FF574X - MFPX Expansion Loom Application and Installation Instructions

General
The MFP Range of Fire panels provides Auxiliary Expansion Input and Outputs to interface with external equipment. Two Fire outputs and a Fault output are provided. These are of open collector type. These outputs can be disabled via the DISABLE function. A "Class change" input is provided that will activate the alarm sounder outputs from an external command. Connections "A" to "F" are as follows:

Auxiliary Fire Output 1 (A)
This output is activated when the alarm sounders are activated in a Fire condition.

Auxiliary Fire Output 2 (B)
This output is activated in a Fire condition, whether the alarm sounders are activated or not. i.e. it is activated immediately when a Fire condition is detected, even in the delayed sounders mode. This output remains activated in a Silenced Fire state, until the panel is Reset.

Auxiliary Fault Output (C)
This output is activated in any Fault condition. When all Faults are cleared then the Fault output is deactivated.

External Sounder Activate ("Class Change") (D)
This normally open input when shorted to 0v activates the relay to energize the Alarm Sounder circuits. When the short is removed the relay is released. No panel indication is given during the relay activation. Note. This input does not activate Aux.Fire 1 and Aux.Fire 2 outputs.

0v Supply (E) and 24v (F)
Supply outputs for use with the above.

Applications for Auxiliary Inputs and Outputs
The outputs are typically used to drive relays external to the panel. The relays may for example be used to control ventilation systems, gas valves, door release systems etc . The External Sounder Activate may be used to interface to other panels or may be controlled by a time switch to give a momentary warning of a timed event via the alarm sounders throughout a building (Check with the Fire officer that this is permissible).

There is no restriction on the choice of relays other than they must have a 24v coil and the coil current must not exceed the Auxiliary Output capability (100mA), and if the relay contacts are switching mains potentials that those potentials are suitably isolated from the Fire Panel drive circuits. If the coil current is derived from the panel it will affect the standby time of the system. The worst case is that of the Fault relay which will be energised for the whole time the mains supply has failed.

Circuit Examples
The circuit below shows an example of a general arrangement where all outputs and inputs are used.

CONNECTIONS TO PL5 ON PCB
VIA EXPANSION LOOM
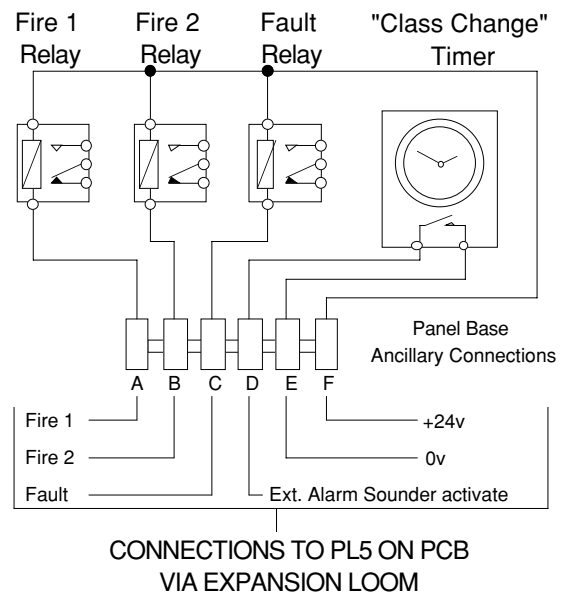
Panel Interconnection Example
Shown below is an example where up to 5 MFP Fire Panels in different premises may be interconnected. The system has been designed so that any panel that detects a fire can activate its own alarm sounders, and also those on all the other panels via a common 2 wire connection. In addition each panel has a relay connected to the Fire 2 output in order to switch a Strobe light powered from a local supply to indicate the source of the alarm. In this case the light would only be illuminated if that particular panel was in an alarm state, but not if triggered externally. All the Alarm Sounders are Silenced from the triggered panel only. After Silencing the light stays lit until the panel is Reset.
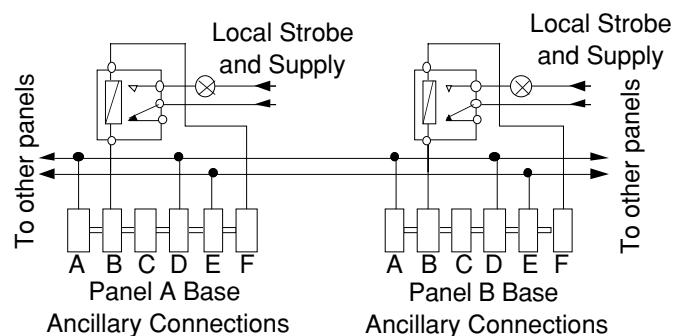
Installing the MFPX Loom
Connections are made from PL5 (adjacent relay) on the main PCB via MFPX Expansion Loom to the Ancillary Connections "A" to"F" in the base of the panel.
1 Remove power from the system before installation
2 Fit the three plastic push Retaining Clips through the holes for Ancillary connections A to F in the back of the control panel and push the terminal block onto the clips. (For bases with screw fixed looms, secure the loom with the screws provided).
3 Fit the other end of the loom onto plug PL5 on the main circuit board. Note that it is designed to fit one way only, as shown in the diagram. Forcing the connector onto PL5 will cause mechanical and possible electrical damage.
4 Make off connections to peripheral equipement, and when made recheck.
5 Re - apply power and test the system.

MFPX Expansion Socket
in place on PL5.

Loom connects to A through F in Panel Base