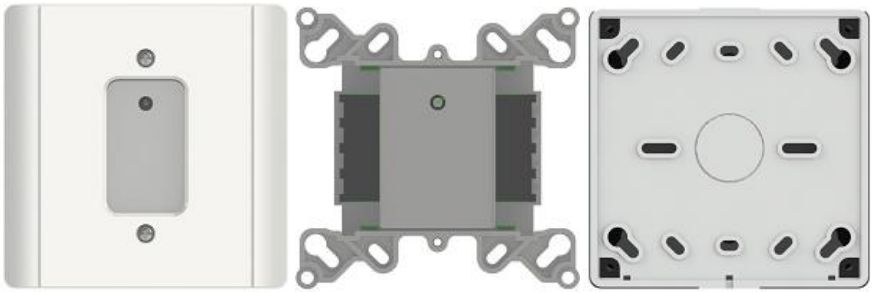
FW821 Input-Output Module



DESCRIPTION

The input-Output module FW821 is a UL listed device according to UL864 and ULC-S527 for Fire Protective Signaling Systems for indoor use. FW821 provides one 24VDC output and in addition one feedback input switch. The input line is monitored for open line faults and ground faults and the contact must thus be wired with an end of line resistor. The output line is monitored for open line, short circuit faults, ground faults, external 24VDC power source loss and an end of line resistor is needed as well.

When the output is activated or the feedback is switched, the device LED will indicate the event condition by fast blinking.

A return to normal condition will cause the event to disappear and the device LED indicator will return to the red idle condition.

The FW821 is intelligent addressable and takes one address on the Signaling Line Circuit (SLC) of the fire alarm control panel.

SPECIFICATION

SLC Nominal Voltage	24VDC
SLC Voltage Range	15 to 28VDC
Standby Current	0.15 mA
Active Current (SLC)	0.26 mA
External Input Power Supply	24VDC (nominal)
External Input Power Supply	15.4 to 24.4VDC (range)
Active Current (Output)	80 mA, 0.35pf
Output Range (Special Application)	15.0 to 24.0VDC (Supplied by Model FW106 Auxiliary power output); 20.0 to 25.9VDC (Supplied by Listed 24VDC Regulated power supply).
Max. Line Impedance (Input)	25 Ω
Max. Line Impedance (Output)	1 Ω
Max. Impedance for Grounding	6.6 KΩ
Compatible EOLR	FW421 (10KΩ)
Operating Temperature	32°F to 120°F (0°C to 49°C)
Mounting	FW800 base
Operating Humidity	0% to 93% RH
Dimension	120mm(L) x120mm(W) x 45mm(H)
Weight (with back box)	9.2 oz (261g)
Wiring Gage	12 to 18 AWG

PROGRAMMING

The module must be programmed to a valid address before use. A valid address means the address must be in 1~252 and can't be duplicate with other device in same loop. Please use the hand-held programmer ReadWritor FW411 to set device address.

CAUTION Disconnect wire at terminal 1, 2, 3 and 4 before programming.

INSTALLATION

- Mount the base, FW800, onto a 2X4 or 4x4 electrical box using the screws provided, as illustrated in Figure 1.

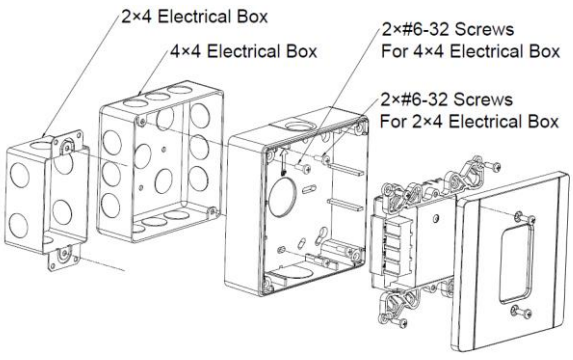


Figure 1 Installation Diagram

- Connect the wires, see Figure 2. There is polarity sensitive between terminal 1 and terminal 2. The

power source at terminal3 and terminal4 is polarity sensitive as well.

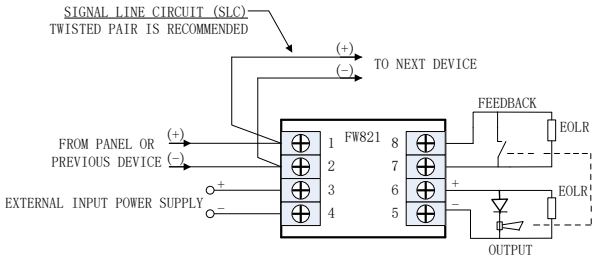
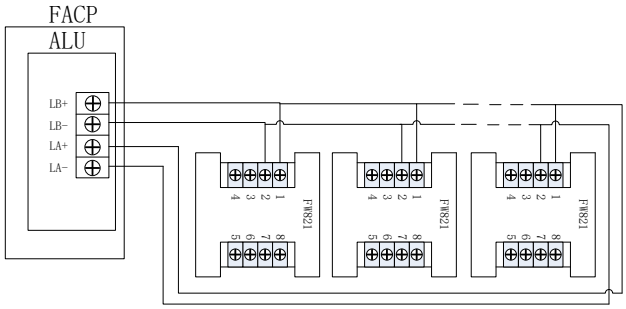


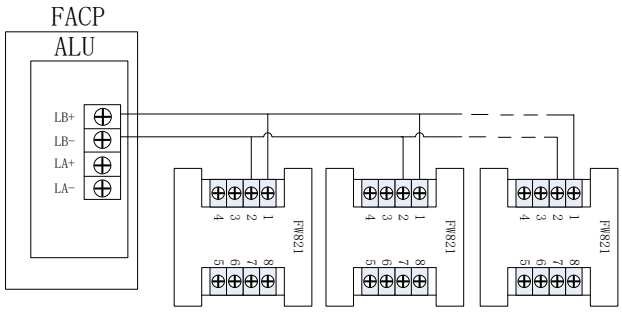
Figure 2 Wiring Diagram

(Note1: polarity sensitive between terminal 1 and terminal 2, terminal 3 and terminal 4, terminal 6 and terminal 5.)
(Note2: All circuits are power-limited)
(Note3: The maximum line impedance for Feedback input circuit is 25 Ω. The maximum line impedance for output circuit is 1 Ω)
(Note4: External input power supply is either PCU AUX output of FACP or Listed 24VDC Regulated/power-limited source with ground fault detection.)
(Note5: An example of compatible device is door strike, Model 0563 from RUTHERFORD CONTROLS IN'L INC with "Fail secure" mode. Acceptability should be determined by Authorities Having Jurisdiction.)

- Wire the SLC to the module as illustrated in Figure 3.



(a) Class A Circuit



(b) Class B Circuit

Figure 3 SLC Wiring Diagram

- Combine the assembled unit to the base using the screws provided.
- Apply power to the control unit.

TESTING

1. Before testing, inform proper authorities that the system is undergoing maintenance, and will temporarily be put out of service. Disable the system to prevent unwanted alarms.
2. Make sure the indicator LED on the module's surface is flashing. Failure to flash indicates a nonfunctioning detector or faulty wiring. Check the wiring and remount the device.
3. Trigger the input switch to activate a feedback signal. The LED should turn to red fast blinking. Check the event occurrence displayed on LCD of controller and verify it.
4. Restore the input switch to normal position. The LED should turn to red idle condition. An output signal will display on the FACP AMI interface.
5. Activate the output (you may need to make a related control logic at first on control panel). The LED should turn to red fast blinking.
6. Deactivate the output. The LED should turn to red idle condition.
7. When testing is completed, set the system back to normal operation and inform proper authorities.

MAINTENANCE

Return the device for repair if it fails to flash or alarm during testing. Do not disassemble the module without permission.

ATTENTION

The products must be installed in accordance with NFPA 72, CAN/ULC-S524 and CEC depending on country of installation. Check information of equipment used in the system by other manufacturers for any guidelines or restrictions.

NOTE

Do not paint this device.

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