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warranty 2 years warranty

Multicolored LEDs

MADE IN **FRANCE**

DIN 144 x 144 format

Indicator display panel using RS485/RS422 bus

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

Bus RS485

«User» relay

«Watchdog» relay

10A 11A
«LEDs Test» button

1A 2A
«Auxiliary» push button

J2405RS

Voltage presence LED

«LEDs Test» button

«Auxiliar» button

J2005RS

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 144x144 that can be fitted on front of cabinet.
Front fitted with :
- 12 or 24 «LED block» 10x10mm/5x10mm 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.
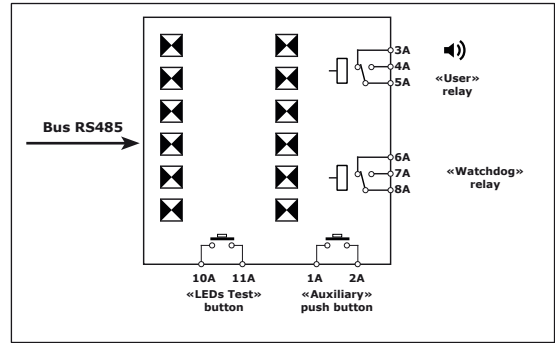
POSSIBLE FUNCTIONS :

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.
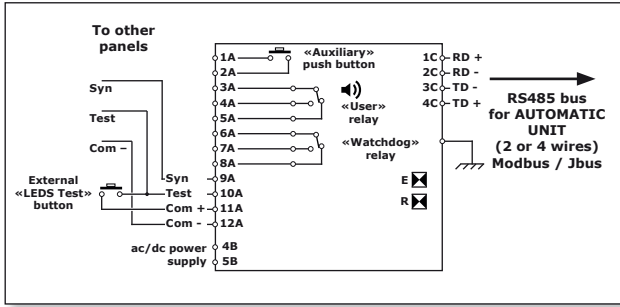- Bus control security selection with 4 possible times.

**Please ask
for protocol transmission documentation
for more information on signal frames**

RS485 bus - 1km
64 possible devices
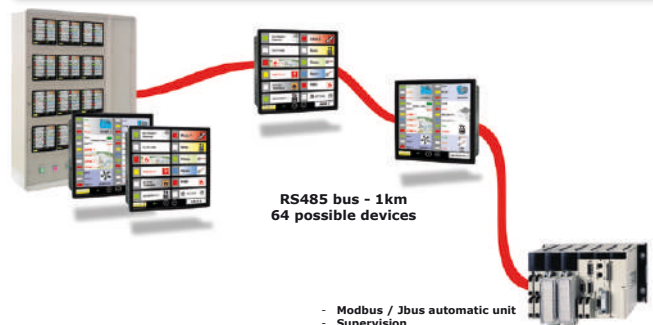
- Modbus / Jbus automatic unit
- Supervision

REPRESENTATIVE DIAGRAM :

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)

- J2x05RS presence control on bus by automatic unit :
  Allows the supervisor or automatic unit to control rapidly the j2x05RS 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 1A/2A) :
  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.
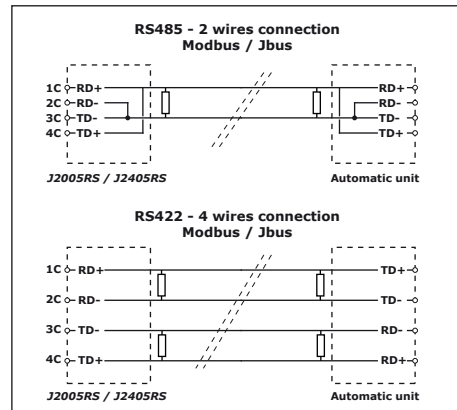This PC software is FREE. It is possible to load it on our website :

www.ami-control.com

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

4 text lines possible
Icons can be added
2 different languages possible
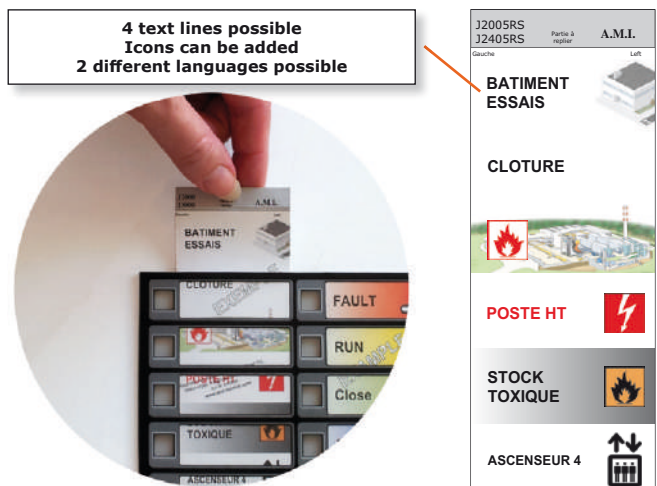
RS485 TERMINAL BOARD : 2 OR 4 WIRES :

(See details in the «Transmission» notice)

- 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.

RS485 - 2 wires connection
Modbus / Jbus

1C RD+ / 2C RD- / 3C TD- / 4C TD+ — RD+ / RD- / TD- / TD+
J2005RS / J2405RS — Automatic unit

RS422 - 4 wires connection
Modbus / Jbus

1C RD+ / 2C RD- / 3C TD- / 4C TD+ — TD+ / TD- / RD- / RD+
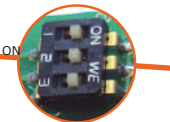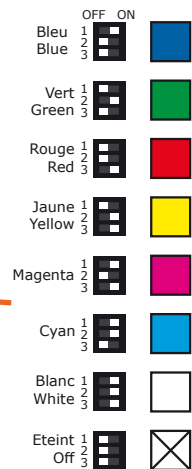J2005RS / J2405RS — Automatic unit

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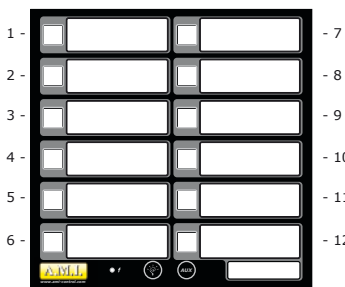
Red, Green, Yellow, Blue, White, Cyan, Magenta.
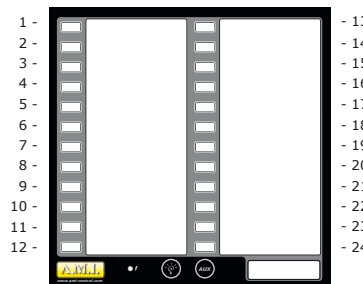
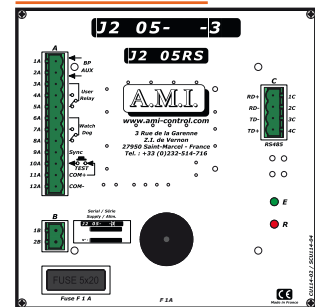Changing LEDs is no longer necessary.

OFF ON

Bleu / Blue
Vert / Green
Rouge / Red
Jaune / Yellow
Magenta
Cyan
Blanc / White
Eteint / Off

FRONT FACE :

numbering system

1 - / - 7
2 - / - 8
3 - / - 9
4 - / - 10
5 - / - 11
6 - / - 12

J2005RS

1 - / - 13
2 - / - 14
3 - / - 15
4 - / - 16
5 - / - 17
6 - / - 18
7 - / - 19
8 - / - 20
9 - / - 21
10 - / - 22
11 - / - 23
12 - / - 24

J2405RS

REAR FACE :

J2005RS / J2405RS

CUT-OUT :

144x144 DIN format

138 mm
138 mm
144 x 144 mm
8 mm max.
53
14
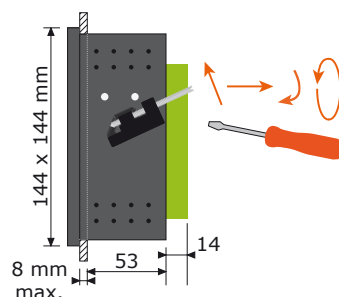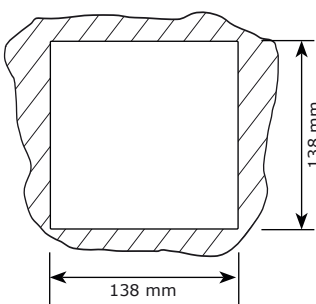
SPECIFICATIONS :

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

ORDER REFERENCES :

J2x05-0x-3x

- 12 LEDs : **J2005**
- 24 LEDs : **J2405**

- **0** Without buzzer (standard)
- **2** Optional buzzer

- **3** RS485 bus, Modbus/Jbus

- **02** 24Vac/dc
- **03** 48Vdc
- **05** 80-265Vac/dc

Example :
J2405-03-32, J2405 (24 LEDs), 48Vdc powered with buzzer as an option.

COMPLEMENTARY PRODUCTS :

M0800
M0815

M0720

M0800 19 inch brushed aluminium front, Ht : 4U
For bay, 3 pre-drilled holes 138x138mm.

M0815 cover mask 144x144
Fitting to M0800 front.

M0720 IP54 sealed front
«quarter-turn» closing button 144x144 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 :

- 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.

> **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.
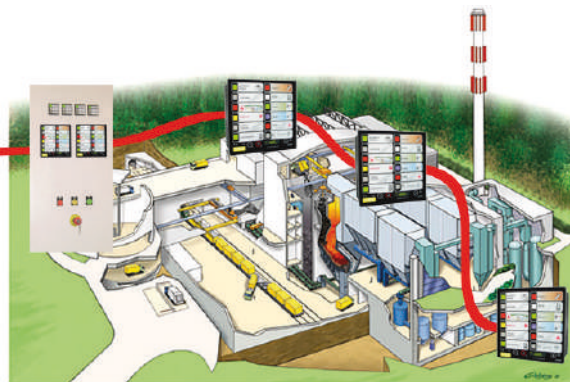
RS485 bus / 1km / fitted with 64 modules as a maximum

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.