
PAMEL

OPERATING MANUAL

PT1WIFI

Programmable Wi-Fi timer switch

S8: 7 days × 48 tiles • 3 timing cycles • vacation

PROGRAM S8

highly visual weekly programming

9

operating
modes

7×48

30 min
tiles

Wi-Fi

local
web page

VACATION

from-to +
override mode

ESPECIALLY USEFUL FOR:

- domestic hot-water circulation pumps (DHW)
- aeration of septic tanks and domestic treatment plants

1. Intended use and key features

PT1WIFI is a programmable timer switch with local Wi-Fi control. It controls one output according to the selected timing mode. It can perform simple countdowns, cyclic operation, delayed switching on, timed switching off, automatic start after power-up, and an advanced S8 weekly program.

KEY FEATURE - S8 Program S8 lets you program all 7 days of the week using 48 half-hour tiles per day. Each tile can mean OFF, ON or one of three independently configurable timing cycles. You can also set a vacation period from-to and the state that applies during that period.

PT1WIFI is particularly useful where a load should not operate continuously, but its operation needs to be repeatable and easy to change:

- domestic hot water (DHW) circulation pumps,
- aerators for septic tanks and domestic wastewater treatment plants - if the installation is designed for this type of control,
- pumps, fans, lighting, heaters and other loads requiring timed control,
- installations that require different behavior on working days, weekends and during vacations.

IMPORTANT PT1WIFI controls operating time, not a process parameter. It does not replace the safety devices required by the pump, blower, heater, treatment plant or other installation.

2. Safety

DANGER If the device operates at mains voltage, installation and connection must comply with the electrical installation requirements and the nameplate of the specific version. Disconnect the power before working on the installation.

- Do not exceed the rated voltage, current or output load stated on the device.
- For motors, pumps, blowers, compressors and other inductive loads, check the starting current. The power shown on the motor nameplate alone is not sufficient to assess the load on the contact/output.
- If the starting current is unknown, high, or close to the permitted PT1WIFI load, use an external contactor or relay suitable for the type of load.
- Do not use the device where it may be exposed to flooding, condensation, aggressive vapors or temperatures outside the range permitted for the specific enclosure.
- After an update, reset or power failure, some modes may switch the output on automatically. Always take this into account when designing the installation.

ESPECIALLY FOR S6 AND S7 S6 assumes the ON state after power-up. S7 automatically starts the programmed T1 time. S2, S5 and S8 also start operating automatically when the controller starts.

Photos and visualizations in this manual are for reference only. The markings and parameters of the specific device are binding.

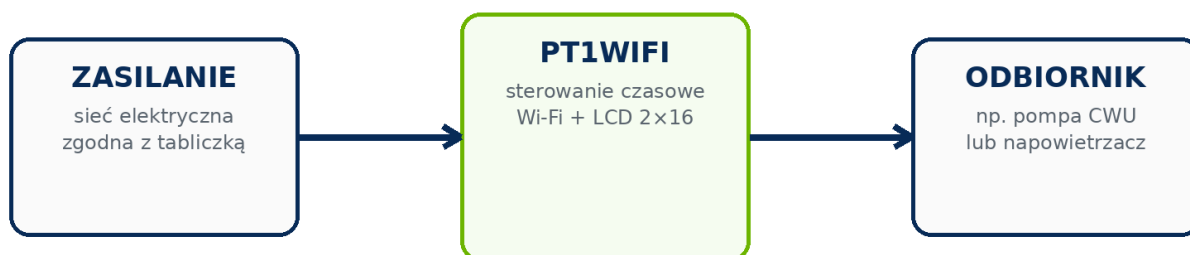
3. Technical data and program parameters

Parameter	Value
Display	2×16 character LCD
Local operation	3 buttons: left, center/OK, right
Number of modes	9: S0-S8
Default mode	S8
T1	00:00:00-16:39:00; default 00:05:00
T2	00:00:00-16:39:00; default 00:06:00
Time-setting resolution	1 s in HH:MM:SS editing
S8 weekly program	7 days × 48 fields per day; field = 30 minutes
S8 tile states	OFF, ON, TAKT1, TAKT2, TAKT3
TAKT1	default ON 00:05:00 / OFF 00:16:00
TAKT2	default ON 00:10:00 / OFF 00:30:00
TAKT3	default ON 00:02:00 / OFF 01:00:00
Vacation	from-to, with selection of OFF/ON/TAKT1/TAKT2/TAKT3
Wi-Fi	client mode + emergency AP access point
AP	SSID PT1WIFI_PAMEL; typical address 192.168.4.1
RTC	optional Crowtail RTC 2.0 / DS1307
Network time	NTP; Europe/Warsaw time zone
Update	OTA via the Internet
PAMEL CLOUD	6-digit device number; function depends on server/firmware version
Manual base version	firmware 0.1.4; PCB PRD2WIFI 10/2026

ELECTRICAL PARAMETERS Read the supply voltage and maximum permitted output load from the nameplate of the specific PT1WIFI version. This manual does not replace the ratings stated on the device.

4. Connecting the device

PODŁĄCZENIE - ZASADA OGÓLNA



WAŻNE DLA SILNIKÓW I POMP

Silniki, pompy i dmuchawy mogą mieć wysoki prąd rozruchowy. Jeśli obciążenie jest bliskie dopuszczalnej wartości wyjścia albo prąd rozruchowy jest nieznan, zastosuj zewnętrzny stycznik/przełącznik o odpowiedniej kategorii pracy.

General principle - PT1WIFI is installed between the power supply and the controlled load, or it controls an actuator circuit.

Before connection, make sure the load can be safely switched on and off by a timer controller. Starting current is especially important for DHW pumps and aeration blowers.

1. Disconnect power from the installation.
2. Connect PT1WIFI according to the markings of the specific version and its nameplate.
3. Connect the load or the coil of an external contactor.
4. Check that the installation has the required protective devices.
5. Switch on the power and observe the startup screen and output state.

5. Buttons and basic operation

OBSŁUGA TRZEMA PRZYCISKAMI



- / W LEWO

zmniejszanie, poprzednia pozycja



OK / MENU

krótkie: START/STOP lub zatwierdzenie
przytrzymaj ok. 4 s: wejście do menu



+ / W PRAWO

zwiększanie, następna pozycja

Action	Operation
Hold center button for approx. 4 s	enter the menu; the controller confirms entry with a short beep
Left / right in menu	previous / next item
Short press of center button in menu	open the item or confirm
Longer press of center button in menu	return to the main screen
Left / right while editing time	change the currently selected HH, MM or SS field
Center button while editing time	HH → MM → SS → save
Left / right in S0	directly change T1 by 1 minute
Left / right in S4	directly change T1 by 15 minutes

TIP Long names in the lower LCD row scroll automatically. Times and numeric values remain stable so they can be read easily.

6. First startup



Startup screen - approx. 4 s.



The controller then displays the PAMEL CLOUD number once and emits a short beep.

1. After power-up, the Wi-Fi module starts trying to connect before the LCD is initialized.
2. The LCD shows the PT1WIFI name and software version.
3. After the startup screen, the 6-digit CLOUD number is displayed.
4. The controller switches to the main screen. The default mode is S8.
5. If connection to Wi-Fi is unsuccessful, the PT1WIFI_PAMEL access point starts after about 20 s.

S8 FACTORY STATE By default, S8 operates as "Cała doba" with the OFF action, so the output remains off until the settings are changed.

7. S0-S8 operating modes - overview

Mode	Name	Operating principle
S0	RĘCZNY TIMER	START starts T1; left/right allows quick T1 correction in 1-minute steps.
S1	TIMER START	START starts the previously saved T1 time; after T1 the output switches off.
S2	CYKL ON/OFF	automatic cycle: T1 ON → T2 OFF → repeat.
S3	OPÓŹNIONY START	after START the output is OFF for T1 and remains ON after T1.
S4	TIMER 15 MIN	as S0, but T1 can be quickly adjusted left/right in 15-minute steps.
S5	CYKL LOSOWY	T1 ON → random OFF pause 1-10 min → repeat.
S6	CZASOWY OFF	normally ON; START switches the load off for T1, then it returns to ON.
S7	AUTO START	as S1, but T1 starts automatically when power is applied.
S8	PROGRAM 7 DNI	full day or 7×48 tiles; OFF/ON/3 timing cycles; vacation.

AFTER A POWER FAILURE S2, S5, S7 and S8 start operating automatically after startup. S6 sets the output to ON after startup. S0, S1, S3 and S4 start in the OFF state.

8. S0-S3 modes - detailed description

S0 - MANUAL TIMER

Set T1. A short press of the center button switches the output on for T1. When the time expires, the output switches off. On the main screen, the left and right buttons can change the stored T1 value in 1-minute steps.

S1 - TIMER START

Set T1 in the menu. Each START begins the full programmed T1 time. After T1 expires, the output switches to OFF. This mode is convenient when the same operating time is always required.

S2 - ON/OFF CYCLE

After the controller is powered on, the cycle starts automatically. First the output is ON for T1, then OFF for T2, and the sequence repeats indefinitely.

S3 - DELAYED START

After pressing START, the controller counts down T1 with the output switched off. When the countdown ends, the output switches on and remains ON. This mode is intended for delayed activation of a load.

CAUTION - S3 After the delay ends, the output is on without a countdown. Pressing START again begins a new delay period and switches the output off for T1.

9. S4-S7 modes - detailed description

S4 - 15 MIN TIMER

It works like S0, but on the main screen the left and right buttons change T1 in 15-minute steps. This makes it easier to set longer periods quickly.

S5 - RANDOM CYCLE

The controller automatically switches the output on for T1 and then off for a random time from 1 to 10 minutes. After the random pause, the cycle starts again. T2 is not used in this mode.

S6 - TIMED OFF

The output is normally on. START switches the output off for T1. When T1 expires, the controller switches the output on again. This mode is the reverse of a typical timer.

S7 - AUTO START

Each time power is applied, the controller automatically switches the output on for T1. After T1, the output switches to OFF. T1 can also be started again manually.

AUTOMATIC START RISK S6 and S7 may switch the load on after power returns without an additional user command. Take this into account especially with pumps, blowers and mechanical equipment.

10. S8 - 7-DAY PROGRAM

S8 is the most advanced PT1WIFI mode and the default operating mode. Instead of one simple time value, the user can program the device behavior for an entire week.

S8 - 5 STANÓW KAŻDEGO KAFELKA



Każde 30-minutowe pole programu tygodniowego może mieć dowolny z pięciu stanów.

TAKT1/2/3 nie są stałymi czasami - użytkownik sam ustawia dla każdego taktowania czas ON i czas OFF.

Two operating methods are available in S8:

- **FULL DAY** - one selected state applies continuously; a weekly clock is not required.
- **WEEKLY PROGRAM** - each day has 48 half-hour fields, giving 336 tiles per week.

WHY THIS IS PRACTICAL For example, you can enable DHW circulation only during actual demand periods and use cycling rather than continuous operation within those periods. For aeration you can use different cycles during the day, at night and during vacations.

11. S8 - TAKT1, TAKT2 and TAKT3

TAKT means a repeating ON/OFF cycle. PT1WIFI has three independent timing-cycle sets. Any of them can be assigned to any tiles in the weekly program.

Timing cycle	Default ON	Default OFF	Example use
TAKT1	00:05:00	00:16:00	shorter, more frequent operation - a good starting point for DHW circulation
TAKT2	00:10:00	00:30:00	longer cycle with a longer pause
TAKT3	00:02:00	01:00:00	short pulses with a long pause

Each ON and OFF time can be set with 1-second resolution up to 16:39:00. The default values are only a starting point and must be adjusted to the installation.

FOR TREATMENT PLANTS There is no single universal aeration time suitable for all installations. Choose the times according to aerator capacity, tank volume, installation load and the treatment-plant manufacturer's recommendations.

FOR DHW Operating the pump too frequently or for too long increases heat loss in the pipes. Program S8 can limit operation to the required periods, while TAKT can reduce operating time within an active window.

PROGRAM S8 page - mode selection, timing-cycle settings and the beginning of the weekly grid.

1. Select "Program tygodniowy".
2. Select a color/state: ON, OFF, TAKT1, TAKT2 or TAKT3.
3. Click the tiles for successive 30-minute intervals. One tile = half an hour.
4. If needed, use the option to copy Monday to working days or to the entire week.
5. When finished, select "ZAPISZ PROGRAM S8".

TILES INSTEAD OF A TIME LIST The visual layout lets you see the entire week at a glance: where the load operates, where it is off and where it operates cyclically. Changing one period does not require rebuilding the entire schedule.

13. S8 - URLOP (vacation) mode

Cz	
Pt	
So	
Nd	

Urlop

Włącz urlop

Od

2026-07-10

Do

2026-07-24

Tryb w urlopie

OFF

v

ZAPISZ PROGRAM S8

Program zapisany.

Lower part of the PROGRAM S8 page - vacation settings and program saving.

Vacation mode lets you replace the normal weekly program with one selected state for a specified absence period. Set the FROM date, TO date and the behavior during the vacation.

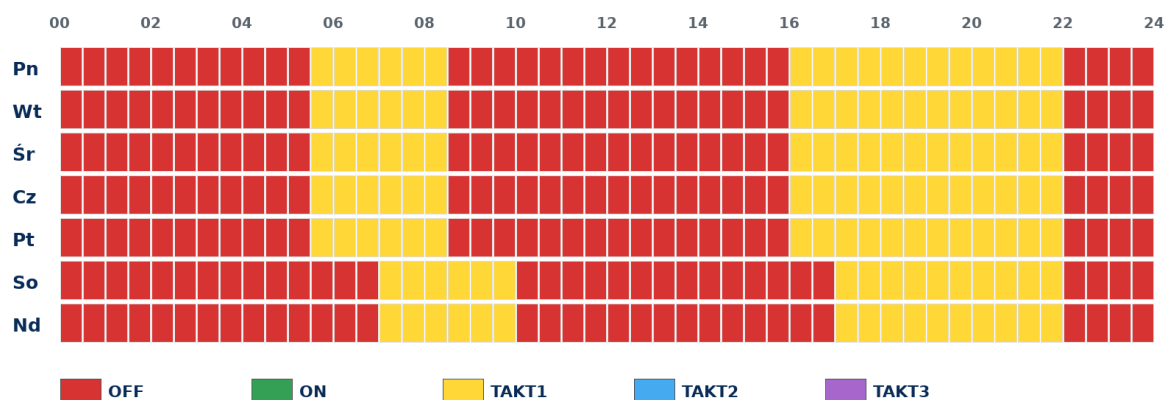
Vacation mode	Meaning
OFF	the load remains switched off
ON	the load remains switched on
TAKT1	operates according to timing cycle no. 1
TAKT2	operates according to timing cycle no. 2
TAKT3	operates according to timing cycle no. 3

IMPORTANT IN 0.1.4 Vacation mode is checked in "Program tygodniowy" mode. When S8 is set to "Cała doba", the selected full-day state applies and vacation mode does not override it.

The date range includes both the first and last day. When the vacation ends, the controller automatically returns to the normal weekly program.

14. S8 example - DHW circulation pump

PRZYKŁAD S8 - CYRKULACJA CIEPŁEJ WODY



Przykład: aktywne okna rano i wieczorem, a w nich TAKT1. Poza tym pompa pozostaje wyłączona. Taktowanie ogranicza czas pracy pompy bez utraty komfortu.

Example strategy for a house: on working days, circulation should be available in the morning and again in the afternoon/evening, while on weekends it starts later in the morning. Instead of continuous ON, use TAKT1, e.g. 5 min ON / 16 min OFF.

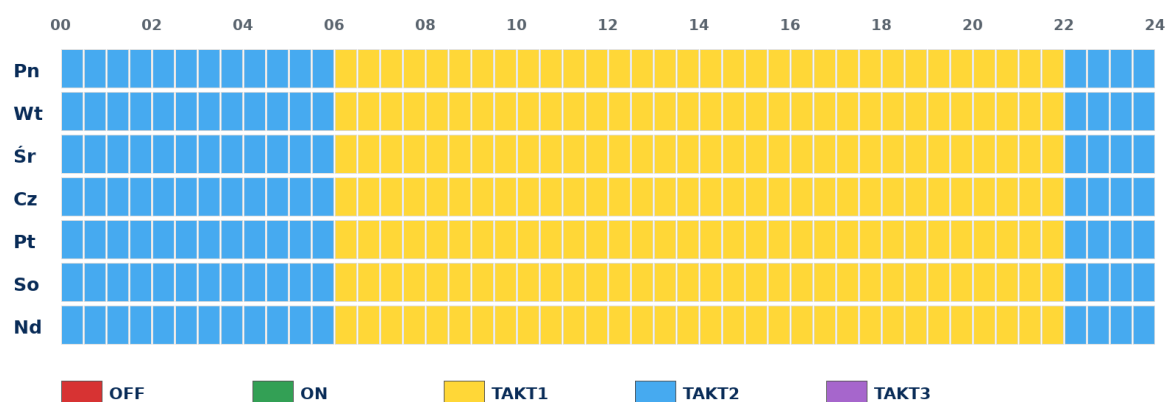
Example steps:

1. Set S8 = WEEKLY PROGRAM.
2. Set TAKT1 for your installation, e.g. initially 00:05:00 ON and 00:16:00 OFF.
3. Mark TAKT1 on the tiles corresponding to the times when hot water is normally used.
4. Leave OFF outside those periods.
5. For a trip, enable URLOP and set OFF or an infrequent timing cycle if the installation requires it.

SELECTING TIMES The shortest sensible ON time depends on loop length, pump capacity and the time required to bring hot water to the furthest outlet. Measure your installation rather than copying values blindly.

15. S8 example - septic tank / treatment plant aeration

PRZYKŁAD S8 - NAPOWIETRZANIE SZAMBA / OCZYSZCZALNI



Przykład: w dzień TAKT1, w nocy spokojniejszy TAKT2. Czasy ON/OFF należy dobrać do konkretnej instalacji, wydajności napowietrzacza i zaleceń producenta oczyszczalni.

In installations where the aerator is to operate cyclically, S8 allows separate daytime and nighttime behavior. For example, TAKT1 can be used during the day and TAKT2 at night with a different ON-to-OFF ratio.

1. Set TAKT1 and TAKT2 according to the recommendations for the specific aerator and tank.
2. Select TAKT1 on daytime tiles and TAKT2 or OFF on nighttime tiles, depending on the process.
3. If the installation load is lower during a vacation, the vacation mode can be changed to another timing cycle instead of completely switching aeration off.

DO NOT SWITCH THE PROCESS OFF BLINDLY In a domestic treatment plant, completely disabling aeration for a long time may disturb the biological process. Vacation mode should be selected according to the recommendations for the specific treatment plant.

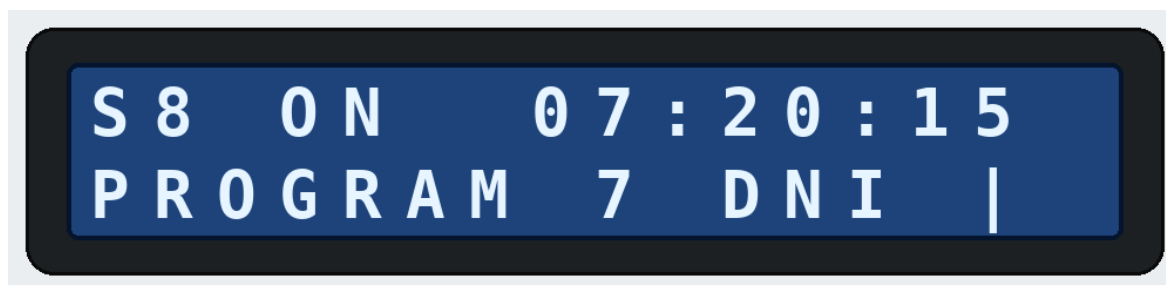
16. S8 - clock, RTC and behavior when time is unavailable

The weekly program requires the correct day of week and time. PT1WIFI can obtain time from the Internet via NTP, while the optional DS1307 module can retain the time after a power failure.

Situation	Behavior
S8 = CAŁA DOBA	the selected state applies regardless of the clock
S8 = PROGRAM TYGODNIOWY + valid time	the controller executes the weekly tiles and applies vacation mode
S8 = PROGRAM TYGODNIOWY + no valid time	the controller uses the "S8 BRAK ZEGARA" parameter
Wi-Fi available	the controller synchronizes NTP and can save time to the RTC
No RTC, but NTP was synchronized	time runs in software until power is lost
RTC present with correct time	time can be used even before NTP synchronization

RECOMMENDATION For an installation where the schedule must continue after a longer Internet and power outage, use the optional DS1307 RTC and set a safe "S8 BRAK ZEGARA" action.

17. Main LCD screen



The first row has the form: MODE + OUTPUT STATE + TIME. The output state has a fixed width: "ON " or "OFF". If the controller does not have a valid time, "--:--:--" is shown instead of the clock.

In S8, the second row scrolls the name "PROGRAM 7 DNI" and the information "PLAN" or "CALA DOBA". In other modes, the second row shows the mode name and T1 / remaining countdown time.

START/STOP IN S8 S8 is an automatic mode: the output state is continuously calculated from the program. Manual STOP is not a permanent override of the schedule. To switch the load off for longer, set the appropriate tiles to OFF, use vacation OFF, or set S8 to "Cała doba = OFF".

18.1. Menu screens - group 1

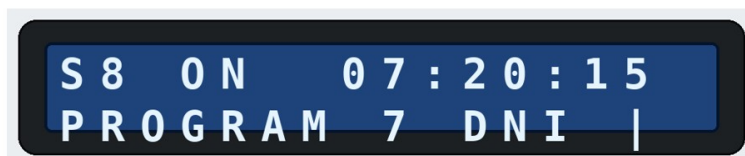
PT1WIFI - ekrany 1-6



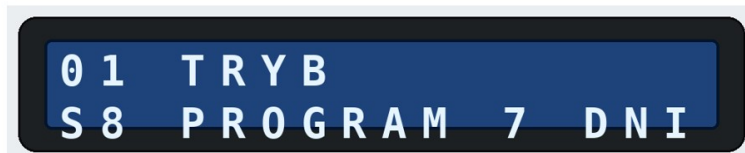
START



CLOUD PO STARCIE



EKRAŃ GŁÓWNY S8



01 TRYB



02 CZAS T1



03 CZAS T2

Screen	Meaning / operation
START	Startup screen with the software version.
CLOUD PO STARCIE	Once after startup: 6-digit PAMEL CLOUD number.
EKRAŃ GŁÓWNY S8	Mode, output state, time and PLAN/CALA DOBA information.
01 TRYB	Selection of one of the S0-S8 modes.
02 CZAS T1	Editing hours, minutes and seconds of T1.
03 CZAS T2	Editing hours, minutes and seconds of T2.

18.2. Menu screens - group 2

PT1WIFI - ekrany 7-12



04 RESET PROGRAMU



05 WIFI STATUS



06 WIFI SIEC



07 WIFI IP



08 WIFI AP



09 RESET WIFI

Screen	Meaning / operation
04 RESET PROGRAMU	Restart of the current program logic without restoring factory settings.
05 WIFI STATUS	Current Wi-Fi interface state.
06 WIFI SIEC	Name of the stored / used network.
07 WIFI IP	Current controller IP address.
08 WIFI AP	Name of the PT1WIFI access point.
09 RESET WIFI	Deletes the saved Wi-Fi configuration after confirmation.

18.3. Menu screens - group 3

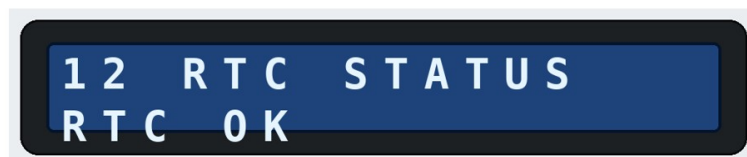
PT1WIFI - ekrany 13-18



10 ZEGAR CZAS



11 ZRODLO CZASU



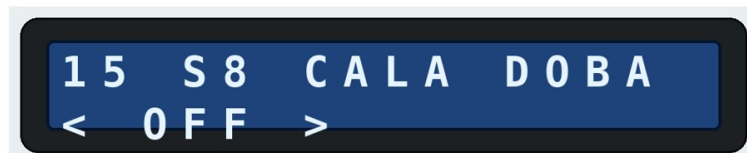
12 RTC STATUS



13 SYNCH NTP



14 S8 TRYB

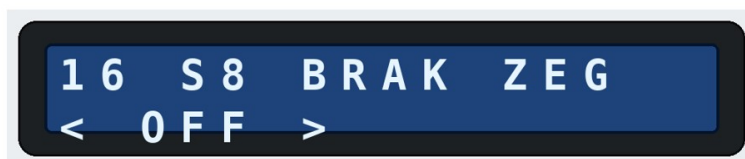


15 S8 CALA DOBA

Screen	Meaning / operation
10 ZEGAR CZAS	Current local time.
11 ZRODLO CZASU	Time source, e.g. NTP or RTC.
12 RTC STATUS	Information whether the optional RTC has been detected.
13 SYNCH NTP	Manually forces synchronization with the Internet.
14 S8 TRYB	Selection: CAŁA DOBA or TYGODNIOWY.
15 S8 CALA DOBA	State applied in full-day mode.

18.4. Menu screens - group 4

PT1WIFI - ekrany 19-24



16 S8 BRAK ZEGARA



17 TAKT1 ON



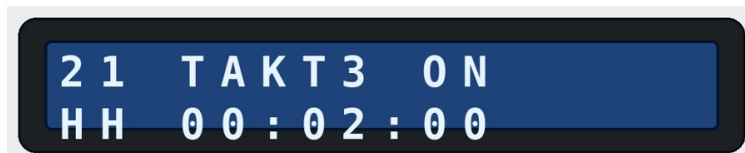
18 TAKT1 OFF



19 TAKT2 ON



20 TAKT2 OFF

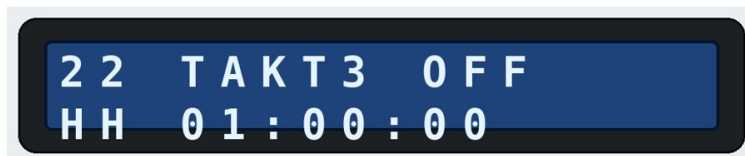


21 TAKT3 ON

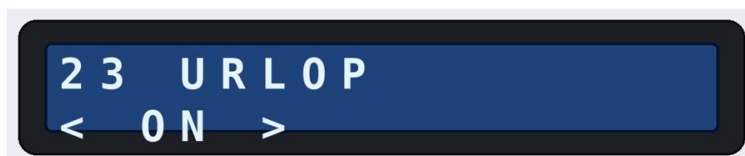
Screen	Meaning / operation
16 S8 BRAK ZEGARA	Fallback state used in the weekly plan when valid time is unavailable.
17 TAKT1 ON	ON time in the TAKT1 cycle.
18 TAKT1 OFF	OFF time in the TAKT1 cycle.
19 TAKT2 ON	ON time in the TAKT2 cycle.
20 TAKT2 OFF	OFF time in the TAKT2 cycle.
21 TAKT3 ON	ON time in the TAKT3 cycle.

18.5. Menu screens - group 5

PT1WIFI - ekrany 25-30



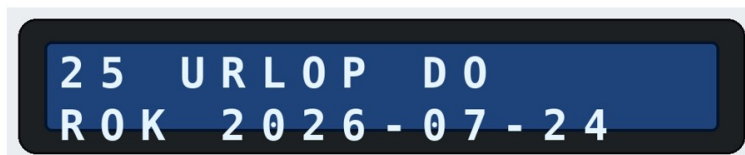
22 TAKT3 OFF



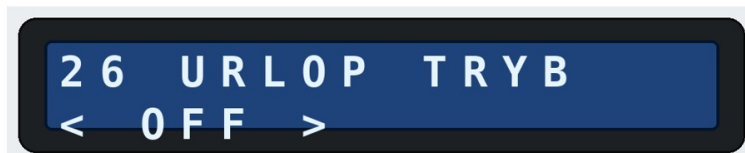
23 URLOP



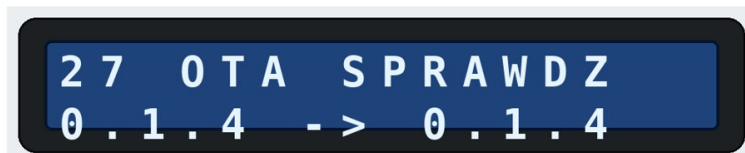
24 URLOP OD



25 URLOP DO



26 URLOP TRYB

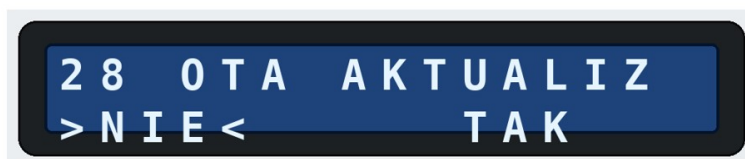


27 OTA SPRAWDZ

Screen	Meaning / operation
22 TAKT3 OFF	OFF time in the TAKT3 cycle.
23 URLOP	Enables or disables vacation mode.
24 URLOP OD	Vacation start date.
25 URLOP DO	Vacation end date.
26 URLOP TRYB	OFF/ON/TAKT1/TAKT2/TAKT3 applied during the vacation period.
27 OTA SPRAWDZ	Checks the version available on the server.

18.6. Menu screens - group 6

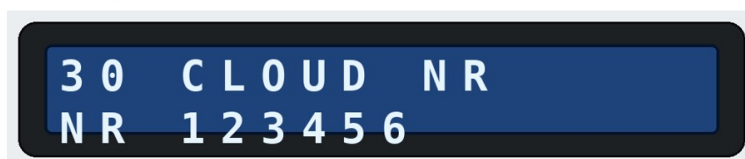
PT1WIFI - ekrany 31-36



28 OTA AKTUALIZUJ



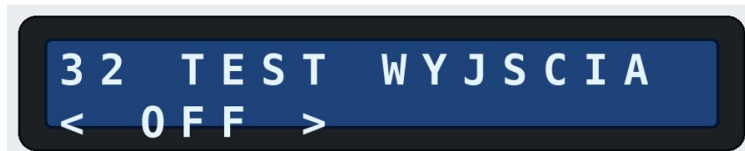
29 WERSJA



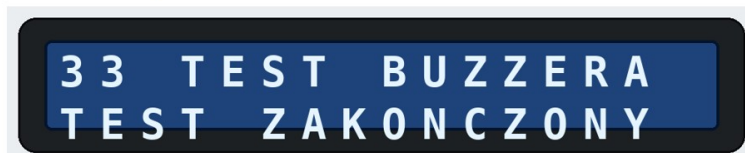
30 CLOUD NR



31 CLOUD STATUS



32 TEST WYJSCIA



33 TEST BUZZERA

Screen	Meaning / operation
28 OTA AKTUALIZUJ	Downloads and installs the update after confirmation.
29 WERSJA	Current firmware version.
30 CLOUD NR	6-digit device number in PAMEL CLOUD.
31 CLOUD STATUS	PAMEL CLOUD connection/telemetry status.
32 TEST WYJSCIA	Manual ON/OFF switching of the output for testing.
33 TEST BUZZERA	Short audible-signal test.

18.7. Menu screens - group 7

PT1WIFI - ekrany 37-38



34 UST FABRYCZNE



35 WYJSCIE

Screen	Meaning / operation
34 UST FABRYCZNE	Restores default settings after confirmation.
35 WYJSCIE	Returns from the menu to the main screen.

19. Local web page - access

PT1WIFI provides a local web page on the same Wi-Fi network. In version 0.1.4, the interface is divided into four tiles: STEROWANIE, PROGRAM S8, WI-FI and SYSTEM.

- If PT1WIFI is connected to your home network, read its IP address from the "WIFI IP" menu and enter it in a browser on a device connected to the same network.
- If PT1WIFI cannot connect to Wi-Fi, the "PT1WIFI_PAMEL" AP starts after about 20 s. Connect to it and open 192.168.4.1; if the device shows a different actual interface address, use that address.

PAMEL PT1 WIFI VER 0.1.4

STEROWANIE

PROGRAM S8

WI-FI

SYSTEM

Stan

Tryb

Wyjście

Czas

S8

ON

00:00:00

PROGRAM

7 DNI

Stan: schedule | Zegar 07:20:15

START

STOP

RESET PROGRAMU

Tryb i czasy

Tryb

S8 - PROGRAM 7 DNI - AUTO: cała doba albo program tygodniowy 7x48 po 30

T1 HH:MM:SS

T2 HH:MM:SS

00:05:00

00:06:00

ZAPISZ

Zapisano.

STEROWANIE tile - status, START/STOP, mode selection and T1/T2.

20. WWW - PROGRAM S8

PT1WIFI's key interface: set S8 mode, three timing cycles, the full week and vacation in one place.

[illegible]

[illegible]

ORDER First set the TAKT1/2/3 times, then paint the weekly tiles, set vacation mode if needed, and finally use "ZAPISZ PROGRAM S8".

21. WWW - WI-FI

PAMEL PT1 WIFI VER 0.1.4

STEROWANIE

PROGRAM S8

WI-FI

SYSTEM

Polaczenie

Status	Siec	IP
CONNECTED	DOM_WIFI	192.168.1.55

AP: PT1WIFI_PAMEL | adres domyslny 192.168.4.1

Ustaw siec Wi-Fi

SSID

DOM_WIFI

SZUKAJ SIECI

DOM_WIFI

GOSC

WARSZTAT

Haslo

ZAPISZ WIFI

Zapisano. Laczenie...

Reset Wi-Fi

Usuwa zapisana siec. Sterownik ponownie szuka domyslnej sieci PAMEL, a po timeout uruchamia AP.

This section shows the connection state, current network and IP address. The "SZUKAJ SIECI" button displays detected networks as tiles. After clicking a network, enter the password and select "ZAPISZ WIFI".

"RESET WIFI" removes the stored network data. The controller again tries to connect to the default PAMEL service network and, if it cannot find it, switches to AP mode.

AP SECURITY The access point is intended for local configuration. After configuring your own network, normal operation in Wi-Fi client mode is recommended instead of leaving the controller permanently in AP mode.

22. WWW - SYSTEM

PAMEL PT1 WIFI VER 0.1.4

STEROWANIE

PROGRAM S8

WI-FI

SYSTEM

Zegar

Czas	Zrodlo	RTC
07:20:15	NTP	OK

SYNCHRONIZUJ NTP

OK

PAMEL CLOUD

Model: **PT1WIFI**

Numer: **NR 123456**

device_id: PT1WIFI_ABCDEF123456

Status: **ONLINE**

Aktualizacja OTA

Aktualizacje oprogramowania przez Internet.

SPRAWDZ AKTUALIZACJE

POBIERZ I ZAINSTALUJ

0.1.4 - wersja aktualna

Wersja

PT1WIFI VER 0.1.4

The SYSTEM section contains the clock, PAMEL CLOUD, OTA update, device version and factory reset.

- SYNCHRONIZUJ NTP - manually retrieves the current time from the Internet.
- PAMEL CLOUD - shows the model, number, device_id and connection status.
- SPRAWDŹ AKTUALIZACJE - retrieves information about the version available on the server.
- POBIERZ I ZAINSTALUJ - starts the OTA update.
- PRZYWRÓĆ FABRYCZNE - erases user settings and restarts the controller.

VERSION-DEPENDENT FUNCTIONS PAMEL CLOUD, OTA and RTC support may develop with firmware. The appearance or availability of some fields may differ in newer software versions.

23. Wi-Fi configuration step by step

1. Switch on PT1WIFI and wait about 20 s if it does not yet know your network.
2. On a phone or computer, select the "PT1WIFI_PAMEL" network.
3. Open a browser and enter 192.168.4.1 or the address shown in the "WIFI IP" menu.
4. Open the WI-FI tile and select "SZUKAJ SIECI".
5. Click your network, enter the password and select "ZAPISZ WIFI".
6. After connecting, read the new IP address from the LCD. Further web operation uses this address on your local network.

IF THE PAGE DOES NOT OPEN Check whether the phone/computer is on the same network as PT1WIFI. In AP mode, disable automatic switching to mobile data if the phone treats the AP as a "no Internet" network.

RESET WIFI If an incorrect password was entered or the router was changed, use menu 09 RESET WIFI or the RESET WIFI button on the page.

24. Clock, NTP and optional RTC

PT1WIFI uses Europe/Warsaw local time and takes daylight-saving time changes into account. While connected to the Internet, it periodically synchronizes time via NTP.

Menu	What it shows / does
10 ZEGAR CZAS	current time
11 ŹRÓDŁO CZASU	NTP, RTC or no valid source
12 RTC STATUS	whether DS1307 was detected
13 SYNCH NTP	manual time retrieval

The optional Crowtail RTC 2.0 / DS1307 is particularly useful with the weekly program when the controller needs to retain the correct time after a power failure without waiting for Internet access.

NO RTC DOES NOT BLOCK OPERATION The controller can operate without an RTC module. After NTP synchronization it keeps time in software until power is lost. For S8, set a safe "S8 BRAK ZEGARA" parameter.

25. PAMEL CLOUD and OTA update

PAMEL CLOUD

After startup, PT1WIFI displays a 6-digit CLOUD number. The number can also be read in menu 30 and on the SYSTEM page. The cloud function does not block local device operation - the controller continues to execute the program even without Internet access.

OTA update

The update can be checked and started from the LCD or the web interface. During download and verification, the LCD displays successive stages such as MANIFEST, POBIERANIE and SPRAWDZANIE. After the update is prepared, the controller restarts.

DO NOT CUT POWER Do not switch off power during download, writing and restart after an update. Use only official PAMEL updates.

Version 0.1.4 technically also allows installation of older versions. For normal use, the latest tested version intended for PT1WIFI is recommended.

26. Diagnostics and most common problems

Symptom	What to check / what to do
Web page unavailable	check WIFI STATUS and WIFI IP; make sure the devices are on the same network; in AP mode use 192.168.4.1
PT1WIFI does not connect to the router	check SSID and password; use RESET WIFI; configure again
Weekly program does not switch at the expected time	check ZEGAR CZAS and ŹRÓDŁO CZASU; force SYNCH NTP
After a power failure the schedule has the wrong time	use an RTC DS1307 or provide a quick Internet connection; set a safe state for missing time
Output in S8 "comes back" after STOP	this is normal for an automatic program - the schedule applies the state again; use OFF in the program/vacation/full-day mode
S6 switches the load on at startup	this is how S6 works - the default state of this mode is ON
S7 starts the load at startup	this is how S7 works - AUTO START starts T1 after power-up
Pump/blower causes unreliable output operation	check starting current; consider an external contactor/relay

27. Tests and factory settings

OUTPUT TEST

Menu 32 allows the output to be switched OFF/ON manually. After leaving the test, the controller forces OFF and returns to the menu. Use the test only when a brief manual activation of the load is safe.

BUZZER TEST

Menu 33 activates a short audible signal and shows a test completion message.

FACTORY SETTINGS

Menu 34 or the button on the SYSTEM page restores default settings, including S8 as the operating mode, "Cała doba = OFF", default T1/T2 and default timing cycles. The device restarts after the operation.

BEFORE RESET Save or write down your weekly program, timing-cycle times and Wi-Fi settings. Factory reset erases the user configuration.

28. Operation and typical user errors

- Do not use the motor power rating as the only criterion when selecting the output - starting current and load type also matter.
- Do not set TAKT1/2/3 without checking how frequent switching is tolerated by the controlled load. Some pumps and compressors limit the number of starts per hour.
- In a DHW program, do not keep the pump ON continuously if the goal is to reduce heat loss - use time windows and cycling.
- In a treatment plant, do not set vacation mode to OFF only because nobody is at home - the biological process may still require aeration.
- After changing the router or Wi-Fi password, reset and reconfigure the network in PT1WIFI.
- After an update, check the operating mode, clock and S8 program, especially if the controller operates unattended equipment.

MAINTENANCE The controller does not require periodic clock calibration when it uses NTP. Keep the enclosure dry and clean; do not clean the device while energized and do not use aggressive cleaning agents.

29. Quick reference - key S8 settings

What you want to achieve	Setting
Off all day	S8 TRYB = CAŁA DOBA; S8 CAŁA DOBA = OFF
On all day	S8 TRYB = CAŁA DOBA; S8 CAŁA DOBA = ON
Cyclic operation all day	S8 TRYB = CAŁA DOBA; select TAKT1/2/3 and set ON/OFF
Different plan for each day	S8 TRYB = TYGODNIOWY; paint the 7×48 tiles
Safe behavior when time is lost	set S8 BRAK ZEGARA, usually OFF or a selected timing cycle
Temporary plan for a trip	enable URLOP, set OD/DO and URLOP TRYB
Quickly copy working days	WWW: PON → WT-PT
Quickly set the whole week the same	WWW: PON → WSZYSTKIE or WYPEŁNIJ WYBRANYM

BEST PROGRAMMING METHOD For small adjustments you can use the LCD, but the full 7×48 schedule is most convenient to create on the web page. The LCD is intended for quick checking of parameters, modes and states.

30. Help, online manuals and PAMEL server

Current PAMEL materials, manuals, updates and online functions are provided through serwer.pamel.pl.

<https://serwer.pamel.pl/>



Scan the QR code to open the PAMEL server.

Technical support and contact information may be updated on the server. If an older manual differs from newer firmware, check the current online documentation.

MANUAL VERSION This interface description was prepared based on PT1WIFI firmware 0.1.4. Newer versions may add items, change the appearance of the web interface or extend PAMEL CLOUD.

31. Short startup checklist

- Check the ratings and the load.
- Switch on the power and check the version.
- Configure Wi-Fi.
- Check the clock / RTC / NTP.
- Select the mode.
- For S8, set the timing cycles.
- Program the weekly tiles.
- Set the behavior for loss of time.
- Set vacation mode if needed.
- Test the output with a short, safe cycle.
- After a power failure, check the behavior of the selected mode.

FOR UNATTENDED INSTALLATIONS After full configuration, perform a power-loss and power-return test. This confirms that the selected automatic-start mode is suitable for the pump or aerator.

32. Example settings - starting point

Application	Example	Notes
DHW - comfort windows	S8 weekly; TAKT1 in the morning/afternoon; OFF outside the windows	Adjust TAKT1 to the circulation loop; e.g. 5 min ON / 16 min OFF only as a starting point
DHW - night	OFF	usually no need to maintain circulation at night
Aeration - day/night	day TAKT1, night TAKT2	times only according to the specific process
DHW vacation	OFF	after returning, the weekly program resumes automatically
Treatment plant vacation	TAKT2/TAKT3 instead of automatic OFF	depends on treatment technology
Clock failure	S8 BRAK ZEGARA = safe state	for a DHW pump usually OFF; for a treatment plant it may be a timing cycle

THESE ARE EXAMPLES These are not universal process values. PT1WIFI makes them easy to set, but time selection remains dependent on the installation.

User notes 1

Space for your own TAKT1/TAKT2/TAKT3 times, active-window hours, installation description and program changes.

[illegible]

User notes 2

Space for your own TAKT1/TAKT2/TAKT3 times, active-window hours, installation description and program changes.

DATE / TIME	SETTING / NOTE

User notes 3

Space for your own TAKT1/TAKT2/TAKT3 times, active-window hours, installation description and program changes.

[illegible]

User notes 4

Space for your own TAKT1/TAKT2/TAKT3 times, active-window hours, installation description and program changes.

[illegible]

User notes 5

Space for your own TAKT1/TAKT2/TAKT3 times, active-window hours, installation description and program changes.

DATE / TIME	SETTING / NOTE

WARRANTY TERMS - 1/2

Dear User,

First of all, thank you for choosing a PAMEL product. We are confident that you will be satisfied with your choice. We design our devices to meet your requirements and to provide trouble-free future use.

WARRANTY TERMS

PAMEL provides a warranty for the controller (excluding additional equipment) within the territory of the Republic of Poland for a maximum period of 60 months:

24 months of basic warranty,
6 months of extended manufacturer's warranty,
it is also possible to purchase an extension of the warranty up to 40 or 50 months.

The total warranty period may not exceed 80 months from the device production date.

Additional equipment (e.g. probes, heaters) is covered by the standard warranty arising from the Civil Code. A purchased warranty extension is confirmed by a holographic sticker on the warranty card.

The warranty does not cover consumable parts and accessories intended for self-installation (e.g. antennas, sensors, brackets, heaters, cables, batteries).

During the warranty period, the manufacturer undertakes to remedy physical defects free of charge. If at least four repairs have been carried out under the basic warranty and the device is still defective, the Buyer has the right to replacement with a new unit of equivalent parameters or a refund of the purchase price.

The warranty period is extended by the duration of the repair.

Complaints must be reported by e-mail (pamel@pamel.pl) or by telephone.

The manufacturer will first attempt to resolve the problem remotely and will indicate the next complaint-handling steps.

At the manufacturer's request, the Buyer is required to complete a complaint report.

The warranty covers only defects caused by reasons inherent in the device.

The warranty does not cover damage resulting from:

improper installation, operation or maintenance,
storage under unsuitable conditions,
use of unsuitable consumables,
unauthorized repairs or modifications,
mechanical damage, flooding, water-vapor condensation, contamination, weather phenomena or random events,
exceeding the rated parameters.

The warranty does not cover claims concerning the technical parameters of the device if they comply with the manufacturer's data.

WARRANTY TERMS - 2/2

To retain warranty rights, the device must be delivered:
complete,
in packaging protecting it from damage,
with documentation, cables and additional components,
with seals and stickers intact and not removed,
with the original warranty card signed by both parties and the sticker showing the production date.

The warranty does not cover services and materials related to normal operating service (e.g. installation, programming, cleaning, maintenance, replacement of fuses and bulbs).

These services are chargeable.

The service department may refuse warranty repair in the event of:
discrepancies between the documentation and the actual condition of the device,
unauthorized alterations to documents,
removal of device identification markings (e.g. labels).

Warranty repairs are carried out within 21 days from the date the device is delivered to the service department.

If parts must be imported from abroad, this period may be extended - the Buyer will be informed by e-mail.

The device must be installed in accordance with standards and the operating manual. Where required by law, installation must be carried out by a person with the appropriate qualifications.

The scope of the parties' rights and obligations is governed solely by this document.

Equipment not collected from the service department within 3 months after completion of the repair becomes the property of the service department. Parts replaced during repair remain the property of the manufacturer.

The manufacturer is not responsible for the loss of user data stored in the device. After repair, the device is returned with factory settings restored.

By signing the warranty card, the Buyer confirms that they have read and accept the warranty terms.

A card without a signature and without the original sticker showing the production date is invalid.

Note: maintenance, cleaning, replacement of bulbs, fuses, wear parts, or repairs resulting from normal wear (e.g. potentiometers) are not counted as repairs.

16.05.2026

WARRANTY PERIOD START DATE	SELLER'S STAMP	CUSTOMER SIGNATURE