



F&F Filipowski sp.k., ul. Konstytucyjna 79/81, 95-200 Pabianice, tel.: +48 (42) 214 90 37, e-mail: biuro@fif.com.pl, www.fif.com.pl



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.



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.



<https://www.youtube.com/embed/pgBjRLAqW6A?enablejsapi=1&origin=https%3A%2F%2Fwww.fif.com.pl>


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 $h = -0.583^\circ$). 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 INTERRUPTION - 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:

$\pm 15^\circ$ - angular correction for the time of switching on relative to the position of the center of the sun's disk relative to the horizon

- 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
- 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 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	No
External programming	Yes
With memory card	No
60 min program	No
24 h program	No
Weekly program	No
Annual program	No
Holiday program	No
Impulse program	No
Cycle program	Yes
Astro program	Yes
Random program	No
Hour meter	No
Mains synchronous	No
Quartz controlled	Yes
Radio-controlled	No
Radio-controlled (DCF77)	No
GPS (global positioning system)	No
Automatic switching summer/winter time	Yes
Suitable for manual operation	Yes
External push button input	No
Switching preselection	No
Potential free switch contact	Yes
Mounting method	DIN rail
Voltage type (supply voltage)	AC/DC
Contact type	Change-over contact (NO/NC)
Degree of protection (IP)	IP20