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PCZ-526.4

2-channel astronomical time switch

Index: PCZ-526.4

Two-channel. With programmable night interval.

Configuration for iOS and Android phone.

PCZ-526.4 astronomical timer is used for switching on and off lighting or other electrical appliances, according to the times of sunset and sunrise with the possibility of programming a night break, i.e. temporary shutdown of appliances for saving purposes.

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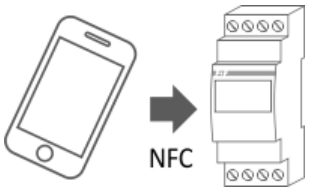
FUNCTIONING

DESCRIPTION

NEW FUNCTION IN 4-Series CLOCK.

In the Series 4 device , the clock**configuration**can be **read and saved wirelessly** via **an Android or iOS phone equipped with an NFC communication module**.



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Operation

The astronomical clock on the basis of information about the current date, geographical coordinates of the place where it is installed automatically determines daily programmed points of switching on and off the lighting. The exact time of switching on and off is determined by calculating the position of the sun relative to the horizon. The program allows you to select one of four control options (the moment the light is switched on and off is set independently):

1. astronomical sunset and sunrise

2. dusk / civil dawn

3. correction - individual correction of the programmed on and off points by the user: angular or time.

4. Time - determination of a "rigid" time of switch-on or switch-off independent of the cycle of sunrise and sunset.

Between the programmed switch-on and switch-off points, it is possible to program a night interval, i.e. to temporarily switch off receivers for saving purposes.

Functions of the PCZ-526 two-channel astronomical clock

AUTOMATIC OPERATION - automatic operation according to programmed contact switching on and off points [switched on symbol on the left-hand display].

SLOW-ATMATIC OPERATION - possibility of manual contact switching on/off during automatic operation. The change will be in effect until the next ON/OFF resulting from the automatic operation cycle [flashing symbol on the left-hand display].

NOTE: In semi-automatic mode, the contact position is opposite to that resulting from the program cycle (i.e., at night the contact is off and during the day it is on). Semi-automatic operation works only until the end of the current automatic operation cycle, e.g., entering semi-automatic mode during the day will turn on the light until the programmed switching time resulting from the astronomical cycle. Then the timer returns to automatic operation and the light remains on until dawn). The mode is activated or deactivated using the +/- buttons on the main level.

MANUAL OPERATION - [ON] permanent contact activation (items 1-5) or [OFF] permanent contact disconnection (items 1-6) when the AUTOMATIC OPERATION mode is deactivated. [no symbol on the display on the left].

ASTRONOMIC SUNRISE AND SUNSET - moments when the center of the solar disk touches the horizon (parameter h =-0.583°). For the sake of simplification of calculations, a deviation of a few minutes from the data determined by the "HM Nautical Almanac Office" is allowed.

NOTE: The advantage of setting the on/off moment as a function of the position of the solar disk is that it is insensitive to changes in the duration of dusk/dawn for different seasons, so that the on/off moment always occurs for the same level of brightness.

DAWN AND DAWN CIVIL - also calendar - the phase of sunset, at which the center of the solar disk will be no more than 6 angular degrees below the horizon (the solar disk viewed from Earth has a diameter of about half a degree). At this time, the brightest stars and planets appear in the sky (if the air is clear) (the "Evening Star," the "first star" on Christmas Eve). Due to the scattering of light in the atmosphere, there is still generally enough sunlight that it is still sufficient for normal outdoor activities without artificial light sources. Civil dawn (also calendar dawn) - the time before sunrise when the center of the sun's disc is already more than 6° below the horizon line.

PROGRAMMABLE ON and OFF POINT - the times of contact on (items 1-5) and contact off (items 1-6) determined based on the selected control option: astronomical sunrise/sunset or civil dawn/dusk and location.

NIGHT INTER RUPTION - user-settable temporary switch-off between programmed ON and OFF points.

CONFIGURATION - providing LOCATION and designating PROGRAMMABLE ON and OFF POINTS.

LOCATION - geographic coordinates and time zone of the locality relatively close to the place of clock installation. Locations and time zones of about 1500 localities from 51 countries of the world are defined in the memory. It is possible to enter your own settings in the form of geographic location and time zone (UTC).

CODE OF COORDINATES - assigned geographic coordinates for the specified cities to make it easier to specify the location (the cities and their assigned codes are given in the table at the back of the manual).

CORRECTION - acceleration or delay of on/off times in relation to the astronomical time points of sunrise and sunset:

±15° - angular correction for the time of switching on relative to the position of the center of the sun's disk relative to the horizon

±180 min. - time correction for the moment of switching on as a time offset relative to sunrise/sunset.

DST - Daylight Saving Time - the global name for daylight saving time (free translation: sunlight-saving time). Function to disable automatic time change.

AUTOMATIC TIME CHANGE - Changing time from winter to summer. Option to work with or without automatic change. The controller is equipped with a function of time zone selection, thanks to which the switching time is compatible with the local time.

DATE VIEW - preview of the set date (OK).

PROGRAMMABLE ON/OFF POINTS AND LOCATION VIEW - possibility to preview the current time of contact switching on and off, as well as the set location (geographical coordinates are displayed) and UTC time zone (in date preview mode successive presses of +/- buttons.

NFC FREE COMMUNICATION - Possibility to read and save the timer's configuration wirelessly via an Android phone equipped with an NFC communication module.

PCZ CONFIGURATOR APPLICATION - Free application for phones and tablets running on Android and equipped with an **NFC** wireless communication module.

Functions:

* preparation of clock configuration in offline mode (without the need to connect to the clock).

* setting coordinates by selecting a predefined location (coordinate code), directly pointing to the location on the map on the phone or rewriting the current position registered by GPS on the phone.

* reading and writing configurations to the controller.

* quick programming of multiple controllers with a single configuration.

* reading and writing configurations to a file

* sharing of configurations via e-mail, bluetooth, network drives, ...

* unambiguous identification of the connected clock and the ability to give devices their own names.

* automatic configuration backup. In conjunction with the unique identifier of each clock, you can easily restore the previous configuration

* setting the time and date based on your phone's watch.

The application is available on Google Play!

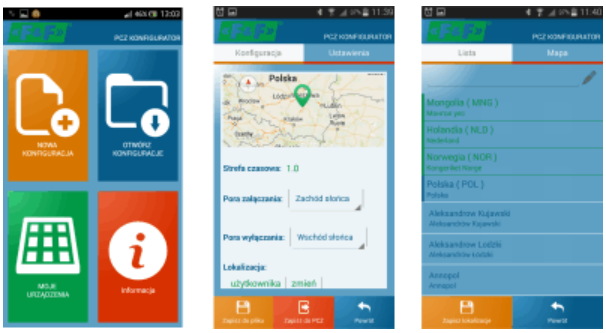
CLOCK TIMING CORRECTION - Set monthly correction of system clock seconds.

BATTERY CHARGING INDICATOR - The controller is equipped with a battery status check to maintain clock operation in case of main power failure. If the battery is low, the user will be informed that the battery needs to be replaced.

LCD BRIGHTNESS CORRECTION - Changing the contrast of the display allows the LCD to be read clearly for different viewing angles.

RELAY STATUS MEMORY - The relay status set in manual mode is also remembered after a power outage.

PCZ Configurator



- NFC wireless communication - possibility to read and save **the timer** configuration wirelessly via **an Android phone** equipped with **an NFC communication module**.

- preparation of the timer configuration in offline mode (without the need to connect to the timer)

- reading and writing the configuration to the controller

- quick programming of multiple controllers with a single configuration

- reading and writing the configuration to a file

- sharing the configuration via e-mail, bluetooth, network drives ...

- unambiguous identification of the connected clock and the ability to give devices their own names

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- setting the time and date based on the phone's clock

The app is available on Google Play!

NOTE!

Currently the PCZ-526 clock is sold with index 4.

This is the index indicating the software version of the clock.

Check what software version your clock has and download the correct manual.

https://www.youtube.com/embed/m9Pp0zMZV-8?enablejsapi=1&origin=https%3A%2F%2Fwww.fif.com.pl

https://www.youtube.com/embed/7r_cCi2A-X8?enablejsapi=1&origin=https%3A%2F%2Fwww.fif.com.pl

TECHNICAL DATA

Depth	65 mm
Height	90 mm
Width	35 mm
Width in number of modular spacings	2
Max. switching power LED	250 W
Nominal switching current at 250 V AC	16 A
Number of memory locations	2
Shortest switching time channel 2	1 min
Shortest switching time channel 1	1.00000004 min
Number of contacts	2

Accuracy per day	1 s
Autonomy in years	6
Number of channels	2
Supply voltage	24-265 V
Text guidance in display	Nie
External programming	Tak
With memory card	Nie
60 min program	Nie
24 h program	Nie
Weekly program	Nie
Annual program	Nie
Holiday program	Nie
Impulse program	Nie
Cycle program	Tak
Astro program	Tak
Random program	Nie
Hour meter	Nie
Mains synchronous	Nie
Quartz controlled	Tak
Radio-controlled	Nie
Radio-controlled (DCF77)	Nie
GPS (global positioning system)	Nie
Automatic switching summer/winter time	Tak
Suitable for manual operation	Tak
External push button input	Nie
Switching preselection	Nie
Potential free switch contact	Tak
Mounting method	DIN rail
Voltage type (supply voltage)	AC/DC
Contact type	Change-over contact (NO/NC)
Degree of protection (IP)	IP20