

F6001 Control Card (ECD) for Fire Extinguishing System

This card gathers and deploys the signals and logic associations relating to fire extinguishing control. Using the inputs and outputs managed by the other cards of the H-S81-HS panel, it enables system compliance with the EN 12094-1 standard. It does not have physical I/O, but uses inputs and commands managed by other cards of the H-S81-HS system.



Main Characteristics

- It performs the functions of an ECD (electric control and delay device)
- It is certified by an accredited body to the European C.P.D. Construction Product Directive (Cert. n° 051-CPD-0139/0138/0137)
- It makes the S81 System compliant with EN 12094-1
- It allows building fire extinguishing systems certified SIL2 and SIL3 (IEC 61508)
- LED indication of extinguishing zone status
- It manages 4 virtual inputs (V-IN) and 10 virtual outputs (V-OUT)
- 0-60 second extinguishing control delay is configurable at operator level 3
- Can be hot-swapped
- Communication management by FPGA
- Internal logic management by micro-controller
- SMD technology multilayer circuit
- Front plug-in on 19" rack, with locking screws

Operation

It deploys the inputs and outputs physically located on other cards of the S81 panel using virtual inputs and outputs that are processed, according to pre-configured logics, for extinguishing system control in compliance with regulations.

Zone Status Indication

LED	Function
ACTIVATED	Activated condition
RELEASED	Extinguishing system operated
FAULT	General fault
DISABLED	General disabling
INHIBIT	Emergency stop
HOLD	Emergency hold
AUTOMATIC OFF	Automatic mode excluded
RESERVE	Reserve cylinder bank

Possible Configuration

Each extinguishing zone needs an F6001 card, whatever the number of its sections, while the physical outputs to operate the extinguishing system (actuators, valves, visual/audible alarms, etc.) can be on 81-F5001 (eight 0.5A channels), F5003 (eight polarity reversal channels) or F5004 (four 2A channels) cards, or addressable modules on BUS.

The inputs from the field (pushbuttons, limit switches, sequence stop, detection) are connected to such cards as the 81-F3002 (eight detection lines) and/or the F7002 loop control cards.

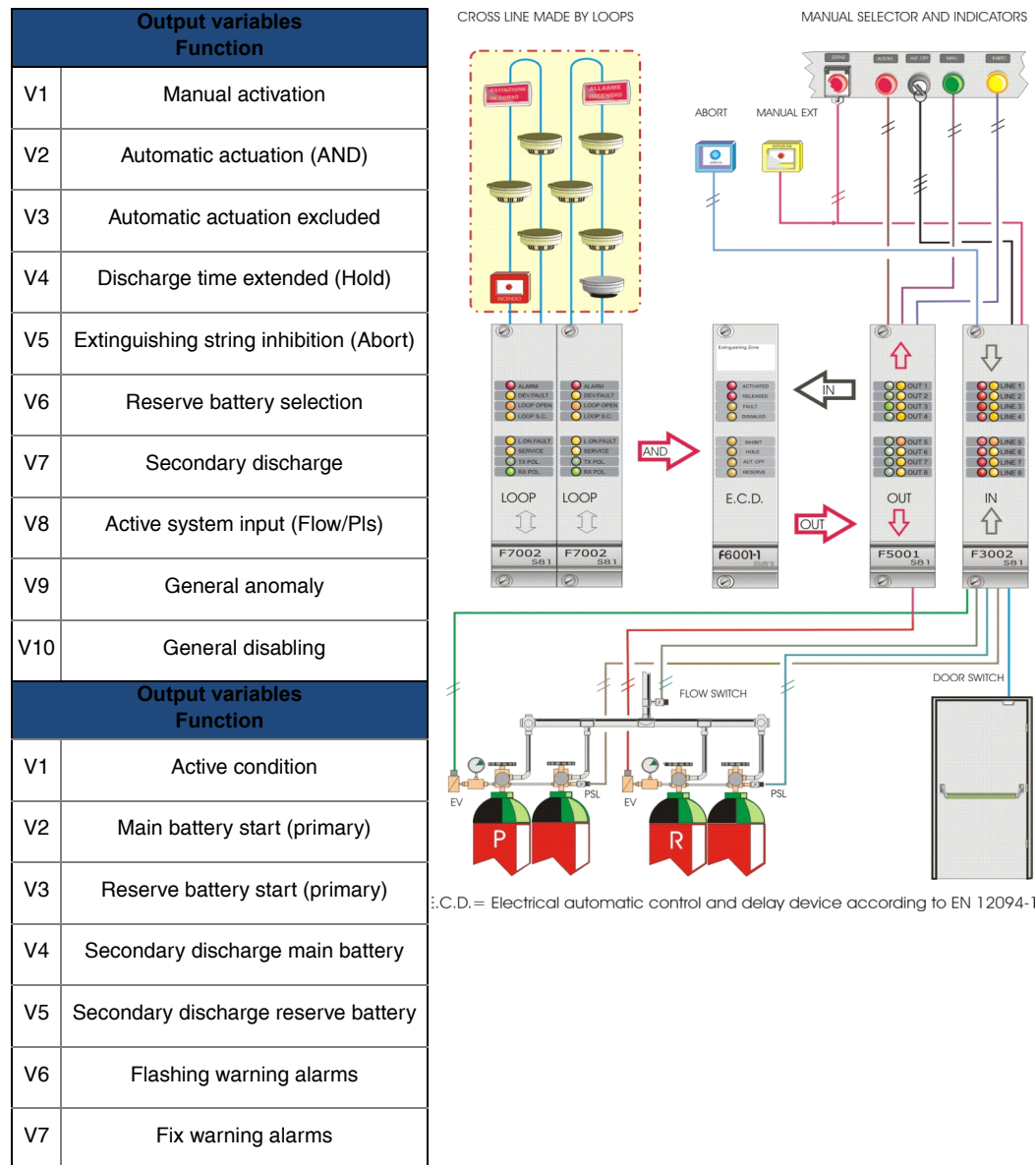
Each extinguishing zone, even in the case of very complex systems, can be configured through the ProHS81 program to create logic associations between virtual inputs and outputs (V-IN 1-4; V-OUT 1-10) and physical inputs and outputs.

Virtual Connections

The card deploys the virtual inputs constituted by the output variables from the other panel cards (IN, END) to produce virtual outputs (OUT), which are obtained through software elaboration by internal logic devices.

The virtual outputs generated are input variables to other cards and are used to create special functional logics for fire extinguishing system control.

The right drawing gives an example of an extinguishing zone. Note that the input and output devices necessary for the automatic extinguishing are connected to other cards of the system. In this example, the fire detection is performed using two loops routed to allow either a double consent.



NOTE: The card can be removed and replaced without switching off the panel.