F&F Filipowski sp. j
ul. Konstantynowska 79/81
95-200 Pabianice POLAND
tel/fax 48 42 2270971
e-mail: fif@fif.com.pl

PCG-417 DUO

TIME CONTROLLERS
star-delta switch

www.fif.com.pl

F&F products are covered by an 24 months warranty from date of purchase

PURPOSE

To control the STAR-DELTA contactor connection system.

FUNCTIONING

The PCG-417 relay is equipped with a special system of two electromagnetic relays which removes the risk of activating two connectors simultaneously, with each relay controlling a given connector. Once the system is switched from STAR to DELTA, one relay disconnects the "star" connector (a forced interval takes place). The other then activates the "delta" connector.
After the power supply is turned on (green LED is shining), the joint 7-9 is closed and remains in this position for the preset start-up time t1. After the lapse of t1, joint 7-9 opens and both joints remain open for the time t2. After the lapse of t2, the joint10-12 is closed and remains in this position until the power voltage is disconnected.

ASSEMBLY

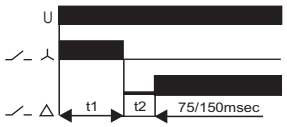
1. Take OFF the power.
2. Put on the relay on the rail in the switchgearbox.
3. Cable of power connect with wiring diagram with marks; voltage 230V to joints 1-3, voltage 24V to joints 1-4.
***ATTENTION! :** Connect only one of choosen voltages.*
4. Power system of coil of connector which switching STAR system connect in line with joint 7-9.
5. Power system of coil of connector which switching DELTA system connect in line with joint 10-12.

TECHNICAL DATA

supply	*230VAC / 24VAC/DC*
current load	*2×(<8A)*
joint	*2×PZ*
DELTA activation time	*1÷1000sec*
switching time	*green LED*
action indicator	*red LED*
power consumption	*0,8W*
working temperature	*-25÷50°C*
connection	*screw terminals 2,5mm²*
dimensions	*1 module (18mm)*
fixing	*on rail TH-35*

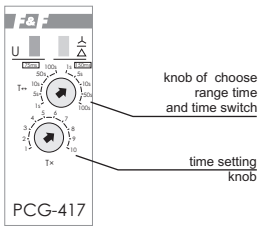
Realisation of time t1 is signaling by pulse shining of red LED. Take ON a STAR system (after time t2) is signaliby by shine of red LED.

DIAGRAM



SETTINGS OF ACTIVATION TIME AND DELAY OF SWITCHING TO

By setting range knob T↔ set choosen time range (for delay switch for t2=75msec on the left side of scale, but for delay switch for t2=100msec on the right side of scale). By knob T× set value on the scale from 1 to 10. Product of this values is equal activation time t1 (e.g.. t1=1s×7=7sec).



WIRING DIAGRAM

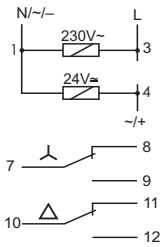
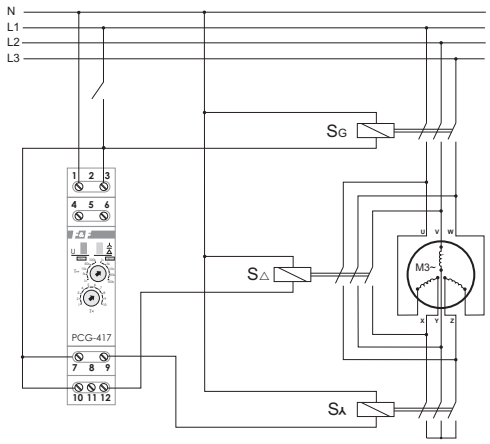


Diagram of switching connector system
STAR - DELTA



SG - main connector
S△ - connector of system “DELTA”
SΛ - connector of system “STAR”

A090604

F&F Filipowski sp. j
ul. Konstantynowska 79/81
95-200 Pabianice POLAND
tel/fax 48 42 2270971
e-mail: fif@fif.com.pl

PCR-513 230V

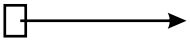
TIMING RELAYS
lagged activation

www.fif.com.pl

F&F products are covered by an 24 months warranty from date of purchase

PURPOSE

Timing relays are devised to time the control of industrial and domestic automatic control vengineering systems (e.g. entilation, heating, lighting, signalling, etc.).



WORK TIME SETTINGS

By time range switch set to one of choosen range and by setting time knob set value from 1 to 12. Product of this vaules is equal work time (e.g. 1m×7=7 min).

ATTENTION!

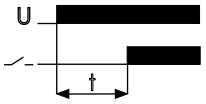
- With the power supply on, the system does not respond to time range setting modifications.
- The newly set time range is active after the power supply has been turned off and on.
- With the power supply on, it is possible to regulate the preset time freely within the selected time range.

ASSEMBLY

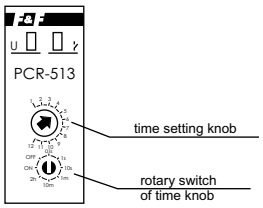
1. Take OFF the power.
2. Put on the relay on the rail in the switchgearbox.
3. Cables of power connect with wiring diagram .
4. System of switching ON receiver connect in line to joints 11-12

FUNCTIONING

Working mode: ***LAGGED ACTIVATION***
After the power voltage is supplied (green LED is shining), contact is shifted to position 11-10 and the countdown of the preset value t is commenced. After the preset time t has been counted down, contact returns to position 11-12. The working sequence of the relay may be repeated after turning the power supply off and on.



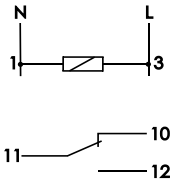
Setting the time range knob regulator in the:
-ON *- position with power supply activated connection of joint in position 11-12.*
*-****OFF*** *- position with power supply activated connection of joint in position 11-10.*



TECHNICAL DATA

supply	*230V AC*
current load	*<10A*
joint	*1P*
operation time	*0,1sec÷24h*
power supply indicator	*green LED*
operation mode indicator	*red LED*
power consumption	*0,8W*
working temperature	*-25÷50°C*
connection	*screw terminals 2,5mm²*
dimensions	*1 module (18mm)*
fixing	*on rail TH-35*

WIRING DIAGRAM



A090603

F&F Filipowski sp. j
ul. Konstantynowska 79/81
95-200 Pabianice POLAND
tel/fax 48 42 2270971
e-mail: fif@fif.com.pl

PCR-515 DUO

TIMING RELAYS
lagged activation

www.fif.com.pl

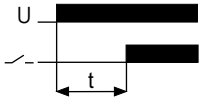
F&F products are covered by an 24 months warranty from date of purchase

PURPOSE

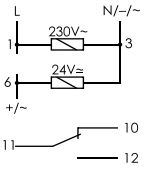
Timing relays are devised to time the control of industrial and domestic automatic control vengineering systems (e.g. entilation, heating, lighting, signalling, etc.).

FUNCTIONING

Working mode: ***LAGGED ACTIVATION***
After the power voltage is supplied (green LED U is shining), contact stay in position 11-10 and the countdown of the preset work time. After the preset time t has been counted down, contact switch to position 11-12 (red LED ↯ is shining). The working sequence of the relay may be repeated after turning the power supply off and on.



INPUT/OUTPUT direction



1-3	*relay supply; 230V*
3-6	*relay supply; 24V*
11	*supply input of joint (COM)*
10	*output: opening joint (passive)*
12	*output: closing joint (active)*

ASSEMBLY

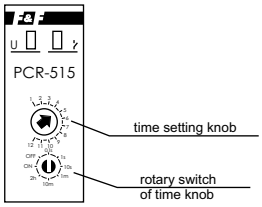
1. Take OFF the power.
2. Put on the relay on the rail in the switchgearbox.
3. Cables of power connect with wiring diagram accordance to marks; voltage 230V to joints 1-3, voltage 24V to joints 3-6. ATTENTION! Connect only one of choosen voltages!!
4. System of switching ON receiver connect in line to joints 11-12.

TECHNICAL DATA

supply	*230 VAC / 24V AC/DC*
current load	*<10A*
joint	*separate 1P*
operation time	*0,1sec÷576h*
power supply indicator	*green LED*
operation mode indicator	*red LED*
power consumption	*0,8W*
working temperature	*-25÷50°C*
connection	*screw terminals 2,5mm²*
dimensions	*1 module (18mm)*
fixing	*on rail TH-35*

WORK TIME SETTINGS

By time range switch T↔ set to one of choosen range and by setting time knob T× set value from 1 to 12. Product of this vaules is equal work time (e.g. 1m×7=7 min).



TIME RANGE

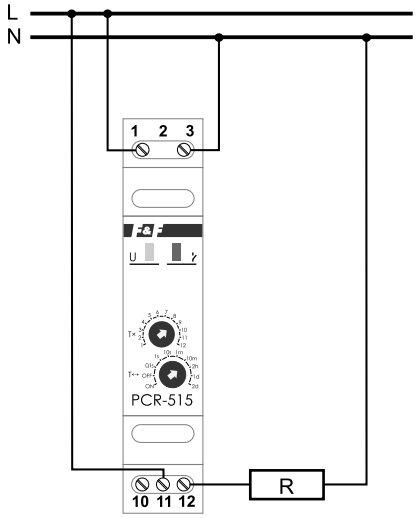
0,1s *:*	*0,1÷1,2 sec.*	***10m*** *:*	*10÷120 min.*
1s *:*	*1÷12 sec.*	***2h*** *:*	*2÷24 h.*
10s *:*	*10÷120 sec.*	***1d*** *:*	*1÷12 days (24÷288 h.)*
1m *:*	*1÷12 min.*	***2d*** *:*	*2÷24 days (48÷576 h.)*

ON *with power supply activated make to contact of joint in position11-12.*
OFF *with power supply activated make to contact of joint in position11-10.*

ATTENTION!

- With the power supply on, the system does not respond to time range setting modifications.
- The newly set time range is active after the power supply has been turned off and on.
- With the power supply on, it is possible to regulate the preset time freely within the selected time range 1÷12.

WIRING DIAGRAM



B111030

«F&F»® Importőr: HD HUNGÁRIA

www.fif.com.pl www.hdhungaria.hu

PCS-516 UNI

10 funkciós időrelé

Az F&F termékekre a vásárlástól számított 36 havi garancia érvényesíthető

ÜZEMMÓDOK:

A

KÉSLELTETETT BEKAPCSOLÁS
A tápfeszültség bekapcsolása után (zöld LED világít) a kontaktusok 3-5 helyzetben maradnak, majd az előre beállított t idő eltelte után a kontaktusok 3-7 helyzetre zárnak. A művelet a tápfeszültség ki- és újra bekapcsolása után ismétlődik.

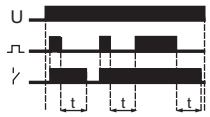
F

Kikapcsolás késleltetés a segédjel bekapcsolását t idővel követően, a relé a segédjel bekapcsolásakor zár. A t idő mérése közben a a rendszer újabb indítási jelre nem reagál

G

Kikapcsolás késleltetés a segédjel kikapcsolását t idővel követően, a relé a segédjel kikapcsolásakor zár. A t idő mérése közben a rendszer újabb indítási jelre nem reagál

H



Kikapcsolás késleltetés a segédjel kikapcsolását t idővel követően, a relé a segédjel bekapcsolásakor zár. A t idő mérése közben adott újabb indítási jel a folyamatot újraindítja.

B

KÉSLELTETETT KIKAPCSOLÁS
A kontaktus 3-5 helyzetből, a tápfeszültség bekapcsolását követően (zöld LED világít) 3-7 helyzetbe kapcsol aAz előre beállított t idő elteltéig (piros LED világít). A művelet a tápfeszültség ki- és újra bekapcsolása után ismétlődik.

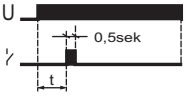
C

CIKLIKUS MŰKÖDTETÉS BEKAPCSOLÁS KÉSLELTETÉSSEL
Az előre beállított t idő szerint az "A" üzemmód ciklikus ismétlése.

D

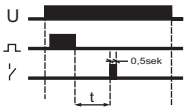
CIKLIKUS MŰKÖDTETÉS KIKAPCSOLÁS KÉSLELTETÉSSEL
Az előre beállított t idő szerint a "B" üzemmód ciklikus ismétlése.

E



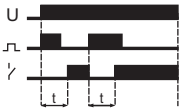
Előre beállított t idő után 0,5 sec impulzus adás

I



Bekapcsolás vagy kikapcsolás késleltetés impulzusjel adásával. Ha a segédjel kevesebb, mint 45sec aktív, a rendszer nem veszi figyelembe, ha azonban a 45sec-t meghaladja, az előre beállított t idő mérése a kikapcsoláskor megkezdődik. A segédjel időmérésen belüli újabb bekapcsolása esetén ez, az újabb lesz a vezérlő jel. (Pl. szellőztetés vezérléshez).

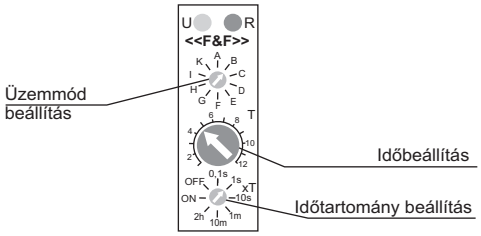
K



A segédjel indítását követően a beállított t idő után a relé bekapcsol. Kikapcsolás a segédjel újabb bekapcsolásakor, a működési periódus ekkor indul újra.

A RESET alkalmazása esetén
**A, B, C, D, F üzemmódban a kiválasztott mód újrakezdődik;*
**F, G, H, I üzemmódban a relé alapállapotba áll, és a segédjelre vár;*
**K üzemmódban a relé tartós zárt állapotba kerül.*

Az állítótárcsa
****ON** helyzetbe állításával a relé 3-7 pozícióba zárt állapotba kerül*
****OFF** helyzetbe állításával a relé 3-5 pozícióba zárt állapotba kerül (tápfeszültség bekapcsolva)*



MŰKÖDÉSI IdŐ BEÁLLÍTÁSA

T: az idő mérőszámának beállítása
xT: az időtartomány beállítása
pl. 7 min beáll: T=7, xT=1m

ÜZEMMÓD BEÁLLÍTÁSA

Az üzemmód állító csavar elforgatásával a menkfelelő funkció választható

FIGYELEM!

** Korábbi beállítások módosításához a tápfeszültséget ki/be kell kapcsolni*

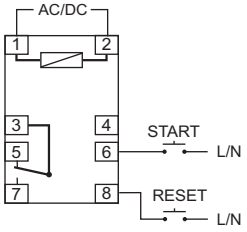
BEÉPÍTÉS

1. feszültségmentes állapotban.
2. Hlyezzük a relét a DIN sínre.
3.Csatlakoztassuk a tápkábeleket a diagram szerint.
4. A relékimeneteket csatlakoztassuk a 3-7 kimenetre

MŰSZAKI ADATOK

tápfeszültség	*12÷264V AC/DC*
névleges áram	*<10A*
kontaktus	*1NO*
időtart	*0,1s ÷24h*
bek. késl.	*< 50ms*
tápfesz. kijelzés	*zöld LED*
reléállapot kijelzés	*piros LED*
teljesítményfelvétel	*0,8W*
működési hőm. tart.	*-25÷50°C*
csatlakozás	*csavaros 2,5mm¸*
méretek	*1 modul (17,5 mm)*
rögzítés	*DIN sín TH-35*

BEKÖTÉSI VÁZLAT



A081211

«F&F»®
F&F Filipowski sp. j.
ul. Konstantynowska 79/81, 95-200 Pabianice
tel./fax: +48 (42) 215 23 83 / 227 09 71 POLAND
http://www.fif.com.pl e-mail: fif@fif.com.pl

TIMING RELAY
8-function

PCS-506

5 908312 595380

Purpose

Lagged-pulse time relay PCS-506 is devised to support the power supply of the controlled receiver for a specified period of time after decay of the control voltage, e.g. in bathroom ventilation systems in which the upkeep of the fan operation (activated along with the lighting) is required for a specified period of time after turning off the accompanying lighting.

Note!

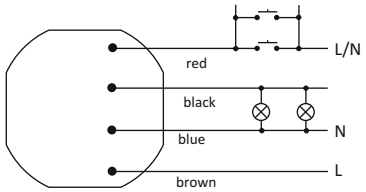
PCS-506 not compatible with bell pushes equipped with fluorescend lamps.

Assembly

1. Take OFF the power.
2. Put on the relay to under plaster box.
3. Take ON the power: L - brown cable, N - blue cable.

4. Choose one of control control impulse option L or N. Control buttons connected in parallel connect between red cable and control cable (L or N).
5. Controlled receiver connect to red cable and to cable N.
6. By code switches set work function and time range.
7. By knob set time work.

Connection scheme

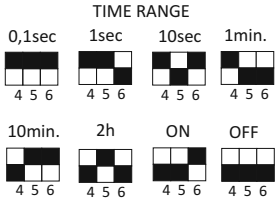


Note!

* With the power supply ON, the system does not respond to time range setting modifications.
* The newly set time range is active after the power supply has been turned OFF an ON.
* With the power supply on, it is possible to regulate the preset time freely within the selected time range.

Work time settings

By time range switch set one of choosen range and by time knob set value on the scale from 1 to 12. Product of this values egual work time „t" (e.g. t = 1m × 7 = 7 min).

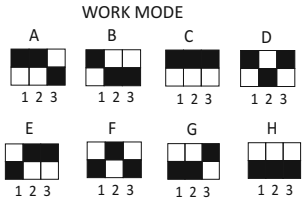


Setting the wheel regulator in the:

* **ON** position with power supply activated causes the contact to be permanently opened.
* **OFF** position with power supply activated causes the contact to be permanently closed.

Settings of work mode and time range

The required time range and the operation mode of the relay is selected by choosing the proper combination of the switches (black field in the diagram stands for the switch position).



Technical data

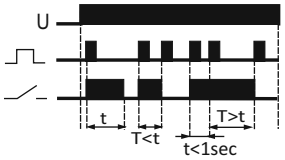
power supply	230V AC
current load	<10A
activation delay	<50msec
work time	0,1sec÷24h
power consumption	0,8W
working temperature	-25÷50°C
terminal	4×DY 1mm², l=10cm
dimensions	Ø55, h=13mm
mounting	in flush mounted Ø60
ingress protection	IP20

Work functions

A

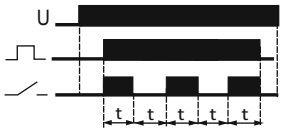
Presence simulator. When the START signal is being applied, the system turns the relay on and off at random for a period of 20 sec up to 20 min. The sequence in question is initiated by activation of the relay. After the START signal is discontinued, the system turns the relay off. The device does not respond to time range settings.

B



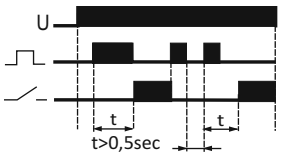
Bistable relay with step automatic module. A single pressing of the START button results in activating the relay for the preset time. A further START impulse generated during the countdown will deactivate the relay. Two START impulses applied within a time shorter than 1 sec will result in the permanent activation of the relay. The following impulse turns the relay OFF.

C



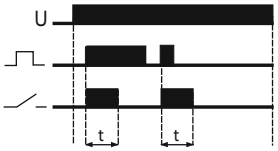
Generator with a pulse duty factor of 50% which initiates it's working sequence from the moment of activation. It is active as long as START voltage is applied. Once the START signal is disconnected, the connection is broken and the device is deactivated.

D



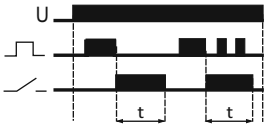
Lagged activation of the relay with the START signal. When the relay is active, another START impulse will turn it OFF. The following START impulse causes a repetition of the time countdown sequence and activation of the relay. The interval between the trailing edge of the reset signal and the leading edge of the START signal, which re-initiates the countdown sequence, should be at least 0,5 sec.

E



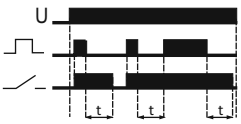
Generation of a single impulse of „t" time by the START signal trailing edge. During preset time countdown, the system does not respond to START impulses.

F



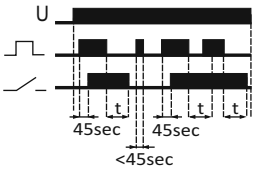
Generation of a single impulse of „t" time by the START signal trailing edge. During preset time countdown, the system does not respond to START impulses.

G



Lag in deactivation with support function enabled. The leading edge of the START signal results in relay activation, whereas the trailing edge of the same signal triggers the time countdown. The supply of the START signal during countdown results in an extension of the cycle by another „t" time value along the trailing edge.

H



Deactivation and activation lags with support function enabled. If the START voltage is supplied for less than 45 sec, it is ignored by the system, however if it is longer, the relay is activated after the 45 sec and the preset time value is counted down with the trailing edge of the START signal. If another START impulse is applied during the countdown, then the trailing edge of this signal will result in the repeated countdown sequence (e.g. for ventilation purposes: short activation of the lighting does not turn the fan on, but if the lilting lighting is activated for longer than the 45 sec, the fan will start).

F&F Filipowski sp. j
ul. Konstantynowska 79/81
95-200 Pabianice POLAND
tel/fax 48 42 2270971
e-mail: fif@fif.com.pl

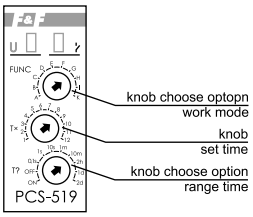
PCS-519 DUO

TIMING RELAYS
10 function

5 908312 593935

www.fif.com.pl

F&F products are covered by an 24 months warranty from date of purchase



PURPOSE

Time relay is used to temporarily control in automation and home systems (for example, ventilation, heating, lighting, signaling, etc.)

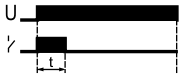
ATTENTION!

- With the power supply ON, the system does not respond to time range setting modifications.
- The newly set time range is active after the power supply has been turned OFF an ON.
- With the power supply on, it is possible to regulate the preset time freely within the selected time range.

DELAY ACTIVATION

After the power voltage is supplied (green LED "U" is shining), the joint remains in position 11-10 and the timing of the preset value t is commenced. After the preset time t has been counted down, the joint is shifted to position 11-12 (red LED is shining). The working sequence of the relay may be repeated after turning the power supply OFF and ON.

B



DELAY DEACTIVATION

Until the relay is activated, the joint remains in the 11-10 position. After the power voltage is supplied (green LED "U" is shining), the contact is shifted to position 11-12 and the countdown of the preset value t is commenced (red LED is shining) . The working sequence of the relay may be repeated after turning the power voltage OFF and ON.

C

DELAY ACTIVATION - CYCLIC

The DA operational mode is triggered in equal interruption/work cycles according to preset time values of work and break.

WORK TIME SETTINGS

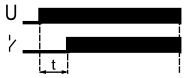
By time range switch T- set one of choosen range and by time knob T× set value on the scale from 1 to 12. Product of this values egual work time t (e.g. t=1mx7=7 min).

SETTINGS OF WORK MODE

By choose option knob FUNC set one of functions (e.g. function A- delay activation).

WORK FUNCTIONS:

A

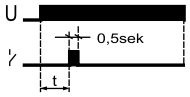


D

DELAY DEACTIVATION - CYCLIC

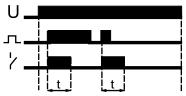
The DD operational mode is triggered in equal interruption/work cycles according to preset time values of work and break.

E



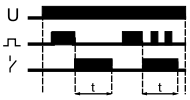
Generate impulse 0,5s. after set time t

F



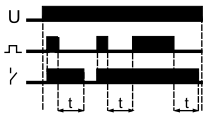
Generation of a single impulse of t time by the START signal eading edge. During preset time countdown, the system does not respond to START impulses.

G



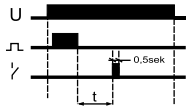
Generation of a single impulse of t time by the START signal trailing edge. During preset time countdown, the system does not respond to START impulses.

Ⓗ



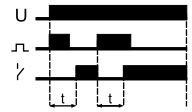
Delay in deactivation with support function enabled. The leading edge of the START signal results in relay activation, where as the trailing edge of the same signal triggers the time countdown. The supply of the START signal during countdown results in an extension of the cycle by another t time value along the trailing edge.

Ⓘ



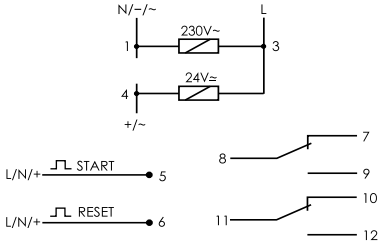
Generating a single pulse 0.5 seconds after time t triggered by trailing edge of START signal

Ⓚ



***5**. Cable of RESET signal connect to joint 6*
***6**. Circuits of switched ON receivers connect in series to joints 8-9 and 11-12.*

INPUT/OUTPUT description



SUPPLY
1-3 power relay: 230V
3-4 power relay: 24V

CONTROL INPUTS
5 input of signal START
6 input of signal RESET

JOINT 1
8 input of joint power
7 output: open joint (passive)
9 output: close joint (active)

JOINT 2
11 input of joint power
10 output: open joint (passive)
12 output: close joint (active)

Turning OFF the relay for a specified period of time along the leading edge of the START signal. During the preset time countdown the system does not respond to START signals.

If the RESET voltage is applied during the execution of:
**A, B, C, D, F functions the selected work mode is restarted*
**F, G, H, I functions the relay returns to the initial condition and awaits the START signal;*
**K function the relay's joint is closed permanently in the 8-9 and 11-10 position.*

TIME RANGE

0,1s:	*0,1÷1,2 sec*	***10m***:	*10÷120min*
1s:	*1÷12 sec*	***2h***:	*2÷24godz*
10s:	*10÷120 sec*	***1d***:	*2÷12dni (24÷288godz.)*
1m:	*1÷12 min*	***2d***:	*2÷24dni (48÷576godz.)*

*- **ON** - position with power supply activated results in the permanent closure of the joint in position 8-9 and 11-10.*
*- **OFF** - position (power supply activated) causes the contact to be permanently closed in the position 8-7 and 11-12.*

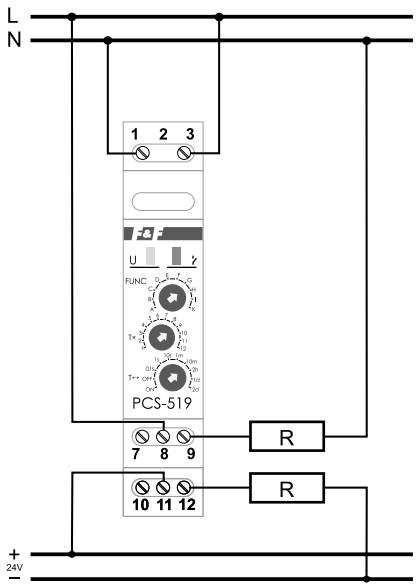
ASSEMBLY

***1**. Take OFF the power.*
***2**. Put on the relay on the rail in the switchgearbox.*
***3**. Cables of power connect with diagram with marks: voltage 230V to joints 1-3, voltage 24V to joints 3-4. **ATTENTION!** Connect only one of choosen volatges!*
***4**. Cable of START signal connect to joint 5.*

TECHNICAL DATA

supply	*230VAC/24VAC/DC*
current load	*2×(<8A)*
joints	*2P*
work time	*0,1s÷24h*
activation lag delay gunction	*<50msec*
power supply indiactor	*green LED*
work mode indicator	*red IED*
power consumption	*0,8W*
working temperature	*-25÷50°C*
connection	*screw terminals 2,5mm²*
dimensions	*1 module (18 mm)*
fixing	*on rail TH-35*

WIRING DIAGRAM



An example of the power supply system by 230V of relay which control the receiver powered by 230V and 24 V

A100522

«F&F» Importőr: HD HUNGÁRIA

www.fif.com.pl www.hdhungaria.hu

PCU-511 UNI

MULTIFUNKCIÓS IDŐRELÉ

GUARANTEE 24 months

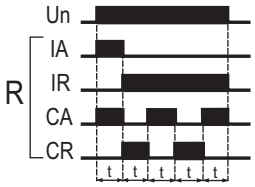
ÜZEMMÓDOK

****KÉSLELTETETT BEKAPCSOLÁS (IR)***
A tápfeszültség bekapcsolása után a kontaktusok 3-5 pozícióban maradnak, a beállított idő mérése megkezdődik. A beállított idő letelte után a kontaktusok 3-7 pozícióba kapcsolnak. A művelet a tápfeszültség ki- és újra bekapcsolás után ismétlődik

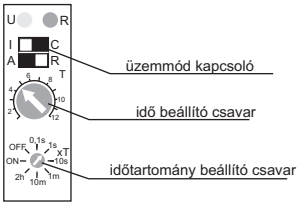
****KÉSLELTETETT KIKAPCSOLÁS (IA)***
A tápfeszültség bekapcsolása után a contaktusok 3-7 pozícióban. A beállított idő letelte után a kontaktusok 3-5 pozícióba kapcsolnak. A művelet a tápfeszültség ki- és újra bekapcsolás után ismétlődik

****CIKLIKUS KÉSLELTETETT BEKAPCSOLÁS (CR)***
Az IR üzemmód a beállított késleltetési idővel megyező időciklusokban.

****CIKLIKUS KÉSLELTETETT KIKAPCSOLÁS (CA)***
Az IA üzemmód a beállított késleltetési idővel megyező időciklusokban.



Az időtartomány beállító csavar:
****ON** - helyzetében a kontaktusok állandó 3-7 pozícióban vannak (Tápfeszültség jelenléte esetén)*
****OFF** - helyzetében a kontaktusok állandó 3-5 pozícióban vannak (Tápfeszültség jelenléte esetén)*



A működési idő beállítása:

Az időtartomány beállítása és az idő mérőszámának beállítása a megfelelő csvarokkal történik. A működési idő a két érték szorzata (pl.: t = 1 m × 7 = 7 min).

Üzemmód beállítása

A kívánt üzemmód a jumperkapcsolók megfelelő kombinációjával állítható be.

FIGYELEM!

**Tápfeszültség bekapcsolása alatt az időtartomány beállításai nem módosíthatóak.*
**Az újonnan beállított értékek a tápfeszültség ki és bekapcsolása után aktiválódnak.*
**Bekapcsolt tápfeszültség mellett az időértékek a tartományon belül szabadon módosíthatók.*

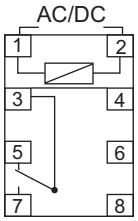
BEKÖTÉS:

1. A bekötést nem szabad áram alatt végezni!.
2. Helyezzük a relét a DIN sínre.
3. Kössük be a tápfeszültséget a bekötési diagram alapján.
4. A vezérelt kört kössük a 3-7 vagy a 4-8 pozíciókra..

MŰSZAKI ADATOK

tápfeszültség	*12-264V AC/DC*
névleges áram	*10A*
kontaktus	*1 C/O*
működési tartomány	*0,1÷24h*
a késleltetés ideje	*<50msec*
tápfeszültség	*zöld LED*
működéskijelzés	*piros LED*
energiafelvétel	*0,8W*
működési hőm. tartomány	*-25÷50°C*
csatlakozás	*csavaros 2,5mm²*
méretek	*1 modul (17,5mm)*
beépítés	*DIN sín TH-35*

BEÉPÍTÉSI DIAGRAM:



F&F Filipowski sp. j
ul. Konstantynowska 79/81
95-200 Pabianice POLAND
tel/fax 48 42 2270971
e-mail: fif@fif.com.pl

PCU-520 230V

TIMING RELAYS

SETTING OF TWO INDEPENDENT TIME

www.fif.com.pl

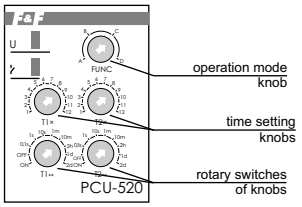
F&F products are covered by an 24 months warranty from date of purchase

PURPOSE

Timing relays are devised to time the control of industrial and domestic automatic control vengineering systems (e.g. entilation, heating, lighting, signalling, etc.).
Setting two independent times : work time t1 and break time t2.

FUNCTIONING

Working mode: ***LAGGED DEACTIVATION(A)***
Until the relay is activated, the contact remains in the 1-5, 2-8 position. After the power voltage is supplied (green LED U is shining), contact is shifted to position 1-6, 2-7 for time t1 (red LED is shining). After the preset time t1 has been counted down, joint returns to position 1-5, 2-8 for time t2. After time t2 joint return to position 1-6, 2-7. The working sequence of the relay may be repeated after turning the power supply off and on.



WORK TIME SETTINGS

By time range switch T↔ set to one of choosen range and by setting time knob T× set value from 1 to 12. Product of this vaules is equal work time (e.g. 1m×7=7 min).

WORK MODE SETTINGS

By knob FUNC set one of functions (e.g. function A - Lagged Deactivation).

ATTENTION!

- With the power supply on, the system does not respond to time range setting modifications.
- The newly set time range is active after the power supply has been turned off and on.
- With the power supply on, it is possible to regulate the preset time freely within the selected time range.

ASSEMBLY

1. Take OFF the power.
2. Put on the relay on the rail in the switchgearbox.
3. Cables of power connect with wiring diagram with marks: joint 3 -L, joint 4-N.
4. System of switching ON a receiver connect in line to joints 1-6 and 2-7.

LAGGED ACTIVATION (B)

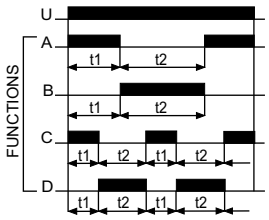
After the power voltage is supplied (green LED U is shining), the contact remains in position 1-5, 2-8 for time t1. After the preset time t1 has been counted down, the joint is shifted to position 1-6, 2-7 for time t2 (red LED is shining). After time t2 joint returns to position 1,5, 2-8. The working sequence of the relay may be repeated after turning the power supply off and on.

LAGGED ACTIVATION - CYCLIC (D)

The Lagged Activation mode is triggered in equal work cycles according to the preset time values.

LAGGED DEACTIVATION - CYCLIC (C)

The Lagged Deactivatin mode is triggered in equal work cycles according to the preset time values.

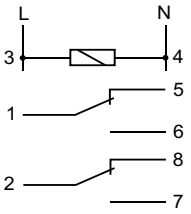


Setting the time range knob regulator in the:
-ON *- position with power supply activated connection of joint in position 1-6, 2-7.*
*-****OFF*** *- position with power supply activated connection of joint in position 1-5, 2-8.*

TECHNICAL DATA

supply	*230VAC*
current load	*2×(<10A)*
joint	*2P*
work time	*0,1sec÷24h*
break time	*0,1s÷24h*
switching ON delay	*<50msec*
power supply indicator	*green LED*
operation mode indicator	*red LED*
power consumption	*1,2W*
working temperature	*-25÷50°C*
connection	*screw terminals 2,5mm²*
dimensions	*2 modules (35mm)*
fixing	*on rail TH-35*

WIRING DIAGRAM



A090605

Importőr:

www.hdhungaria.hu

PCZ-521.2

PROGRAMOZHATÓ IDŐZÍTŐ EGYCSATORNÁS

5 9 0 8 3 1 2 5 9 3 2 4 9

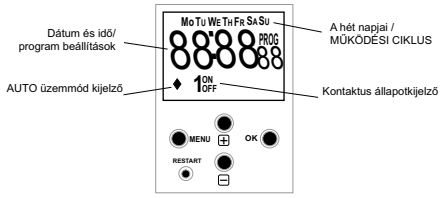
MŰKÖDÉS

AZ időzítő különböző berendések megadott időpontban történő ki- és bekapcsolására használható. Beállítható működési ciklusok: napi, heti, munkanapokra (hétfő-péntek), hétvégi (szombat-vasárnap)

ÜZEMÓDOK ÉS FUNKCIÓK

AUTO - *ON/OFF parancsok felhasználó által előre beprogramozott rend szerinti automatikus végrehajtása.*
MANUAL *(KÉZI)* ***[ON] -*** *a kontaktusok bekapcsolt (1-5) állapotban, vagy* ***[OFF]*** *a kontaktusok kikapcsolt (1-6) állapotban [kikapcsolt AUTO üzemmódban nincs jel a kijelzőn]*
ON-OFF COMMAND *(ON-OFF parancs)* ***-*** *attól függően, hogy a működtetett készülék ki- vagy bekapcsol.*
OPERATION CYCLE *(MŰKÖDÉSI CIKLUS)* ***-*** *beállítható heti ciklus (7 nap, hétfőtől vasárnapig) melyen belül a berendezést az ON-OFF parancsok működtetik.*

A frontpanel



A kezelőgombok

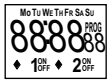
MENU:
- A programmenü aktiválása (nyomva tartani> 3 sec.)
- A dátum és idő beállítások és az ON/OFF parancsok elfogadása
- Egy szinttel feljebb lépés
OK:
- beállítás elfogadása és váltás a következő beállítandó elemre
- dátum ellenőrzése

+:
- A beállítandó érték +1 egységgel történő változtatása (folyamatosan nyomva tartva az érték futva változik)
- MANUAL (KÉZI) üzemben: a kontaktus állandó be- (ON) vagy kikapcsolása (OFF)
-:
- A beállítandó érték -1 egységgel történő változtatása (folyamatosan nyomva tartva az érték futva változik)
RESTART:
- a processzor újraindítása - például ha az időzítést le akarjuk állítani, stb. Nem törli az időbeállításokat és z ON/OFF parancsokat.
+ és - : ('Teljes Reset')
- az összes beállítás törlése (mindkét gomb nyomva tartva >3 sec.)

PROGRAMOZÁS

1. INDÍTÁS

Bekapcsolás
Kijelző önellenőrzés (minden digit látszik)

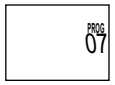


Az időzítő bekapcsol és méri az időt
FIGYELEM: *Ha a kijelző önellenőrzése nem történik meg és az idő kijelzése látszik, akkor már vannak eltárolt idő és ON/OFF adataink.*
FIGYELEM: *Az összes korábbi eltárolt adat törléséhez használjuk a teljes törlés parancsot (+ és -).*

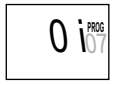
2. DÁTUM

Tartsuk lenyomva a MENU gombot legalább 3 másodpercig. A készülék a programmenübe lép (date hour prog edit del mode/ dátumi idő prog edit törlés mód). Lépjünk a dátumbeállításra a +/- gombokkal.

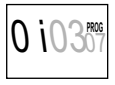
Nyugtázzuk az OK gombbal.
Az időzítő az év beállításra lép.



Állítsuk be az éset a +/- gombokkal, majd nyugtázzuk az OK gombbal.
Az időzítő a hónap beállításra lép.



Állítsuk be a hónapot a +/- gombokkal, majd nyugtázzuk (OK gomb).
Az időzítő a hónap napjának beállítására lép.



Állítsa be a napot a +/- gombokkal.
**Az OK gombbal visszaléphatünk az év beállítására.*
** Nyugtázzuk a dátumbeállítást a MENU gombbal. A készülék átlép a program menübe.*

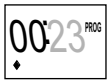
FIGYELEM: *A téli/nyári időszámítás autómatikusan átállítódik.*

3. IDŐ

Tartsuk lenyomva a MENU gombot legalább 3 másodpercig. A készülék a programmenübe lép. Lépjünk az idő (hour) beállításra a +/- gombokkal.

Nyugtázzuk az OK gombbal.
Az időzítő a perc beállításra lép.

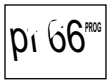
Állítsuk be a percet a +/- gombokkal, majd nyugtázzuk az OK gombbal
Az időzítő az óra beállításra lép.



Állítsuk be az órát a +/- gombokkal.
**Az OK gombbal a perc beállításra léphetünk vissza.*
** Nyugtázzuk az időbeállítást a MENU gombbal. A készülék átlép a program menübe. A MENU ismételt megnyomásával a főmenübe lépünk.*

4. 1.ON/OFF PARANCS - Paraméter beállítások

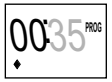
4.1 Tartsuk lenyomva a MENU gombot legalább 3 másodpercig. Az időzítő a programmenübe lép.
Lépjünk az ON/OFF parancs szerkesztő módra ('prog') a +/- gombokkal.



Nyugtázzuk az OK gombbal.
Az időzítő az ON/OFF parancs következő számát jelzi ki.

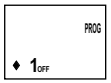
Az időzítő automatikusan a perc beállításra lép.

Állítsuk be a percet a +/- gombokkal.
Az időzítő az óra beállításra lép.



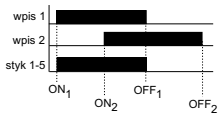
Állítsuk be az órát a +/- gombokkal.
Az időzítő a MŰKÖDÉSI CIKLUS beállítására lép.
Állítsa be a működési ciklust a +/- gombokkal
- egy nap: Mo; Tu; We; Th; Fr; Sa vagy Su (H, K, Sze, Cs, P, Szo, V)
- munkanapok: Mo Tu We Th Fr (hétfőtől péntekig)
- hétvégék: Sa Su (szombat és vasárnap)
- minden nap: Mo Tu We Th Fr Sa Su (hétfőtől vasárnapig)

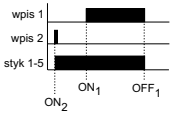
Nyugtázzuk az OK gombbal.
Az időzítő az ON vagy OFF opció beállítására lép

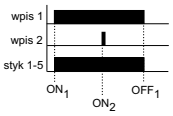


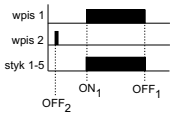
Állítsuk be az ON vagy OFF opciót a +/- gombokkal, majd nyugtázzuk az OK gombbal.
Az időzítő automatikusan a következő ON/OFF parancs paramétereinek beállítására lép.
Nyugtázzuk a beállításokat a MENU gombbal. Az időzítő automatikusan a program menübe lép. A MENU gomb ismételt megnyomásával a főmenübe lépünk.

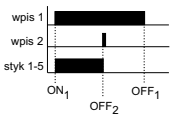
FIGYELEM!
A betáplált ON/OFF parancsok nem mindig párban kapcsolják a kontaktust KI vagy BE. Különálló parancsként kell őket kezelni és a beállítások kronológiájának megfelelően lesznek végrehajtva. Az alábbi diagramok olyan eseteket illusztrálnak, mikor két ON/OFF parancs-pár működési időtartamában átfedések vannak.











**Egy ON/OFF parancs-párral beállított működési időtartam több is lehet, mint 24 óra. Az ON parancsot be lehet állítani a hét bármely napjának bármely órájára (pl.: kedd 13:45) és az OFF parancsot beállíthatjuk egy másik nap bármely órájára (pl.: Csütörtök, 17:05)*

Választhatunk másik MŰKÖDÉSI CIKLUST is az egyes parancsokhoz. A különböző MŰKÖDÉSI CIKLUSOKKAL rendelkező parancsok a következő sorrendben lesznek végrehajtva:
-a hét egy napja hétfőtől vasárnapig
-munkanapok (hétfőtől péntekig)
-hétvége (szombat, vasárnap)
- minden nap hétfőtől vasárnapig

5. SZERKESZTÉS (EDITING) - Paraméterek változtatása

Tartsuk lenyomva a MENU gombot legalább 3 másodpercig. Az időzítő a programmenübe lép.
Válasszuk az ON/OFF parancsok paramétereinek változtatását ('edit') a +/- gombokkal.

Nyugtázzuk az OK gombbal.
Az időzítő kijelzi az első ON/OFF parancsot.
Állítsa be a változtatni kívánt ON/OFF parancsban szereplő számokat a +/- gombokkal. Nyugtázzuk az OK gombbal.
A folytatásban játjunk el az ON/OFF parancsok paramétereinek beállításához hasonlóan. (lásd 4. pont)
**A változtatásokat nyugtázzuk a MENU gombbal. Az időzítő automatikusan a programmenübe lép. A MENU gomb ismételt megnyomásával a főmenübe lépünk.*

6. TÖRLÉS

Tartsuk lenyomva a MENU gombot legalább 3 másodpercig. Az időzítő a programmenübe lép.
Válasszuk az ON/OFF parancsok törlését a +/- gombokkal. ('del')

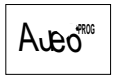
Nyugtázzuk az OK gombbal.
Az időzítő az első ON/OFF parancsot jelzi ki.
Válasszuk ki az ON/OFF parancs törölni kívánt első számát.
Nyugtázzuk az OK gombbal.
A változtatásokat a MENU gombbal nyugtázhatjuk.

7. MŰKÖDÉSI MÓD (OPERATION MODE) - Kiválasztás

Tartsa lenyomva a MENU gombot legalább 3 másodpercig. Az időzítő a programmenübe lép.
Lépjen a működési mód kiválasztására a +/- gombokkal. ('mode')

Nyugtázzuk az OK gombbal.
Az időzítő a működési mód menüjébe lép. (automatikus/'auto' ; kézi/'hand')
Válasszuk ki a működési módot a +/-gombokkal.

AUTOMATIKUS MŰKÖDÉS - ***'auto'***



vagy
KÉZI VEZÉRLÉSŰ MŰKÖDÉS - ***'hand'***

Nyugtázzuk az OK gombbal.
Az időzítő automatikusan a programmenübe lép.
A MENU gomb megnyomásával a főmenübe léphetünk.

FIGYELEM
A kontaktusok pozíciójának megváltoztatása KÉZI VEZÉRLÉSŰ MŰKÖDÉS esetén a +/- gombok használatával lehetséges a főmenüben.

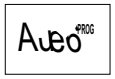
8. MEMÓRIA TÖRLÉS - 'teljes reset'

Minden korábbi DÁTUM és IDŐ beállítás, valamint ON/OFF parancs törléséhez tartsuk nyomva legalább 3 másodpercig a + és - gombokat egyszerre.

9. Téli/nyári időszámítás automatikus váltásának kikapcsolása

Tartsa nyomva a MENU gombot legalább 3 másodpercig. Az időzítő a programmenübe lép.
Válassza a +/- gombokkal az automatikus időszámítás-váltás kikapcsolását. 'dst'
(DST - Daylight Saving Time - téli időszámítás)

Nyugtázzuk az OK gombbal.
Az időzítő a téli/nyári időszámítás automatikus váltási beállításának menüjébe lép. (auto - off).
Válassza ki a kívánt módot a +/- gombokkal.
** Automatikus időszámítás-váltás* ***bekapcsolva*** *-* ***'auto'***



vagy
** Automatikus időszámítás-váltás* ***kikapcsolva*** *-* ***'off'***

Nyugtázzuk az OK gombbal.
Az időzítő automatikusan a programmenübe lép.
A MENU gomb megnyomásával a főmenübe lépünk.

TÉLI/NYÁRI IDŐSZÁMÍTÁS:

Az átállás a téli időszámításról a nyári időszámításra minden évben március utolsó vasárnapjának éjjelén 2 órakor történik. Ilyenkor egy órát hozzáadunk az aktuális időhöz.

Az átállás a nyári időszámításról a téli időszámításra minden évben október utolsó vasárnapjának éjjelén 3 órakor történik. Ilyenkor egy órával visszatekerjük az időt az aktuális időhöz képest.

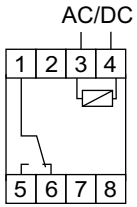
BEKÖTÉS

1.Kapcsolja ki az áramot!
2.Helyezze az időzítőt a DIN sínre a kapcsolódobozban.
3.Csatlakoztassa a kábeleket a bekötési diagramnak megfelelően.
4.Csatlakoztassa a vevőberendezést a diagram szerint.
5.Állítsa be a dátumot (lásd 2. pont) és időt (lásd 3. pont)
Állítsa be a parancsok paramétereit, melyek a vevőberendezést fogják ki- és bekapcsoln (lásd 4. pont).

MŰSZAKI ADATOK

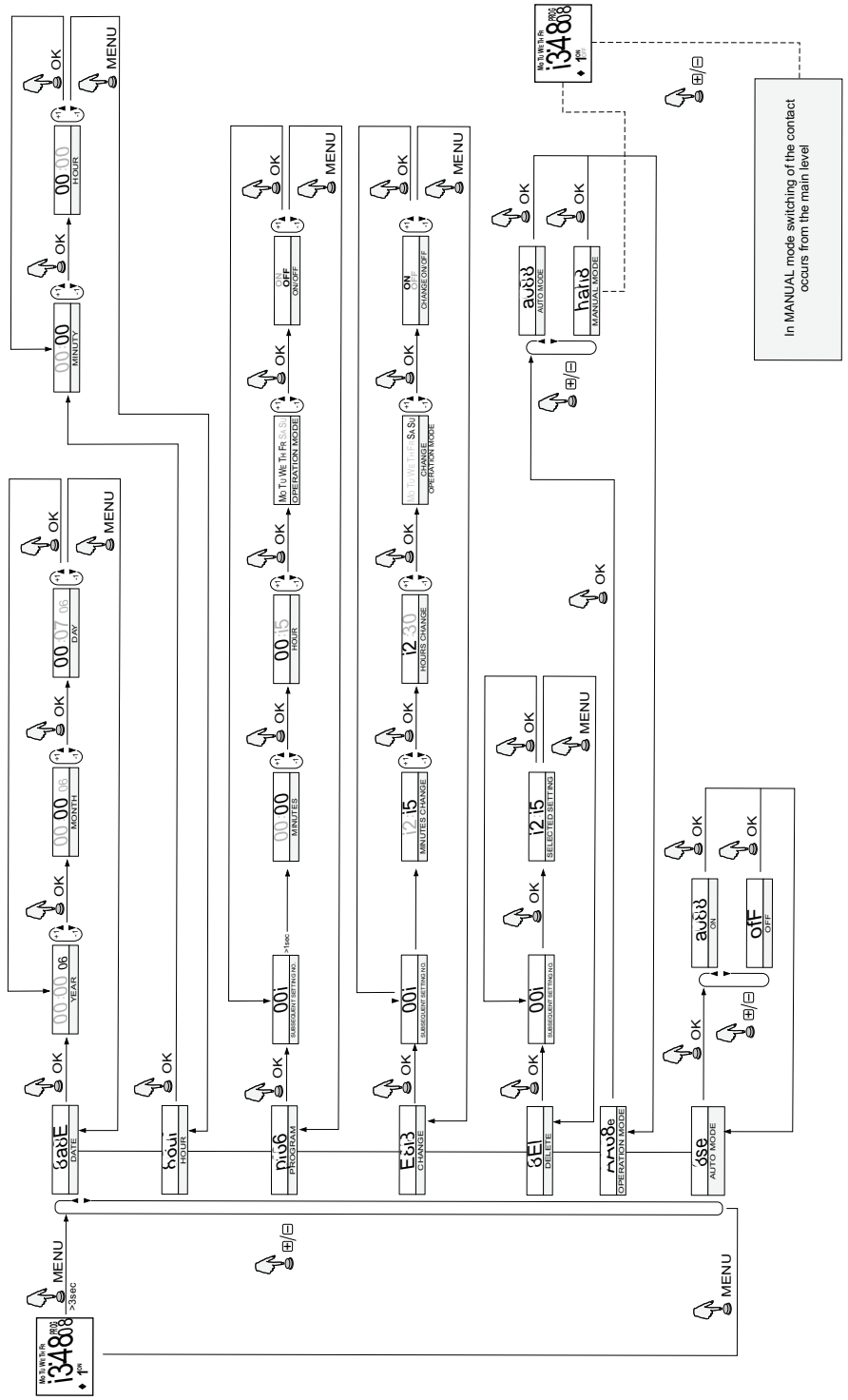
tápfeszültség	*24÷264V AC/DC*
névleges áram	*<16A*
kontaktus	*1P*
program működési ideje	*10 év*
elem töltési ideje	*30 óra*
időkijelzés pontossága	*1s*
időmérési pontatlanság	*±1s/nap*
program időbeállításainak pontossága	*1 min.*
a program memória-celláinak száma	*250 (125 ON/OFF parancs-pár)*
teljesítményfelvétel	*1.5W*
működési hőmérséklettartomány	*-20-50°C*
csatlakozás	*csavaros, 2.5mm²*
méretek	*2 modul (35mm)*
rögzítés	*Din sín TH-35*

BEKÖTÉSI DIAGRAM



1-5 kontaktus - 'ON'
1-6 kontaktus - 'OFF'

PROGRAMOZÁSI DIAGRAM



F&F Filipowski sp. j
ul. Konstantynowska 79/81
95-200 Pabianice POLAND
tel/fax 48 42 2270971
e-mail: fif@fif.com.pl

PCZ-523.2

PROGRAMMABLE CONTROL TIMER
pulse type

www.fif.com.pl

F&F products are covered by an 24 months warranty from date of purchase

PURPOSE

Programmable control timers are used to control the work time of devices included into industrial or household automatic systems in compliance with individual time schedule planned by the user.

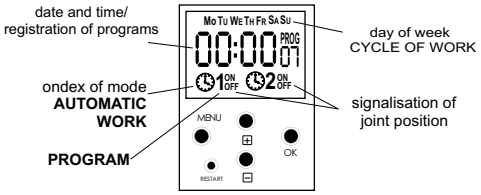
FUNCTIONING

The timer activates and deactivates a given device at preset hours in the following cycles: 24-hour, weekly, working day (Mon-Fri) or weekend (Sat, Sun).

DESCRIPTION OF WORK AND FUNCTIONS

***AUTOMATIC WORK** - according to program points of enclosures and switching off joint [sign ◷ on the left of display]*
***HANDIWORK- [ON]** - enduring connection of joint (position 1-5) or **[OFF]-** enduring switch off joint (position 1-6) by activated AUTOMATIC WORK [lack of sign ◷ on the left of display]*
***ORDER SWITCH ON - HOLD ON-** registry of program by whom make switch ON or OFF a receiver.*
***CYCLE OF WORK -** setting by user, weekly (7 days fron monday to sunday). In this time a reciver is enclose with programmabled ORDERS SWITCH ON- SWITCH OFF .*
***PROGRAM** - one of two programming line, with user settings for ORDERS ENCLOSE-EXCLUSION, contoll with own enclosing joint a receiver (connection between programs and button OK.. in main menu AUTOMATIC WORK mode.*

DESCRIPION OF DISPLAY AND PANEL STEERING



Mo-monday;Tu-tuesday; We-wednesday;Th-thursday;Fr-friday; Są-saturday; Su-sunday

DESCRIPTION OFF BUTTONS FUNCTION

MENU:
- pass to programmable menu (preeser >3sec)
*- acceptance of settings **DATE, TIME AND ORDERS SWITCH ON- HOLD ON***
- pass to upper level
OK:
- enter settings and pass to next settings
- select program: PROGRAM 1 or PROGRAM 2 in AUTOMATIC WORK mode.
+:
- change setting position by +1 in choosen programable position (preesing a button make intennsive changes in settings by +1 in loop)
*- in **HANDIWORK** mode:permanent enclosure **ON** and exclusion **OFF** a joint for CHANNEL 1*
–:*- change settings position by -1 in choosen programable position*
(preesing a button make intennsive changes in settings by -1 in loop)
*- in **HANDIWORK** mode:permanent enclosure **ON** and exclusion **OFF** a joint for CHANNEL 2*

RESET:
- to reset a processor - in case of hook-up of function of work indispensable of timer. It does not erase setups of DATES and TIME and ORDERS SWITCH ON - HOLD ON.
***- +** and **–** ("hard" reset):*
- delete of all settings of DATE and TIME and ORDERS SWITCH ON - HOLD ON from memory (preesing >3sec two buttons simultaneously).

PROGRAMMING

1. START
1.1 Take ON the POWER
1.2 Timer make a test of display (enclose all section)

1.3 Timer sterted count time from hour. 00:00
***ATTENTION!** If after took the power timer show another time and date then it means, in memory timmerare are earlier setting.*
If timer have got in memories earlier settings, they could be deleted by "hard" reset (see p. 8).

2. DATE

2.1 Prees a button MENU >3sec. Timer pass to setting mode of programming (date - hour - prog1 - prog2 - mode).
*2.2 By buttons **+/–** select mode date "**DATE**"*

Enter by OK.
2.3 Timer pass to setting year mode.

*By buttons **+/–** set year , enter OK..*
2.4 Timer pass to setting month mode.

*By buttons **+/–** set a month, enter OK.*
2.5 Timer pass to setting day of month mode.

By buttons +/– set to actual day of month
- by button OK pass to setting year mode (see p2.3)
- by button MENU accept to registry and out of programming mode.
By button MENU enter registry of date. Timer automaticly out from programmable DATE function and pass to programming mode. Again prees a button MENU cause pass to main menu.

3. TIME

3.1 Button MENU prees >3sec. Timer pass to programing menu (date - hour - prog - edit - del - mode-dst).
*3.2 By buttons **+/–** select mode of set hour **"HOUR"***

Enter OK.
4.1.3 Timer pass to menu of programming line (set - edit - del)

4.2 ORDER ENCLOSE- HOLD ON- setting parameters

*4.2.1 By buttons **+/–** select settings parameter mode **"set"***

Enter OK.
4.2.2. Timer displied next number of ORDER ENCLOSE-HOLD ON

Timer automalicly pass to setting minutes mode.

*By buttons **+/–** set minutes, enter OK.*
4.2.3 Timer pass to setting hour mode.

Enter OK..
3.3. Timer pass to setting minutes mode.

*By buttons **+/–** set minutes, enter OK..*
3.4 Timer pass to setting hour mode.

*By buttons **+/–** set hour.*

- By button OK return to setting minutes mode (see p.3.3.)
- By button MENU enter registry of time. Timer automaticly out from programmable DATE function and pass to programming mode. Again prees a button MENU cause pass to main menu.

4. ORDER ENCLOSE- HOLD ON

4.1.1 Prees button MENU >3sec. Timer pass to programing mode (date - hour - prog1 - prog2 - mode).
*4.1.2 By buttons **+/–** select PROGRAM:*
*PROGRAM 1 - **"PROG1"**. or PROGRAM 2 **- "PROG2"**.*

*By buttons **+/–** set hour. Enter OK..*

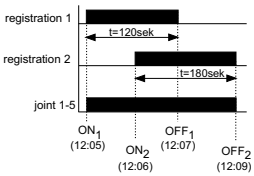
*4.2.4 Timer pass to setting CYCLE WORK mode. By buttons **+/–** set CYCLE of WORK:*
- one day of week: Mo; Tu; We; Th; Fr; Sa lub Su.
- work days: Mo Tu We Th Fr (from monday to friday).
- weekand: Sa Su (saturday and sunday)
- everyday: Mo Tu We Th Fr Sa Su (from monday to sunday)

Enter OK.
4.2.5 Timer pass to setting lenght of sec. of activation time mode.

*- By button **+/–** set sec, enter OK.*
4.2.6 Timer pass to setting lenght of minute of activation time mode.

*- By button **+/–** set minutes, enter OK.*
- Timer automaticly pass to input a next parameter of ORDER ENCLOSE-EXCLUSION mode (see p..4.2.2.)
- By button MENU enter registry of time. Timer automaticly pass to menu. Again prees a button MENU cause pass to main menu.

ATTENTION!
- Registried orders ENCLOSE-HOLD ON didn't make up permament function which realise ENCLOSING or EXLUSIONING of joint. They are threat as once orders and realise with input chronolgy. Example of set to interplay times of ENCLOSE oders ENCLOSE-HOLD ON present below digrams:



5. EDITION - change of parameter

*5.1 By buttons **+/–** select change parameter mode **"edit"**.*

Enter OK.
5.2 Timer displaied first ORDER ENCLOSE-HOLD ON.
*By buttons **+/–** set number of ORDER ENCLOSE-HOLD ON to changes of parameter, enter OK.*
5.3 Conduct as by set parameters of ORDER ENCLOSE-HOLD ON (see p. 4.2.1 ÷ 4.2.6)
By button MENU enter registry. Timer automaticly pass to programming mode of choosen channel. Again prees a button MENU cause pass to main menu.

6. CANCEL- delete registry

*6.1 By buttons **+/–** select delete mode "**del**".*

or
*- HAND WORK - **"hand"***

Enter OK. , Timer automaticly pass to programming mode. Again prees a button MENU cause pass to main menu.

ATTENTION!
*Changes of joint position in HAND WORK mode make by buttons **+/–** in main menu of this menu.*

8. SELECT PROGRAM

Connection by PROGRAM1 and PROGRAM 2 (and return) possible is by button OK in main menu in AUTOMATIC WORK mode.

9. MEMORY RESET - "hard" reset

*If you wont delete all earlier settings of DATE, TIME and ORDERS ENCLOSE-HOLD ON , prees simultaneously a buttons **+** i **–** >3sec.*

10. Exclusion of AUTOMATIC TIME CHANGE

10.1 Prees button MENU >3sec. Timer pass to programming mode (date - hour - prog1 - prog2 - mode - dst).
*9.2 By buttons **+/–** select exclusion of AUTOMATIC TIME CHANGE mode "**dst**".*
DST - Daylight Saving Time - global name for summer time (free transtation: time of win a sun light).

Enter OK.
6.2 Timer displaied first ORDER ENCLOSE-HOLD ON.
*By buttons **+/–** set number of ORDER ENCLOSE-HOLD ON todelete of parameter, enter OK....*

By button MENU enter registry. Timer automaticly pass to programming mode. Again prees a button MENU cause pass to main menu.

ATTENTION!
If you want delete all earlier settings od DATE, TIME, ORDERS ENCLOSE-EXCLUSION ("hard" reset see p. 9.)

7. WORK MODE- choose

7.1 Prees button MENU >3sec. Timer pass to programming mode (date - hour - prog1 - prog2 - mode).
*7.2 By buttons **+/–** select work selecting mode **"mode"**.*

Enter OK.
7.3 Timer pass to menu WORK MODE (auto-hand).
*7.4 By buttons **+/–** select work mode.*
*AUTOMATIC WORK - **"auto"***

Enter OK.
10.3 Timer pass to exclusion of AUTOMATIC TIME CHANGE mode (auto -OFF) .

*10.4 By buttons **+/–** select mode:*
*- with AUTOMATIC TIME CHANGE - "**auto**"*

or
*- without AUTOMATIC TIME CHANGE - **"off"***

Enter OK.
Timer automaticly pass to programming mode. Again prees a button MENU cause pass to main menu.

AUTOMATIC TIME CHANGE!

Changes time from winter time to summer time is automaticly make at the last sunday of march at 2 a.m. (add 1 hour to actual time) .
Changes time from summer time to winter time is automaticly make at the last sunday of october at 3 a.m. (subtract 1 hour from actual time) .

ATTENTION!

Possible is take OFF automatic function of time change (see p..10).

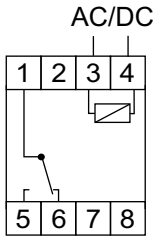
ASSEMBLY

1. Take OFF the power.
2. Timer put on the rail in the switchgearbox
3. Cable of supply connect with digram.
4. A receivers connect with diagram.
5. Set a correct date (see p2) and time (see p3).
6. Set time of enclose a receiver (see p4).

TECHNICAL DATA

supply	*24÷264V AC/DC*
current load	*<16A*
contacts	*1P*
display maintenance time	*non*
timer maintenance time	*6 years*
indication accuracy item	*1sec*
time deviation	*±1s/24h*
schedule time accurancy item	*1min*
schedule time hold on item	*1sec*
range of hold on time	*1sec÷99min59sec*
no. of program memory sectors	*250*
	2×(60 orders: ON/OFF /program)
power consumption	*1,5W*
working temperature	*-20÷50°C*
connection	*screw terminals 2,5mm²*
dimensions	*2 modules (35mm)*
fixing	*on the rail TH-35*

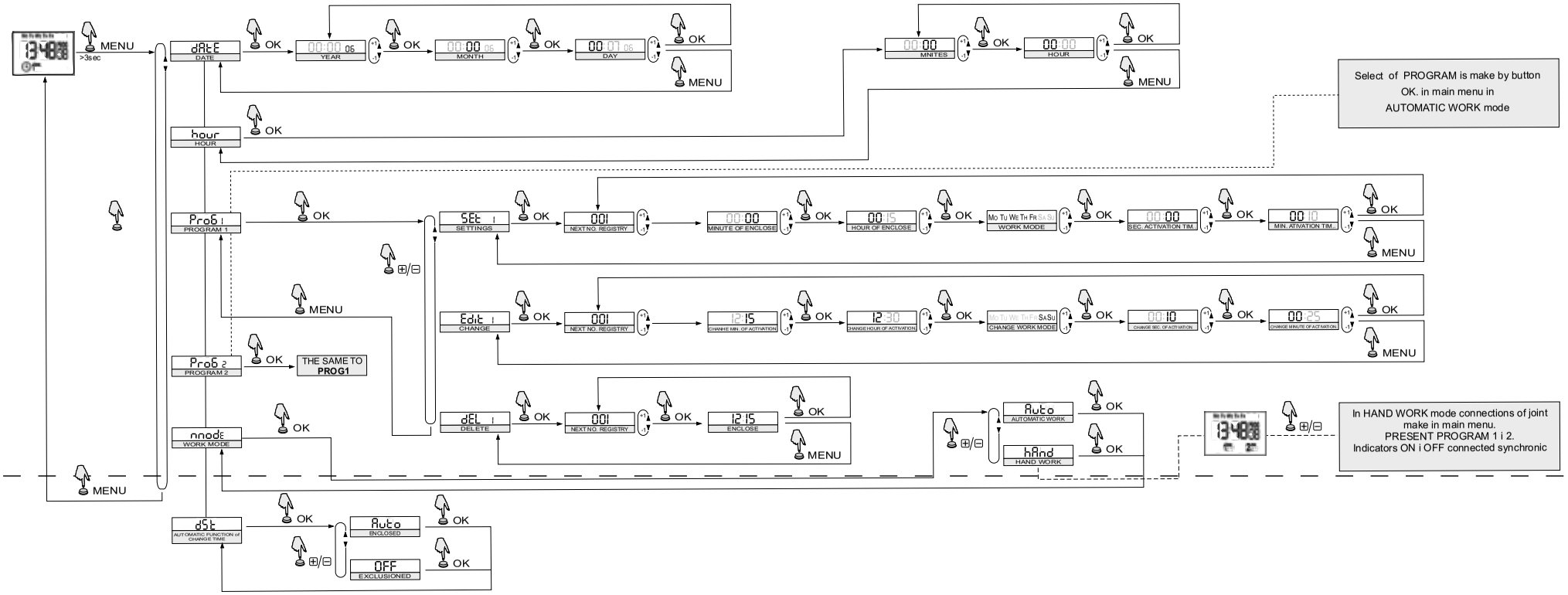
WIRING DIAGRAM



joint 1-5 “ACTIVATE” [ON]
joint 1-6 “DEACTIVATE” [OFF]

B110701

Programming diagram



F&F Filipowski sp. j
ul. Konstantynowska 79/81
95-200 Pabianice POLAND
tel/fax 48 42 2270971
e-mail: fif@fif.com.pl

PCZ-522.2

PROGRAMMABLE CONTROL TIMER
two-way type

www.fif.com.pl

F&F products are covered by an 24 months warranty from date of purchase

PURPOSE

Programmable control timers are used to control the work time of devices included into industrial or household automatic systems in compliance with individual time schedule planned by the user.

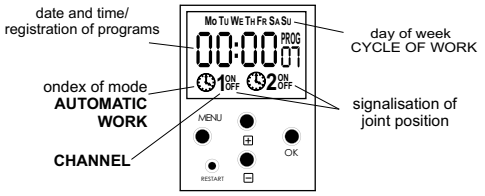
FUNCTIONING

The timer activates and deactivates a given device at preset hours in the following cycles: 24-hour, weekly, working day (Mon-Fri) or weekend (Sat, Sun).

DESCRIPTION OF WORK AND FUNCTIONS

***AUTOMATIC WORK** - according to program points of enclosures and switching off joint [sign ◷ on the left of display]*
***HANDIWORK- [ON]** - enduring connection of joint (CHANNEL 1 :position1-5, CHANNEL 2 : position 2-7) or **[OFF]-** enduring switch off joint (CHANNEL 1 :position1-6, CHANNEL 2 : position 2-8) by activated AUTOMATIC WORK [lack of sign ◷ on the left of display]*
***ORDER SWITCH ON - SWITCH OFF-** registry of program by whom make switch ON or OFF a receiver.*
***PROGRAMMING-** set correct date and time by whom will be enclose or exclusion a receiver repeat weekly.*
***CYCLE OF WORK -** setting by user, weekly (7 days fron monday to sunday). In this time a reciver is enclose with programmabled ORDERS SWITCH ON- SWITCH OFF .*
***CHANNEL** - programming line, with user settings for ORDERS ENCLOSE-EXCLUSION, contoll with own enclosing joint a recuiver*

DESCRIPION OF DISPLAY AND PANEL STEERING



Mo-monday;Tu-tuesday; We-wednesday;Th-thursday;Fr-friday; Są-saturday; Su-sunday

DESCRIPTION OFF BUTTONS FUNCTION

MENU:
- pass to programmable menu (preeser >3sec)
*- acceptance of settings **DATE, TIME AND ORDERS SWITCH ON- SWITCH OFF***
- pass to upper level
OK:
- enter settings and pass to next settings
- peep a date
+:
- change setting position by +1 in choosen programable position (preesing a button make intennsive changes in settings by +1 in loop)
*- in **HANDIWORK** mode:permanent enclosure **ON** and exclusion **OFF** a joint for CHANNEL 1*
–:*- change settings position by -1 in choosen programable position (preesing a button make intennsive changes in settings by -1 in loop)*
*- in **HANDIWORK** mode:permanent enclosure **ON** and exclusion **OFF** a joint for CHANNEL 2*

RESET:
- to reset a processor - in case of hook-up of function of work indispensable of timer. It does not erase setups of DATES and TIME and ORDERS SWITCH ON - SWITCH OFF.
- + *and* **–** *("hard" reset):*
- delete of all settings of DATE and TIME and ORDERS SWITCH ON - SWITCH OFF from memory (preesing >3sec two buttons simultaneously).

PROGRAMMING

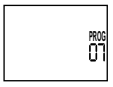
1. START
1.1 Take ON the POWER
1.2 Timer make a test of display (enclose all section)

1.3 Timer sterted count time from hour. 00:00
***ATTENTION!** If after took the power timer show another time and date then it means, in memory timmerare are earlier setting.*
If timer have got in memories earlier settings, they could be deleted by "hard" reset (see p. 8).

2. DATE

2.1 Prees a button MENU >3sec. Timer pass to setting mode of programming (date - hour - prog - edit - del - mode-dst).
*2.2 By buttons **+/–** select mode date "**DATE**"*

Enter by OK..
2.3 Timer pass to setting year mode.



*By buttons **+/–** set year , enter OK..*
2.4 Timer pass to setting month mode.

*By buttons **+/–** set a month, enter OK.*
2.5 Timer pass to setting day of month mode.

By buttons +/– set to actual day of month
- by button OK pass to setting year mode (see p2.3)
- by button MENU accept to registry and out of programming mode.
By button MENU enter registry of date. Timer automaticly out from programmable DATE function and pass to programming mode. Again prees a button MENU cause pass to main menu.

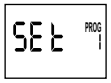
3. TIME

3.1 Button MENU prees >3sec. Timer pass to programing menu (date - hour - prog - edit - del - mode-dst).
*3.2 By buttons **+/–** select mode of set hour **"HOUR"***

Enter OK.
4.1.3 Timer pass to choosen CHANNEL menu (set - edit - del - mode)

4.2 ORDER ENCLOSE- EXCLUSION- setting parameters

*4.2.1 By buttons **+/–** select settings parameter mode **"set"***



Enter OK.
4.2.2. Timer displied (1sec) next number of ORDER ENCLOSE-EXCLUSION.

Timer automalicly pass to setting minutes mode.

*By buttons **+/–** set minutes, enter OK.*
4.2.3 Timer pass to setting hour mode.

Enter OK..
3.3. Timer pass to setting minutes mode.

*By buttons **+/–** set minutes, enter OK..*
3.4 Timer pass to setting hour mode.

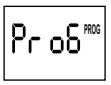
*By buttons **+/–** set hour.*

- By button OK return to setting minutes mode (see p.3.3.)
- By button MENU enter registry of time. Timer automaticly out from programmable DATE function and pass to programming mode. Again prees a button MENU cause pass to main menu.

4. ORDER ENCLOSE- EXCLUSION- parameters

4.1 CHANNEL 1-select

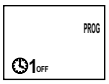
4.1.1 Prees button MENU >3sek. Timer pass to programing mode (date - hour - prog - edit - del - mode-dst).
*4.1.2 By buttons **+/–** select*
*CHANNEL 1 **"PROG1"**. or CHANNEL 2 **"PROG2"**.*



*By buttons **+/–** set hour. Enter OK..*

*4.2.4 Timer pass to setting CYCLE WORK mode. By buttons **+/–** set CYCLE of WORK:*
- one day of week: Mo; Tu; We; Th; Fr; Sa lub Su.
- work days: Mo Tu We Th Fr (from monday to friday).
- weekand: Sa Su (saturday and sunday)
- everyday: Mo Tu We Th Fr Sa Su (from monday to sunday)

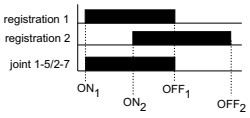
Enter OK.
4.2.5 Timer pass to setting option SWITCH ON [ON]or SWITCH OFF [OFF] mode.

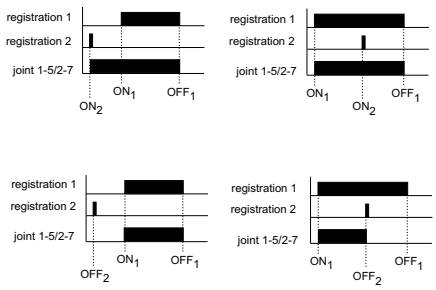


*- By button **+/–** set option ON or OFF, enter OK.*
- Timer automaticly pass to input a next parameter of ORDER ENCLOSE-EXCLUSION mode (see p..4.2.2.)
- By button MENU enter registry of time. Timer automaticly pass to menu. Again prees a button MENU cause pass to main menu.

ATTENTION!

- Registried orders ENCLOSE-EXLUSION didn't make up permament function which realise ENCLOSING or EXLUSIONING of joint. They are threat as once orders and realise with input chronolgy. Example of set to interplay times of ENCLOSE oders ENCLOSE-EXCLUSION present below digrams:

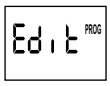




- Time of enclose joint which is established by pair of orders ENCLOSE-EXLUSION could be longer than 24 hours. It means order ON could be set for any hour and day of week (e.g. Thuesday 13:45) but order OFF for any different date (Thursday 17:05).
- for every order could be establised different CYCLE of WORK. Orders with different CYCLES of WORK are realise with sequence:
- one day of week: Mo; Tu; We; Th; Fr; Sa lub Su.
- work days: Mo Tu We Th Fr (from monday to friday).
- weekand: Sa Su (saturday and sunday)

5. EDITION - change of parameter

5.1 Prees button MENU >3sek. Timer pass to programming mode (date - hour - prog - edit - del - mode-dst).
*5.2 By buttons **+/–** select change parameter mode ORDER ENCLOSE-EXCLUSION **"edit"**.*



Enter OK.
5.3 Timer displaied first ORDER ENCLOSE-EXCLUSION.
*By buttons **+/–** set number of ORDER ENCLOSE-EXCLUSION to changes of parameter, enter OK.*
5.4 Conduct as by set parameters of ORDER ENCLOSE-EXCLUSION (see p. 4.2.2 ÷ 4.2.5)
By button MENU enter registry. Timer automaticly pass to programming mode of choosen channel. Again prees a button MENU cause pass to main menu.

6. CANCEL- delete registry

6.1 Prees button MENU >3sek. Timer pass to programming mode (date - hour - prog - edit - del - mode-dst).
6.2 Select channel 1 or 2 (see p..4.1.2)
*6.3 By buttons **+/–** select delete mode ORDER ENCLOSE-EXCLUSION **"del"**.*

Enter OK.
6.4 Timer displaied first ORDER ENCLOSE-EXCLUSION.
*By buttons **+/–** set number of ORDER ENCLOSE-EXCLUSION to changes of parameter, enter OK.*

By button MENU enter registry. Timer automaticly pass to programming mode. Again prees a button MENU cause pass to main menu.

ATTENTION!
If you want delete all earlier settings od DATE, TIME, ORDERS ENCLOSE-EXCLUSION ("hard" reset see p. 8.)

7. WORK MODE- choose

7.1 Prees button MENU >3sek. Timer pass to programming mode (date - hour - prog - edit - del - mode-dst).
7.2 Select channel 1 or 2 (see p..4.1.2)
*7.3 By buttons **+/–** select work selecting mode **"mode"**.*

Enter OK.
7.4 Timer pass to menu WORK MODE (auto-hand).
*7.45By buttons **+/–** select work mode.*
*AUTOMATIC WORK - **"auto"***

or
*- HAND WORK - **"hand"***

Enter OK.. Timer automaticly pass to programming mode. Again prees a button MENU cause pass to main menu.

ATTENTION!
*Changes of joint position in HAND WORK mode make by buttons **+/–** in main menu of this menu.*

8. MEMORY RESET - "hard" reset

*If you wont delete all earlier settings of DATE, TIME and ORDERS ENCLOSE-EXCLUSION , prees simultaneously a buttons **+** i **–** >3sek.*

9. Exclusion of AUTOMATIC TIME CHANGE

9.1 Prees button MENU >3sek. Timer pass to programming mode (date - hour - prog - edit - del - mode-dst).
*9.2 By buttons **+/–** select exclusion of AUTOMATIC TIME CHANGE mode "**dst**".*
DST - Daylight Saving Time - global name for summer time (free transtation: time of win a sun light).

Enter OK.
9.3 Timer pass to exclusion of AUTOMATIC TIME CHANGE mode (auto -OFF) .

*9.4 By buttons **+/–** select mode:*
*- with AUTOMATIC TIME CHANGE - "**auto**"*

or
*-without AUTOMATIC TIME CHANGE - **"off"***

Enter OK.
Timer automaticly pass to programming mode. Again prees a button MENU cause pass to main menu.

AUTOMATIC TIME CHANGE!

Changes time from winter time to summer time is automaticly make at the last sunday of march at 2 a.m. (add 1 hour to actual time) .
Changes time from summer time to winter time is automaticly make at the last sunday of october at 3 a.m. (subtract 1 hour from actual time) .

ATTENTION!

Possible is take OFF automatic function of time change (see p.9).

ASSEMBLY

1. Take OFF the power.
2. Timer put on the rail in the switchgearbox
3. Cable of supply connect with digram.
4. A receiver connect with diagram.
5. Set a correct date (see p2) and time (see p3).
6. Set time of enclose a receiver (see p4).

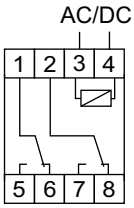
TECHNICAL DATA

supply	*24÷264V AC/DC*
current load	*2×(<16A)*
contacts	*2×1C/O*
display maintenance time	*non*
timer maintenance time	*6 years*
indication accuracy item	*1sec*
time deviation	*±1s/24h*
schedule time accurancy item	*1min*
no. of program memory sectors	*2×250 (2×125 entry pairs: ON/OFF)*
power consumption	*1,5W*
working temperature	*-20÷50°C*
connection	*screw terminals 2,5mm²*
dimensions	*2 modules (35mm)*
fixing	*on the rail TH-35*

WIRING DIAGRAM

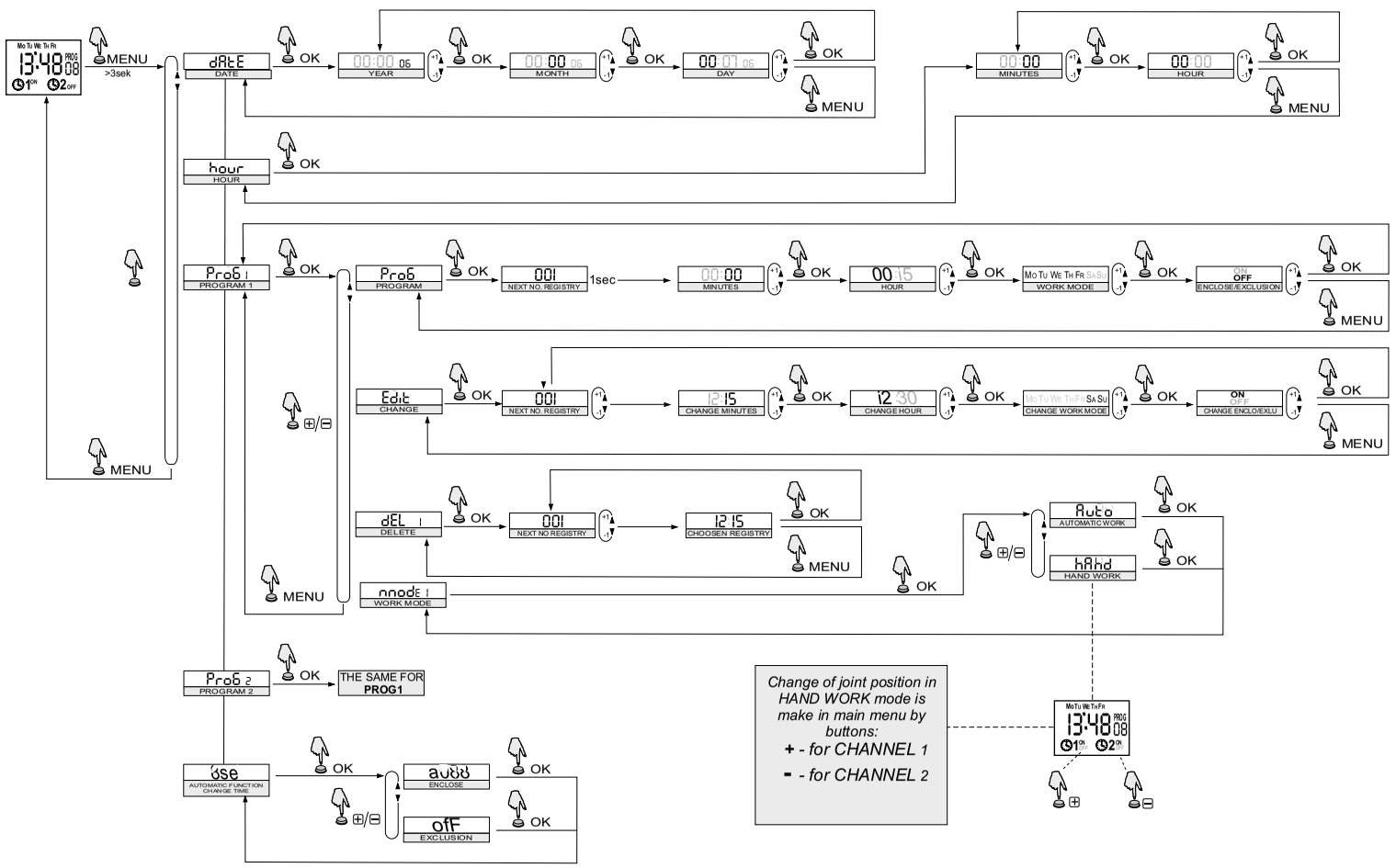
CHANNEL 1:
joint 1-5 "ACTIVATE" [ON]
joint 1-6 "DEACTIVATE" [OFF]

CHANNEL 2:
joint 2-7 "ACTIVATE" [ON]
joint 2-8 "DEACTIVATE" [OFF]



B110701

Programming diagram



F&F Filipowski sp. j
ul. Konstantynowska 79/81
95-200 Pabianice POLAND
tel/fax 48 42 2270971
e-mail: fif@fif.com.pl

PO-406 230V

TIMING RELAYS

lagged-pulse time relays

www.fif.com.pl

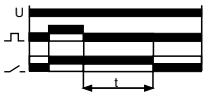
F&F products are covered by an 24 months warranty from date of purchase

PURPOSE

Lagged-pulse time relay P0-406 230V is devised to support the power supply of the controlled receiver for a specified period of time after decay of the control voltage, e.g. in bathroom ventilation systems in which the upkeep of the fan operation (activated along with the lighting) is required for a specified period of time after turning off the accompanying lighting.

FUNCTIONING

The application of control voltage S to the relay causes its activation and the resulting supply of voltage R to the controlled receiver. After decay of the control voltage, the operation of the receiving device is kept for the support time t (preset with the potentiometer). After the t time has been counted down, the controlled receiver is turned off automatically. If control voltage S is re-supplied before the lapse of the preset time, the relay will repeat its operational sequence.



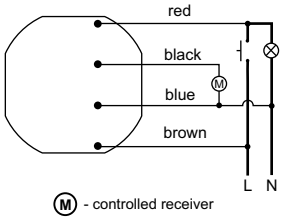
ASSEMBLY

1. Take OFF the power.
2. Put on the relay to under plaster box.
3. Connect to system with marks.
4. By knob set activation time.

TECHNICAL DATA

supply	*230VAC*
current load	*<10A*
activation time	*1÷15min*
power consumption	*0,56W*
working temperature	*-25÷50°C*
connection	*4×DY 1mm², l=10cm*
dimensions	*Ø55, h=13mm*
fixing	*to under plaster box Ø60*

WIRING DIAGRAM



A090609