SmartLAN/485

Ethernet interface for SmartLine control panels

General description 1

The system-on-chip platform used in SmartLAN/485 provides SmartLine fire-detection panels with LAN networking capability and fast connectivity to the Internet.

If you wish to take full advantage of all the SmartLAN/485 resources, it will be necessary to contact your Network Administrator before configuring the board, as its operational capabilities depend on the configuration of the network it is working in.

Note

SmartLAN/485 boards are compatible with SmartLine 2.00 firmware versions or higher.

Box contents:

- SmartLAN/485 board
- Installation Guide (this document)
- Anchorplate
- 5 anchor screws
- 3 metal spacers

The SmartLAN/485 allows you to program the fire-detection panel parameters from remote locations using the SmartLeague software via LAN/internet.

Additionally, the SmartLAN/485 is capable of sending a UDP packet (event description report) to a configurable IP address each time the fire-detection panel registers an event.

As a result of this feature, the fire-detection panel can be supervised through INIM's custom software (SmartLook), or integrated into any supervisory software. For further details regarding the remote-server communications protocol contact your dealer.

CE mark 2

The indications for the CE marking shown here on refer to the SmartLine series control panels equipped with the SmartLAN/485 optional board.

CE
0051

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18

0051-CPR-1414

EN 54-2:1997 + A1:2006
EN 54-4:1997 + A1:2002 + A2:2006
EN 54-21:2006

SmartLine020-2

Control and indicating equipment with integrated power supply equipment and alarm transmission and fault warning routing equipment for fire detection and fire alarm systems installed in buildings

Essential characteristics		Performance
Performance under fire conditions		*PASS*
Performance of power supply		*PASS*
Response delay (response time to fire)		*PASS*
Performance of transmission		*PASS*
Operational reliability		*PASS*
Durability of operational reliability:	*temperature resistance*	*PASS*
	vibration resistance	*PASS*
	electrical stability	*PASS*
	humidity resistance	*PASS*
Options provided according to EN 54-2		**Performance**
7.8 Output to the fire alarm device		*PASS*
7.9 Control of fire alarm routing equipment		*PASS*
7.11 Ritardo delle uscite		*PASS*
7.12 Dependencies on more than one signal (Type A and B)		*PASS*
10 Test condition		*PASS*

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EN 54-2:1997 + A1:2006
EN 54-4:1997 + A1:2002 + A2:2006
EN 54-21:2006

SmartLine020-4

Control and indicating equipment with integrated power supply equipment and alarm transmission and fault warning routing equipment for fire detection and fire alarm systems installed in buildings

Essential characteristics		Performance
Performance under fire conditions		*PASS*
Performance of power supply		*PASS*
Response delay (response time to fire)		*PASS*
Performance of transmission		*PASS*
Operational reliability		*PASS*
Durability of operational reliability:	*temperature resistance*	*PASS*
	vibration resistance	*PASS*
	electrical stability	*PASS*
	humidity resistance	*PASS*
Options provided according to EN 54-2		**Performance**
7.8 Output to the fire alarm device		*PASS*
7.9 Control of fire alarm routing equipment		*PASS*
7.11 Ritardo delle uscite		*PASS*
7.12 Dependencies on more than one signal (Type A and B)		*PASS*
10 Test condition		*PASS*

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0051-CPR-1412

EN 54-2:1997 + A1:2006
EN 54-4:1997 + A1:2002 + A2:2006
EN 54-21:2006

SmartLine036-4

Control and indicating equipment with integrated power supply equipment and alarm transmission and fault warning routing equipment for fire detection and fire alarm systems installed in buildings

Essential characteristics		Performance
Performance under fire conditions		*PASS*
Performance of power supply		*PASS*
Response delay (response time to fire)		*PASS*
Performance of transmission		*PASS*
Operational reliability		*PASS*
Durability of operational reliability:	*temperature resistance*	*PASS*
	vibration resistance	*PASS*
	electrical stability	*PASS*
	humidity resistance	*PASS*
Options provided according to EN 54-2		**Performance**
7.8 Output to the fire alarm device		*PASS*
7.9 Control of fire alarm routing equipment		*PASS*
7.11 Ritardo delle uscite		*PASS*
7.12 Dependencies on more than one signal (Type A and B)		*PASS*
10 Test condition		*PASS*

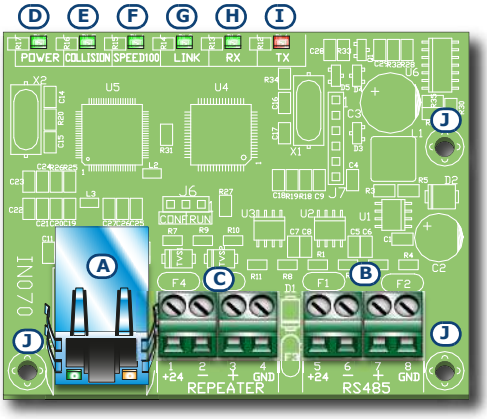
Technical description 3

Table 1: Technical specifications

Power supply voltage	24V ⎓
Maximum current draw	50mA
Operating temperature	from -5 to +40°C
Dimensions	80 x 60 x 20mm

Table 2: Description of the parts

A	RJ45 input for LAN line
B	SmartLAN/485 board connection terminals to SmartLine board
C	Not in use
D	Green LED Board power supply LED
E	Green LED Network conflict LED
F	Green LED 100Mbps Mbps connection speed LED
G	Green LED Network connection
H	Green LED Data packet reception via BUS RS485
I	Red LED Data packet reception via BUS RS485
J	Screw location and earth protection

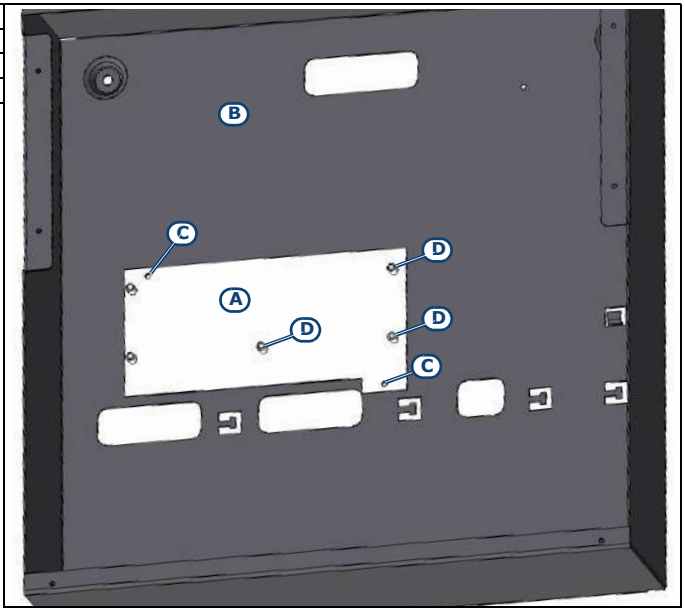


Installation 4

1. Open the control panel enclosure and remove the frontplate and the plastic board support.

Table 3: Mounting the plate

A	Anchorplate
B	SmartLine020 backbox
C	Anchorplate to backbox screw locations
D	Board to anchorplate screw locations



2. Using the screws in the indicated locations, secure the anchorplate to the backbox (*table 3, C*).
3. Using the screws in the indicated locations, secure the SmartLAN/485 to the anchorplate (refer to *table 2, J* and *table 3, D*).
4. If the enclosure houses a SmartLine/8Z board, removes the screws indicated in the diagram (see *table 3, D*), and replace them with the metal spacers (included), then install SmartLAN/485 board.
5. Connect the RS485 BUS terminals to the BUS of the SmartLAN/485 board (see *table 2, B*) to the RS485 BUS terminals on the control panel by means of a appropriate link (not included).
6. Replace the plastic-board support and frontplate.

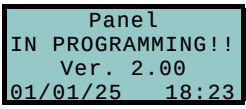
Programming 5

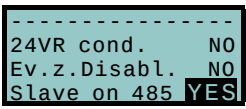
Programming the SmartLine panel for the SmartLAN/485 connection 5-1

The SmartLine fire-detection panel, which the SmartLAN/485 board is to be connected to, must be configured on the BUS as "Slave" at address "1". This configuration can be implemented via your computer or directly programmed at the fire-detection panel console.

VIA CONTROL PANEL

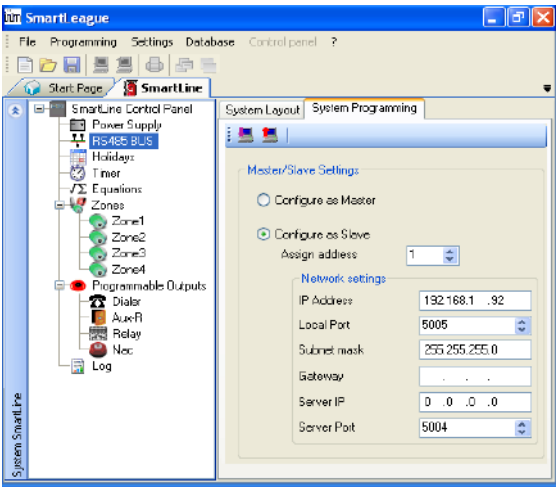
1. Insert the programming jumper.
2. Press ◇ and select "PROGRAMMING".
3. Scroll the menu using ◇ and select "OPTIONS".
4. Scroll the menu using ◇ and select "Slave on 485", the using Ok select "YES".
5. Press Esc to step back to the main programming menu and select the "CONFIGURATION".
6. Scroll the menu using ◇ and select "EnR. External BUS".
7. Ensure that the address is positioned at "1".





VIA SOFTWARE

1. Start the SmartLeague software and open a **SmartLine 2.xx** solution.
2. Select **BUS RS485** from the tree menu on the left side of the window.
3. Select the "**System Programming**" section.
4. Select the "**Configure as Slave**".
5. Select address "1".



Programming the SmartLAN/485 5-2

The configuration of the SmartLAN/485 can be implemented only by means of the SmartLeague software.

The connection between the PC and the panel, equipped with the SmartLAN/485 board, can be implemented via serial port or via TCP/IP.

1. Start the SmartLeague software and open a **SmartLine 2.xx** solution.
2. Select **Settings - Application settings**, in order to choose the connection mode, the COM serial port or the IP addres.
3. Press **OK** to exit.
4. Select **BUS RS485** from the tree menu on the left side of the window.
5. Select the "**System Programming**" section.
6. Select the "**Configure as Slave**".
7. Select address "1"..
8. Configure the parameters of SmartLAN/485 in the "**Network settings**" section:

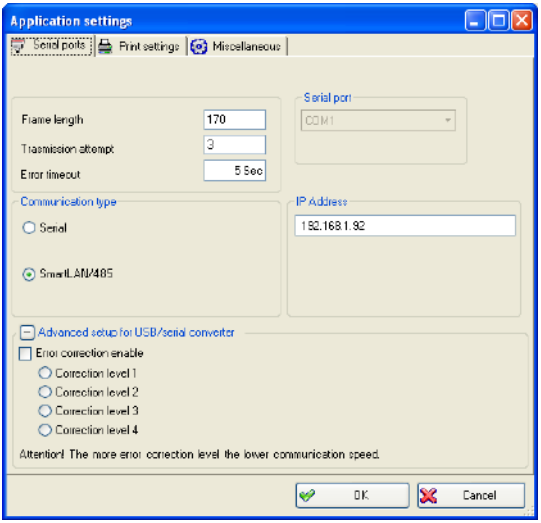


Table 4: Network settings

IP address	It is the address assigned to the SmartLAN/485 board.	192.168.1.92
Subnet-mask	Refer to the Appendix under "Configuring a network".	255.255.255.0
Local port	It is the port used for the link with the SmartLeague programming software, or for the supervisory software (SmartLook or similar) commands input.	5005
Server port	Server Port - Communication port for the remote server.	5004
Gateway	Refer to the Appendix under "Configuring a network".	Not set
Server IP	The IP address of the recipient server, the board will send a data packet (event report) for each event registered by the panel. If you leave this address at 0.0.0.0 (default), the board will not send any data packets (event reports).	0.0.0.0

About this manual 6

MANUAL CODE DCMIINIESLAN485

VERSION 1.60

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Manufacturer's details 7

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The persons authorized by the manufacturer to repair or replace the parts of this system have authorization to work on INIM Electronics brand devices only.

Appendix

Configuring a network

Minimum requirements:

-1 router/modem connected to the Internet. The router/modem must have "port forwarding" capability in order to route external connections properly.

-1 SmartLAN/485 connected to the router/modem.

Additionally, a PC with **SmartLeague** software (for programming purposes) connected to a SmartLAN/485 (point-to-point connection using twisted ethernet cable or connected via router).

A good knowledge of networking and TCP/IP protocol is required during the SmartLAN/485 board configuration and the Internet connection phase:

IP address - The IP address identifies each peripheral distinctly in the network, for example, each computer connected in an "office" network or directly to the Internet.

The IP address of the SmartLAN/485 board is "static" and therefore cannot be assigned automatically. You can assign an IP address (**192.168.1.92** at default) from the SmartLAN/485 programming window in the SmartLeague software application. The PC used when first programming the SmartLAN/485 board must have an IP address in the same address class **192.168.1.xxx** (for example 192.168.1.123).

The initial IP address of the SmartLAN/485 board can be changed at a later time, when the network administrator provides you with one which increases the network capabilitie.

Subnet Mask - This specifies which address class can communicate with the SmartLAN/485 board.

The mask must be provided by the network administrator. It is set at **255.255.255.0** at default, thus allowing the SmartLAN/485 board to communicate with all the peripherals with class address **192.168.1.xxx**.

TCP/IP port - This identifies a service which a single peripheral in the network can use.

The SmartLAN/485 board uses two TCP/IP ports and a UDP port:

-The programming ports (up/downloading). At default, these parameters are set at **5005**.

-UDP server port. At default, this parameter is set at **5004**.

Gateway - This is the gateway that passes traffic from the local net to the Internet. In a minimum configuration, the gateway coincides with the router.

The IP address of the gateway must be in the same class as the IP address of the local net (for example: 192.168.1.1).

DNS - This is a server which translates Internet names into IP addresses (for example: www.google.com in 209.85.129.99). The IP address of the DNS server depends on the Internet-connection provider (Telecom, Vodafone, etc.), therefore, must be provided by the network administrator.

Configuring a router

External access to the SmartLAN/485 board requires knowledge of the public IP address of the router, assigned by the Internet-connection provider (Telecom, Vodafone, etc.). This address can be either static or dynamic and effects connections external to the route:

Dynamic public IP address connections - After a connection, or at set intervals, the provider may assign a modified public IP address to the router. This operation hinders external access to the router.

In order to solve this problem, many routers have access to services which link dynamic IP addresses with Internet names (for example: www.dyndns.com). It is necessary to register with a "dynamic DNS host" and set up the router with the parameters supplied by the service (for example: user, password, domain, etc.). The router will update the dynamic IP address periodically with the static name chosen during registration (for example: http://myhouse.dyndns.org). In this way, it will be possible to communicate with the router by means of the distinct lpublic IP address..

Static public IP addresses connections - These are connections to a public IP address that is always the same. In this case, it is possible to communicate with the router directly using the static IP address or by obtaining a domain (for example: www.myhouse.com) which can be re-addressed to a static IP address assigned by the connection provider.

Once the external connection with the router is established, it is necessary to forward the incoming connections to the SmartLAN/485 board. The previously configured "IP address" and "Port" parameters allow identification of these connections. The manufacturer strongly recommends that you contact the network administrator during this programming phase, in order to avoid IP address conflict.

Programming port - For this route, set up the following parameters:

-Communication protocol: TCP/IP

-External port: 5005 (or the one selected during the programming phase)

-Internal port: 5005 (or the one selected during the programming phase)

-IP Address: IP address of the SmartLAN/485 board

External Access

To establish external communication with the SmartLAN/485 through the SmartLeague software application, type-in the configuration parameters (IP address of the router and external forwarding port).

Evolving Protection

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