Intelligent Peripheral Devices
4-Input / 4-Output Interface Module
Model FDCIO422

─────── **ARCHITECT AND ENGINEER SPECIFICATIONS** ───────

- Four (4) inputs / four (4) outputs via one (1) address
- Input lines can be supervised for open, short and ground-fault conditions
- Light-emitting diode (LED) display of each input / output status
- Supports 'Class A' and 'Class B' input-circuit wiring
- Polarity insensitive utilizing *SureWire*™ technology
- Microprocessor-controlled signal evaluation
- Two-wire installation, per addressable loop
- Power supply via C-NET module
- Communication via C-NET
  - Individual addressing
- Four (4) AC-rated / DC-rated relay outputs
- Mounts in one (1) electrical back box
  - Optional 4—11/16 inch [12 cm.] and 5-inch [12.7 cm.] square back boxes
- Restriction of Hazardous Substances (RoHS compliant)
- Electronic address programming is easy and dependable
- Easy front-end access to programming port and wiring terminals
- Model 8720 / DPU programs and verifies device's address, as well as performs test functionality
- ⓊUL Listed, ⓊULC Listed;
  FM (#3230), CSFM (#7165-0067:0264) and NYC Fire Department Approved

Model FDCIO422
[white front plate included]

Product Overview

The four (4) input / (4) output interface module (Model FDCIO422) from Siemens — Fire Safety is designed to provide the means of interfacing direct shorting devices to the Device Loop Card (Model DLC); FireFinder® XLS, as well as the Models FC901, FC922 and FC924 fire-alarm control panels (FACPs).

Model FDCIO422, which contains microcomputer-chip (*SureWire*) technology and is polarity insensitive, achieves the state of an 'intelligent device' through its highly advanced method of address programming and supervision — combined with its sophisticated, bi-directional FACP communication.

The relays and contact device inputs for Model FDCIO422 are controlled at the same address. From the aforesaid, respective Siemens FACP, the relays and input contacts can be controlled as a separate function. The relay is typically used where control or shunting of external equipment is required. Four (4) independent in/out circuits are acceptable on one (1) Model FDCIO422 module.

Model FDCIO422 is designed to monitor Normally Open (N.O) or Normally Closed (N.C) dry contacts.

Specifications

Each interface module reports the status of the (N.O) or (N.C) to the FACP. Model FDCIO422 is used for the connection of up to two (2) independent (2 –x– 2) 'Class A' or four (4) independent 'Class B,' dry and N.O configurable contacts. Input lines can be supervised for open, short and ground-fault conditions (depending on end-of-line [EOL] termination resistor and class configuration).

Inputs can be independently configured, via the FACP, for *Alarm*, *Trouble*, *Supervisory* or *Status* zones.

Model FDCIO422 has four (4) programmable outputs with four (4) potential free-latching-type 'Form A' (dry) relay contacts for fire-control installations.

The FACP's C-NET module provides supervised, power-limited power supply for Model FDCIO422. The four (4) input / (4) output interface module provides status indication per LED for each input / output, plus one (1) LED for general device status. Also included with Model FDCIO422 are four (4) EOL devices (470 ohms (Ω)), as well as three (3) separators to separate power-limited wiring from non-power-limited wiring.

Cerberus® PRO
Fire Safety Products

9905
Four (4) In/Out Interface Module

SIEMENS

Specifications — (continued)

Separators are delivered in the following sizes:
- ✓ 4–11/16-inch [12 cm.] back box
- ✓ 4–11/16-inch [12 cm.] extension ring

Note: Optional 5" [12.7cm.] back boxes are available exclusively via Randl Industries, Inc.

Model FDCIO422 has a multi-color LED that flashes GREEN when operating in 'normal' (standby) condition; AMBER if unit is in a *Trouble* event, and RED to indicate a change of event status.

Model FDCIO422, which is fitted with screw terminals for connection to an addressable circuit, is fully compatible on the same circuits all Siemens Model 'H'-series detectors; Model 'HMS'-series addressable manual stations, or any other addressable intelligent modules, such as Model HZM or Model HCP.

Field-Device Programmer / Test Unit

Model FDCIO422 is compatible with the Siemens field-device programmer / test unit (Model DPU / 8720), which is a compact, portable and menu-driven accessory for electronically programming and testing Model FDCIO422 easily and reliably.

Model DPU / 8720 eliminates the need for cumbersome, unreliable mechanical programming methods — such as dials or rotary switches — and reduces installation and service costs by electronically programming and testing the detector prior to installation (via the interface's microcomputer-chip, non-volatile memory).

For proper operation of Model DPU / 8720, the technician selects the accessory's program mode, and enters the desired address. In turn, Model DPU / 8720 automatically sets and verifies the address, as well as tests Model FDCIO422. When in the 'test' mode, Model DPU / 8720 will perform a series of diagnostic tests without altering the address or other stored data, allowing technicians to determine if the detector is operating properly.

Model DPU / 8720 operates on AC power or rechargeable batteries, providing flexibility and convenience in programming and testing equipment from practically any location. Additionally, vibration, corrosion and other conditions that deteriorate mechanical-addressing mechanisms are no longer a cause for concern.

Electrical Ratings

Voltage Rating:	12VDC — 32VDC
Maximum Voltage: (C-net modules)	32VDC
Operating current: (quiescent)	1mA
Peak Current:	1.92mA, max.

Electrical Ratings — (continued)
Supervised switch ratings

Monitoring Voltage:	3VDC
Cable-length input:	200 feet (61 meters), max.
Input-shielding cable-length range:	30 ft — 200 ft (9.14m — 61m)
C line-to-line:	0.02 µF, max.
C line-to-shield:	0.04 µF, max.
Line Sizes American Wire Gauge (AWG)	14 AWG, max; 18 AWG, min.

Technical Data

Communication Protocol:	C-net (supervised signaling-line circuit, power limited)
Storage Temperature Range:	-22° — +140 °F (-30° – +60 °C)
Operating Temperature Range:	+32° — +120 °F (0° – +49 °C)
Relative Humidity:	5 – 85 % (non freezing and condensing at low temperature)

P H Y S I C A L	**P R O P E R T I E S**	Color:	Carrier: RAL 9017
		Cage Cover:	Transparent
		Cage:	RAL 9017
		Faceplate:	White
		Dimensions: { W -x- H -x- D }	4" -x- 4.7" -x- 1.2" (12 cm. -x- 12 cm. -x- 3.1 cm.)
		Weight:	1 Lb. (454 g.)
		Volume: (cage and carrier)	11.7 inch³

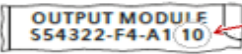| AC Relay Output Ratings			Normally Open (N.O) or Normally Closed (N.C) Dry Contacts	
Output A, B, C, D	**Output B, C**	**Output C**		
4 -x- 5 Amps max.	or 2 -x- 7 Amps	or 1 -x- 8 Amps	30 VDC, resistive; 125 VAC, resistive	Ambient Temp: 77° F (25° C)
4 -x- 3 Amps max.	or 2 -x- 4 Amps	or 1 -x- 5 Amps	30 VDC, resistive; 120 VAC, inductive	Ambient Temp: 100° F (38° C)
4 -x- 2 Amps max.	or 2 -x- 2.5 Amps	or 1 -x- 3 Amps	30 VDC, resistive or inductive (0.35PF); 120 VAC, inductive	Ambient Temp: 120° F (49° C)

Notes:
- AC output ratings are only applicable to Model FDCIO422 interface modules that have Engineering State (ES) version '10' or higher.
- The part number (S54322-F4-A1) for Model FDCIO422 is found on the back of each interface module, and the ES version is placed just the right of the part number (See **Page 3** for an illustration).
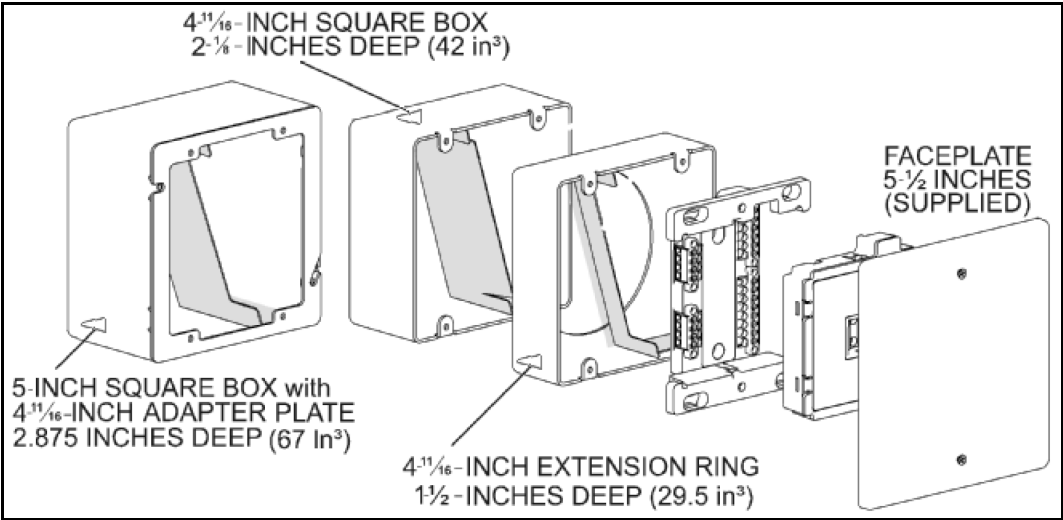- Refer to Installation Operation Manual, IOM: A6V10324662, for further details.

NOTICE

AC ratings must not be used with modules with an ES less than 10. The ES number can be found on the label:

OUTPUT MODULE
S54322-F4-A1 10 ⟵ **ES**

Mounting Diagram
— Model FDCIO422 Control-Module (Supplied) Barrier —

FACP Compatibility Table

Model	Data Sheet Number	Description
—	6300	FireFinder® XLS (system overview)
FC901	9813	50-point addressable panel
FC922	9815	252-point system (networkable)
FC924	9815	504-point system (networkable)

Details for Ordering

Model	Part Number	Description
FDCIO422	S54322-F4-A1	Four (4) Input / Four (4) Output Interface Module
FDCIO422-EOL	S54312-F7-A1	End-of-Line (EOL) Resistor {100 Ω ±1% ½ W}
TB-EOL	S54322-F4-A2	TB - EOL Terminal

Model FDCIO422-EOL
[End-of-line resistor]

Optional Accessories
[available via Randl Industries, Inc.]

Part Number	Description
M-411000	4—11/16-inch [12 cm.] adapter plate
T55017	5-inch [12.7 cm.] back box
T55018	5-inch [12.7 cm.] back box
T55019	5-inch [12.7 cm.] back box

This Page Left Intentionally Blank

SIEMENS Cerberus® PRO

Siemens Industry, Inc. — Building Technologies Div.
8 Fernwood Road • Florham Park, NJ 07932
Tel: (973) 593-2600 • Fax: (908) 547-6877
Web: www.USA.Siemens.com/Cerberus-PRO