

G002752

Control & Indication Unit

CN-AIOI

Part no. 023261

System: CS4000, NSAC-I, TERRA FIRE, TERRA ONE

General description

CN-AIOI is a line unit ideal for control and monitoring of conventional fire detectors, fire doors, dampers or similar equipment.


The CN-AIOI is an addressable Control & Indication unit with two inputs and three single pole changing relay outputs with built-in short circuit isolator.

The CN-AIOI can be programmed for different types of control and monitoring functions. The functions are selected by means of a DIP-switch.

Normally CN-AIOI is powered by the line via a two-core cable, but when using the relays an external 24 VDC power supply must be connected separately.

The PC-board is mounted in a plastic box. Cable connections are made through the cable glands.

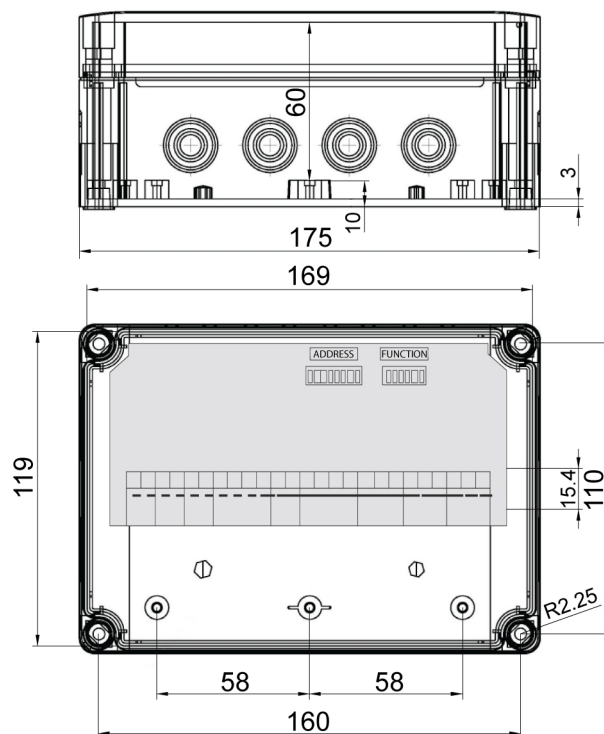
The CN-AIOI can be fitted with expansion cards for special applications. See data sheets for RKS05 (supervised triple alarm devices) and RKS06 (delayed relay activation during power cuts).

Max load relay contacts (from external power supply)	48 VDC / 1.0 A 24 VDC / 2.0 A
Ingress protection	IP65
Relative humidity	0–95% RH
Temperature range	-10°C to +55°C
Classification	EN54-17:2005/AC:2007 EN54-18:2005/AC:2007 IACS E10
Certified according to	 0845-CPD-232.1707
Enclosure material	PC/ABS
Weight	500 g

Data

Nominal voltage	34 VDC
Working voltage	20–38 VDC 24 VDC ± 20% (from external power supply)
Address setting	8-way DIP-switch
Function setting	6-way DIP-switch
Working current (loop)	0.3 mA
Alarm current (loop)	10 mA
Operating current (from external power supply)	50 mA

Dimensions (mm)



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Connection

Relay3 OUT3		Relay2 OUT2		Relay1 OUT1		Superv. IN4		Superv. IN3		Ext. 24V		Det/Switch IN2		Det/Switch IN1		Cable screen (earth connection)		Line OUT		Line IN				
25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
NC	C	NC	NO	C	NC	NO	C	NC	-	+	-	+	-	+	-	+	-	+	⏏	⏏	-	+	-	+

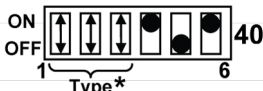
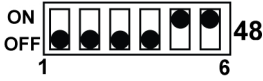
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* = End of line resistor

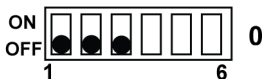
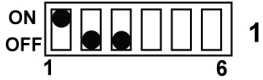
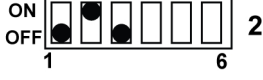




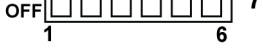
Function DIP-switch

Fire mode

Function DIP	Function	IN 1	IN 2	OUT1/2/3	Description
	Conventional zone	Conventional detectors/zone	Remote indication	Programmable	Interface for conventional detectors

Function DIP	Function	IN 1	IN 2	OUT1/2/3	Description
	External fire alarm	Fire input, closing contact	Prealarm input	OUT 1 : Fire reset pulse OUT 2/3 : Programmable	Interface for external fire alarms (aspiration, beam detectors, ...).
	Sprinkler alarm	Flow switch, alarm is 15 sec delayed	Sprinkler valve, input open at closed valve	Programmable	Interface for sprinkler alarm

*The type of device connected is defined by the lower 3 DIP switches for the conventional zone and external fire alarm setting:

Function DIP	Device type
	DETECTOR
	SMOKE
	HEAT
	MANUAL CALL POINT
	IS NOTE: For normal applications use NS-AINI for intrinsically safe devices.
	FIRE
	SPRINKLER
	FLAME



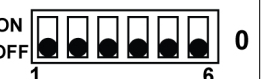
NOTE!














The external 24V power supply is not supervised when the CN-AIOI is set in fire mode

I/O mode

The following option are available in different I/O settings:

- Safe Input 1 used for input of the safe condition, for example closed door position switch.
- Unsafe Input 2 used for input of the unsafe condition, for example open door position switch.
- Failsafe Relays will open in case of power loss.
- Watchdog Relays will keep position for a period of time in case of power loss on the loop.
NOTE: Must be used together with add-on board RKS-06.
- Auto Relays will open in case of any device within a +/- 3 address range from the CN-AIOI goes into fire alarm condition, fault condition or if one is disabled and goes into fire alarm condition..

Function DIP	Safe	Unsafe	Failsafe	Watchdog	Auto	Description
						General I/O device.

Function DIP	Safe	Unsafe	Failsafe	Watchdog	Auto	Description
ON OFF  1 6						General I/O device, bell control. Use for RKS05.
ON OFF  1 6	<input checked="" type="checkbox"/>					General I/O device, door/fire damper control.
ON OFF  1 6	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>			General I/O device, door/fire damper control.
ON OFF  1 6			<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	Door/fire damper control.
ON OFF  1 6	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	Door/fire damper control.
ON OFF  1 6	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Door/fire damper control. Use together with add-on board RKS-06.
ON OFF  1 6			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Door/fire damper control. Use together with add-on board RKS-06.
ON OFF  1 6	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>				General I/O device, door/fire damper control.
ON OFF  1 6	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>			Door/fire damper control.
ON OFF  1 6			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		Door/fire damper control. Use together with add-on board RKS-06.
ON OFF  1 6			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> *	Door/fire damper control. Use together with add-on board RKS-06.
ON OFF  1 6			<input checked="" type="checkbox"/>			Failsafe general I/O device
ON OFF  1 6						Local timer.

*Automatically close relays if any disabled device on the same loop goes into fire alarm condition.