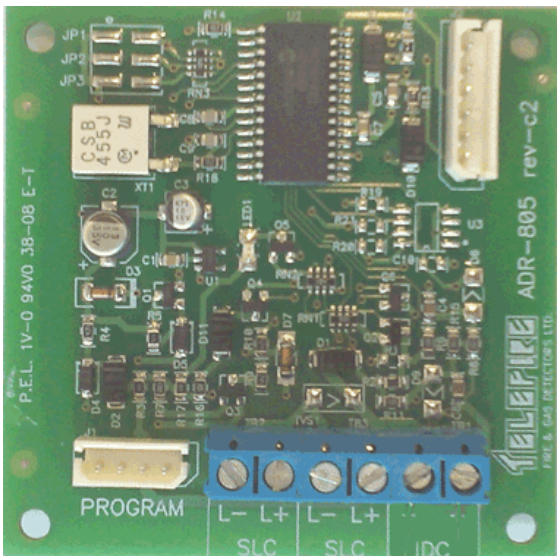
ADR-805

TELEFIRE

ADR-805

Analog Addressable Switch Interface Module

Technical Manual



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ADR-805En112.pdf
Revision 1.12
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Compatibility

This manual refers to equipment with the following prerequisites:

ADR-805 Hardware revision .....C or higher

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Note

The terms “**Trouble**” as used in NFPA 72 guideline and UL 864 standard and “**Fault**” as used in EN 54 standards are used interchangeably throughout this manual.

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Note

Do not install, operate, and maintain this Product before fully reading this manual.

1 Introduction

The ADR-805 switch input module interfaces between the ADR-7000/3000 and a non-powered initiating device such as a presostat, alarm switch, valve switch, sprinkler flow switch, extinguishing gas flow switch, flooding switch, or a supervisory switch.

The module is powered by the SLC and does not require 24 Vdc input.

The module's input is supervised for short, open, alarm, and normal status. The end-of-line device is a 100 KΩ resistor. Configuration jumpers allow the selection of operation mode to be without short supervision (i.e., a short is considered as an alarm or activation) or with short supervision (i.e., a 3.9KΩ resistance is considered an alarm or activation, while a short is considered as a trouble condition).

The module is intended to be installed close to the switch it supervises (in the same room or up to 10m) without short supervision; and up to 100m with short supervision. The End of Line device is a 100KΩ resistor.

The ADR-805 occupies a single address. The address is stored in the module's non-volatile memory and can be programmed or verified by using the PROG-4000 Analog Addressable Detector and Accessory Programmer. Please refer to the PROG-4000 Technical Manual for further information.

The ADR-805 includes an onboard indicating LED that flashes when addressed by the control panel and latches on upon alarm.

The ADR-805 module is supervised by the control panel and communicates with it via the SLC.

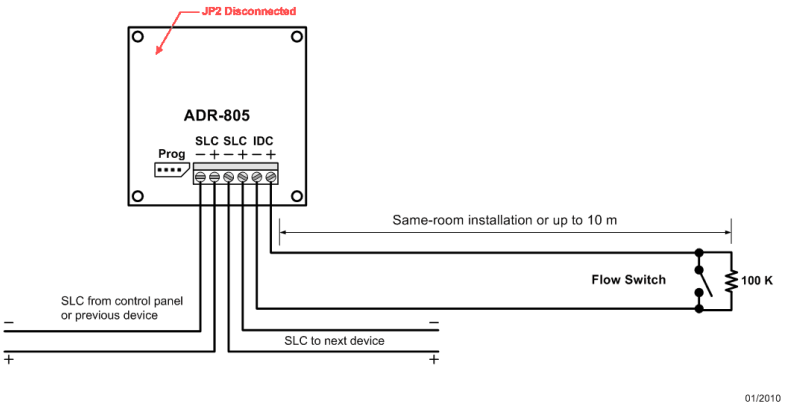

Figure 1 ADR-805 – without short supervision (short = activation)

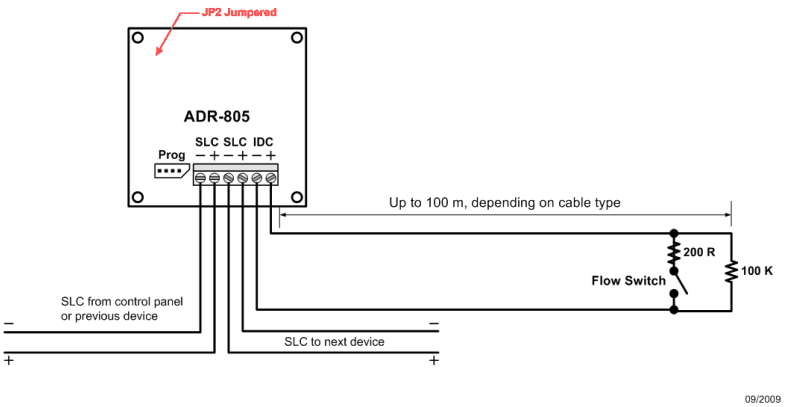

Figure 2 ADR-805 – with short supervision (short = trouble, 3.9KΩ = activation)

2 Compatibility

Rev C of the ADR-805 is compatible with previous revision when all jumpers are open (off).

The ADR-805 is compatible with Telefire's TFT-2800 Flooding Switch.

It is compatible with devices that were approved by Telefire and the relevant authorities.

3 Installation

3.1 Pre-Installation Planning

3.1.1 Capacity Planning

Ensure that the control panel has a free address for the ADR-805.

3.1.2 Cabling Planning – Wire Characteristics' Effect on System Performance

The following table shows the effect of wiring characteristics on system performance:

Characteristic	Effect on SLC	Effect on IDC
Electric resistance	Minimal	Minimal
Capacitance	High	No affect
Inductance	High	Minimal
Mechanical Strength	High	High

Table 1 Wire Characteristics' Effect on System Performance

3.1.3 Cabling Planning – Signaling Line Circuits (SLC)

The ADR-805 connects to the control panel via a two-wire cable 12 – 18 AWG (cross section of 0.8mm^2 to 3.3mm^2). Twisted-pair cable is recommended.

Wire Size	Cross Section (mm^2)	Maximum SLC branch length for wire size
18 AWG	0.8 mm^2	950 m
16 AWG	1.3 mm^2	1,520 m
14 AWG	2.1 mm^2	2,420 m
12 AWG	3.3 mm^2	3,830 m

Table 2 Selecting SLC Wires

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Note

Notify the operator or the security personnel that the system will be temporary disconnected before adding devices to the control panel.

3.1.4 Cabling Planning – Initiating Device Circuit (IDC)

The ADR-805 connects to the initiating device via a two-wire cable 12 – 18 AWG (cross section of 0.8mm^2 to 3.3mm^2). The initiating device should be no farther than 100m is

configured for short supervision, or no more than 10m, same-room installation without short supervision.

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Note

When the ADR-805 is configured without supervision for shorts (JP2 open), the IDC line is limited to the same room or no farther than 10m.

3.2 Installation

Connect the initiating device to the ADR-805 using a 12 – 18 AWG (cross section of 0.8mm^2 to 3.3mm^2).

3.2.1 ADR-805 Configuration

Mode	JP1	JP2	JP3	Work Mode
1				Flow switch, NO, without short supervision[1]
2			•	Flow switch, NC, without short supervision[1]
3		•		Flow switch, NO, with short supervision[2]
4		•	•	Flow switch, NC, with short supervision[2]
5	•			Flooding switch without short supervision[1]
6	•		•	Flooding switch without short supervision[1]
7	•	•		Flooding switch with short supervision[2]
8	•	•	•	Flooding switch with short supervision[2]

Open	
Jumpered	•

Table 3 ADR-805 Configuration Options

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Note

When the ADR-805 is configured without supervision for shorts (JP2 open), the IDC line is limited to the same room or no farther than 10m.

3.2.2 Configuring the ADR-7000/3000

Define the ADR-805 as **Push_Button** when it is connected to a flow switch. Configure it as a **Supervisory_Switch** when it is connected to a supervisory device or a flooding sensor. Please see the ADR-7000/3000 technical manual for additional information on device configuration and matrix activations.

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[1] When the module is configured for no supervision for shorts (jumper JP2 is open), the input line (IDC) is limited to the same room or no more than 10m. A short is considered as an alarm or activation.

[2] When the module is configured for supervision for shorts (jumper JP2 is jumpered), the input line (IDC) is limited to no more than 100m. A short is considered as a fault (trouble), and a resistance of 3.9kΩ is considered as an alarm or activation.

3.2.3 Location

The ADR-805 should be installed in a closed location. Avoid exposure to outdoor environment to prevent high humidity or dust or air pollution.

Mount the ADR-805 in an AIB-800 box on a solid wall at a height that will have comfortable access to connecting the cables and where it is possible to supervise and clearly see the LED indicators. Ensure that cable length limitations are met.

3.2.4 Connecting input (IDC) and SLC lines

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Note

Measure the wiring to ensure there are no shorts before connecting the wiring to the ADR-805.

Connecting or adding modules to the control panel shall be done when all power to the control power (AC and batteries) is disconnected.

Connect the input device and SLC cable.

3.3 Post-Installation

Test the module to ensure that it operates properly and verify that it is included in the appropriate matrices as specified by the planning consultant.

3.4 Documentation

Mark the module's addresses on a label that is easily visible. Indicate its purpose (for example, "second-floor sprinkler flow switch").

4 Troubleshooting

The ADR-805 includes a red LED that flashes upon being addressed by the control panel. This LED turns on when the ADR-805 is in alarm.

An alpha-numeric message on the ADR-7000's/3000's LCD screen and annunciators will be indicated with a detailed description of the event.

5 Specification

Module PCB dimensions (W / H)	70 / 70 mm
AIB-800 dimensions (W / H / D)	167 / 125 / 33 mm
Weight	21 gr.
Operating Temperature range	-10°C – +60°C (14°F – 140°F)
Operating Voltage (supplied by control panel)	21 V modulated
Maximum Current Consumption	200 µA (quiescence mode) 2.0 mA (Alarm)
Local Indication	Local red LED (light-emitting diode) flashes upon being addressed by the control panel and turns solid on upon alarm.

All values are nominal. Specifications are subject to change without prior notice

6 Certification

Telefire's ADR-805 Analog Addressable Switch Interface Module has the following approvals:

- EN 54-17 Approved
- IS 1220 Approved
- GOST Compliant
- UL 864 Edition 9 Approved
- CE Marked