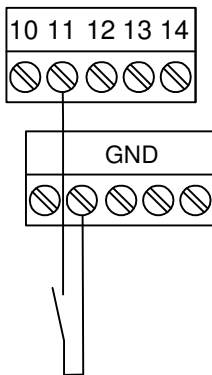
Notes for the function:

Switch for giving the command to lock the door. When the contact is closed, the door will be locked, independent from the current operating mode (day or night mode; permanently open mode).

**Note:** The locking status is updated when the door is closed or the door open status is cancelled! Subsequent commands via the TA or TDA input are not executed until TZ has been opened again!

Recommended wire:  
JY (St)Y...x...x 0,6

### Input 11 – TDA (door permanently open)



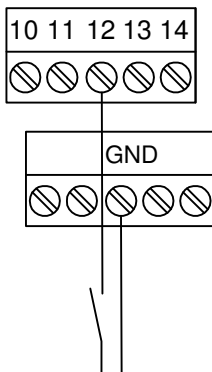
Notes for the function:

Switch for giving the command permanently opened. When the contact is closed, the door will be unlocked, the latchbolt is also opened completely, independent from the current operating mode (day or night mode).

exception: TZ closed

Recommended wire:  
JY (St)Y...x...x 0,6

### Input 12 – T/N (day / night)



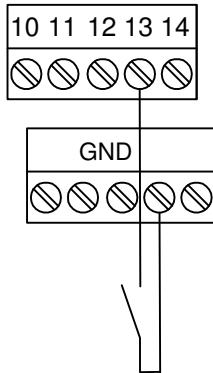
Notes for the function:

Switch for giving the command changeover day/night mode. Day mode-open / locking with latchbolt only. Night mode-open / locking always with latchbolt and lock bar. The night mode is set when the contact is closed.

Note: a bridge has to be used in case of permanent night mode.

Recommended wire:  
JY (St)Y...x...x 0,6

## Input 13 – TA (door open)



Notes for the function:

Switch for giving the command open door. When the contact is closed, the door will be opened, independent from the current operating mode (day or night mode).

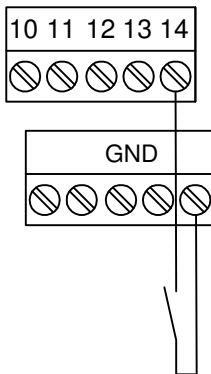
Exception: permanently open mode; door closed

Recommended wire:

JY (St)Y...x...x 0,6

**Connection facility for access control.**

## Input 14 – TK (door contact)

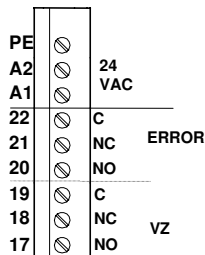


Notes for the function:

This input must always have a door contact. Otherwise malfunctions can occur. Make sure that the door can be opened and closed correctly, depending on the door state.

Recommended wire: existing connecting line, or for the extension JY(St)Y...x...x 0,6

## Outputs, overview



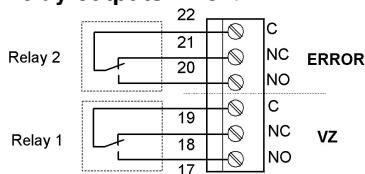
Notes for the function:

Clamp A1-A2 connection operating voltage 24 VAC

The output ERROR is set when the motorised cylinder cannot reach the learned position (jamming of latchbolt or lock bar).

The output VZ offers you the display of the door state open/closed.

### Relay-outputs Error / VZ



Notes for the function:

C=change-over contact, NC=closed in passive state

NO = opened in passive state

The picture shows the contacts in the passive state.

Capacity of the contacts:

max. 250V/5A AC

## Initial operation

Learning mode 1, 2 or 3 is used to commission the DOM motor cylinder, depending on the application. The learning mode is based on the following principle: with the door open, the open and closed positions are moved to. The motor cylinder then locks, and waits for the panic activation. When the bolt is engaged again, the door must be closed. The door is now locked once and the learning process is complete.

The learning mode can be activated at any time during normal operation, with the door open. Activation directly after a reset is no longer necessary, but still possible. The mode starts as soon as the learn key is pressed.

### Learning mode 1 (standard)

The motorised cylinder control is in the position of learning and memorising the functions of the lock and the door independently. Once acquired traverse paths of latchbolt and lock bar are not memorised flighty and they remain until something is „learned“ again.

#### Requirements:

All components are mounted, the cabling has been done, 230 V-mains voltage are prepared, but not switched on with the power switch.

All control inputs are opened, the clock timer is set on the day mode. The door is opened.

	Action	Reaction
1	Setting of the basic position. Turn the lock bar and the latchbolt in an opened position with the key. Draw the key off when it is in the draw-off position.	
2	Press the button learning mode and keep it pressed. Switch on the power switch and then let off the button learning mode.	The lock bar slowly moves forward until the end position is reached (depending on the direction of circuit of the door the latchbolt is opened first.
3		The motor cylinder waits for approx. 10 seconds..
4		The bolt is retracted and the latch engages briefly.
5		The motor cylinder waits for approx. 10 seconds for the door to close.
6	Please close the door	The bolt moves into locked position.
7		The bolt now moves into the position preset by the control.
8	The motorised cylinder is ready for operation!	

## Learning mode 2 (different traverse paths)

Steps 1..4 are performed with the door open. The door is only closed at the 5th process step. From this point, the lock travel can be changed by means of e.g. the locking plate (2-revolution lock, only 1 bolt revolution possible in the locking plate).

**This change is detected by the motor cylinder.**

## Learning mode 3 (Acquisition of the anti-panic-function)

The learning mode for using anti-panic locks only differs from the standard learning mode through actuation of the latch during the waiting time in step 3. **With programming of the panic function, the motor cylinder will attempt to lock the door every 15 minutes in night operation.**

Therefore the following changes results in learning mode:

4	The lock bar is extended to the end stop again.
5	The motor cylinder waits for approx. 10 seconds. Now operate the door latch in order to trigger the anti-panic function.
6	The lock bar is extended to the end stop again (for checking the position).

### Note:

Special regulations apply for doors in escape and emergency routes. Please ensure compliance with the regulations before installing the components!

Please pay particular attention to ensuring that the door contact is precisely adjusted. The control cannot operate reliably if the door contact indicates that the door is closed when it is still open!

## Notes

### Anti-panic-locks

The DOM motorised cylinder II is a knob cylinder!

Consequently the manufacturers' instructions for the use of knob cylinders have to be considered when using the DOM motorised cylinder II with anti-panic-locks.

The lock rod of the DOM motorised cylinder II is permanently connected with the knob and the motor-gearbox. The function „learning mode 3“ must not be used with locks, which also activate the lock rod of the cylinder when the anti-panic-function is activated. **However, these locks are not suitable for operation with the motor cylinder, as manually triggered, rapid motor rotation can irreparably damage the control.**

### Operation

The DOM motorised cylinder II can be operated in the standard via the locking cylinder with an authorised key at any time. As soon as the key is inserted and the entrainment of the lock is done, the motor-gearbox unit is switched off. When the key is turned in the desired direction, the door is opened or closed (function as with standard locking cylinders).

You will need a bit more force, because the gearbox is also turned. Depending on the position of the lock rod, a free turning without locking function can be effected. This is not a malfunction, but a normal, technically caused effect.

### Security advises

If a key is inserted during the execution of a control command (depending on execution or activated by a switch, e. g. „door closed“), it is possible in the worst case that the key is also turned. There is the risk of injury, when you keep holding the key!

If a key is inserted in the locking cylinder, the control commands per switch are not executed.

## Specific features

### Locking in the day mode

In the day mode the lock bar of a standard lock is opened, the door is only kept closed with the latchbolt.

If the door is locked with the key, the day mode is cancelled. The locked state is kept until the door is unlocked with the key, with the inner knob or with the command „door open“.

## Locking aid

In case of locks with multipoint locks it might be necessary to turn the key several times to lock or unlock the door. Insert the key, turn it once in the desired direction and draw it off again. The motorised cylinder effects all remaining rotations independently for you until the door is completely opened.

**The locking aid is not available when the cylinder is operated with the anti-panic-function.**

## Operation with inner knob

### Night mode:

If you turn the inner knob some millimetres in the desired direction (opened/closed), the motorised cylinder will turn until the desired state is reached.

### Day mode:

To open the door turn the knob some millimetres in the desired direction. The motor cylinder opens independently.

It is not possible to lock via the knob, the command is executed, but afterwards the lock bar will go back in the basic position. An unintentional locking via the knob is not possible.

## Temporal courses:

### Night mode, opening with key

Insert the key, turn it until the entrainment is done, turn it one lock bar tour, draw the key off.	The motorised cylinder turns remaining tours independently and unlocks completely.
Open door (door contact opens).	The latchbolt is opened again.
Close door (door contact closes).	The motorised cylinder waits for 5 seconds and locks.

### Day mode, opening with key

Insert key, turn it until the entrainment is done, draw back the latchbolt and open the door (door contact opens).	The latchbolt is opened again.
Close door (door contact closes).	

## Night mode, opening with inner knob

Turn the knob in the direction opened.	The motorised cylinder turns remaining tours independently and unlocks completely.
Open door (door contacts opens).	The latchbolt is opened again.
Close door (door contacts closes).	The motorised cylinder waits for 5 seconds and locks.

## Day mode, opening with inner knob

Turn the knob in the direction opened.	The latchbolt is opened.
Open door (door contacts opens).	The latchbolt is opened again.
Close door (door contacts closes).	

## Night mode, opening via DOM access control or switch on TA, reader

Release, press button.	The motorised cylinders rotates independently and unlocks completely.
Open door (door contacts opens).	The latchbolt is opened again.
Close door (door contacts closes).	The motorised cylinder waits for 5 seconds and locks.

## Day mode, opening via DOM access control or switch on TA, reader

Release, press button.	The latchbolt is opened.
Open door (door contacts opens).	The latchbolt is opened again.
Close door (door contacts closes).	

### **The following applies to all functions:**

If the door (door contact) is not opened after an opening command, the motorised cylinder goes back into the position, which was set before the opening command was given, after 10 seconds.

If the door (door contact) is not closed again after opening, the motorised cylinder stays in the unlocked position (i. e. the latchbolt is extended after opening the door).

## Circuit Output Error

This circuit output offers you a possibility of displaying problems with opening and locking. The circuit output is set when the lock bar or the latchbolt cannot go into or out of the locking plate.

Example: extension of the lock bar when the door is closed.

Door is closed. (door contact closes).	The lock bar is extended after 5 seconds and goes against the locking plate.
	The motorised cylinder opens the lock bar completely and waits for 10 seconds.

This action is repeated three times every 10 seconds. If a remedy is found during one of the three trials continues working as usual.

If no remedy is found until the third trial, the motorised cylinder stops the error operation. The lock bar goes in the position unlocked and the motorised cylinder sets the output Error immediately. The motorised cylinders now tries to establish the locked state every 15 minutes. The circuit output ERROR is set back when the door was locked successfully.

The contact 22-20 at clamp 3 is closed, 22-21 is opened when switching the relay.

Example: Opening the lock bar when the door is closed.

Opening command is given(e. g. DO, DPO)	The lock bar is retracted and held, for example owing to stiffness.
	The motorised cylinder waits for 1 second and repeats the trial to open.

The unlock operation is effected three times in the interval of 1 seconds. If the door cannot be unlocked, the motorised cylinder stops the error operation after the third trial. The motorised cylinder does now wait for a new opening command and then tries to unlock again. If the door is unlocked successfully, the circuit output ERROR is set back.

The manual operation is still possible.

All automatic functions will only be possible after the ERROR state has been set back resp. after the deletion of errors with a subsequent reset.



## Reset after an error

Open the door and keep it opened.  
Switch off the mains adapter of the control.

**Check with the key or with the inner knob, if the lock works properly. Check other reasons for a malfunction (contaminant between frame and blade, etc.)**

Close the door.

Switch on the mains adapter of the control again.  
The motorised cylinder checks its „learned“ traverse paths and is ready for operation again, provided that there are no operational faults anymore.

## Circuit output VZ

This circuit output offers you the possibility of displaying the state of the door (opened/closed).

When the door is closed, the output is in the passive state.

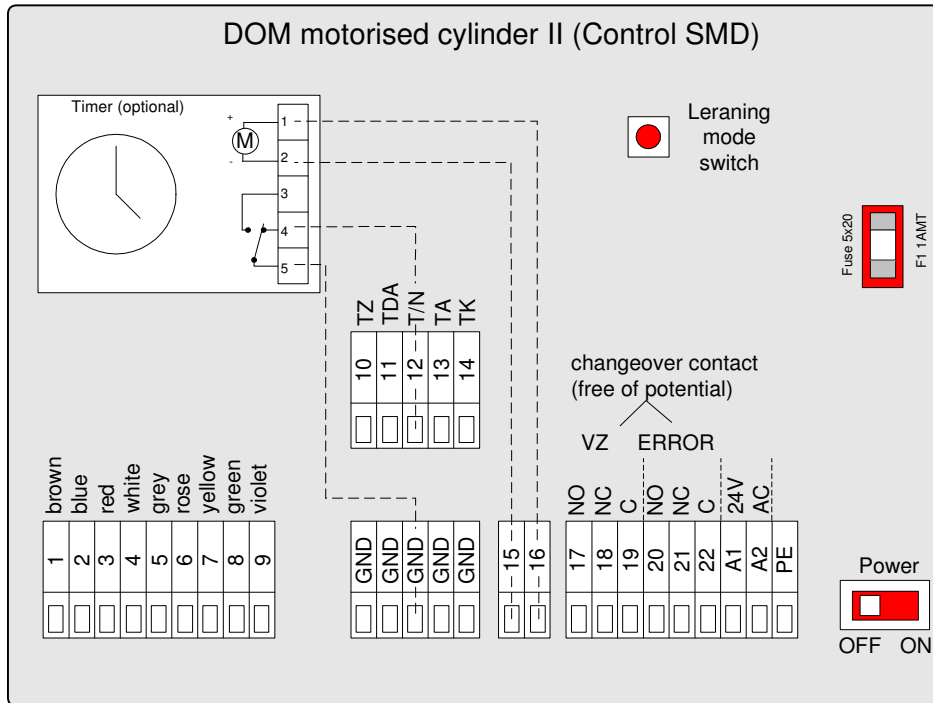
As soon as the latchbolt is opened resp. the end position „opened“ of the lock is reached or when the door contact is opened, the contact 17-19 is closed, the contact 17-18 is opened.

This state is kept as long as the door (door contact) is closed.

## Integrated clock timer (optional)

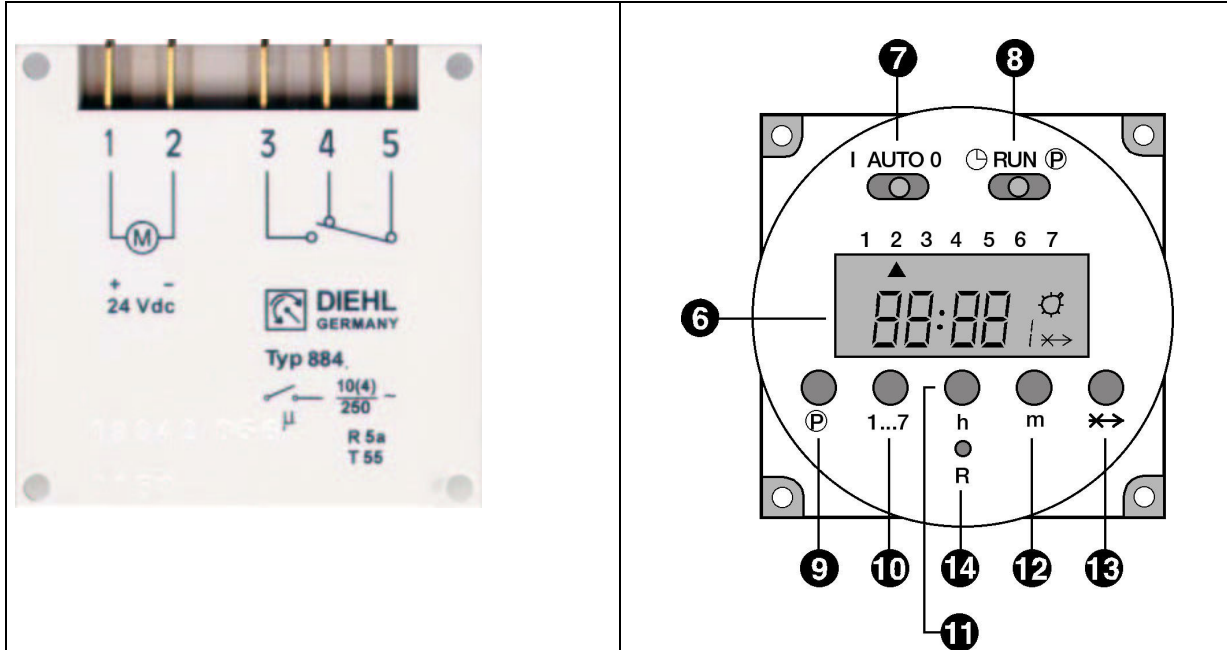
The clock timer is a week clock timer. It offers a potential-free changer contact and so it can be used for different tasks. The programming for this clock timer is described below. For more extensive time and switch functions we recommend the use of a commercially available year clock timer.

Example: switch of day and night mode with the clock timer.



## Optional integrated clock timer

The clock timer is a week clock timer.



For larger time and switching functions we recommend the use of a customary year clock timer.

### Views

**Note!** Concerning weekdays the watch can be printed on optionally, depending on the delivery batch.

1	2	3	4	5	6	7	1...7
---	---	---	---	---	---	---	-------

or

M	T	W	Th	F	S	Su	DAY
---	---	---	----	---	---	----	-----

## Overview function elements

Pos.	Function
(1), (2)	Contacts for the connection to the power supply.
(3), (4), (5)	Relay contacts
(6)	LCD-display
(7)	<p><b>Slide switch for setting the operation mode</b></p> <p><b>I:</b> Permanently ON (day mode set permanently)</p> <p><b>AUTO:</b> Connected DOM motorised cylinder II switches between day and night mode according to the programmed switching points.</p> <p><b>O:</b> Permanently OFF (night mode set permanently)</p>
(8)	<p><b>Slide switch for setting the time and the switching times:</b></p> <p>⊕: Set current time</p> <p><b>RUN:</b> Switch program and clock are running</p> <p><b>P :</b> Enter switching times</p>
(9)	<p><b>P Button to program the 16 switch times</b></p> <p>if the switch times 1, 3, 5, 7, 9, 11, 13, 15, (switch-on points) are selected, the „lamp“ symbol appears * on the right side of the display.</p> <p>If the switch times 2, 4, 6, 8, 10, 12, 14, 16 (switch-off points) are selected, no symbol appears.</p>
(10)	<p><b>1...7: Button to set the week day</b></p> <p>(for the current week day and switch time day).</p> <p>When you program the switch times you can select single week day and also day blocks:</p> <p>1..5 (Monday to Friday)      1..6 (Monday to Saturday)</p> <p>6..7 (Saturday to Sunday)    1..7 (Monday to Sunday)</p>
(11)	<p><b>h: Button to enter the hours</b></p> <p>(for current time and switch time)</p>

## Overview function elements (2)

Pos.	Function
(12)	<b>m:</b> <b>Button to enter the minutes</b> (for current time and switch time)
(13)	<b>-X-&gt;</b> <b>Skip-function</b> Pressing the Skip-button '-X->' leads to: switch times of the following calendar day are not considered. The function will be valid from 00:00 to 23:59 of the next day. <u>Example:</u> The day mode is normally set e. g. between 08:00 to 17:00 by the clock timer. By pressing the button '-X->' e. g. on a Tuesday, the setting of the day function on Wednesday is impeded. For further details of the skip function see page 9.
(14)	<b>R:</b> <b>Reset-button to delete all switch times and the current time.</b>

### Note for the buttons „P“, „1...7“, „h“ and „m“:

Pressing these buttons shortly leads to a count up by 1;

Pressing these buttons for more than 3 seconds leads to a quicker continuous count up.

### Supplementary assembling and connection of the clock timer

Use the assembling parts included in delivery and insert the clock in the existing openings in the control plate.

The connection of the feed line can be taken from the cabling instruction on page 15 of the initial operation instruction for the DOM motorised cylinder II.

## Operation of the clock timer

The timer is ready for operation after a reset.

### RESET

Do a reset before the initial operation:

<b>1.</b>	<b>Make sure that the right slide switch is on the position RUN.</b>
<b>2.</b>	<b>Press the „R“-button with a thin ballpoint pen or something similar and then release the pressure on the button.</b> <b>„0:00“ starts blinking in the display.</b>

## Setting of week day and time

Please follow the steps below

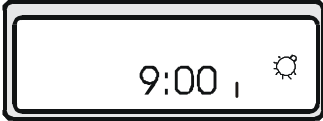
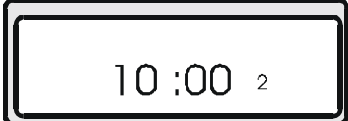
1	Set the right slide switch on the position ☉
2	Press the „1...7“-button to set the week day 1 = Monday 2 = Tuesday 3 = Wednesday 4 = Thursday 5 = Friday 6 = Saturday 7 = Sunday An arrow in the display marks the set week day.
3	Press the button „h“ (for hours) and the button „m“ (for minutes) to set the time
4	Set the right slide switch on the position RUN. The colon in the display starts blinking, the time is running.

## Setting of operation modes

<p><b>Permanently ON</b> The connected DOM motorised cylinder II is permanently set on day mode.</p>	<ul style="list-style-type: none"><li>• Set the left slide switch on the position I.</li><li>• The „lamp“-symbol ✱ appears in the display.</li></ul>
<p><b>Permanently OFF</b> The connected DOM motorised cylinder II is permanently set on night mode.</p>	<ul style="list-style-type: none"><li>• Set the left slide switch on the position 0. The „lamp“-symbol ✱ disappears.</li></ul>
<p><b>AUTO</b> The connected DOM motorised cylinder II switches between day and night mode according to the programming made.</p>	<ul style="list-style-type: none"><li>• Set the left slide switch on the position AUTO.</li><li>• State ON: symbol ✱ appears.</li><li>• State off: symbol ✱ disappears.</li></ul>

## Switching times

You can program 16 switch times (8 x ON, 8 x OFF):

<p><b>Switch-on times (set day mode)</b> 1, 3, 5, 7, 9, 11, 13, 15 („lamp“-symbol * in the display),</p>	<p>1 2 3 4 5 6 7</p> 
<p><b>Switch-off times (set night mode)</b> 2, 4, 6, 8, 10, 12, 14, 16 (no „lamp“-symbol in the display).</p>	<p>1 2 3 4 5 6 7</p> 

The selected switch time is shown in the display by a number in the right bottom side.

**Please note the following for the programming:**

Every switch-on time is closely connected to the following switch-off time.

- switch point 1: switch on    switch point 2: switch off
- switch point 3: switch on    switch point 4: switch off .....etc.

**The switch times should always be programmed pairwise, in order to avoid errors.**

Note: The shortest switching distance is 1 min!



## Programming of switching times

**Please follow the steps below:**

Set the right slide switch on the position <b>P</b> .																																	
The first switching time (1, switch-on, resp. set day mode) is displayed.																																	
<p><b>Setting the switch-on time</b></p> <ul style="list-style-type: none"> <li>▪ Press the „1...7“-button, in order to set the week day or day blocks. You can select single week days or day blocks by pressing this button several times.</li> </ul> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="padding-left: 20px;">1-mal Press:</td> <td style="padding-left: 20px;">Week day 1</td> <td style="padding-left: 20px;">(Monday)</td> </tr> <tr> <td style="padding-left: 20px;">2-mal Press:</td> <td style="padding-left: 20px;">Week day 2</td> <td style="padding-left: 20px;">(Tuesday)</td> </tr> <tr> <td style="padding-left: 20px;">3-mal Press:</td> <td style="padding-left: 20px;">Week day 3</td> <td style="padding-left: 20px;">(Wednesday)</td> </tr> <tr> <td style="padding-left: 20px;">4-mal Press:</td> <td style="padding-left: 20px;">Week day 4</td> <td style="padding-left: 20px;">(Thursday)</td> </tr> <tr> <td style="padding-left: 20px;">5-mal Press:</td> <td style="padding-left: 20px;">Week day 5</td> <td style="padding-left: 20px;">(Friday)</td> </tr> <tr> <td style="padding-left: 20px;">6-mal Press:</td> <td style="padding-left: 20px;">Week day 6</td> <td style="padding-left: 20px;">(Saturday)</td> </tr> <tr> <td style="padding-left: 20px;">7-mal Press:</td> <td style="padding-left: 20px;">Week day 7</td> <td style="padding-left: 20px;">(Sunday)</td> </tr> <tr> <td style="padding-left: 20px;">8-mal Press:</td> <td style="padding-left: 20px;">Day block 1 to 5</td> <td style="padding-left: 20px;">(Monday to Friday)</td> </tr> <tr> <td style="padding-left: 20px;">9-mal Press:</td> <td style="padding-left: 20px;">Day block 6 to 7</td> <td style="padding-left: 20px;">(Saturday to Sunday)</td> </tr> <tr> <td style="padding-left: 20px;">10-mal Press:</td> <td style="padding-left: 20px;">Day block 1 to 6</td> <td style="padding-left: 20px;">(Monday to Saturday)</td> </tr> <tr> <td style="padding-left: 20px;">11-mal Press:</td> <td style="padding-left: 20px;">Day block 1 to 7</td> <td style="padding-left: 20px;">(Monday to Sunday)</td> </tr> </table> <p style="padding-left: 40px;">Arrows in the display mark the week days.</p> <p><b>Press the buttons „h“ and „m“, in order to set the switch-on time.</b></p>	1-mal Press:	Week day 1	(Monday)	2-mal Press:	Week day 2	(Tuesday)	3-mal Press:	Week day 3	(Wednesday)	4-mal Press:	Week day 4	(Thursday)	5-mal Press:	Week day 5	(Friday)	6-mal Press:	Week day 6	(Saturday)	7-mal Press:	Week day 7	(Sunday)	8-mal Press:	Day block 1 to 5	(Monday to Friday)	9-mal Press:	Day block 6 to 7	(Saturday to Sunday)	10-mal Press:	Day block 1 to 6	(Monday to Saturday)	11-mal Press:	Day block 1 to 7	(Monday to Sunday)
1-mal Press:	Week day 1	(Monday)																															
2-mal Press:	Week day 2	(Tuesday)																															
3-mal Press:	Week day 3	(Wednesday)																															
4-mal Press:	Week day 4	(Thursday)																															
5-mal Press:	Week day 5	(Friday)																															
6-mal Press:	Week day 6	(Saturday)																															
7-mal Press:	Week day 7	(Sunday)																															
8-mal Press:	Day block 1 to 5	(Monday to Friday)																															
9-mal Press:	Day block 6 to 7	(Saturday to Sunday)																															
10-mal Press:	Day block 1 to 6	(Monday to Saturday)																															
11-mal Press:	Day block 1 to 7	(Monday to Sunday)																															
<p><b>Setting the switch-off time</b></p> <ul style="list-style-type: none"> <li>▪ Press the „P“-button. The next switching time (2, switch-off, resp. set night mode) is displayed.</li> <li>▪ Press the „1...7“-button, in order to set the week day or day blocks. You can select single week days or day blocks by pressing this button several times.</li> </ul> <p>Press the buttons „h“ and „m“, in order to set the switch-off time.</p>																																	
<p><b>Repeat the steps 2 to 3 as often as necessary.</b></p>																																	
<ul style="list-style-type: none"> <li>▪ After having entered the desired switching times set the left slide switch on the position AUTO and the right slide switch on the position RUN. The clock timer does now switch according to the programmed switching times.</li> </ul>																																	

## Program flow

When the switch-on point is reached, the DOM motorised cylinder II is set on day mode. During the switch-on duration, resp. the day mode the „lamp“-symbol ★ is shown in the display. When the switch-off point is reached, the DOM motorised cylinder II is set on night mode again and the „lamp“-symbol ★ disappears.

### Request, change and delete

Set the right slide switch on the position P.

#### Request

Press the „P“-button as often until the desired switch time is shown in the display.  
Not reserved switching times are indicated by a blinking of the time „0:00“.

#### Change

Select the desired storage space with the button „P“.  
Press the „1...7“-button, in order to change the week day.  
Press the „h“- and „m“-button, in order to change the switching time.

#### Delete single programs:

Select the desired storage place with the button „P“.  
Press the button 1...7 as long until no display of the day appears anymore.  
The single step is not executed without a week day.

#### Delete all programs:

Afterwards press the buttons „P“ and „h“ at the same time.  
„12:00“ blinks in the display for a short time, all switching points are deleted.

Set the right slide switch back on the position RUN when you have finished the request, change or deletion

## Skip-function (soft-override)

The skip-function skips the set program steps on the next calendar day. That means that the program is not executed for the following day.

### Please follow the steps below:

3.	Set the right slide switch on the position RUN.
4.	Press the skip-button „-X->“.
5.	Pressing the skip-button „-X->“ again cancels the skip-function.

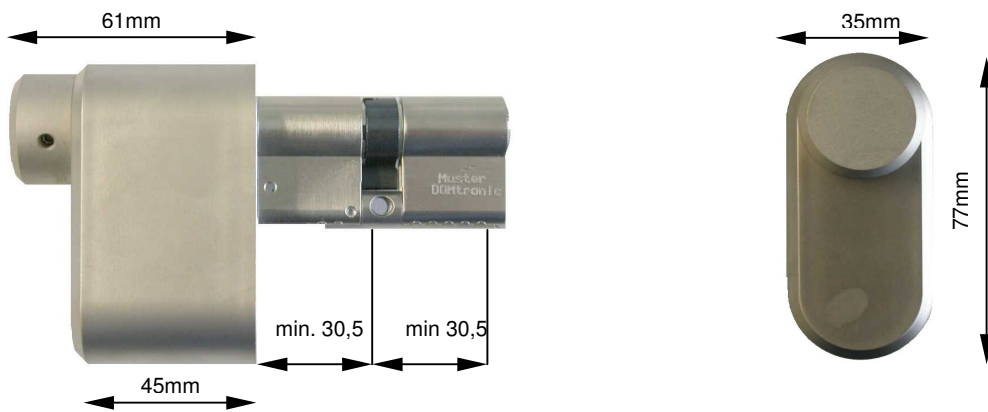
The skip display is in the display immediately after pressing the button. The skip-function becomes active when the time change to 12:00 AM (midnight 00:00) is effected. The skip display is deleted from the display, as soon as the function is active. The activity of the skip-function is indicated by a blinking display of the day. The skip-function is cancelled when the following day is reached.

## Error search

Every switch-on time is closely connected with the following switch-off times. For this reason, e. g. the following combinations of switch-on and switch-off times lead to errors:

Switch-on time	Switch-off time
Switch-on time programmed	No entry
No entry	Switch-off time programmed
Day block (e. g. 1, 2, 3, 4, 5)	Other day block (e. g. 1, 2, 3, 4, 5, 6)
Day block	Week day
Switch-on time programmed (e. g. Wednesday 9:00)	Switch-off time is before switch-on time on the same day (e. g. Wednesday, 8:59)
Switch-on time and switch-off time are the same (e. g. Wednesday 9:00)	

Technical Data	Motorised Cylinder
<b>Power supply:</b>	control: 230 V / 50 Hz Fuse 160mA Motorised cylinder: 24 V DC (via control)
<b>Current consumption:</b>	130mA / 230 V
<b>Connection control unit with motorised cylinder</b>	10-pole connection line (included in delivery) length of connection line: 7 m, 10 × 0.14
<b>Inputs:</b>	5 potential-free inputs for: permanently open, day/night changeover, open the door, close the door, door monitor
<b>Outputs:</b>	2 potential-free message outputs (ERROR, VZ) capacity: 250 V / 5 A 2 outputs with 24 V DC, 12 V DC capacity: 300 mA (24 V) not stabilised 500 mA (12 V)
<b>Turning moment:</b>	max. 2 Nm
<b>Opening time:</b>	approx. 1.5 sec. (for 2 tours lock bar and latchbolt)
<b>Other functions:</b>	automatic recognition: DIN-left, DIN-right number of lock bar tours panic-function automatic day/night changeover (with optional week-clock timer) automatic locking aid for the operation of key and knob
<b>Range of temperature:</b>	-20 to +55 °C
<b>Assembly:</b>	in PZ-opening (DIN 18252, EN 1303) <i>Note DIN 107</i> => with left wing of door, motor on the side of the lock L1 and with right wing of door, motor on the side of the lock R1 observe pin dimensions! <b>(motor housing should swing past frame)</b>
<b>Protection class:</b>	IP65 (control)
<b>Weight:</b>	control: 0,63 kg power supply: 0,84 kg motorised cylinder min. 0,45 kg (depending on cylinder length)
<b>Dimensions:</b>	control: 160 × 120 × 70 mm power supply: 160 × 80 × 70 mm motorised cylinder: 35 × 77 × 61 mm (without locking cylinder) locking cylinder: min. 30,5/30,5 mm up to max. 70/70 mm, extendable on both sides in 5 mm steps .



If you have any questions beyond the information given in this assembly and operation instructions, please turn directly to the branch in your country.

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## Important note

This documentation is updated on a regular basis. The editor will appreciate any information about possible errors or suggestions at any time.

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