621 analogue addressable input module

Installation Instructions

Cautions

ELECTRICAL HAZARD: Disconnect power from equipment prior to making any internal adjustments. Service should only be performed by qualified personnel.

FRAGILE: Inspect the equipment prior to installation. Do not install the equipment if damage is apparent. Do not attempt to disassemble this equipment. If damaged, return to the supplier.

ELECTROSTATIC HAZARD: This is sensitive electronic equipment. Apply safe ant-static practices when handling this equipment.

CIRCUIT LIMITATIONS: The maximum number of devices connected to a single alarm zone is limited by the control and indicating equipment, and may be limited by local regulations.

Introduction

621 analogue addressable single input modules provide the interface to connect an electrically isolated dry-contact switched inputs to Numens 2-wire addressable fire detection control and indicating equipment.

These instructions provide trained installation personnel with details to install and commission 621 input modules for optimum performance.

Preparation

Before commencing installation, ensure all equipment and tools to mount and connect the equipment are available, such as drills, mounting screws, cables and ladders.

Installation

Back-box

1. Knock out or drill out back-box cable-entry holes in the side or rear, appropriate for the wiring routing used for the installation.
2. Feed the conductors through the hole(s) using cable glands.
3. Mount the back-box to the wall using fixing screws that are suitable to securely fix the back-box to the surface.

Address Setting

Select the module address and set the address as shown in Table 1 by adjusting the DIP switch settings located on the PCB assembly.

Note: Addresses 0, 126 and 127 cannot be used.

Wiring

The terminals accept (0.4 ~ 2.5) mm^2 conductors.

Strip the conductor insulation to expose 5 mm of the conductor.

WARNING: Take care to ensure the insulation does not get clamped by the terminal contact.

Multi-State (621-001 and 621-005) Wiring

Connect the conductors to the terminals as shown in Fig. 1.

Note: A 22 kΩ resistor is fitted to the input terminals. A 4k7 Ω resistor is supplied for connection in series with the input contacts.
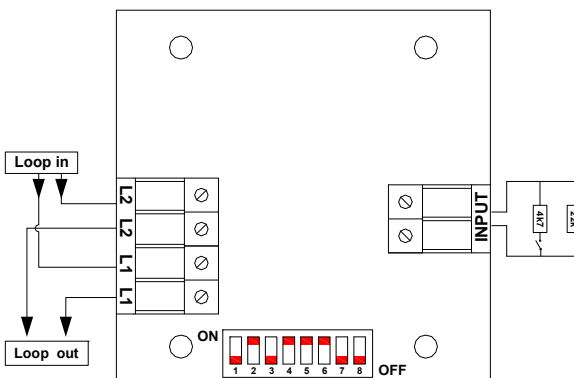

Fig. 1: 621-001 and 621-005 terminal connections

Switched External Supply (621-007) Wiring

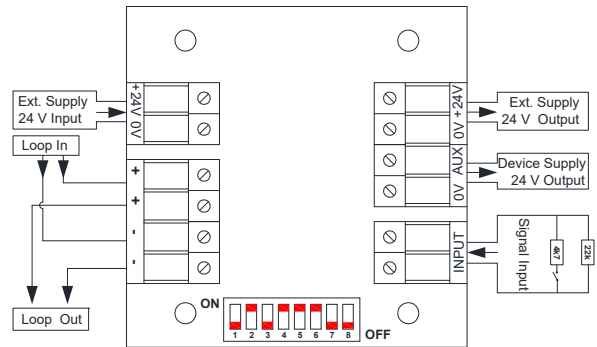Connect the conductors to the terminals as shown in Fig. 2.

Fig. 2: 621-007 terminal connections

Assembly

1. Replace the cover assembly to the back-box.
2. Install and tighten cover using the M3 × 25 screws supplied.
3. Insert the screw-hole covers.

WARNING: Do not use excessive force.

Commissioning

Initial Conditions (all models)

1. Ensure all the alarm signal services, releasing devices and extinguisher systems are disabled during the commissioning period.
2. Install devices in the non-addressable alarm zone.
3. Connect power to the module.
4. Check that the Polling indicator flashes and the control and indicating equipment is in the quiescent condition.

Multi-State Modules (621-001 and 621-005)

Alarm Input Function

Note: A 22 kΩ resistor is fitted to the input terminals. A 4k7 Ω resistor is supplied for connection in series with the input contacts.

1. Place the connected input device into Alarm.
2. Check that the Alarm indicator is illuminated and the condition is reported at the control and indicating equipment.
3. Reset the input device (if required), and then the control and indicating equipment.
4. Check that the Alarm indicator is not illuminated.

Input Short-circuit Function

1. Place a short circuit on the input wiring.
2. Check that a Fault condition is reported at the control and indicating equipment.
3. Remove the short circuit.
4. Check that the Fault condition resets at the control and indicating equipment.

Input Open-circuit Function

1. Open circuit the input wiring.
2. Check that a Fault condition is reported at the control and indicating equipment.
3. Reconnect the wiring.
4. Check that the Fault condition resets at the control and indicating equipment.

Loop Isolator (where fitted)

1. Apply a short circuit to the Loop Out conductors.
2. Check that the yellow Isolator indicator is on.
3. Check that the status of devices connected to the Loop In side of the alarm zone wiring remains unchanged at the control and indicating equipment.
4. Remove the short circuit.
5. Check that the yellow Isolator indicator is off.

6. Check that devices connected to the Loop Out side of the alarm zone return to their previous conditions at the control and indicating equipment.

Switched External Supply Module (621-007)

Alarm Input Function

1. Place the connected input device into Alarm.
2. Check that the Alarm indicator is illuminated and the condition is reported at the control and indicating equipment.
3. Reset the control and indicating equipment.
4. Check that the DC 24 V output supply falls to 0 V during the Reset Condition.
5. Check that the Alarm indicator is not illuminated.

Final Conditions

Ensure all the alarm signal services, releasing devices and extinguisher systems disabled for the commissioning are returned to their previous condition.

References

Document	Description
31-0029	621 analogue addressable input module datasheet

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Table 1 – DIP switch address settings

Least significant nibble	Most significant nibble							
	0000	1000	0100	1100	0010	1010	0110	1110
0000	—[a]	16	32	48	64	80	96	112
1000	1	17	33	49	65	81	97	113
0100	2	18	34	50	66	82	98	114
1100	3	19	35	51	67	83	99	115
0010	4	20	36	52	68	84	100	116
1010	5	21	37	53	69	85	101	117
0110	6	22	38	54	70	86	102	118
1110	7	23	39	55	71	87	103	119
0001	8	24	40	56	72	88	104	120
1001	9	25	41	57	73	89	105	121
0101	10	26	42	58	74	90	106	122
1101	11	27	43	59	75	91	107	123
0011	12	28	44	60	76	92	108	124
1011	13	29	45	61	77	93	109	125
0111	14	30	46	62	78	94	110	—[a]
1111	15	31	47	63	79	95	111	—[a]

[a] Address not permitted.