Zilar ACU 40

Product nr. 21035

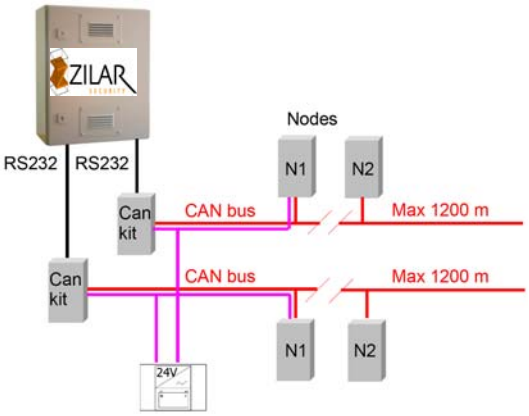
Overview

The Zilar solution is an integrated security and personnel management system that seamlessly integrates access control, intruder alarm, digital video recording and time & attendance into one system. Zilar web-based user interfaces make the applications exceptionally easy to use. A typical Zilar system consists of a central unit and potentially 128 Zilar Z1612 Area nodes in each CAN bus, connected to it either via serial port or IP network. Area nodes are used for connecting readers and sensors into the system. The system also supports other devices, such as CCTV cameras connected through analogue or IP network, to built-in DVR (4 CH) or external (16 CH) DVR and work time terminals. An alarm transfer can be made over an Internet connection, such as a broadband connection, dial-up connection or a GPRS modem.

Zilar ACU 40

CPU	600MHz
Memory	256MB
USB 2.0	2 ports
COM	2
Ethernet 10/100	1
Flash backup 256 Mb	1
Hard disk	40GB
DC power 24V	4A, 2Amps for ext. devices
Batteries	7 Ah x 2
Can bus 50 kbits	1
Wiegand interface	2
Relays	4
Inputs	16
Tamper switch	1
Monitoring	AC, DC, Temperature, Batteries, CAN-bus
Power	230V

Table 1: Hardware specification



Database	SQL
Web server	None
OS	Linux 2.6
Backup	Automatically
Alarm transmission	TCP/IP, optional GSM
User interface	NO, Needs main server
Firewall	internal

Table 2: Software specification

Mechanical specifications

Casing

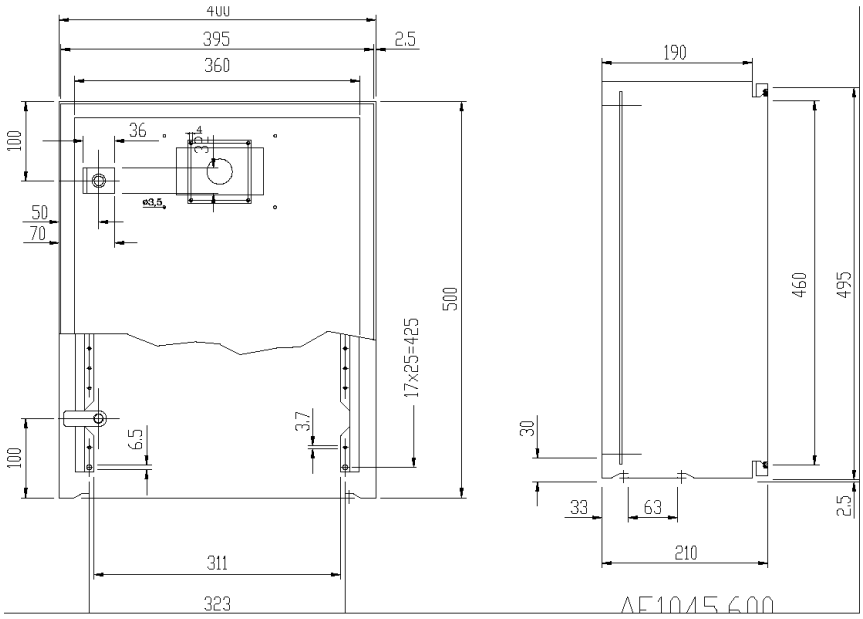
The central unit is built into a lockable, painted steel cabinet The cabinet includes a tamper switch for detecting when the door is opened, and rubber padded holes for cabling on the bottom.

Zilar Security Oy
Valkjärventie 7C
02130 Espoo

Phone +358 (0)20 729 1820
Fax +358 (0)20 729 1825

Mounting

The central unit cabinet includes holes for mounting it on a wall.



Main board

The main board of the central unit is a industrial PC, running 600Mhz The memory is 256 MB. There is one 10/100 Ethernet port, two COM ports.

RS-CAN Kit

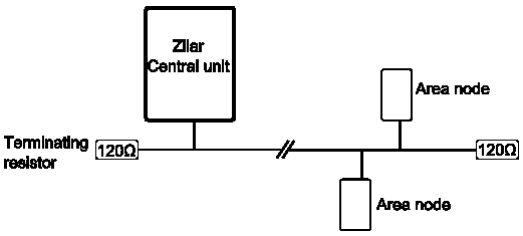
The RS-CAN Kit acts as a bridge between the main board serial port and the CAN bus. The CAN Kit also acts as a Zilar Area node, and includes all the inputs and outputs of an area node except for the serial port, which is reserved for connecting it to the main board. The inputs and relays can be freely used e.g. for sensors in the room the central unit is installed in, or for controlling a siren with a relay. The CAN Kit appears in the Zilar system user interface as an area node. Refer to Zilar Area node Z1612 documentation for a complete description of an area node's range of features.

Connector/fuse board

The connector board includes connectors for the CAN bus and voltage sources. The voltage outputs are fused to protect the power supplies from shorts in external devices. The fuses are rated for 5A.

CAN bus cabling

For the CAN bus, use one twisted pair of the cable. To connect the central unit to the CAN bus, connect the CAN High-wire of the bus to the connector labeled "CAN OUT H" and CAN Low-wire of the bus to the connector labeled "CAN OUT L" on the connector board. The connector board includes a 120Ω terminating resistor, soldered between "CAN OUT H" and "CAN OUT L", so no external resistor should be installed on this end of the bus. This example uses the orange pair for the CAN bus, with the orange/white wire for CAN High and the orange wire for CAN Low.



NOTE: Do not use one pair for CAN High and another for CAN Low. This does not improve the signal, but degrades it, potentially causing the bus not to function. The wires for the bus should be the two wires of one twisted pair.

The topology of the bus should be one straight "line" or a "bus", terminated at both ends with a 120Ω resistor. In other words, all the devices in the cable should be connected to one cable.

Supplying voltage to external devices

The unused pairs in the bus cable (3 pairs or 6 wires in Cat 5) can be used for supplying power for external devices such as the area nodes in the bus, or even doors with electric locks. The more pairs are used, the smaller the losses due to cable resistance and hence higher the current that can be supplied.

The resistance of the cable causes a voltage drop proportional to the cable length, which should be taken into account. For example, when using the three unused pairs in Cat 5-cable, 24V DC operating voltage for a door drawing 600mA can be transferred up to 90m away from the power source so that the voltage drop due to the cable is less than 15%[1].

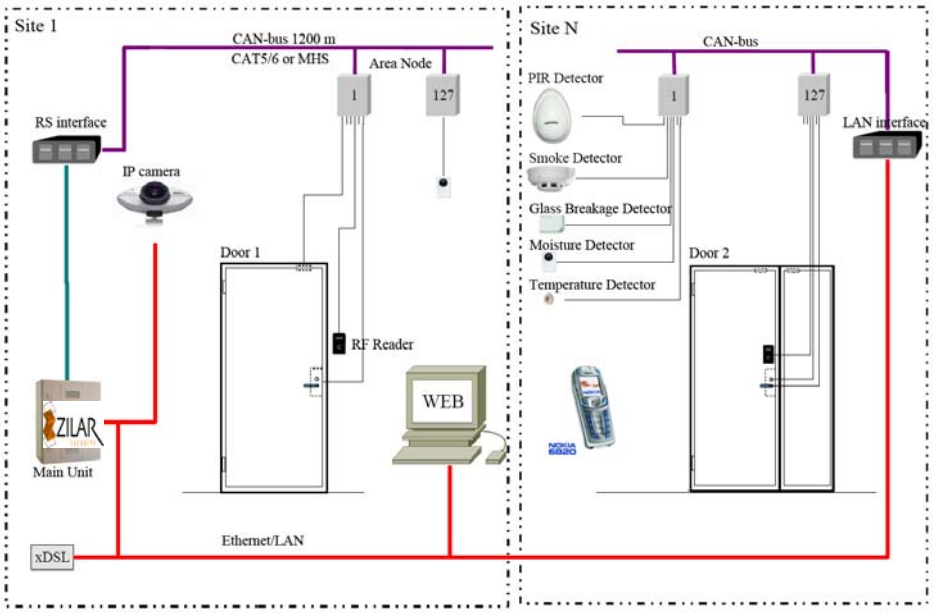
Adding doors to the cable or using fewer pairs would reduce the distance respectively: for two doors, the distance is reduced to 45m, or for a single door using only two pairs to 60m. During an installation, situations such as all doors being open at the same time should be taken into account. The installation should be thoroughly tested for such scenarios. In the case of multiple doors, running a separate voltage cable or installing an altogether separate power supply for the doors should be considered.

Operation

A Zilar system consists of a central unit, area nodes and possibly other devices such as CCTV cameras or work time terminals. Sensors and remote controlled devices such as door locks, gates or elevators are then connected to the area nodes, which communicate with the central unit over a CAN bus.

Polling

The central unit checks the state of the nodes every 10 seconds by sending them the current time over the CAN bus. A node answers this message (the “poll") by returning the states on its inputs and outputs. If the central unit does not receive an answer to a poll in 30 seconds, a node is considered to be "offline", which can be configured to trigger an alarm, and is indicated in the user interface. Likewise, if the node is not polled for 30 seconds, it considers the central unit to be offline, and changes into independent operation.



[1] Theoretical maximum, calculated assuming a DC resistance of 0.1Ω/m per wire (Cat 5)

Zilar ACU 80

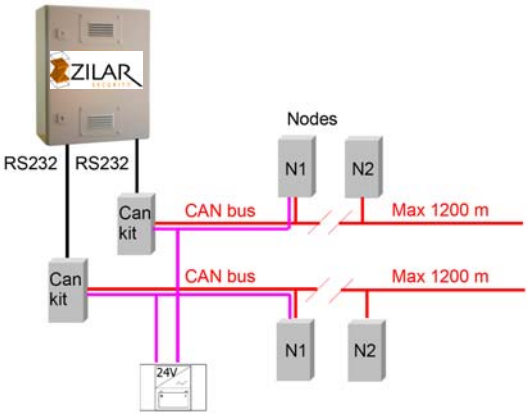
Product nr. 21036

Overview

The Zilar solution is an integrated security and personnel management system that seamlessly integrates access control, intruder alarm, digital video recording and time & attendance into one system. Zilar web-based user interfaces make the applications exceptionally easy to use. A typical Zilar system consists of a central unit and potentially 128 Zilar Z1612 Area nodes in each CAN bus, connected to it either via serial port or IP network. Area nodes are used for connecting readers and sensors into the system. The system also supports other devices, such as CCTV cameras connected through analogue or IP network, to built-in DVR (4 CH) or external (16 CH) DVR and work time terminals. An alarm transfer can be made over an Internet connection, such as a broadband connection, dial-up connection or a GPRS modem.

Zilar ACU 80

CPU	1200MHz
Memory	512MB
USB 2.0	2 ports
COM	2
Ethernet 10/100	1
Flash backup 256 Mb	1
Hard disk	80GB, max 2x300GB
DC power 24V	4A, 2Amps for ext. devices
Batteries	7 Ah x 2
Can bus 50 kbits	1
Wiegand interface	2
Relays	4
Inputs	16
Tamper switch	1
Monitoring	AC, DC, Temperature, Batteries, CAN-bus
Power	230V



Database	SQL
Web server	NO
OS	Linux 2.6
Backup	Automatically
Alarm transmission	TCP/IP, optional GSM
User interface	NO, needs Zilar central unit
Firewall	internal

Table 1: Software specification

Mechanical specifications

Casing

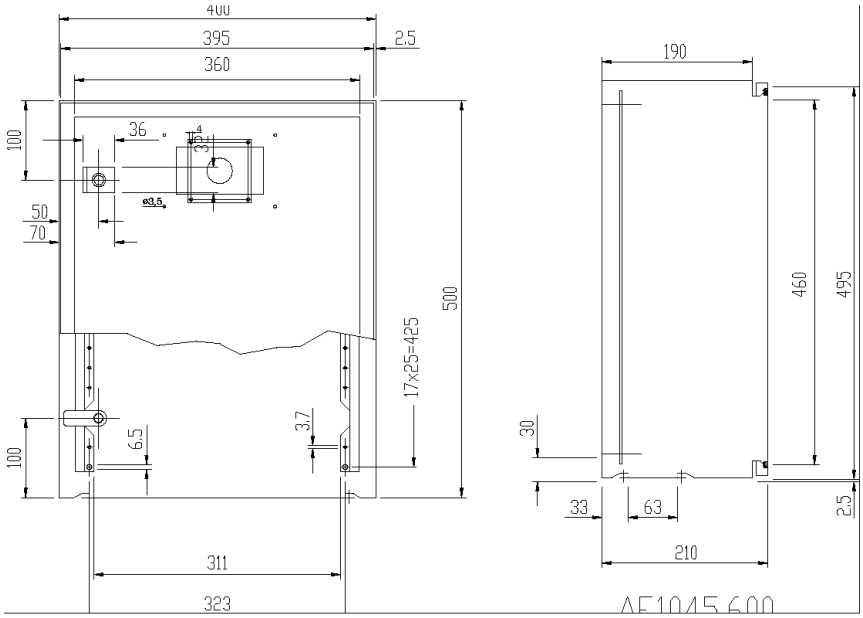
The central unit is built into a lockable, painted steel cabinet The cabinet includes a tamper switch for detecting when the door is opened, and rubber padded holes for cabling on the bottom.

Zilar Security Oy
Valkjärventie 7C
02130 Espoo

Phone +358 (0)20 729 1820
Fax +358 (0)20 729 1825

Mounting

The central unit cabinet includes holes for mounting it on a wall.



Main board

The main board of the central unit is a industrial PC, running 600Mhz The memory is 256 MB. There is one 10/100 Ethernet port, two COM ports.

RS-CAN Kit

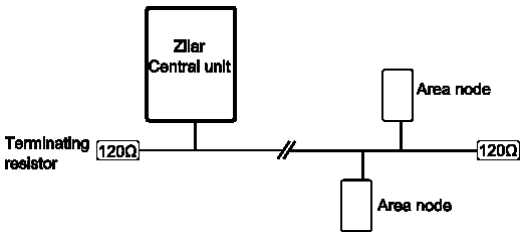
The RS-CAN Kit acts as a bridge between the main board serial port and the CAN bus. The CAN Kit also acts as a Zilar Area node, and includes all the inputs and outputs of an area node except for the serial port, which is reserved for connecting it to the main board. The inputs and relays can be freely used e.g. for sensors in the room the central unit is installed in, or for controlling a siren with a relay. The CAN Kit appears in the Zilar system user interface as an area node. Refer to Zilar Area node Z1612 documentation for a complete description of an area node's range of features.

Connector/fuse board

The connector board includes connectors for the CAN bus and voltage sources. The voltage outputs are fused to protect the power supplies from shorts in external devices. The fuses are rated for 5A.

CAN bus cabling

For the CAN bus, use one twisted pair of the cable. To connect the central unit to the CAN bus, connect the CAN High-wire of the bus to the connector labeled "CAN OUT H" and CAN Low-wire of the bus to the connector labeled "CAN OUT L" on the connector board. The connector board includes a 120Ω terminating resistor, soldered between "CAN OUT H" and "CAN OUT L", so no external resistor should be installed on this end of the bus. This example uses the orange pair for the CAN bus, with the orange/white wire for CAN High and the orange wire for CAN Low.



NOTE: Do not use one pair for CAN High and another for CAN Low. This does not improve the signal, but degrades it, potentially causing the bus not to function. The wires for the bus should be the two wires of one twisted pair.

The topology of the bus should be one straight "line" or a "bus", terminated at both ends with a 120Ω resistor. In other words, all the devices in the cable should be connected to one cable.

Supplying voltage to external devices

The unused pairs in the bus cable (3 pairs or 6 wires in Cat 5) can be used for supplying power for external devices such as the area nodes in the bus, or even doors with electric locks. The more pairs are used, the smaller the losses due to cable resistance and hence higher the current that can be supplied.

The resistance of the cable causes a voltage drop proportional to the cable length, which should be taken into account. For example, when using the three unused pairs in Cat 5-cable, 24V DC operating voltage for a door drawing 600mA can be transferred up to 90m away from the power source so that the voltage drop due to the cable is less than 15%[1].

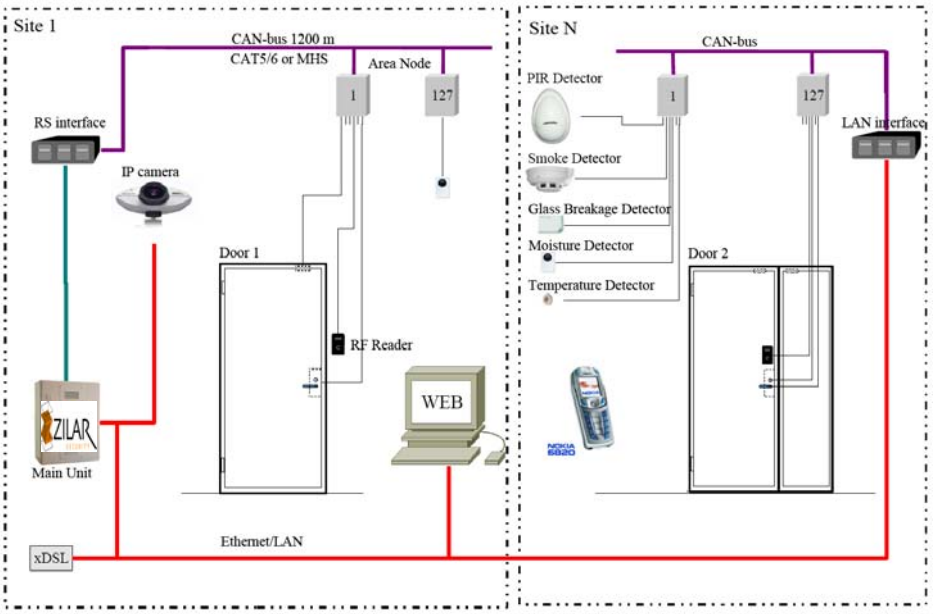
Adding doors to the cable or using fewer pairs would reduce the distance respectively: for two doors, the distance is reduced to 45m, or for a single door using only two pairs to 60m. During an installation, situations such as all doors being open at the same time should be taken into account. The installation should be thoroughly tested for such scenarios. In the case of multiple doors, running a separate voltage cable or installing an altogether separate power supply for the doors should be considered.

Operation

A Zilar system consists of a central unit, area nodes and possibly other devices such as CCTV cameras or work time terminals. Sensors and remote controlled devices such as door locks, gates or elevators are then connected to the area nodes, which communicate with the central unit over a CAN bus.

Polling

The central unit checks the state of the nodes every 10 seconds by sending them the current time over the CAN bus. A node answers this message (the “poll") by returning the states on its inputs and outputs. If the central unit does not receive an answer to a poll in 30 seconds, a node is considered to be "offline", which can be configured to trigger an alarm, and is indicated in the user interface. Likewise, if the node is not polled for 30 seconds, it considers the central unit to be offline, and changes into independent operation.



[1] Theoretical maximum, calculated assuming a DC resistance of 0.1Ω/m per wire (Cat 5)

Zilar 6060 Raid server

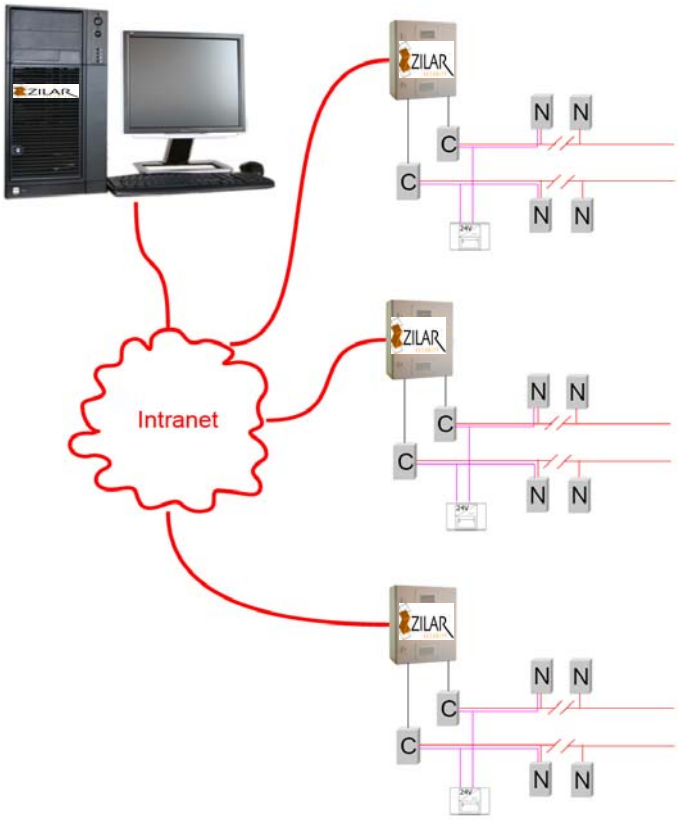
Product nr. 21040

Overview

The Zilar solution is an integrated security and personnel management system that seamlessly integrates access control, intruder alarm, digital video recording and time & attendance into one system. Zilar web-based user interfaces make the applications exceptionally easy to use. A typical Zilar system consists of a central unit and potentially 128 Zilar Z1612 Area nodes in each CAN bus, connected to it either via serial port or IP network. Area nodes are used for connecting readers and sensors into the system. The system also supports other devices, such as CCTV cameras connected through analogue or IP network, to built-in DVR (4 CH) or external (16 CH) DVR and work time terminals. An alarm transfer can be made over an Internet connection, such as a broadband connection, dial-up connection or a GPRS modem.

Zilar 6060 Raid Server

CPU	2600MHz
Memory	1000MB
USB 2.0	2 ports
COM	2
Ethernet 10/100/1000	1
Hard disk	2x160GB, max 3x300GB
Power Supply	230V , 450W



Mechanical specifications

Casing

The central form factor is tower chassis with three hot swap drive bays. 450 W power supply.

Operation

A Zilar system consists of a central unit, ACU units with area nodes and possible other devices such as CCTV cameras or work time terminals. Sensors and remote controlled devices such as door locks, gates or elevators are then connected to the area nodes, which communicate with the central unit over a CAN bus.

Zilar Security Oy
Valkjärventie 7C
02130 Espoo

Phone +358 (0)20 729 1820
Fax +358 (0)20 729 1825

YT 1765619-6

Polling

The central unit checks the state of the ACU:s every 20 seconds by sending them the current time over the LAN. A ACU answers this message (the “poll") by returning the state of unit. If the central unit does not receive an answer to a poll in 30 seconds, a ACU and nodes is considered to be "offline", which can be configured to trigger an alarm, and is indicated in the user interface. The Database is automatically shared from Server to all ACU:s. All ACU:s will send all events to Server Database.

Zilar Area node Z1612, V7

Product nr.11026

Overview

Zilar 1612 Area node is typically used for connecting access control-, alarm- and control devices to the Zilar Alarm and access control system. An area node is designed to be connected to a Zilar central unit with a CAN bus, but can also operate independently from other devices if need be (e.g. if the connection to the Zilar central unit is lost). The size of box is 170 x 105 x 40.

DC + CAN

This connector is for the node's input voltage (24/12 VDC) and CAN bus connection.

Area node	max. 350mA
Supplying 24/12VDC to external devices	max. 600mA
Combined	max. 950mA

Pin	Function
CH	Can dominant high
CL	Can dominant low
+	+24/12V DC
-	Ground
-	Ground

Reader 1 and 2

These connectors include inputs for readers, digital 12V outputs and a 12VDC voltage source for use with external devices. The reader inputs are 100 bit Wiegand reader connections.

Analogy 10bit inputs

The area node is equipped with 15 10 bit analog inputs and one digital input with a measuring voltage of 5V. They can be configured as either digital (ON/OFF) inputs or as windowed (open, idle, alarm, short) loops. The state of the inputs is measured at 40ms intervals.

The inputs are configured to be of type 0-3,depending on their use:

- 0: Normal closed. The input is either in state ”h” (high) or ”L” (low). When high, the loop is open, when low, the loop is closed (the input pin is shorted to GND).
- 1: Normal open. The input is either in state ”h” (high) or ”L” (low). When high, the loop is open, when low, the loop is closed (the input pin is shorted to GND).

Zilar Security Oy
Valkjärventie 7C
02130 Espoo
Phone +358 (0)20 729 1820
Fax +358 (0)20 729 1825
YT 1765619-6

- 2: windowed input, where different voltage levels denote different states. Possible states are ”I” (Idle), ”A” (Alarm) or ”E” (Error). When ”Idle”, the voltage level of the input is within set margin (”Tolerance”) of a preset value. If the voltage deviates from the preset value more, the input’s state changes to ”Alarm”. If the loop is open or closed (for example, the sensor wires have been cut or shorted) the state is ”Error”. Voltage levels for the states can be configured separately for every input either through the Zilar system user interface or through a serial port connection (see **Error! Reference source not found. Error! Reference source not found.**). The defaults (Idle = 1.86 ± 0.24V)[1] correspond to common configurations with 5.6kΩ resistors.
- 3: Simplified windowed input. ”Idle” as in type 2 input. The state changes to ”Alarm” if the loop is open. Every other voltage level is interpreted as “Error”.

CAN

The area node is connected to a can bus, over which it communicates with the Zilar central unit. The speed of the area node CAN interface is 50kb/s. Area nodes connected to the same bus are required to have unique ID numbers

Relays

An area node is equipped with 4 relays, rated for 24VDC 1.5A or 120VAC 0.5A. Leeds on the circuit board indicate that the relay is in active state (pulled). See **Error! Reference source not found.** for the relay numbers.

Output pins

An area node is equipped with 8 digital (ON/OFF) 12V output pins, each rated for max. 350mA (all outputs combined max. 540mA).

Flash memory

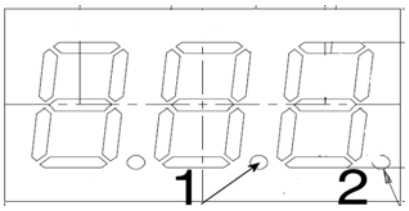
96kB non-volatile EEPROM on board. The memory is used for saving key codes, access rights, timed controls and access events. The memory is preserved over power outage and enable the node to function without a connection to the central unit. After the connection is restored, the data is synchronized with the central unit.

Tamper switch

The tamper switch causes an alarm event whenever the casing is opened (when the switch is allowed to return up). The switch is also used for controlling the on board diagnostics display, and can be used for changing the node ID number. These features are described in detail in section

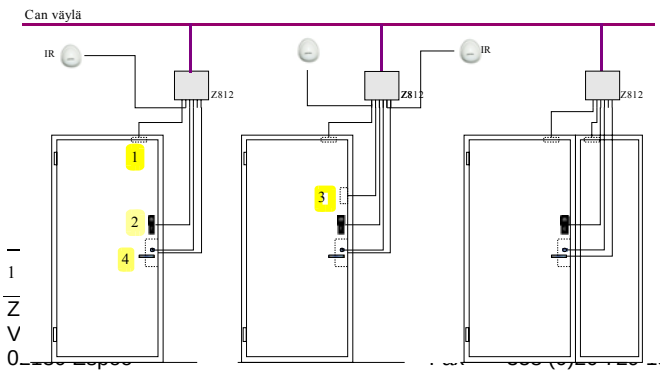
Segment display

The segment display provides information about the state of the node and its inputs. The segment display is controlled using the tamper switch. When input voltage is supplied to the node, first the ID-number of the node is displayed for 5 seconds, then the firmware version preceded with the letter “d” (e.g. “d17”) for 5 seconds, and then the display is cleared except for the dots. In installation phase display can show the status of each input.



Communication with the central unit

Polling



The central unit checks the state of the nodes every 10s by sending them the current time over the CAN bus. The node answers this message ("the poll") by returning the states on its inputs and outputs. If the central unit does not receive answer to a poll in 30 seconds, the node is considered as being "off line", which can be configured to trigger an alarm. Likewise,

if the node is not polled for 30 seconds, it considers the entral unit to be off line, and changes into independent operation.

Alarms

When the node observes that one of its inputs is in an alarming state, it contacts the central unit with information about the source and type of alarm. The loops connected to the inputs can be configured as triggering an alarm when they open (NC), when they close (NO) or when their voltage level differs from a preset value more than a preset tolerance (windowed). If the tamper switch on board the area node is allowed to return up, a tamper alarm is sent to the central unit.

Controls

The relays and digital outputs can be set active either for a preset amount of time (PERIOD) or for an undefined amount of time (INFINITE). In the latter case the input stays active until it is separately turned off.

Copying device configuration between the central unit and an area node

The node can be configured through either the Zilar system user interface or a serial port connection (see section **Error! Reference source not found.**). In the Zilar system user interface, a configuration can either be uploaded into a node's memory, or a configuration can be downloaded from a node. This allows for copying a more up to date configuration of devices to or from a node, allowing for example changing a defective node without the need to repeat the configuration.

Operation when the central unit is off line

In the event the area node has no connection to the central unit, it operates based on information in it's own memory. This includes access rights for doors, but does not include time limitations for access rights. Access events are saved into the node's memory and moved to the central unit in low priority CAN messages once the central unit is again on line

Operation after a power failure

If the node is cut off of operating voltage, all the outputs go to an inactive state. All the data in the node's memory is preserved, and once the input voltage is returned, the node returns into normal operation. Relays active at the moment of power failure do not return into active state before the node receives the current time from the central unit.

The device has been marked with the CE mark and complies with the EMC-directive (89/336/ETY) on the following generic- and product family standards:

- EN 50081-1 (1991) Generic emission standard. Residential, commercial and light industry.
- EN 50082-2 (1995) Generic immunity standard. Industrial environment.
- EN 50130-4 (1995) Product family standard, immunity requirements for components of fire, intruder and social alarm systems.

Zilar CAN kit RS 232/ZRS18

Product nr. 11008

Overview

Zilar ZRS18 Can kit is typically used for connecting CAN-bus with Area nodes to the Zilar central unit. A Can kit is communicating with a Zilar central unit with a RS232 port and in other side Area nodes with Can bus.

To the Zilar ZRS18 is possible to connect 2 doors and 12 alarm devices.

DC + CAN

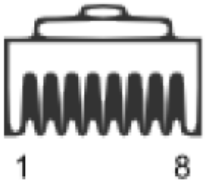
This connector is for the node's input voltage (24/12 VDC) and CAN bus connection.

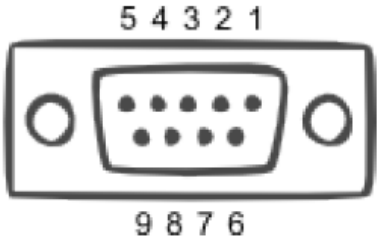
ZRS18	max. 350mA
Supplying 24/12VDC to external devices	max. 600mA
Combined	max. 950mA

Pin	Function
CH	Can dominant high
CL	Can dominant low
+	The size of box is 170 x 105 x 40 +24/12V DC
-	Ground
-	Ground

Serial connection

In device is RJ45 port to connection with PC using RS232. Baud rate is fixed 115k. There is no need to make any configuration for that communication.





RJ45	DB9	RS232
1	5	GND
2	-	-
3	8	CTS
4	2	RX
5	3	TX
6	7	RTS
7	-	-
8	-	-

Zilar Security Oy
Valkjärventie 7C
02130 Espoo

Phone +358 (0)20 729 1820
Fax +358 (0)20 729 1825

Reader 1 and 2

These connectors include inputs for readers, digital 12V outputs and a 12VDC voltage source for use with external devices. The reader inputs are 100 bit Wiegand reader connections.

Analogy 10bit inputs

The ZRS18 is equipped with 12 10 bit analog inputs and one digital input with a measuring voltage of 5V. They can be configured as either digital (ON/OFF) inputs or as windowed (open, idle, alarm, short) loops. The state of the inputs is measured at 40ms intervals.

The inputs are configured to be of type 0-3depending on their use:

- 0: Normal closed. The input is either in state ”H” (high) or ”L” (low). When high, the loop is open, when low, the loop is closed (the input pin is shorted to GND).
- 1: Normal open. The input is either in state ”H” (high) or ”L” (low). When high, the loop is open, when low, the loop is closed (the input pin is shorted to GND).
- 2: windowed input, where different voltage levels denote different states. Possible states are ”I” (Idle), ”A” (Alarm) or ”E” (Error). When ”Idle”, the voltage level of the input is within set margin (”Tolerance”) of a preset value. If the voltage deviates from the preset value more, the input’s state changes to ”Alarm”. If the loop is open or closed (for example, the sensor wires have been cut or shorted) the state is ”Error”. Voltage levels for the states can be configured separately for every input either through the Zilar system user interface or through a serial port connection (see **Error! Reference source not found. Error! Reference source not found.**). The defaults (Idle = 1.86 ± 0.24V) correspond to common configurations with 5.6kΩ resistors.
- 3: Simplified windowed input. ”Idle” as in type 2 input. The state changes to ”Alarm” if the loop is open. Every other voltage level is interpreted as “Error”.

Temperature

The unit is measuring automatically temperature of unit. Alarm is generated if value is higher than +65^{o} C.

CAN

The ZRS18 is connected to a can bus, over which it communicates with the Area nodes. The speed of the ZRS18 CAN interface is 50kb/s. ZRS18s ID is 254.

Relays

An ZRS18 is equipped with 3 relays, rated for 24VDC 1.5A or 120VAC 0.5A. Leeds on the circuit board indicate that the relay is in active state (pulled).

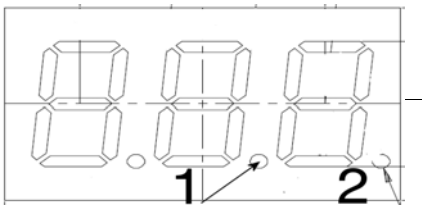
Output pins

An ZRS18 is equipped with 8 digital (ON/OFF) 12V output pins, each rated for max. 350mA (all outputs combined max. 540mA).

Flash memory

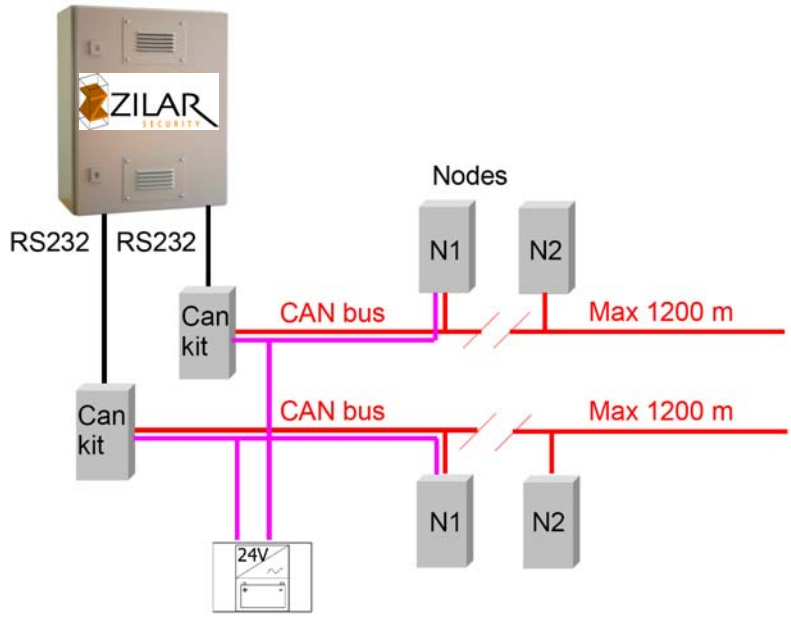
96kB non-volatile EEPROM on board. The memory is used for saving key codes, access rights, timed controls and access events. The memory is preserved over power outage and enable the node to function without a connection to the central unit. After the connection is restored, the data is synchronized with the central unit.

Segment display



The segment display provides information about the state of the node and its inputs. The segment display is controlled using the tamper switch. When input voltage is supplied to the node, first the ID-number of the node is displayed for 5 seconds, then the firmware version preceded with the letter “d” (e.g. “d17”) for 5 seconds, and then the display is cleared except for the dots. In installation phase display can show the status of each input.

Communication with the central unit



Polling

The central unit checks the state of the nodes every 10s by sending them the current time over the CAN bus. The node answers this message ("the poll") by returning the states on its inputs and outputs. If the central unit does not receive answer to a poll in 30 seconds, the node is considered as being "off line", which can be configured to trigger an alarm. Likewise, if the node is not polled for 30 seconds, it considers the central unit to be off line, and changes into independent operation.

Alarms

When the node observes that one of its inputs is in an alarming state, it contacts the central unit with information about the source and type of alarm. The loops connected to the inputs can be configured as triggering an alarm when they open (NC), when they close (NO) or when their voltage level differs from a preset value more than a preset tolerance (windowed).

Controls

The relays and digital outputs can be set active either for a preset amount of time (PERIOD) or for an undefined amount of time (INFINITE). In the latter case the input stays active until it is separately turned off.

Copying device configuration between the central unit and an ZRS18

The node can be configured through either the Zilar system user interface or a serial port connection (see section **Error! Reference source not found.**). In the Zilar system user interface, a configuration can either be uploaded into a node's memory, or a configuration can be downloaded from a node. This allows for copying a more up to date configuration of devices to or from a node, allowing for example changing a defective node without the need to repeat the configuration.

Operation when the central unit is off line

In the event the ZRS18 has no connection to the central unit, it operates based on information in it's own memory. This includes access rights for doors, but does not include time limitations for access rights. Access events are saved into the node's memory and moved to the central unit in low priority CAN messages once the central unit is again on line

Operation after a power failure

If the node is cut off of operating voltage, all the outputs go to an inactive state. All the data in the node's memory is preserved, and once the input voltage is returned, the node returns into normal operation. Relays active at the moment of power failure do not return into active state before the node receives the current time from the central unit.

The device has been marked with the CE mark and complies with the EMC-directive (89/336/ETY) on the following generic- and product family standards:

- EN 50081-1 (1991) Generic emission standard. Residential, commercial and light industry.
- EN 50082-2 (1995) Generic immunity standard. Industrial environment.
- EN 50130-4 (1995) Product family standard, immunity requirements for components of fire, intruder and social alarm systems.

Zilar Security Oy
Valkjärventie 7C
02130 Espoo
YT 1765619-6
Phone +358 (0)20 729 1820
Fax +358 (0)20 729 1825

Zilar Can kit TCP/IP/ZIP20

Product nr. 11009

Overview

Zilar CKZ RS4 Can kit is typically used for connecting Area nodes to the Zilar central unit. An Can kit is communicating with Zilar central unit using a RS232 port.

The size of box is
170 x 105 x 40

DC + CAN

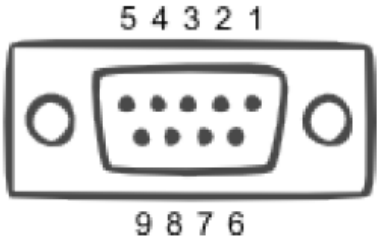
This connector is for the node's input voltage (24/12 VDC) and CAN bus connection.

Power consumption	Max. 100mA

Pin	Function
+	+24/12V DC
CH	Can dominant high
CL	Can dominant low
-	Ground

Serial connection

In device is RJ45 port to connection with PC using RS232. Baud rate is fixed 115k. There is no need to make any configuration for that communication.



RJ45	DB9	RS232
1	5	GND
2	-	-
3	8	CTS
4	2	RX
5	3	TX
6	7	RTS
7	-	-
8	-	-

Zilar Security Oy
Valkjärventie 7C
02130 Espoo

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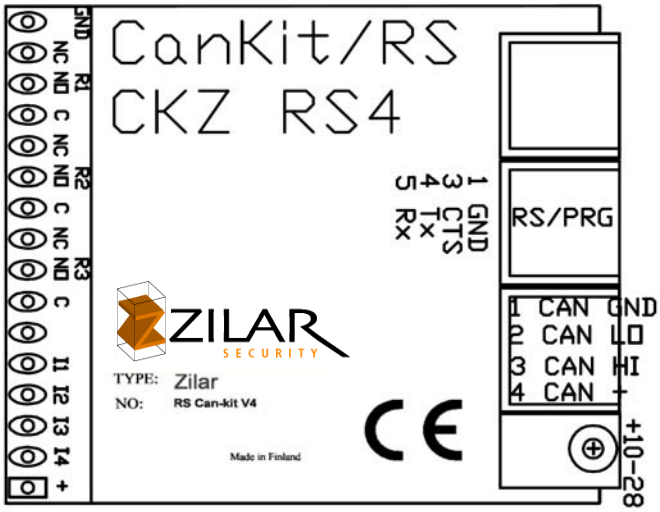
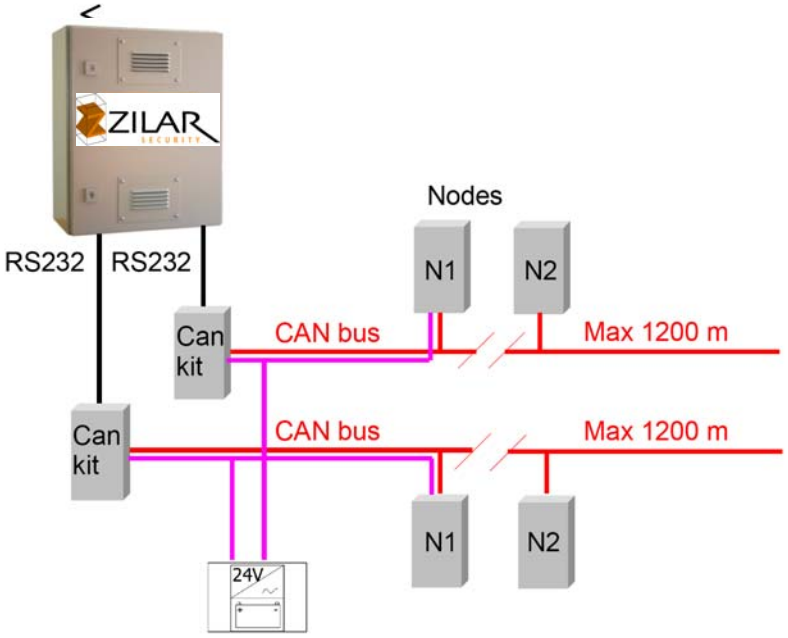
YT 1765619-6



CAN

The area node is connected to a can bus, over which it communicates with the Zilar central unit. The speed of the area node CAN interface is 50kb/s. Area nodes connected to the same bus are required to have unique ID numbers.

Communication with the central unit



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