

## J1805, J2005, J2405

FRAMCE
LEDS INDICATOR DISPLAY PANELS


Reduces energy consumption by 50\%.
7 LEDs colours available. 15 V to $\mathbf{6 0 V a c} / \mathrm{dc}, \mathbf{7 0 V}$ to $150 \mathrm{Vac} / \mathrm{dc}$,
 Included LEDs test.
Included output contact for send general information. Interchangeable labels. Unpluggable terminal boards.


Our range of signaling panels, allows in a single cutout to install and group 8, 12 or 24 multicolored LEDs with an integrated «Test LED» push button.

- Closing the contact connected to the input lights the corresponding high-luminosity LED which changes from light gray to the selected color (7 possible choices: red, green, yellow, white, blue, cyan, magenta). The synthesis relay is activated (if it has been selected).
- The opening of the contact connected to the input turns off the corresponding LED.
- A «LED test» push button is present on the front.
- A «LEDs test» terminal connected to an external push button allows all the LEDs to be lit.
With this technology, the LED consumes only 10 mA , a reduction of $50 \%$ compared to the old generation (J1800, J2000, J2400) and with increased longevity.



## OPERATION

－Closing the contact connected to the input lights up the corresponding LED．If the channel was selected for sending information，synthesis relay will be activated．
－Opening the contact connected to the input turns OFF the corresponding LED．If the channel was selected for sending information，the synthesis relay may be deactivated（if no other channel activates the relay）． －If several channels are selected towards the relay， it will be deactivated only when all channels which activated it，have disappeared．

## LED COLOUR SETTING：

A display choice of 7 colors per LEDs is possible．This choice is selectable using switches on the panel front face．You have a choice of the following colours ：

## Red，Green，Yellow，Blue，White，Cyan，Magenta．

The working lifetime of this type of component is practically unlimited．To improve reliability，the LED is piloted at 10 mA assuring substantial and constant luminosity irrespective of supply voltage．This control ensures effective protection in case of over－voltage．Replace LEDs is no longer necessary．



《TEST» \＆《AUX》BUTTONS：

A «LEDs Test» push button on the unit front allows you to carry out a general «LEDs Test»．One «EL» terminal at rear of unit allows you to have an external general push button，to connect a «LEDs Test» on one or several panels． It is possible to test the set of LEDs and the synthesis relay by pushing on the «LEDs Test» push button or by activating the «EL» terminal．

On the unit front another pushbutton is present．This «AUX» impulse push button is free of potential，this closing contact is linked to the «BP AUX» terminal at the rear of the unit and enables the remote dispatch of information（for example ：call operator）．


## PRODUCING LABELS：



Labels are ordinary paper sheets that can be slid into a transparent pocket included in the thickness of the front face．A blank label is supplied with each unit．
Labels can be handmade，or draw the screen of the PC and produced on a colour printer （laser or ink－jet）．
The PC software allows to create labels including images，allows to save and duplicate the achievements．
This PC software is FREE．It is possible to load it on our website ：

## www．ami－control．com

For high humidity countries，the printing on plastic sheets is recommended．

One «+» polarity on the input, lights up LED (LEDs are connected to «-» in the panel). «Positive input» model is standard.


The input contact closure causes the lighting up of the LED and activation of the synthesis relay (if selected).

## POSSIBLE CONNECTIONS:



Diagram 1 :
Power supply by continuous voltage (DC) or alternating voltage (AC). Use of inputs with «dry contact» (the contacts are fed by an internal voltage delivered by the unit on the «COM»). This voltage supply is protected by the fuse.
Diagram for version :
15 to $60 \mathrm{Vac} / \mathrm{dc}$ ( 02 version) and 70 to $150 \mathrm{Vac} / \mathrm{dc}$ ( 04 version).


Diagram 2 :
Power supply by continuous voltage (DC) or alternating voltage (AC). Use of inputs with an external voltage (the contacts are fed with the same voltage as that of the unit and with polarity connected to terminal 4B).
In this case, the voltage supply is not protected by the fuse. Diagram for version :
15 to $60 \mathrm{Vac} / \mathrm{dc}$ ( 02 version) and 70 to $150 \mathrm{Vac} / \mathrm{dc}$ ( 04 version).


Diagram 3:
Power supply with DC voltage and «open collector» on inputs.
A pull-up resistor to «+» is necessary.
A «-» power supply return is necessary.
The voltage supply on the inputs is not protected
The LED lights up when the «open collector» is
blocked (OFF).
Diagram for version :
15 to $60 \mathrm{Vac} / \mathrm{dc}$ ( 02 version) and 70 to $150 \mathrm{Vac} / \mathrm{dc}$
(04 version).


Diagram 4:
Power supply with DC voltage and «open collector» on inputs.
A pull down resistor at «-» can be useful to
compensate for leakage currents of the transistor.
A «-» power supply return is necessary.
The voltage supply on the inputs is not protected.
The LED lights up when the «open collector» conducts (ON).
Diagram for version :
15 to $60 \mathrm{Vac} / \mathrm{dc}$ ( 02 version) and 70 to $150 \mathrm{Vac} / \mathrm{dc}$ (04 version).


Diagram 5:
Power supply with $A C$ voltage with galvanic insulation.
Use of inputs with «dry contact» (the contacts are fed by an internal voltage delivered by the unit on the «COM»). This voltage supply is protected by the fuse.
Diagram for version:
$80-265 \mathrm{Vac} / \mathrm{dc}$ ( 05 version) with galvanic insulation.



TECHNICAL SPECIFICATIONS:

|  |  | Input voltage | Tolerance | Minimum total consumption | Maximum total consumption | Dimensions in $\mathbf{m m}$ LxIxp | Weight in g . |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| J1805 |  |  |  |  |  |  |  |
| 15-60Vac/dc | 02 | 15-60Vac/dc | 15-60Vac/dc | 5 mA | 95 mA |  | 295g |
| 70-150Vac/dc | 04 | 70-150Vac/dc | 70-150Vac/dc | 5 mA | 95 mA | $96 \times 96 \times 75$ | 295 g |
| 80-265Vac/dc* | 05 | COM (+12Vdc) | 85-265Vac/dc | 5 mA | 31 mA |  | 310 g |
| J2005 |  |  |  |  |  |  |  |
| 15-60Vac/dc | 02 | 15-60Vac/dc | 15-60Vac/dc | 5 mA | 135 mA | $144 \times 144 \times 75$ | 530 g |
| 70-150Vac/dc | 04 | 70-150Vac/dc | 70-150Vac/dc | 5 mA | 135 mA |  | 530 g |
| 80-265Vac/dc* | 05 | COM (+12Vdc) | 85-265Vac/dc | 5 mA | 37 mA |  | 545 g |
| J2405 |  |  |  |  |  |  |  |
| 15-60Vac/dc | 02 | 15-60Vac/dc | 15-60Vac/dc | 5 mA | 255 mA |  | 560 g |
| 70-150Vac/dc | 04 | 70-150Vac/dc | 70-150Vac/dc | 5 mA | 255 mA | $144 \times 144 \times 75$ | 560 g |
| 80-265Vac/dc* | 05 | COM (+12Vdc) | 85-265Vac/dc | 5 mA | 52 mA |  | 580 g |

* Galvanically insulated power supply with UL506, CSA 22-1, VDE \& EN60950,EN61558-1, EN61558-2-6 accreditation.


Contact on output relay : 1 O/C 6A/12Vdc - $0.15 \mathrm{~A} / 240 \mathrm{Vac}$
«AUX» button :
$6 \mathrm{~A}(12 \mathrm{Vac} / \mathrm{dc})$
0.2A ( $240 \mathrm{Vac} / \mathrm{dc}$ )

Nominal temperature :
70 to $150 \mathrm{Vac} / \mathrm{dc}:-20^{\circ} \mathrm{C} /+50^{\circ} \mathrm{C}$ Others: $\quad-20^{\circ} \mathrm{C} /+60^{\circ} \mathrm{C}$
Storage temperature :
$-20^{\circ} \mathrm{C} /+70^{\circ} \mathrm{C}$
Humidity :
90\% without condensation
Storage humidity :
70\%
Front/Rear protection : IP52 / IP22

Protection with cap in optional front : IP54

## ORDER REFERENCE:



Example:
J1805-02-11, J1805 for 15 to $60 \mathrm{Vac} /$ dc power supply, positive inputs with included output relay.

## COMPLEMENTARY PRODUCTS:

M0720 / M0722, IP54 sealed front
IP54 sealed front that is fitted directly to product front. An O-ring provides sealing between steel cabinet and panel. The front is a transparent and open door.

M0720 «Quarter-turn» closing button $144 \times 144$ format
M0722 «Quarter-turn» closing button $96 \times 96$ format
M0800 19-inch brushed aluminium Ht : 4U front for bay 3 pre-drilled holes $138 \times 138 \mathrm{~mm}$.

M0815 Cover mask 144x144
fitting to M0800 front.


M0800 / M0815


M0816 Cover mask 96x96
fitting to M0810 front.
M0730 Adaptator for mounting on DIN Rail profil TS35 For $144 \times 144$ format
M0731 Adaptator for mounting on DIN Rail profil TS35 For $96 x 96$ format

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Indicator display panel with selectable inputs

NO/NC selection Fixed of blinking display OUTPUT relay per input


## USE:

- Allows local display (for example in «Substation») of different information types (Run / Stop / Alert) when the acoustic alarm and the reset are not needed.
- Allows better identification of alarms (blinking LED).
- Accepts inputs in NO/NC contact (to avoid relaying).
- Allows informations clustering for processing with supervisor.
- Displays with a choice of various colours per LED :

Green, Yellow, Red, Blue
(easily unpluggable LEDs).
For each input:

- Selection of direction of input contact ( $\mathrm{NO}=$ Normally Open, NC = Normally Closed).
- Selection of type of display: Blinking or fixed.
- 8 relays with 10/C contact for remote transfer of each channel separately (depending on chosen model).
For the unit :
- 8 unpluggable LEDs for easy colour change.
- «LEDs Test» button on front + input for external button.
- Auxiliary button on front brought out to terminals.
- One green LED for supply voltage presence.
- Unpluggable screw terminals block.


## OPERATION:

When the channel is selected with SEx at NC

- When the input contact is closed, the light is OFF. Output contact is closed on $\mathrm{xD} / \mathrm{xE}$ terminals.
- When the input contact is open, LED lights up (ON) or blinks following its selection on SCLx, the output relay falls (relay is at safety positive). Output contact is closed on $\mathrm{xC} / \mathrm{XE}$ terminals.

When the channel is selected with SEx at NO

- When the input contact is closed, LED lights up (ON) or blinks following its selection on SCLx. Output contact is closed on XD/XE terminals.
- When the input contact is open, LED is OFF, the output relay falls. Output contact is closed on $\mathrm{xC} / \mathrm{xE}$ terminals.

Output relay is activated when the input contact is closed AND the supply voltage present.

MAIN DIAGRAM:


## SPECIFICATIONS:

| Power supply voltage | 24 to $48 \mathrm{Vac} / \mathrm{dc}+/-30 \%$ |
| :--- | :--- |
| Consumption | 20 mA per LED +7 mA per relay |
| Temperature | $-20^{\circ} \mathrm{C} /+60^{\circ} \mathrm{C}$ |
| Humidity | $90 \%$ noncondensing |
| Remote relay | $1 \mathrm{RT} 6 \mathrm{~A} / 12 \mathrm{Vdc}-0.15 \mathrm{~A} / 240 \mathrm{Vac}$ |
| Aux. push button | $6 \mathrm{~A} / 12 \mathrm{Vdc}-0.2 \mathrm{~A} / 250 \mathrm{Vac}$ |
| Weight | 250 g |
| Dimensions | $96 \times 96 \times 67 \mathrm{~mm}$ |
| Protection without cover | $\mathrm{IP52}$ |
| Protection with cover | $\mathrm{IP54}$ |



Labels are ordinary paper sheets that can be slid into a transparent pocket included in the thickness of the front. A blank label is supplied with each unit. Labels can be handmade, or produced on a colour printer (laser or ink-jet). The PC software allows to create labels including images, allows to save and duplicate the achievements.
This PC software is FREE. It is possible to load it on our website :
www.ami-control.com
For high humidity countries, the printing on plastic sheets is recommended.

Numbering system


The LEDs are fitted on detachable sockets, enabling a change of colour. The colours available are the following ones:

## REAR VIEW:

## Red, Green, Yellow.

(Blue available on request)
The working lifetime of this component is practically unlimited. The low consumption (max 20 mA per LED) and excellent luminosity contribute to the reliability of this type of panel.


CUT-OUT:


DIN 96x96 format.



Selection made on product front : - Lift off frame. - Lift off the label support.

| SEx (1 to 8) | SCLx (1 to 8) |
| :---: | :---: |
| No | Blink |
| NC | \| Fixed |

## ORDER REFERENCE:



Indicates general
colour of panel LEDs.
«Positive» inputs / dry Contact: $\mathbf{1}$ $\square \mathbf{0}$ no relay «Negative» inputs / Dry contact (standard) : 2 H 8 output relays (ways 1 à 8 )(standard)

## example:

## J1850-02-2HR

J1850 width $24 \mathrm{Vac} /$ dc power suplied, «Negative» inputs with 8 transfer relays included, 8 red LEDs equiped.

Possible complementary LEDs :
J2101-00-00 LED 5x10mm, color GREEN, code : 2500
J2101-00-10 LED $5 \times 10 \mathrm{~mm}$, color YELLOW, code : 2400
J2101-00-20 LED $5 \times 10 \mathrm{~mm}$, color RED, code : 2300
J2101-00-30 LED $5 \times 10 \mathrm{~mm}$, color BLUE, code : 2300 MBW .

To have LEDs of different colours, it is necessary to order a panel with one same colour and LEDs of desired complementary colour.
example: $J 1850$ with 5 green LEDs and 3 red LEDs.
Order: $1 \times J 1850-02-10$ G (all LEDs green)
$3 \times$ J2101-00-20 (3 LEDs $5 \times 10$ red)

## COMPLEMENTARY PRODUCTS:

M0810 9-inch brushed aluminium Ht: $3 U$
Front for bay, 4 pre-drilled holes $92 \times 92 \mathrm{~mm}$.


## M0816 Cover mask 96x96

Fitting to M0810 front.

## M0722 sealed front IP54

«Quarter-turn» closing button 96x96 format.
IP54 sealed front that is fitted directly to product front. An O-ring provides sealing between steel cabinet and panel.
The front is a transparent and open door.




## PRINCIPLE:

This panel allows to use indicators and informations managed by a programmable automatic unit with distance (Run/Stop information, technical alarm indicator displays, etc.).
This solution easily allows to distribute informations along the bus and allows to have information at the desired place whilst minimising wiring.
It also allows preservation of the «synoptic» function carried out by the LEDs, which is not present on a screen or text display panel.
Connection and management through a single RS485 link gives significant economy ( 1 single RS485 card replaces all outputs cards, whatever the number of LEDs).

## MAIN CHARACTERISTICS:

Fitted in housing $144 \times 144$ that can be fitted on front of cabinet.
Front fitted with:

- 12 or 24 «LED block» $10 \times 10 \mathrm{~mm} / 5 \times 10 \mathrm{~mm}$ LEDs, 7 colour choices can be display per channel, selectable from the front panel with switches.
- LED power supply with tricolour alarm.
- 1 «LEDs Test» front button that can be used for RESET by the operator.
-1 «Auxiliary» front button brought out to terminals.
Panel is fitted with :
- 1 «User» relay (1RT/2A)
- 1 optional buzzer operating in parrallel with the above relay.
- 1 (1RT/2A) «Watchdog» relay with positive security.
- 1 auxiliary push button brought out to terminals that can be used by the operator.
- 1 input to external «LEDs Test» button that can be used for RESET by the operator.
- 1 input/output to synchronize panels between them.
- 1 Half Duplex RS485 link (reception and transmission are not simultaneous), (1 transmission/reception pair or 1 transmission pair + 1 reception pair).
- A micro-controller manages the interface.


## Indicator display panel using RS485/RS422 bus

7 LEDs colours available. Included «LEDs Test». Included transfer relays. Included output for external horn. Interchangeable labels.


## POSSIBLE FUNCTIONS:

a) Use :

The automatic unit can send a Modbus/Jbus signal and trigger the following actions :

- Light up one chosen LED.
- Light up all LEDs.
- Light up one chosen LED with slow blink.
- Light up all LEDs with slow blink.
- Light up one chosen LED with fast blink.
- Light up all LEDs with fast blink.
- Light up one chosen LED with flash.
- Light up all LEDs with flash.
- Turn off one chosen LED.
- Turn off all LEDs.
- Activate «User» relay (+ optional buzzer).
- Deactivate (or acknowledge) user relay (+ optional buzzer).
- Configure a channel at once (LEDs, relay).
- Read total panel condition in one go.
b) Configuration :

It is possible to activate a display program for the panel configuration with panel front LEDs.
This configuration can be modified through the bus.

- RS485 link configuration.
- Synchronization signal reception mode.
- Synchronization signal transmission mode.
- Authorize or not the acknowledgment of the user relay and the optional buzzer, by the local operator from the front panel push-button or the «Test LEDs» terminal.
- Bus control security selection with 4 possible times.




## ANNEXE OPERATIONS:

- «Power supply» LED on front:

Green in normal position. It becomes orange if there is transmission error or loss of transmission.

- RS485 connection control by J2x05RS :

A control of presence and bus activity and control of automatic unit activity can be activated. A delay will be armed and reactivated at each transmission read by the panel. When the delaying period is completed, an alarm is generated (the voltage presence LED on the front becomes orange). Time delay values are ajustable through the RS485 link ( $0,1,5$ and 10 minutes). (The 0 minute period deactivate bus control)

- J2×05RS presence control on bus by automatic unit : Allows the supervisor or automatic unit to control rapidly the $\mathrm{j} 2 \times 05$ RS presence on the bus, thus the whole installation. The automatic unit can call cyclically all J2x05RS units present on the bus, witch will answer with return signal containing their slave unit number.
- «Reset» or «Acknowledge» function:

The panel can be calibrated «with or without acknowledgement». If the «Acknowledge» function is activated, any action on «LEDs Test» (button on front or rear terminal) will deactivate «User» relay and buzzer. This action will be saved by the panel for 30 seconds, allowing the automatic unit to monitor operator acknowledgement (for example : to change blinking light conditon to fixed condition).

- particular «Modbus» function :

The panel send back its slave number on interrogation with the slave number 65 . Take the slave number 0 into account (carries out order but does not send back response).

- «User» relay (1RT/2A) used as «Sound alarm» relay : This relay can be reset from the front TEST button (if authorization has been activated in panel configuration).
- Internal buzzer (as an option) :

Operating in parallel with the above relay, this buzzer is activated or deactivated by the RS485 bus or deactivated by the operator (following the panel setting) and at the same time as the «User» relay.

- «Watchdog» relay (1RT/2A) :

Positive security relay (module fault detection). This relay will be deactivated in case of any panel fault, or in case of exceeding the time set in the panel for bus monitoring.

- 1 «Auxiliary» button on front face + «Auxiliary» terminals (terminals $1 \mathrm{~A} / 2 \mathrm{~A}$ ):
The front «Auxiliary» push button is brought out to terminals. It is a NO type, free of potential and can serve as a remote information return function for the operator.
- 1 «LEDs Test» button on front face + terminal «LEDs Test» (terminal 10A):
It allows to carry out a <LEDs Test», to display panel configuration, to reset user relay and buzzer. The «LEDs Test» terminal enables the same functions as the front «LEDs Test» button and enables the function on several panels simultaneously, using an external closure button (use «COM +» terminal originating from only one panel to supply this external button).
- 1 Input/Output synchronization «Syn» terminal (terminal 9A):
Each panel manages the blinking of its own LEDs. When an operator is in front of several panels, blinking lights can slide between panels causing visual fatigue. You only need connect the «Syn» terminals between the different panels and then to set up one single panel as transmitter. This latter will send out «clock pips» to synchronize the other panels.
- If external synchronization disappears, the panel will resort to its own internal clock.
- If external synchronization re-appears, the «receiver» panel re-synchronizes itself.
- Please note : there should be only one single parameterized panel as a synchro transmitter.
- It is necessary to connect the «Syn» terminals together and do the same with the «COM -» terminals of the panels concerned to ensure normal functioning.
- «COM +» terminal (terminal 11A) :

Allows to connect external button for «LEDs Test». Never connect together one or more «COM +» terminals, or any <COM +» with a <COM -» terminal.

- «COM -» terminal (terminal 12A):

Allows to connect external synchronization circuit. Never connect together one or more <COM +» terminals, or any <COM +» with a <COM -» terminal.

- Power supply (terminals 1B/2B) :

Power supply can be «DC» or «AC». There is no particular polarity to be observed.

## PRODUCING LABELS:

Labels are ordinary paper sheets that can be slid into a transparent pocket included in the thickness of the front face. A blank label is supplied with each unit. Labels can be handmade, or draw the screen of the PC and produced on a colour printer (laser or ink-jet).
The PC software allows to create labels including images, allows to save and duplicate the achievements.
This PC software is FREE. It is possible to load it on our website :

## www.ami-control.com

For high humidity countries, the printing on plastic sheets is recommended.


- RS485 (2 wires) : Half Duplex interface (reception and transmission are not simultaneous). Possibilty of being connected with one transmission/reception pair.
- RS422 (4 wires) : 1 transmission pair +1 reception pair (selection by strap on terminal board). 1200, 2400, 4800, 9600 and 19200 bauds Transmission speeds, no-parity mode, 8 bits transmission, 1 bit per stop-bit, slave number from 1 to 64 configurable through serial link. Possibility of direct display of current configuration on panel front.
- Slave number 0 is recognized by all modules, but no module responds.
- Slave number 65 is used during maintenance to find a module address.
- RS485 link line end resistor of 120 Ohms are external to the interface (refer to «Programming» chapter).
- «yellow» E LED: Impulses display signal passage in Emission from panel.
- «red» R LED : Impulses display signal passage in Reception coming from bus.


## SETTING THE COLOR OF LEDS:



A display choice of 7 colors per LEDs is possible. This choice is selectable using switches on the panel front face. You have a choice of the following colours :

Red, Green, Yellow, Blue, White, Cyan, Magenta.
Changing LEDs is no longer necessary.


## FRONT FACE:

numbering system


J2005RS


J2405RS

REAR FACE:


J2005RS / J2405RS

$144 \times 144$ DIN format



## SPECIFICATIONS:

| Possible voltages | $24 \mathrm{Vac} / \mathrm{dc}, 48 \mathrm{Vdc}+/-30 \%, 80-265 \mathrm{Vac} / \mathrm{dc}$ |
| :--- | :--- |
| Consumption | 10 mA per LED +7 mA per relay |
| RS485 insulation | $1500 \mathrm{~V}+$ protection against line spikes (using <br> CTP and Transil) and charge faults |
| Temperature | $-20^{\circ} \mathrm{C} /+60^{\circ} \mathrm{C}$ (at nominal voltage) |
| Humidity | $90 \%$ noncondensing / 70\% during storage |
| Transfer relay | 1 RT $6 \mathrm{~A} / 12 \mathrm{Vdc}-0.15 \mathrm{~A} / 240 \mathrm{Vac}$ |
| Auxiliary push button | $6 \mathrm{~A} / 12 \mathrm{Vdc}-0.2 \mathrm{~A} / 250 \mathrm{Vac}$ |
| Weight | 750 g |
| Dimensions | $144 \times 144 \times 67 \mathrm{~mm}$ |
| Protection without cover | IP52 |
| Protection with cover | IP54 (M0720, M0721) |



Example:
03 48Vac/d
05 80-265Vac/dc
J2405-03-32, J2405 (24 LEDs), 48Vdc powered with buzzer as an option.

## COMPLEMENTARY PRODUCTS:



M0800 19 inch brushed aluminium front, Ht : 4U For bay, 3 pre-drilled holes $138 \times 138 \mathrm{~mm}$.

## M0815 cover mask $144 \times 144$

Fitting to M0800 front.


## M0720 IP54 sealed front

«quarter-turn» closing button $144 \times 144$ format. IP54 sealed front that is fitted directly to product front. An O-ring provides sealing between steel cabinet and panel. The front is a transparent and open door.

## Refer to ACCESSORIES chapter of our catalog.

## COMPLETE TECHNICAL ALARM

 CENTRALISATION:The PANEL'PC is an alarm centralizer on a RS485 Bus. It can manage 64 panels with 12 alarms each. Its touch screen allows to perform all necessary operations without additional keyboard (RESET, operator assistance display, historics, archiving).
It may refer alarms and remote information to other sub-stations.
It can be used either in a sub-station or control room :

## It is very easy to realize

a technical alarm management unit by BUS : Possibility of using modules equally :

- J3500/J3105/J3000 technical alarm automatic panel.
- J2x05RS indicator display receiver panel with 12 or 24 LEDs.
- PANEL'PC.
- In local sub-station front cabinet, for monitoring alarms and local states, with historic for traceability.
- In control room with clustering by bus of local alarms panels.
- Possible transfer to other sub-stations.

PANEL'PC:


The PANEL'PC integrates :

- Alarm display with «RESET» directly on the screen.
- Operator assistance or instructions for each inputs indicating to operator
how to proceed depending on the alarm present.
- Display of historic periods.
- Re-display of the historic of a recorded period (10,000 pages possible).
- Printing in continuous with time stamping.
- Remote alarm reporting to one or several indicators display by BUS (for example, guard posts, technical service, control room).
- Remote outputs possible.
- Archiving on USB key.
- Login with several safety levels.


