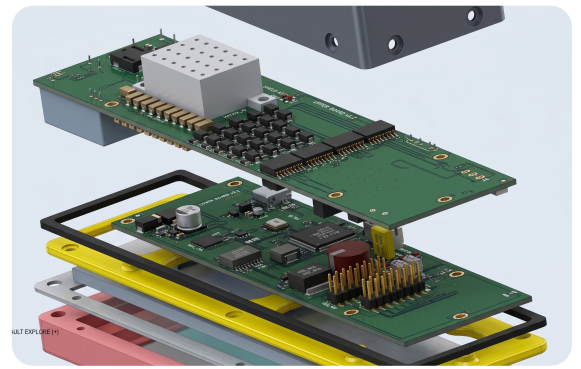


Digital Panel Alarm

Customizable digital solution for clear, reliable train alarm visualization.



Interfacing & Adaptability

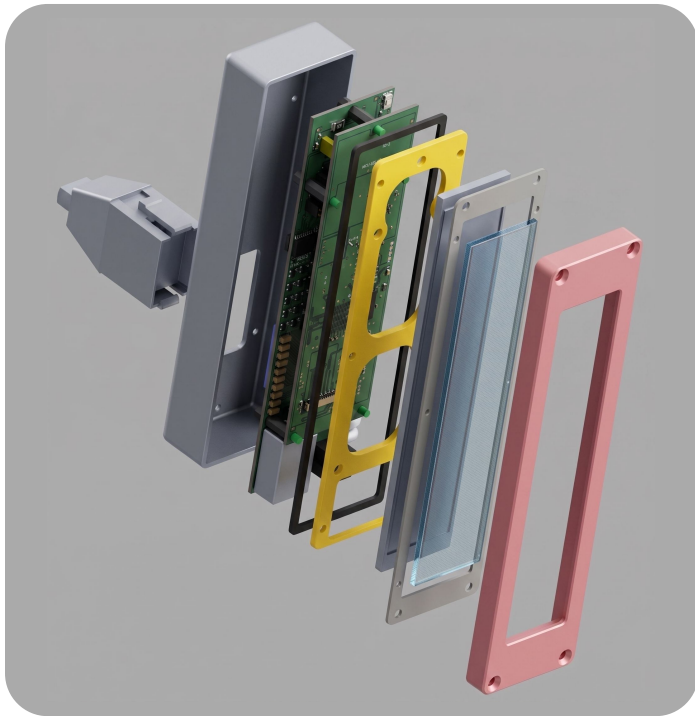
Customized

Railway Standard

Ecofriendly

Main features

The Digital Alarm Panel (DAP) is designed by Sirail to provide visual indications of vehicle Alarms/warning (TCMS mirroring signals) using a fully customizable pictograms on a digital TFT display. Designed to be mounted on the train's driver desk, replacing traditional Sirail panels: it serves as a replacement for most existing LED alarm panels developed by Sirail in the past. To ease integration, the DAP is mechanically compatible with 90% of current Sirail panels, utilizing the same dimensions and vehicle fixing points. The TFT display consists of 20 pictograms arranged in 2 columns and 10 rows of customizable pictograms/symbols.



Dimensions

	Min	Max
Height	213	215
Width	-	52
Length	42	60
N. Fixing Vehicle Points	4 (M4,DIN 7984)	
Single Pictogram Area	15 × 15	
Single Pictogram Resol	125 × 125	
I/O Signal Voltage	24 ÷ 110 VDC	
Supply Voltage	24 ÷ 110 VDC	
Number of Symbols	20	
Device Weight (Max.)	0,500 Kg	

Interfacing & adaptability



- Mechanically fully compatible with current Sirail panels (20 pictograms)
- Dark or sunlight management by dimming backlight TFT
- Wide range for power supply and I/O signals (24÷110dc)

Ecofriendly



- No toxic materials/liquids
- Low weight solution
- High MTBF

Customized



- Fully customizable pictograms by SW
- Compact solution easy to integrate to any interiors

Railway standard



- EN50155, EN61373 compliances
- EN 45545-2 compliance

Display Characteristics

- **Screen Specs:** Features a 7.0-inch active-matrix TFT LCD display with a resolution of 280x1424 pixels.
- **Visibility:** The screen is anti-reflex and anti-glare, ensuring symbols are clearly visible in all lighting conditions (dark or sunlight) without dazzling the driver. It provides a viewing angle of 80 degrees in all directions.
- **Protection:** Covered by a transparent graphite glass (max 3mm thickness) with silkscreen printing. The front face guarantees an IP54 protection degree.

Electrical & Interface Features

- **Power & Signals:** Operates on an ultra-wide input voltage range of 24Vdc to 110Vdc.
- **Vehicle Connectivity:** Uses a 24-contact vehicle interface connector (Souriau SMS Type).
- **Inputs/Outputs Config.:** Includes 20 digital inputs for individual alarms/warnings, a dedicated test input command to turn all indicators on, and a remote PWM input to dimming of the TFT backlight. A hardware/firmware configurable pin can serve as a diagnostic DO relay.
- **Isolation:** All input ports guarantee opto-isolation and EMC/EMI protection (EN50155, EN 50121-3-2)

Configuration & Customization

- **Software Tool:** Fully configurable via dedicated software connecting through an RS485 or USB service port (secured by an admin password).
- **Icon Management:** Pictograms can be customized in terms of position, background colors, line colors, and representation mode (e.g., flashing). Icons are uploaded as BMP files to the system's external flash RAM.
- **Logic:** Alarm/warning activation is configurable to be triggered by digital inputs (high or low active), and multiple inputs can be linked using AND/OR logic with customized event thresholds.

Diagnostics & Maintenance

- **Indicators:** Equipped with two diagnostic SMD LEDs on the front frame: a blinking green LED to indicate the CPU is running correctly, and a red LED to signal a TFT display fault.
- **Start-Up Test:** Performs a built-in diagnostic test upon start-up, checking internal parameters, configuration coherence, inactive pixels, and displaying the hardware/firmware version.
- **Maintainability:** Designed as a Line Replaceable Unit (LRU) that can be easily assembled and disassembled without special tools, aiming for a replacement time of under 10 minutes.

