Satel®

INT-RS Plus

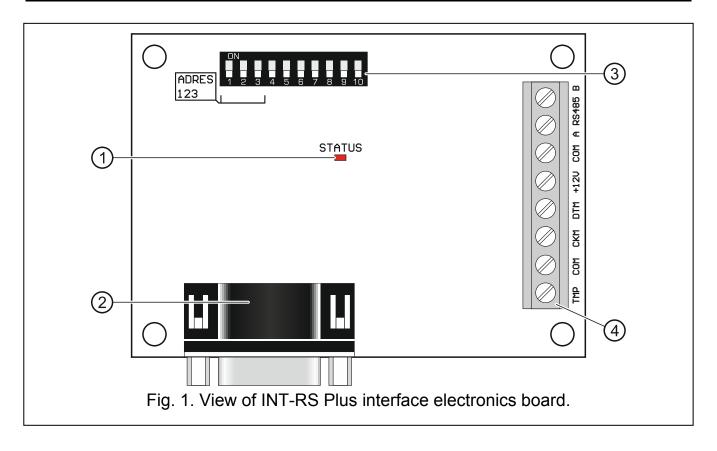## INTERFACE FOR SYSTEMS INTEGRATION

The INT-RS Plus interface is dedicated for use with alarm control panels of the INTEGRA and INTEGRA Plus series. This manual applies to the interface with electronics version 2.1 and firmware version 2.15. The interface is supported by the control panels having firmware in version 1.12 or later.

The device is designed to convert data being sent through the keypad bus into the RS-232 serial bus standard. It can be used for the following applications:

− connection of computer with GUARDX program installed (in much the same way as to LCD keypad),

− event reporting by means of specialized external third-party modules,

− operating the alarm control panel by means of software other than that offered by SATEL (capability of integrating with third-party systems). This is a dedicated application for companies dealing with integration of the object-oriented systems and requires development of their own software.

For information on event reporting and integration with other software please see the www.satel.pl website, next to the device description.

1. Description of electronics board

Fig. 1. View of INT-RS Plus interface electronics board.

Explanations for Figure 1:

1 – **STATUS LED** indicating as follows:

– blinking light – data exchange with the control panel;

– steady light – no communication with the control panel.

2 – **DB-9 male socket (port RS-232)**. Enables the interface to be connected to computer or other external devices. Cross-linked cable with female connectors on both sides (so called, null modem cable) should be used.

3 – **DIP switch package** for setting individual address and operating mode of the interface (see: DIP SWITCHES).

4 - **terminals:**

TMP	-	tamper circuit input of the interface (NC) – if not used, it should be shorted to common ground.
COM	-	common ground.
CKM	-	clock.
DTM	-	data.
+12V	-	power input.
A RS485 B	-	terminals not used.

2. Installation

⚠️ **Disconnect power supply before making any electrical connections.**

INT-RS Plus interface is designed for indoor installation, in spaces with normal humidity of air. The device installation place is to ensure protection against unauthorized access.

1. Secure the device electronics board in the housing.

2. Using DIP switches, set a suitable address of the device and select its operating mode.

Note: *The event reporting mode requires that the MONITORING – ETHM-1 [MONIT.ETHM-1] option be activated in the control panel. If the ETHM-1 module is also connected to the control panel at the same time, events will only be sent by means of the device with a lower address.*

3. Connect the CLK, DAT and COM terminals by means of wires to the keypad bus on the control panel mainboard. It is recommended that the unscreened straight-through cable be used for making the connection. If you use the twisted-pair type of cable, remember that CKM (clock) and DTM (data) signals must not be sent through one twisted-pair cable. The wires must be run in one cable. The length of cables must not exceed 300 m.

4. Connect the housing tamper contact cables to the TMP and COM terminals. If two modules are installed in the housing, the TMP input of one of them is to be shorted to the common ground, and the tamper contact cables connected to the TMP input of the other module.

5. Connect the power supply cables to the +12V and COM terminals. The interface need not necessarily be supplied from the control panel mainboard. The devices

which are installed far from the control panel may be powered locally, from a self-contained power source (buffer power supply unit, expander with power supply).

2.1 DIP switches

2.1.1 Addressing

To set the address, use the DIP switches from 1 to 3. A numerical value is assigned to each switch. In OFF position, the value is 0. Numerical values assigned to individual switches in ON position are shown in Table 1. The sum of numerical values assigned to switches 1-3 means the address. The interface must have an individual address set in it:

- from the 0 to 3 range, if it is connected to the INTEGRA 24 or INTEGRA 32 control panel;

- from the 0 to 7 range, if it is connected to the INTEGRA 64, INTEGRA 128, INTEGRA 128-WRL, INTEGRA 64 Plus, INTEGRA 128 Plus or INTEGRA 256 Plus control panel.

The address must be different than that in the other devices connected to the keypad bus (the control panel does not support devices having identical addresses).

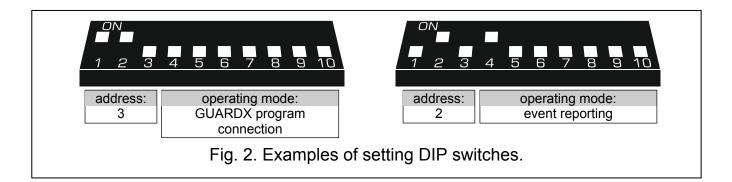| DIP switch number	1	2	3
Numerical value	**1**	**2**	**4**

Table 1.

2.1.2 Defining the interface operating mode

You can select the operating mode of the device by using the switches from 4 to 8. How they should be set is shown in Table 2.

	DIP switch position						
Interface operating mode	4	5	6	7	8	9	10
GUARDX program connection	OFF	OFF	OFF	OFF	OFF	OFF	OFF
event reporting	**ON**	OFF	OFF	OFF	OFF	OFF	OFF
integration with third-party software	OFF	**ON**	OFF	OFF	OFF	OFF	OFF

Table 2.

Fig. 2. Examples of setting DIP switches.

3. The interface start-up

1. Turn on power supply of the security alarm system.
2. Start the *"LCD keypads identification"* function in LCD keypad (→SERVICE MODE →STRUCTURE →HARDWARE →IDENTIFICATION →LCD KEYPADS ID.).

Note: *The 16-bit identification number in the interface memory makes it possible to check the interface availability in the system. Substitution of the device with another one (even having the same address set on the DIP switches) without repeating the identification will trigger alarm signal.*

3. Using the LCD keypad or computer (DLOADX program), program the device, as required.
4. Save the interface settings to the control panel memory.

4. Specifications

Supply voltage .... 12 V DC ±15%
Standby current consumption...35 mA
Maximum current consumption ....40 mA
Electronics board dimensions.. 57x80 mm
Environmental class II
Working temperature range ....-10 °C...+55 °C
Weight .... 42 g

The declaration of conformity may be consulted at www.satel.eu/ce