SAFETY WARNINGS

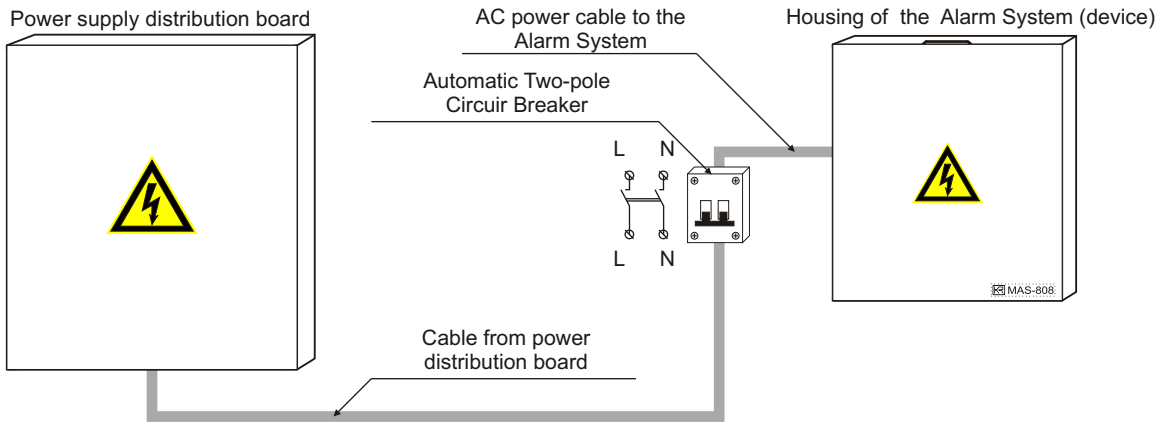
The device must be installed in a place with limited access.

The device must be connected to an AC power supply with Protective Earthing: Phase or Live line (L) – black or brown cable, Neutral line (N) – blue cable, Protective Earth line (PE) – green cable with a vertical yellow dash. Double isolated cables with minimum cross-sectional area of 0,75 mm^2 for 230V power supply must be used.

The device uses two power supplies: main and back-up.
Main power supply: a power transformer with:
– primary winding: ~230V, 50 Hz;
– secondary winding: ~20V, 1.5A, 50Hz.
Back-up power supply: 12V, 7Ah/20HR capacity, rechargeable hermetically sealed Lead-Acid battery.

SecoLink intruder alarm system is compliant with the safety requirements of EN 60950-1:2003.
All the above described power supplies linked to the system must comply with the EN 60950-1:2003 safety requirements.

Additional **automatic Two-Pole Circuit Breaker** should be installed in an AC electric power circuit in order to prevent over-current and short circuits.
The circuit breaker contact gap should be no less than 3mm.
The circuit breaker should be placed close to the system's housing and should be easily accessed.



The device wiring and service should be performed by trained personnel with sufficient knowledge about the device and general safety requirements for work with low voltage (up to 1000V) AC power lines. In the case of a device malfunction repair works can be performed by qualified personnel only.

Before performing any work of installation or service ALWAYS disconnect the device from power supplies in sequence as described below:
- cut off 230 V AC power line with the automatic Two-pole Circuit Breaker;
- disconnect 12V back-up battery by removing battery female plug from Control Panel male socket BAT.

Two-pole Circuit-Beaker installation on flexible cables is forbidden.

General safety requirements:
– do not touch any part of the main power supply under voltage: transformer, a fuse block, connection wires;
– it is forbidden to perform any device installation or service work during lightning;
– use batteries according to manufacturer recommendations. The use of improper battery type may cause an explosion;
- battery replacement : be sure battery terminals are isolated, battery terminals short-wiring may cause an explosion.

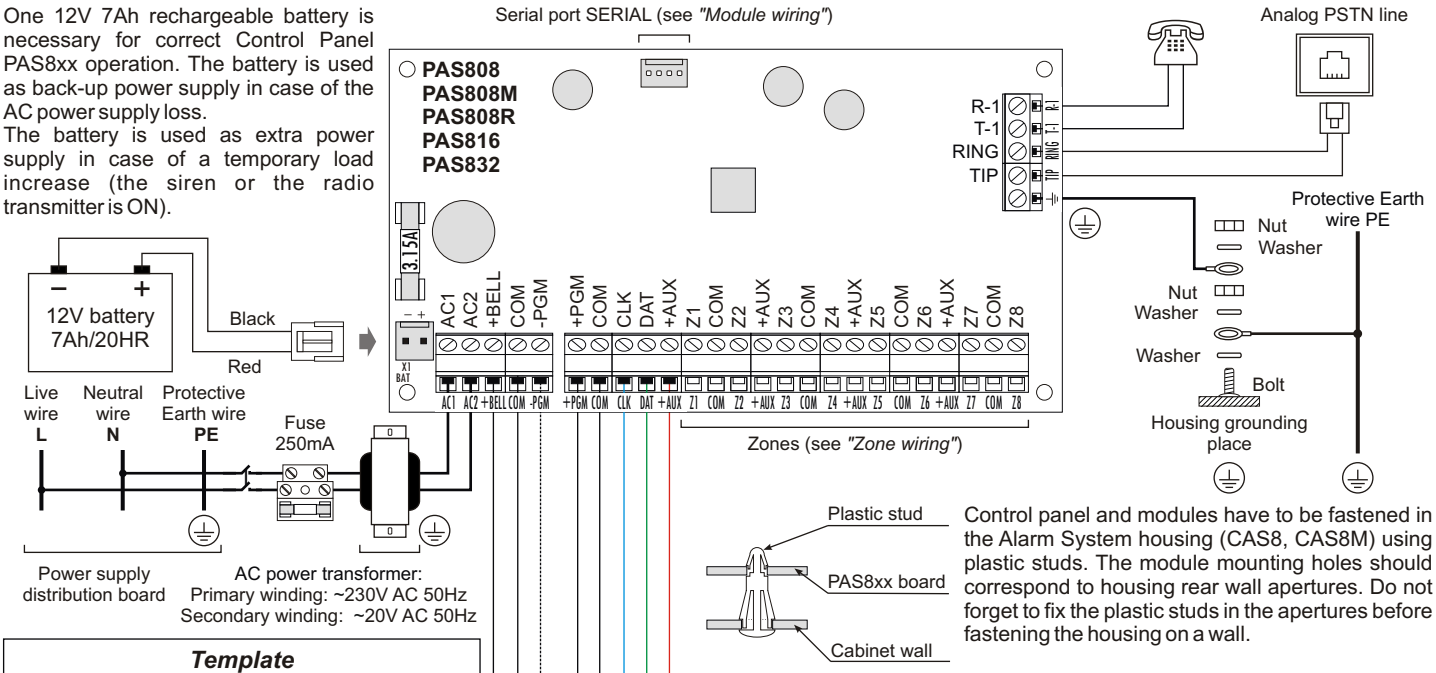
It is not recommended to connect the device to a fully discharged battery. To avoid a malfunction of system use an adequate charger to charge a new or discharged battery before connecting battery with a device.
Inoperative or expired batteries should be recycled according to the local rules or EU directives 2006/66/EC and 93/86/EEC.
Waste battery collection and returning for utilization separate from household waste is mandatory!

The Control Panel Terminals TIP, RING, T-1, R-1 should be connected to analog PSTN line. Connection to digital ISDN line may cause the device damage.

Please act according to your local rules and do not dispose of your old product with normal household waste. The product is covered by European Directive 2002/96/EC.

Wiring diagrams

One 12V 7Ah rechargeable battery is necessary for correct Control Panel PAS8xx operation. The battery is used as back-up power supply in case of the AC power supply loss.
The battery is used as extra power supply in case of a temporary load increase (the siren or the radio transmitter is ON).



Control panel and modules have to be fastened in the Alarm System housing (CAS8, CAS8M) using plastic studs. The module mounting holes should correspond to housing rear wall apertures. Do not forget to fix the plastic studs in the apertures before fastening the housing on a wall.

Template

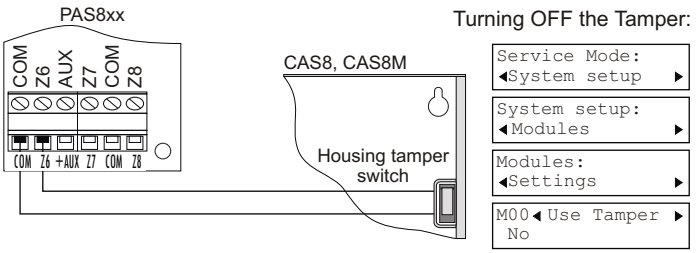
Secolink security systems are supplied to customers with a pre-installed template in the keypad memory. The template data has been transferred to registered system modules during a system start up ("First start"). The template includes 1 partition and 8 zones. Zone Z1 is used for wiring of the magnetic door contact that monitors the opening/closing of the door. Zone Z2 is intended for an entry/exit path motion sensor wiring, zones Z3, Z4 are used for wiring of interior motion sensors, zone Z5 is intended for smoke detector wiring (the smoke detector must be powered from the PGM output +PGM). Zone Z6 is used for tamper switch wiring. Turn OFF the tamper monitoring if you wish to use zone Z6 for other purposes. In the template the keypad zones corresponds to the first zones of control panel on operation. The programable outputs:
+BELL is used for wiring a siren without battery (00_1 PGM);
-PGM – for control a siren with battery (00_2 PGM);
+PGM is used for smoke detector powering (00_3 PGM).

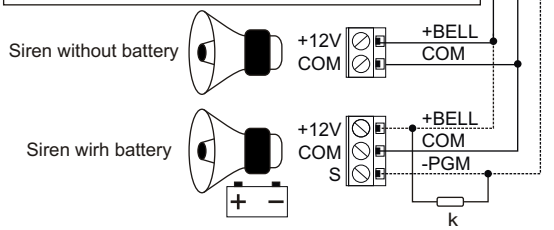
Default PIN codes

Default service PIN	0000
Default user 01 PIN	0001
Default user 02 PIN	0002
...	
Default user 31 PIN	0031

Tamper function

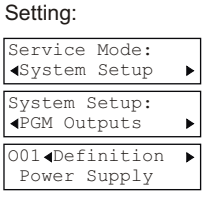
Note: In the template PAS8xx zone Z6 is used for wiring the tamper switch of the housing. If the housing door is opened the system will indicate a trouble or will raise an alarm if the system is armed. If the Tamper function is not necessary it is possible to turn it OFF and use Z6 as a normal zone.



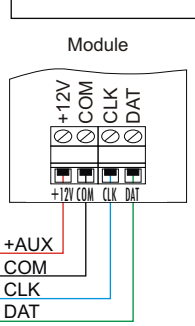


If a high level is not enough for siren control, it is necessary to connect a 3-15 kOhm resistor between terminals +BELL and -PGM.

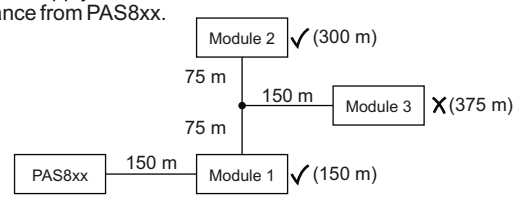
Note: In the template output Setting:
+BELL is set for wiring the siren without a battery. If you wish to wire a siren with a battery it is necessary to change the +BELL (00_1 PGM) definition to "Power supply" setting.



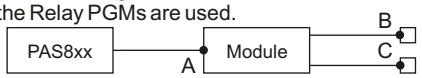
Note: In the template output +PGM (00_3 PGM) is set for the smoke detector powering (see page 5 "Wiring samples").



Note: The data line (CLK, DAT) length (the distance between control panel and module) must not exceed 300 metres. It is recommended to use a 6-wire or 8-wire cable for the module wiring. It is advised to use the free wire pairs for the module power supply, when the modules are on considerable distance from PAS8xx.



It is possible to find out the voltage between module terminals **+12V** ir **COM** during the voltage test (*"Main Menu/Test/Voltage Test"*). The SECOLink module supply voltage should be in the range of 9-14 V, but for module RCM800(wl) it should exceed 10,5 V if the Relay PGMs are used.

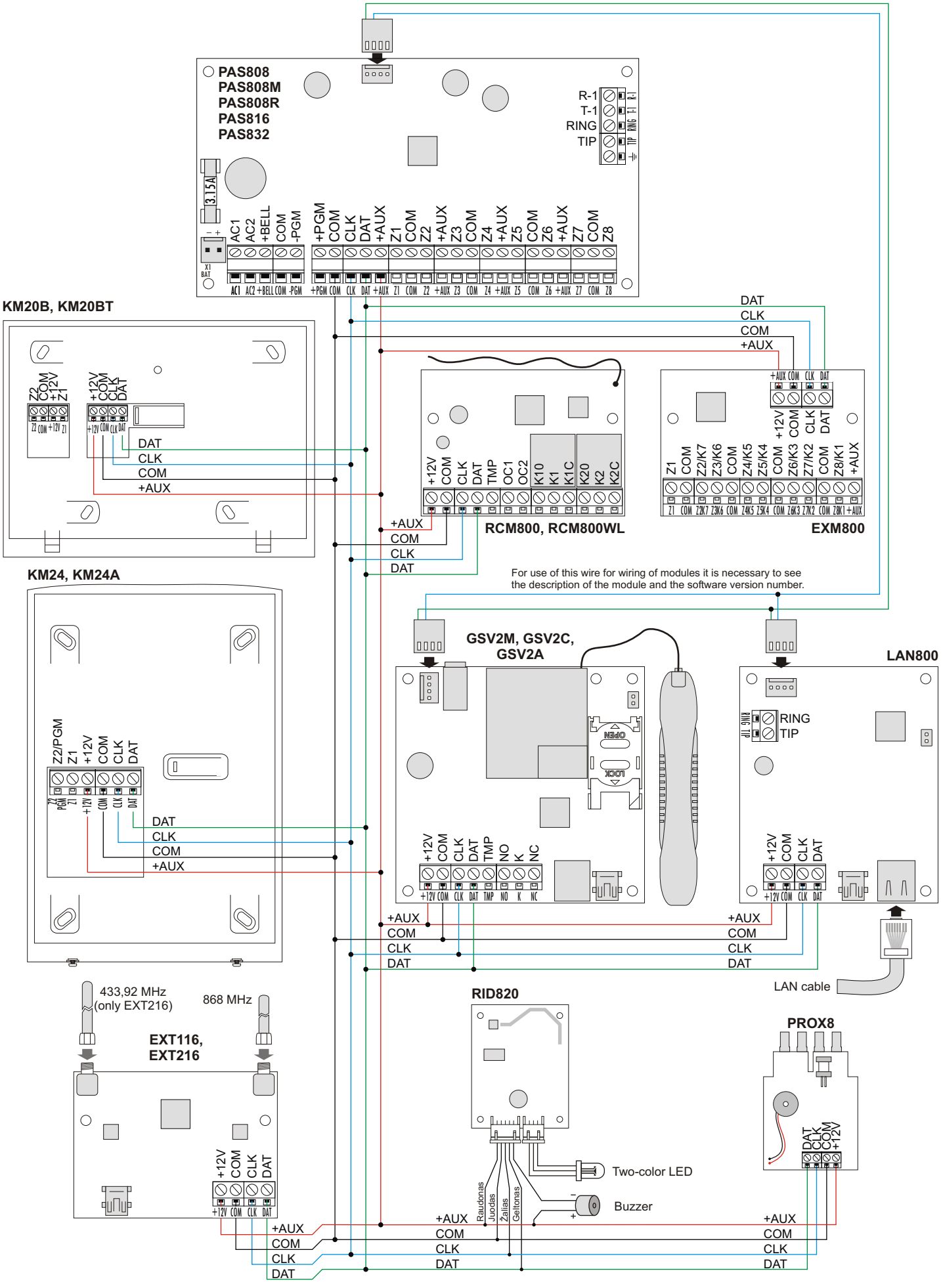


Voltage is measured only in a point A. The voltages on terminals of connected detectors B, C should be measured using a voltmeter.

Operational maximum ratings of control panel PAS8xx

Maximum permissible long term load of the power supply: ($I_{+AUX} + I_{+BELL} + I_{+PGM} \leqslant 0,7$ A)	0,7 A
Maximum permissible load of the +AUX output (switching "+"):	+0,8 A
Maximum permissible load of the +BELL output (switching "+"):	+0,8 A
Maximum permissible load of the -PGM output (switching "-"):	-0,05 A
Maximum permissible load of the +PGM output (switching "+"):	+0,8 A
Maximum permissible battery charging current:	0,4 A
Battery is disconnected when voltage is less than:	9,5 V

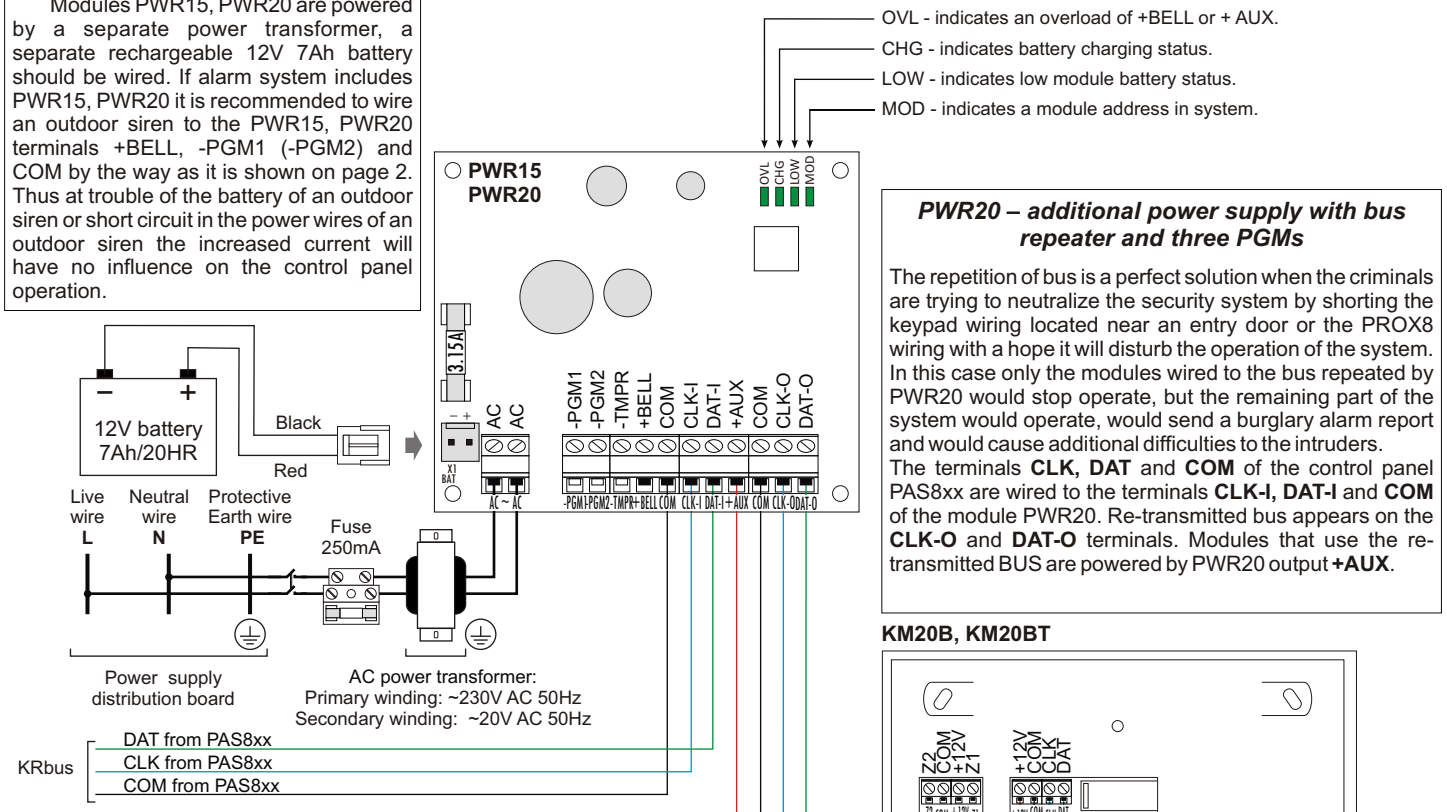
Wiring of modules



Wiring of modules in large or high security level systems

Safe wiring of outdoor siren

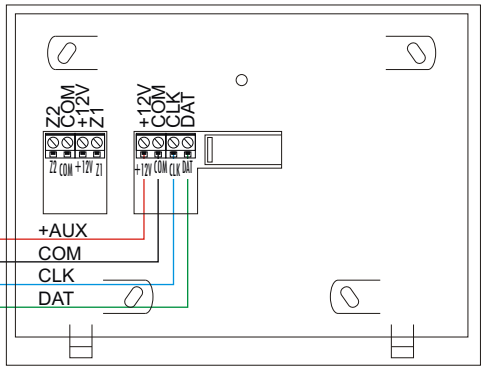
Modules PWR15, PWR20 are powered by a separate power transformer, a separate rechargeable 12V 7Ah battery should be wired. If alarm system includes PWR15, PWR20 it is recommended to wire an outdoor siren to the PWR15, PWR20 terminals +BELL, -PGM1 (-PGM2) and COM by the way as it is shown on page 2. Thus at trouble of the battery of an outdoor siren or short circuit in the power wires of an outdoor siren the increased current will have no influence on the control panel operation.



PWR20 – additional power supply with bus repeater and three PGMs

The repetition of bus is a perfect solution when the criminals are trying to neutralize the security system by shorting the keypad wiring located near an entry door or the PROX8 wiring with a hope it will disturb the operation of the system. In this case only the modules wired to the bus repeated by PWR20 would stop operate, but the remaining part of the system would operate, would send a burglary alarm report and would cause additional difficulties to the intruders.
The terminals **CLK, DAT** and **COM** of the control panel PAS8xx are wired to the terminals **CLK-I, DAT-I** and **COM** of the module PWR20. Re-transmitted bus appears on the **CLK-O** and **DAT-O** terminals. Modules that use the re-transmitted BUS are powered by PWR20 output **+AUX**.

KM20B, KM20BT



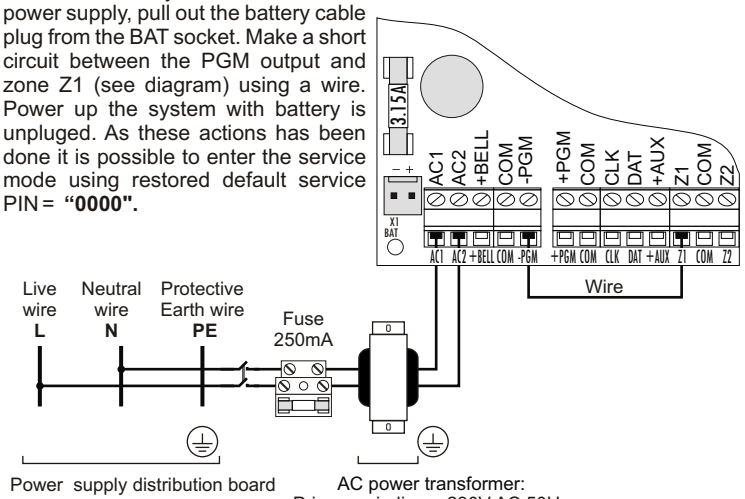
Operational maximum ratings of PWR15

Maximum permissible long term load of the power supply: ($I_{+AUX} + I_{+BELL} \leq 1$ A)	1 A
Maximum permissible load of the +AUX output (switching "+"):	+1 A
Maximum permissible load of the +BELL output (switching "+"):	+2 A
Maximum permissible load of the -PGM1 output (switching "+"):	-0,05 A
Maximum permissible load of the -PGM2 output (switching "+"):	-0,05 A
Maximum permissible battery charging current:	0,4 A
Battery is disconnected when voltage is less than:	9,5 V

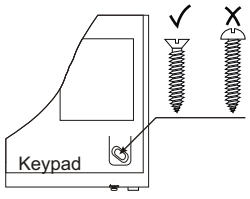
Additional information

Default service PIN restoring

Disconnect the system from 230V AC power supply, pull out the battery cable plug from the BAT socket. Make a short circuit between the PGM output and zone Z1 (see diagram) using a wire. Power up the system with battery is unpluged. As these actions has been done it is possible to enter the service mode using restored default service PIN = **"0000".**



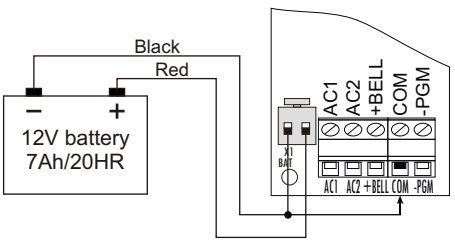
Keypad attachment



For the attachment of keypads use only self-tapping screws with flat (countersunk) head (3x30 PH). Make sure that the screw is screwed completely and the head is sinked into the wall of the housing. If you are using other type of screws or if you fail to screw them fully there is a possibility of the screw touching the keypad electronics wich would cause the keypad fail.

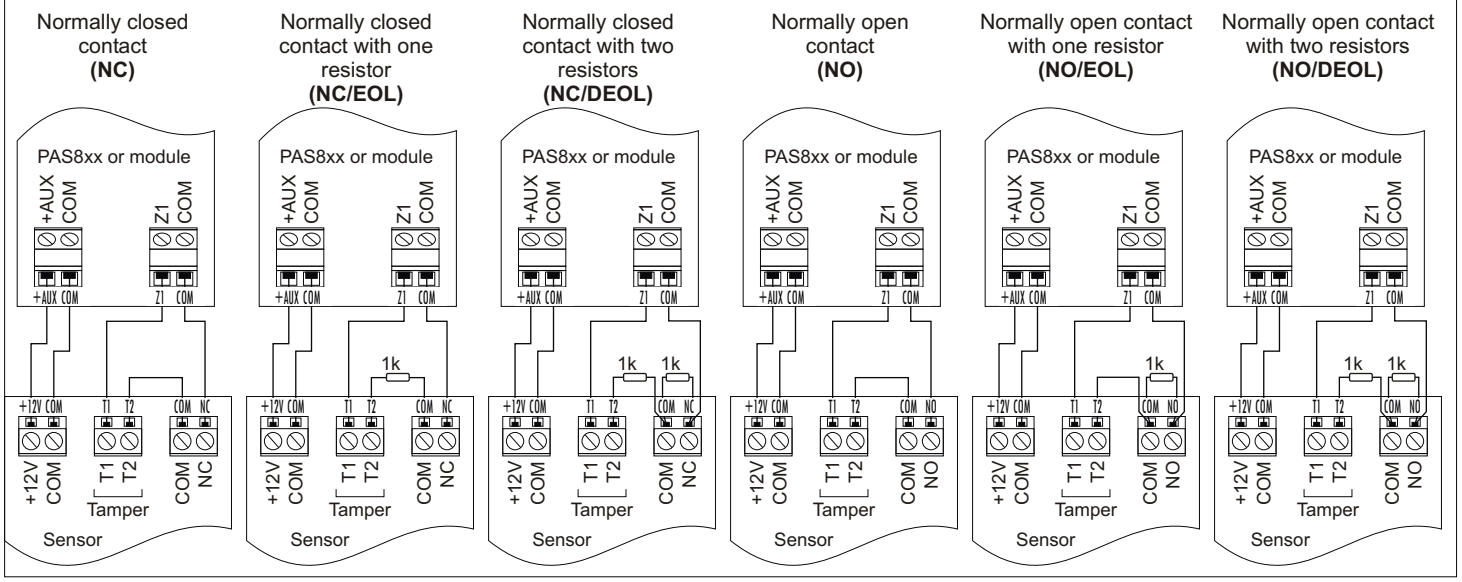
System start-up with no AC 230V power

Connect 12VAh/20HR battery to the PAS8xx BAT connector. With an additional wire connect the negative battery pole to the PAS8xx COM terminal for a short time. The system will start operate however the AC loss trouble will be indicated.

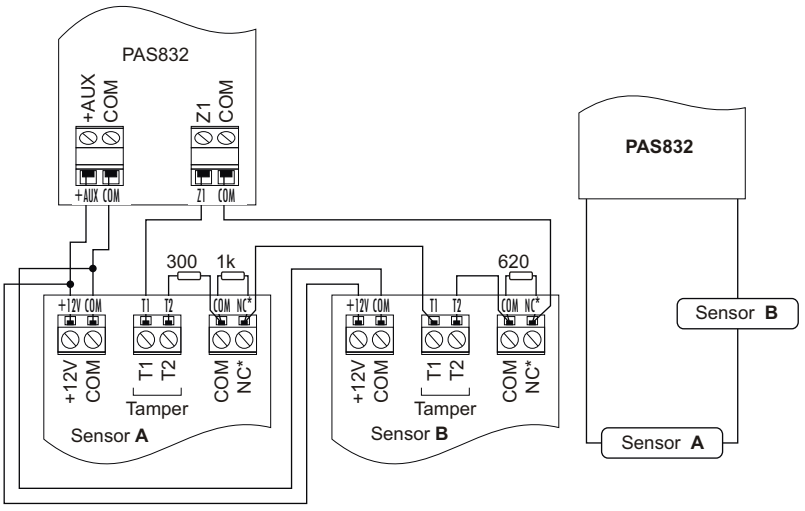


Wiring of zones

Wiring of single zones



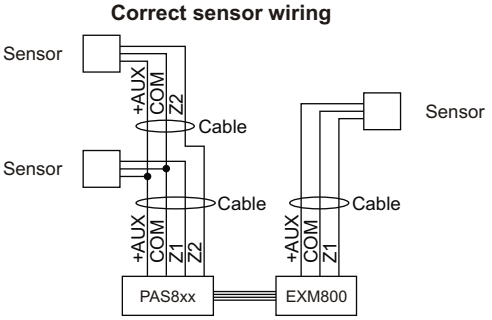
Wiring of double zones (only PAS832)



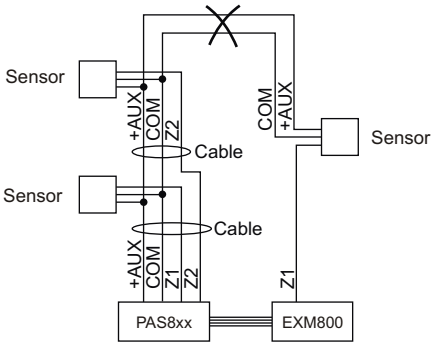
* - Sensor contact type may be NC or NO.

ATTENTION! Sensors must be wired without loops

Correct sensor wiring

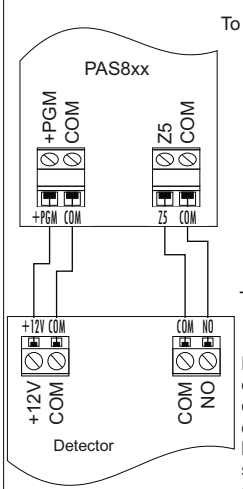


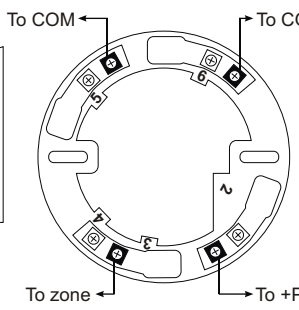
Wrong sensor wiring



Wiring samples

Wiring of 4-wire smoke detector





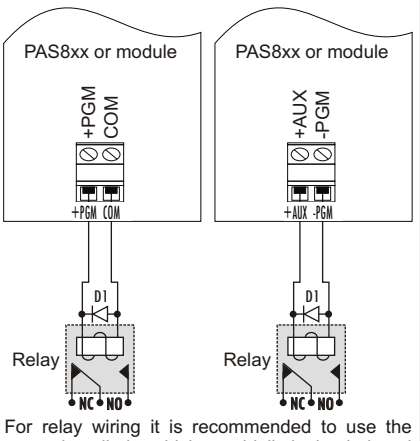
The contacts of smoke detector

Note: the smoke detectors made by different manufacturers may have a different contact layout. For more detailed information about contact layout look the documentation supplied by manufacturer of smoke detector.

The smoke detectors may be triggered by dust, so in order to prevent false alarms it is necessary to execute an trigger re-check. For achievement of this objective an attribute “Fire verification” has to be assigned to the system’s fire zone, the smoke detector has to be powered by PGM output with definition “Fire Power Supply”and the fire zone has to be assigned to the corresponding PGM trigger source. In the template is set that fire zone is the control panel zone Z5, the +PGM2 output is used for power supply of smoke detectors.

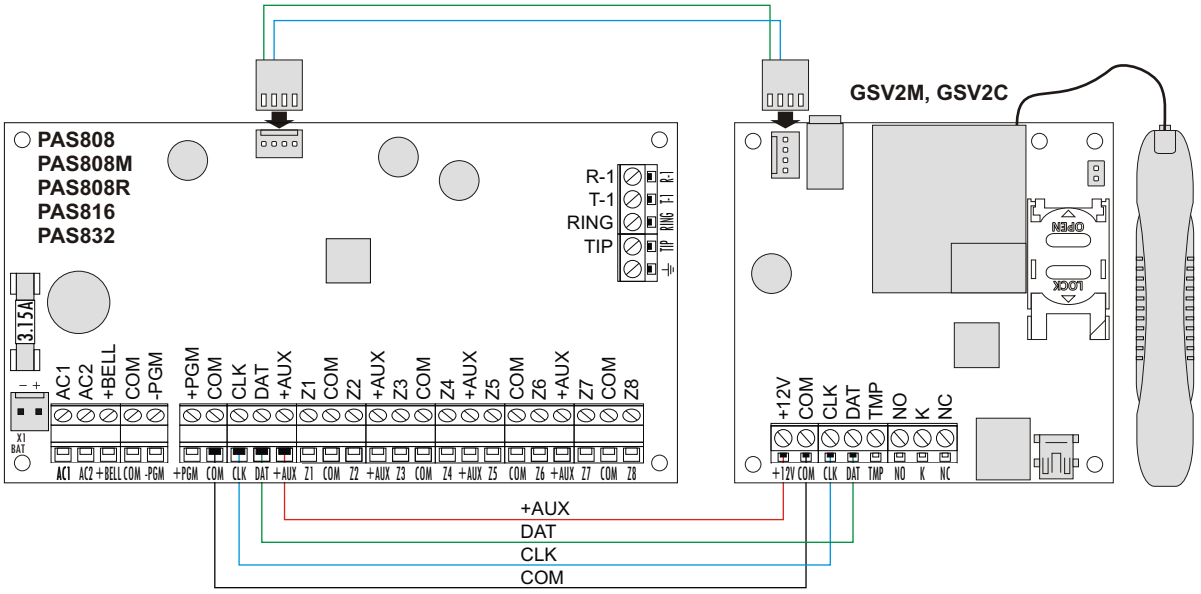
Operation: In order to check the triggered smoke detector it’s power supply has to be turned OFF and turned ON again. The system turns OFF the PGM output for a time equal to PGM trigger time. When this time expires the system turns ON the PGM output again and waits for detector operating status settling (”Detector settling time”). The system executes the detector trigger re-check with duration equal to “Fire verification time”. If during this time the smoke detector is triggered again the system raises a fire alarm and sends report, if there are no smoke detector trigger the system does not alarm.

Wiring of relays



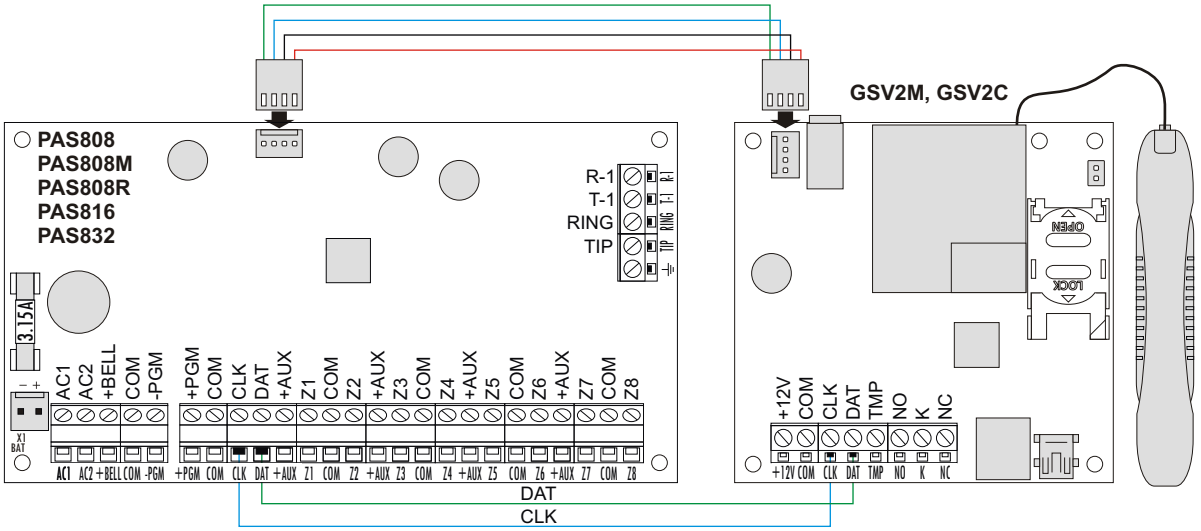
For relay wiring it is recommended to use the protective diode which would limit the induced current appearing during turning OFF the relay.

Wiring of GSV2 (with monitoring of modules)



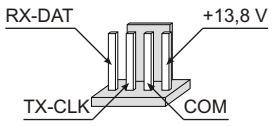
The control panel is monitoring the operation of modules constantly. If the operation of module fails and the module gives no response to the control panel commands, then the control panel turns OFF for a short time the PGM output +AUX that powers the modules in such a way trying to restart the module.

Wiring of GSV2 (without monitoring of modules)



The such wiring way ensures, that even in case of the short circuit between +AUX and COM the module will be able to execute the its main duty - reporting to the Central Monitoring station or to the user. If the module is wired under this diagram, the control panel can not execute module monitoring and restore its normal operation in case of failures.

Wiring of compatible transmitter via SERIAL connector



Attention! The consumption current of the transmitter should not exceed of 3A. The power supply circuit has no short-circuit protection. In case of short circuit the PCB damage is possible.