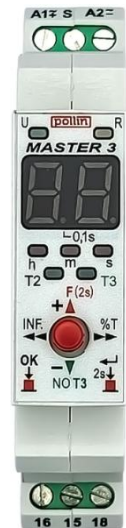


Time relay MASTER-3

Description

The MASTER-3 time relay is a multifunctional, digital device designed for use in automation systems. It offers 28 time functions, including on-delay, off-delay, cyclic switching, and special modes. It features a large two-digit LED display, indicator LEDs, and a five-position joystick for quick and intuitive parameter entry. Depending on the selected function, independent values for times T1, T2, and T3 can be set, allowing for precise control of the operating cycle. The setting range is from 0.1 s to 99 h 59 min 59.9 s. Status is indicated by a green "U" LED (power) and a yellow "R" LED (operation). The maximum contact load is 16 A at 250 V AC AC-1 (2.5 A at 250 V AC AC-15), enabling direct control of loads.

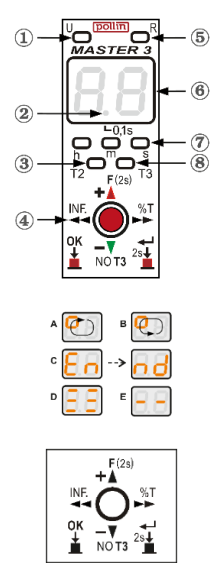
The modular housing (1 DIN module) is made of self-extinguishing plastic and is designed for mounting on a TH35 rail.



Principle of operation

After applying power, the MASTER-3 is ready for operation, as indicated by the green LED "U." Programming is performed using the joystick – a long press (>2 seconds) activates the function selection mode, and subsequent movements of the joystick allow you to change the function number, set the T1, T2, and T3 times, and confirm them. The LED display provides information about the function number, time values, countdown status (graphic animations), and messages (e.g., "End" after the cycle is completed). During operation, the yellow LED "R" lights when terminals 15-18 are shorted. The device allows you to view the set parameters at any time and display the percentage progress of the function. After programming, the settings are saved in the device's memory, and the function is activated after powering up again or applying the "S" control signal (depending on the selected function). The MASTER-3 is equipped with protection against programming errors (indicated by flashing dashes) and automatic termination of programming after 15 seconds of inactivity.

Operation signaling

	1. Power indication: green LED "U" is lit. 2. Tenths of a second setting indication: a dot flashes on the display. 3. Indication of setting or viewing the T2 time value: the green "T2" LED lights up. 4. Joystick: five-position button for programming. 5. Output contact position indication: the yellow LED "R" lights up when terminals 15-18 are shorted. 6. Displaying information about: • expiry of the set time (in %), • set parameters (function number, time values T1, T2 and T3) - preview mode, • counting down the T1 time (the square on the display moves around the circle to the right) - Fig. A, • counting down the T2 time (the square moves around the circle to the left) - Fig. B, • setting individual digits of times T1, T2, T3 (flashing digit), • completion of the function (the letters "E", "n", "d" appear successively) - Fig. C, • programming error (all horizontal lines flash) - Fig. D, • stopping the time countdown or waiting for it to start (two horizontal lines are displayed) - Fig. E. 7. Indication of setting or viewing hours, minutes and seconds: the corresponding red LED marked "h", "m" or "s" lights up for times T1, T2 and T3. 8. Signaling regarding time T3: • possibility of accepting or rejecting programming (green LED "T3" flashes), • setting the T3 time (the "T3" LED is on), • preview of the set T3 time value (the "T3" LED is on).
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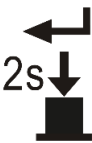
Jostick button operation (five positions)

Press up	
“F(2s)”	A longer (> 2 s) press upwards starts programming. The first function symbol F0 (permanent on) will appear.
“+”	increasing the function number or increasing the digit of the set time value by short presses (long presses will cause subsequent digits to appear automatically and, as a result, you will reach the desired digit faster).

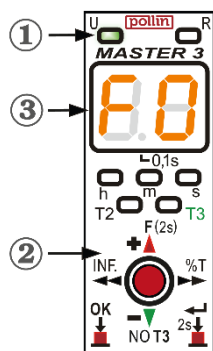
Pressing down	
“ — ”	decreasing the function number or decreasing the digit of the set time (analogously as above for "+").
“ NO T3 ”	resignation (rejection) of setting the T3 time after the "query" appears, signaled by a flashing green LED marked T3.

Press left	
	"scrolling" to the left, i.e. moving during programming through the set parameters in order to check or change them.
“ INF. ”	short pressing during the execution of a function or inactivity ("End" message) will allow you to check the parameters of the function being performed (preview mode) - the number of this function will appear and you can use the right scroll button to check what parameters of times T1, T2, T3 were set. long press (>2s) allows, similarly to the above, to check the set parameters for the newly programmed function (before replacing the "old function" by turning the power off and on).

Press right	
	"scrolling" to the right, i.e. moving during programming through the set parameters in order to check or change them.
“ %T ”	A short press while the function is running will display the amount of time (in percentage) that has already passed since the function was started.

Vertical press	
	Confirmation of individual set parameters during programming (short press).
	Saving the set parameters to memory after programming is completed (long press, >2s).

Programming

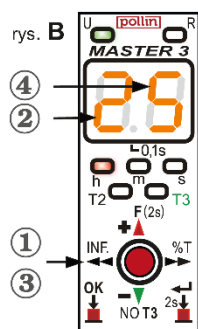
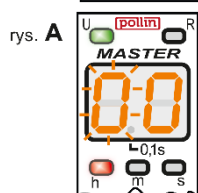


START PROGRAMMING AND SELECTING FUNCTIONS

Turn on the power (the green LED U (1) lights up), then press the joystick button up F (2s) and hold it for more than 2s (2) until the first function symbol F0 (permanent off) appears on the display (3).

Then, briefly press the up (+) button to increase the function number until the desired number appears on the display. You can also hold the button longer, and the subsequent digits will scroll automatically – reaching the desired function number faster. Press the down (-) button to decrease the function number. After selecting the function number, confirm it by pressing the OK button vertically (towards the interior of the device).

TIME SETTING T1 (Fig. A and B)



After confirming the function number, MASTER-3 will automatically proceed to setting the tens of hours of time T1 (the red h LED will light up, 00 will appear on the display and the tens digit will flash - Fig. A).

Fig. B - Press the up (+) or down (-) button (1) until the desired tens of hours digit appears on the display (e.g. 2) (2), and then confirm your selection by pressing the vertical (OK) button (3). Repeat steps (1) and (3) for the hours digit (e.g. 5) (4). After confirming it (OK), the MASTER-3 will proceed to setting the minutes (led m), seconds (led s) and tenths of seconds (dot on the display). Repeat steps (1) and (3) until all values for time T1 are set.

TIME SETTING T2

If time T2 is available for the selected function, then after setting time T1, MASTER 3 will proceed to setting (in the same way as T1) the tens of hours of time T2 (the green T2 and red h LEDs will light up, 00 will appear on the display, and the tens digit will flash). Set the hours, minutes, seconds and tenths of a second as for time T1.

TIME T3 SETTING

If time T3 is available for the selected function, then - after setting time T2 - the green T3 LED will start flashing. Confirm (by pressing the vertical button) or reject (by pressing the down button - NO T3) the T3 time setting. If you have confirmed the desire to set time T3 (press vertically), the MASTER-3 will proceed to setting the tens of hours of time T3 (the green T3 LED will now be constantly lit, at the same time the red h LED will light up, 00 will appear on the display, and the tens digit will flash. Set the hours, minutes, seconds and tenths of a second in the same way as for times T1 and T2.

FINAL SAVE OF ALL SETTINGS INTO MEMORY

Thanks to the scroll function during programming (◀◀/ ▶▶), you can check and correct the settings. After the last OK confirmation (settings or corrections), press the button again (> 2s) to save all the set parameters to memory (◀◀).

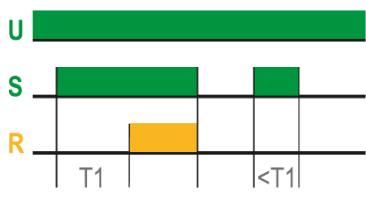
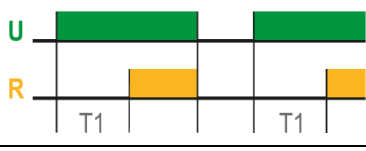
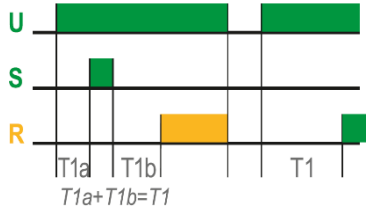
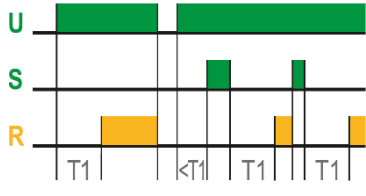
ACTIVATE SETTINGS

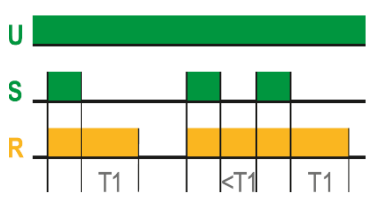
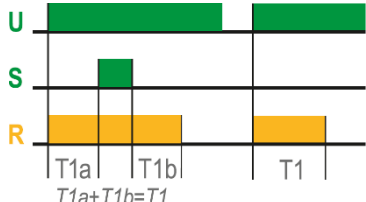
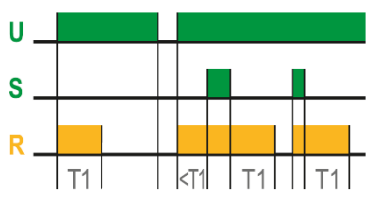
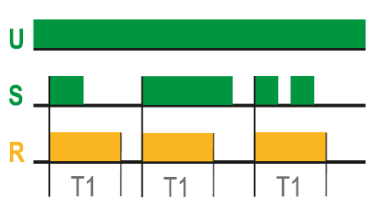
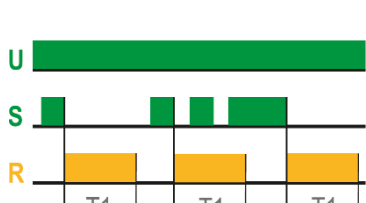
After completing all settings, turn off the power. The function will be activated after turning the power back on or after turning the power on and applying the S control signal (depending on the selected function).

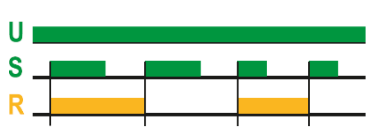
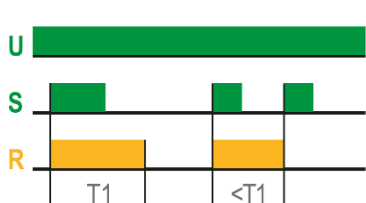
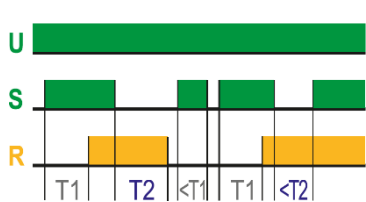
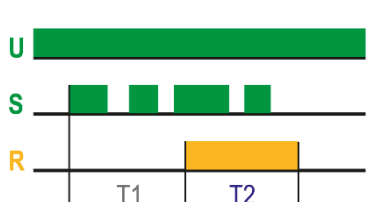
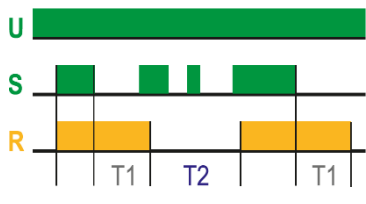
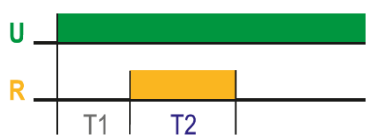
ATTENTION!

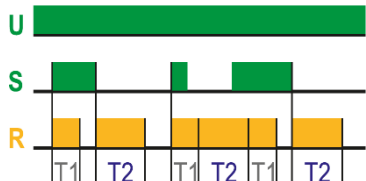
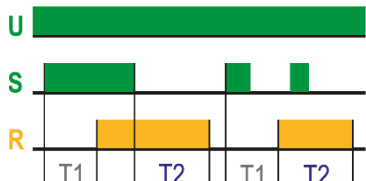
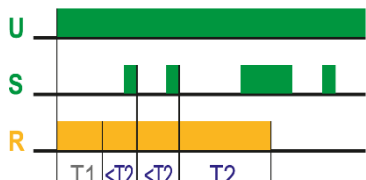
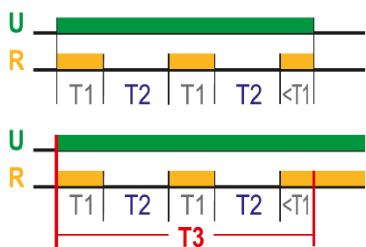
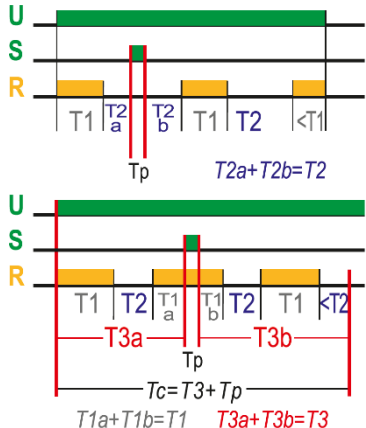
Programming automatically stops after >15 seconds of inactivity! Programming can also be interrupted (e.g., if incorrect settings are entered) and restarted by turning the power off and on again.

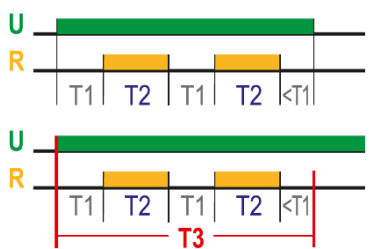
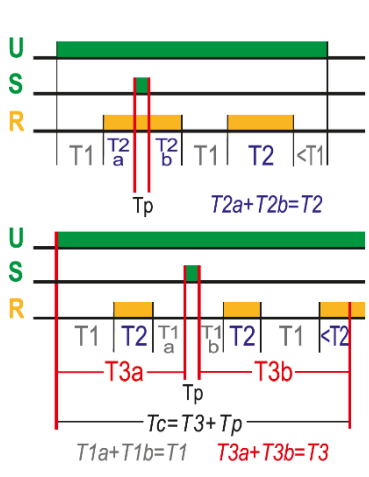
List of functions

No.	Diagram	Control Name	Description
0		AT Permanent control disabled	Activating the F0 function immediately switches the output relay contact to position 16, 15 and displays the number "0." To end the F0 function, press the red joystick button down and hold it until the F0 symbol goes out. After releasing the button, the display will show "End." To return to the previously performed function, turn the power off and then on again.
1		AT Permanent control on	Activating the F1 function immediately switches the output relay contact to position 15, 18 and displays the number "1." To end the F1 function, press the red joystick button down and hold it until the F1 symbol goes out. After releasing the button, the display will show "End." To return to the previously performed function, turn the power off and then on again.
2		U, S Delayed switching on controlled by contact S	The supply voltage must be permanently applied. After the control contact S closes, the T1 time begins, after which the output relay contact switches to position 15, 18, and the display shows "End." This state lasts until the S contact opens, which immediately switches the output relay contact to position 16, 15, with the "End" message remaining displayed. If the S contact opens before the T1 time expires, the output relay will not operate, and the time that has already elapsed will be reset.
3		U Delayed On (power-activated)	Applying the supply voltage starts the T1 time measurement, after which the output relay switches to position 15, 18 (the display shows the message "End") and remains in this state until the power supply is turned off.
		U, S Delayed switching on (power-on) with stopping the time measurement by contact S (rising edge)	Applying the supply voltage starts the T1 time. If the control contact S closes during this time, the timer stops until the contact S reopens, after which the T1 timer continues. After the T1 time has elapsed, the output relay switches to position 15, 18 (the display shows "End") and remains in this state until the power is turned off.
4		U, S Delayed switching on with RESET function activated by S contact	Applying the supply voltage starts the T1 time measurement. If the S contact is closed during this time, the time counted down so far is reset. Opening the S contact restarts the T1 time measurement, after which the output relay switches to position 15, 18 (the display shows the "End" message) and remains in this state until the power supply is turned off or the S contact is closed again. Reopening the S contact starts the T1 time measurement.

5		U, S Delayed switch-off controlled by S contact (falling edge starts timing)	The supply voltage must be supplied continuously. After closing the control contact S, the output relay contact immediately switches to position 15, 18. This state persists until the contact S opens, which starts the T1 time measurement. After the time T1 has elapsed, the output relay switches to position 16, 15 (the message "End" appears on the display). If the S contact is closed before the T1 time has elapsed, the measured time is reset and the output relay remains switched on (pos. 15, 18). The next opening of the S contact will start the T1 time measurement.
6		U Switching on for the set time	Applying the supply voltage causes the output relay to immediately switch to position 15, 18 and starts measuring the T1 time, after which the contact switches to position 16, 15 (the message "End" appears on the display).
		U, S Switching on for the set time with stopping the time measurement by closing the S contact	Applying the supply voltage causes the output relay to immediately switch to position 15, 18 and starts measuring the T1 time. If the control contact S is closed, the T1 time measurement is stopped and the output relay remains switched on (position 15, 18) until the S contact is opened again. After the full time T1 has elapsed, the contact of the output relay switches to position 16, 15 (the message "End" appears on the display).
7		U, S Switching on for the set time with the RESET function activated by the S contact	Applying the supply voltage causes the output relay to immediately switch to position 15, 18 and starts measuring the T1 time. If the control contact S is closed during the T1 time measurement, the counted time is reset. Opening the S contact restarts the T1 time measurement, after which the output relay contact switches to position 16, 15 (the display shows the "End" message) and remains in this state until the power supply is turned off or the S contact is closed again. Reopening the S contact starts the T1 time countdown.
8		U, S Single switching for a set time triggered by closing the S contact (rising edge)	The supply voltage must be supplied continuously. After closing the control contact S, the output relay contact immediately switches to position 15, 18 for time T1. After time T1 has elapsed, the output relay switches to position 16, 15 (the display shows "End"). Opening and closing the control contact S during the T1 time measurement does not affect the function being performed. Re-switching the output relay (pos. 15, 18) is possible after the T1 time has elapsed and the S contact is closed again.
9		U, S Single switching for a set time triggered by opening the S contact (falling edge)	The supply voltage must be supplied continuously. Closing the control contact S and then opening it immediately switches the output relay contact to position 15, 18 for the T1 time. After the T1 time has elapsed, the output relay switches to position 16, 15 (the display shows "End"). Closing and opening the S contact during the T1 time measurement does not affect the function being performed. Re-switching the output relay (pos. 15, 18) is possible after the T1 time has elapsed and the S contact is closed and opened again.

10		U, S Bistable operation controlled by S contact	The supply voltage must be supplied continuously. Each closing of the S contact causes the output relay contact to switch (a feature of a bistable relay). Note: Time T1 must be set to zero.
		U, S Bistable operation controlled by S contact with automatic switch-off after time T1	The supply voltage must be permanently applied. Closing the control contact S causes the output relay contacts to immediately switch to positions 15-18 and begins measuring the T1 time. After T1 has elapsed, the relay switches to positions 16-15 (the display shows "End"). If the S contact is closed again during the T1 measurement, the measured time is reset and the output relay switches off (position 16-15).
11		U, S Delayed on and delayed off controlled by contact S. Independent settings T1 and T2.	The supply voltage must be permanently applied. Closing the S contact starts the T1 measurement, after which the relay switches to positions 15-18 . Opening the S contact starts the T2 measurement, after which the relay switches to positions 16-15 (the "End" message is displayed). If the S contact is closed during the T2 measurement, the measured time is reset and the relay remains switched (positions 15-18). If the S contact is closed for a time shorter than T1, the relay will not switch on.
12		U, S Delayed switching on for the set time triggered by closing the S contact. Independent settings T1 and T2.	The supply voltage must be permanently applied. Closing contact S (pulse or constant state) starts the T1 measurement, after which the relay switches to positions 15-18 and the T2 measurement begins. After T2, the relay deactivates (positions 16-15) and the display shows the message "End." This state lasts until contact S is closed again. A change in the S state during the T1 or T2 measurement does not affect the function's operation.
13		U, S Delayed switch-off for a set time triggered by closing the S contact. Independent settings T1 and T2.	The supply voltage must be permanently applied. After closing contact S, the relay switches to positions 15-18 . Opening contact S starts the T1 measurement. After T1, the relay switches off (positions 16-15) and the T2 measurement begins. After T2, the relay switches on again (positions 15-18), and the message "End" appears on the display. This state lasts until contact S closes and opens again. A change in the S state during the T1 or T2 measurement does not affect the function.
14		U Delayed switching on for the set time	Applying the supply voltage starts the T1 measurement. After T1 has elapsed, the relay switches to position 15-18 and the T2 measurement begins. After T2 has elapsed, the relay switches off (position 16-15).

15		U, S Switching on at the set times T1 and T2 controlled by contact S. Independent settings of T1 and T2.	The supply voltage must be permanently applied. After closing the S contact, the relay switches to positions 15-18 and the T1 measurement begins. After T1 elapses, the relay deactivates (position 16-15). Opening the S contact activates the relay (position 15-18) for the T2 time, after which the relay deactivates (position 16-15) and the display shows the message "End". If during T1 the contact S is opened, after T1 has elapsed the relay remains on for the time T2. If during T2 the contact S is closed, after T2 has elapsed the relay remains on (pos. 15-18) for the time T1, after which it switches off (pos. 16-15). Reopening the S contact switches the relay on for the time T2.
16		U, S Delayed on and delayed off controlled by contact S. Independent settings T1 and T2.	The supply voltage must be permanently applied. Closing contact S starts the T1 measurement, after which the relay switches to positions 15-18. Opening contact S starts the T2 measurement, after which the relay switches off (positions 16-15) and the display shows the message "End". If the S closing time is shorter than T1, the relay will switch on (15-18) for the T2 time immediately after T1 ends. Changes to the S state during the T2 measurement have no effect.
17		U, S Downtime supervision. Switching on for the T2 time extended by subsequent pulses (closing and opening of the S contact). Independent T1 and T2 settings.	Applying the supply voltage causes the relay to immediately switch to position 15-18 for the T1 time. After T1 has elapsed, the T2 timer begins (the relay remains on). Applying a pulse (closing and opening the S contact) resets the time measured so far and restarts the T2 measurement without switching off the relay. If no further pulse occurs during T2 measurement, after T2 has elapsed the relay switches to position 16-15 and the display shows "End". This state lasts until the power is turned off and on again.
18		U Cyclic operation starting from switching on. Independent settings of T1 and T2. Possibility to set the time T3.	Applying the supply voltage starts the cyclical operation by switching on the relay at position 15-18 for the time T1. After T1 has elapsed, the relay switches off (position 16-15) for the time T2. Cyclic operation continues until the power is turned off or until the T3 countdown ends (if set). After T3 elapses, the display shows "End".
		U, S Cyclic operation starting from switching on. Independent settings of T1 and T2. Possibility to stop the measured time with contact S. Possibility to set the time T3.	Applying the supply voltage starts the cyclical operation by switching on the relay at position 15-18 for the T1 time. After T1 has elapsed, the relay switches off (position 16-15) for the T2 time. The cyclical operation continues until the power is turned off or until the T3 countdown ends (if set). After T3 has elapsed, the display shows the message "End". Closing the S contact immediately stops the time countdown. Opening the S contact resumes the countdown. A change in the S state does not change the position of the output relay contacts.

		U Cyclic operation starting with a break. Independent settings for T1 and T2. Possibility to set the time T3.	Applying the supply voltage starts cyclical operation by leaving the relay in position 16-15 for time T1. After T1 has elapsed, the relay switches on (position 15-18) for time T2. Cyclic operation continues until the power is turned off or until the T3 countdown ends (if set). After T3 elapses, the display shows "End".
19		U, S Cyclic operation starting with a break. Independent settings for T1 and T2. Possibility to stop the measured time with contact S. Possibility to set the time T3.	Applying the supply voltage starts the cyclical operation by leaving the relay in position 16-15 for the T1 time. After T1 has elapsed, the relay switches on (position 15-18) for the T2 time. The cyclical operation continues until the power is turned off or the T3 countdown ends (if set). After T3 has elapsed, the display shows the message "End". Closing the S contact immediately stops the time countdown. Opening the S contact resumes the countdown. A change in the S state does not change the position of the output relay contacts.

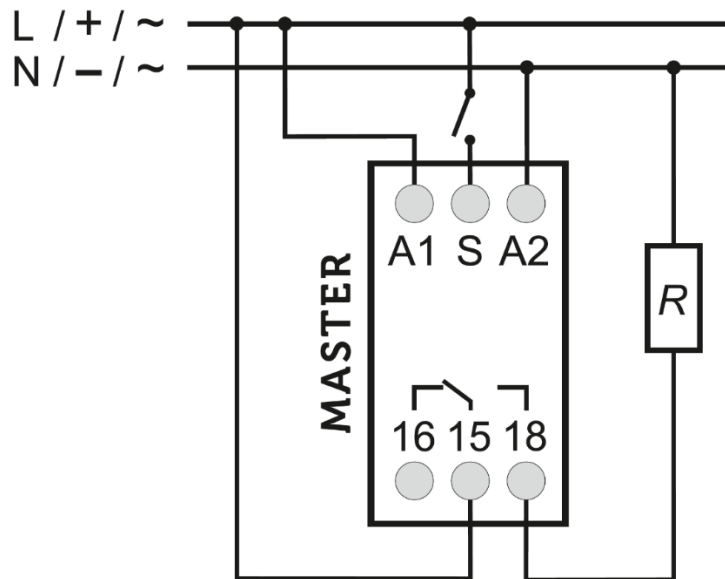
Technical data

Parameter name	Value
Rated supply voltage	24 to 250 V AC/DC
Operating supply voltages	20 to 253 V AC / 20 to 300 V DC
Operating temperature range	-25 to 50 °C
Max power consumption	3.2 VA
Number of relay outputs	1
Contact arrangement	NO / NC
Maximum load current AC-1	16A / 250V AC
Maximum load current AC-15	2.5A / 250V AC
Maximum LED load power	120 W
Case	Modular housing (1 DIN module)
Degree of protection	IP20

Parameter name	Value
Installation	TH35 rail
Time ranges	0.1 sec to 99 h 59 min 59.9 sec
Time setting accuracy	0.1 sec
Time function type	Multifunctional
Number of time functions	28
Clamp type	Elevator
Wire stripping length	6.5 mm
Single-wire conductor	0.25 to 2.5 mm ²
Multi-stranded conductor (stranded wire) without ferrule	0.25 to 2.5 mm ²
Stranded wire with square crimp sleeve	0.25 to 2.5 mm ²
Tighten to maximum torque	0.5 Nm

Full technical specifications are available on the website www.pollin.pl/do-pobrania or by scanning the QR code provided in the warranty and guarantee section.

Connection diagram



Installation

The MASTER-3 time relay must be installed in accordance with applicable electrical installation standards and regulations. The following guidelines are intended to ensure the installer's safety and the proper operation of the device:

1. **Authorizations** - The device may only be installed by a person with appropriate qualifications and authorizations to work on electrical installations.
2. **Disconnecting the power supply** - Before starting any work, it is essential to disconnect the power supply at the distribution board and make sure that the circuit is voltage-free (e.g. using a voltage indicator).
3. **Personal Protection** - The installer should use personal protective equipment such as electrically insulating gloves and safety glasses.
4. **Mechanical installation** - The device should be mounted on a standard TH35 rail in the distribution board, ensuring stable mounting and adequate ventilation space.
5. **Wiring** - Connections should be made according to the wiring diagram provided by the manufacturer. Ensure that the terminals are tightened with the correct torque and that the wires used have the appropriate cross-section. Only one wire may be inserted into each terminal, regardless of whether it is solid or stranded with a crimped ferrule.
6. **Checking the connections** - After completing the installation, carefully check the correctness of all connections, make sure that the terminals are securely tightened and that there are no exposed wires that could cause a short circuit or a shock hazard.
7. **Restoring Power** - After completing the installation and inspection, turn on the power and check the operation of the device according to the instructions.
8. **Tests** - After completing the assembly, check the correct operation of the device.

No Modifications - Any modifications to the device or its components are prohibited. This may result in malfunctions and a safety hazard.

Warranty and guarantee - short information

The warranty applies to every purchaser, including consumers. Warranty claims should be directed to the seller from whom the purchase was made.

If a defect is found in the device, the customer has the right to choose: he or she can use the statutory warranty (in accordance with the provisions of the Civil Code) or the manufacturer's warranty.



Pollin Guarantee



Pollin devices are covered by a 10-year manufacturer's warranty – Zakład Elektroniczny POLLIN Wojciech Polak. The warranty applies only to devices purchased by businesses and covers material and manufacturing defects.

Warranty claims should be submitted by e-mail to: pollin@pollin.pl, in accordance with the procedure described in the full version of the document.

The warranty does not cover, among other things, mechanical damage, unauthorized modifications, installation by unqualified persons and natural wear and tear of consumables.

The full text of the warranty terms is available at: <https://pollin.pl/do-pobrania> or via the attached QR code.

Markings



This symbol on a device indicates that the used equipment should not be disposed of with other household waste. Used equipment should be taken to one of the designated electronic waste collection points or returned to the store when purchasing new equipment. Improper disposal of electronic waste poses a threat to the environment and human health.



The CE marking confirms that the product meets the essential requirements of all applicable European Union directives and regulations.



This marking indicates that installation, connection and all servicing of the device may only be performed by qualified personnel with electrical qualifications.

Technical support – the fastest help from Pollin experts

If you have any questions regarding the operation, configuration or installation of the device, **please contact us by email – this is the fastest way to obtain technical support**.

Send a message to: support@pollin.pl, describe the problem in detail and leave your contact number and the hours when we can call you.

Our engineers will review your request and make every effort to provide you with professional assistance as quickly as possible.



Pollin Automation - Technology That Works for You

Want to talk to the sales department?

Use the telephone contact – the number can be found at <https://pollin.pl/>.

Discover the world of Pollin automation – more than one product!

Thank you for your trust and for choosing Pollin technology – solutions that work for you. This is just the beginning of the possibilities Pollin technology offers! Our brand is synonymous with reliability, innovation, and safety in electrical installations.

On the website <https://www.pollin.pl> you will find:

- **A full product catalog** – from automation and security to modern solutions supporting renewable energy sources and Smart Home installations.
- **Downloadable materials** – manuals, diagrams, catalog cards and warranty documents in one place.

Don't wait – scan the QR code from the manual or visit our website and discover solutions that are changing industry standards.

Pollin is more than just a product
It is a trusted partner in your work!