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Digibus®

MULTIFUNCTION DEVICE Type 6949

TECHNICAL SPECIFICATIONS

Type 6949 is a programmable multifunction device for use with DIGIBUS systems. The device solves specific requirements in DIGIBUS systems.
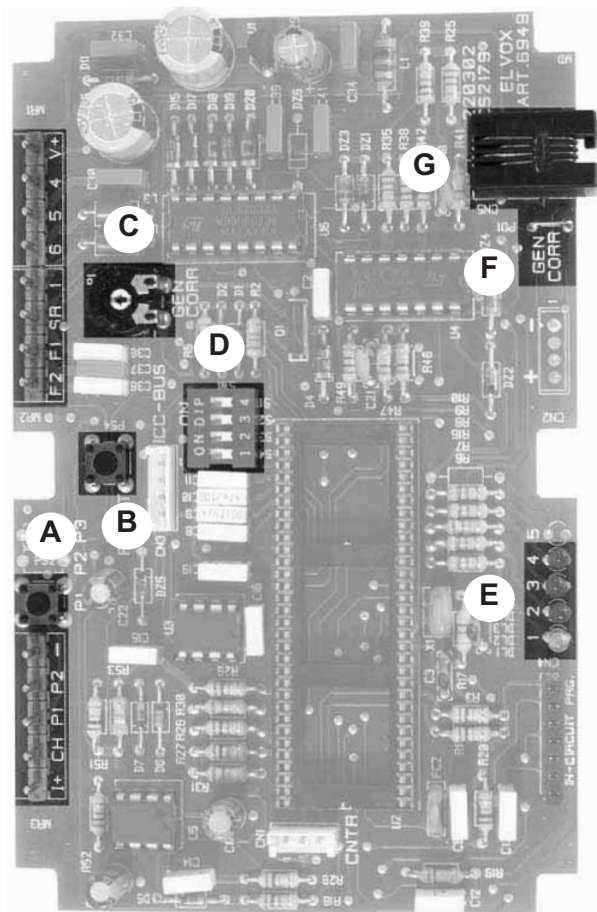
Type 6949 can be used as:

- **Converter of codes from 4 to 8 digits and vice versa.** Type 6949 enables the combination of interphones and monitors with 4-digit encoding/decoding with entrance panels and switchboards with 8-digit encoding/decoding. Type 6949 converts the call codes and the commands F1, F2 and door lock release, from 4 to 8 digits and vice versa by adding or removing the 4 digits set in the parameter "Predigit".

- **Pseudo stairway entrance panel with 8-digit encoding.** Type 6949 is used as a stairway entrance panel (secondary) in building complex type systems with 8-digit encoding/decoding, where there are buildings with secondary entrances fitted with stairway panels and buildings without stairway panels. Type 6949 performs all functions of a standard stairway panel without the need for a secondary input.

- **Pseudo stairway entrance panel with 4-digit encoding.** As per the above application but for systems with 4 digit encoding/decoding.

- **Digital signal amplifier with 8-digit encoding.** Type 6949 is used in systems where the same cable riser column has a high number of interphones or monitors and there is the need to amplify/regenerate the digital signal with 8-digit encoding/decoding. If the parameters "Initial user" and "Final user" are used, type 6949 filters the call codes, passing on only those within the set range.

- **Digital signal amplifier with 4-digit encoding.** As per the above application but for systems with 4 digit encoding/decoding.
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- **Call filter with switchboards in parallel.** Type 6949 is used to filter calls from interphones or monitors to switchboards type 945B when there is more than one switchboard in parallel in the same system (maximum 4 switchboards). A 6949 is connected to each switchboard between the switchboard and the interphone/&monitor cable riser, which will filter the calls, auxiliary commands (F1, F2, F3, F4, F5) and the door lock release control from the interphones/monitors, to use them as switchboard calls. The filter control is managed by the parameter "Predigit". If two external switches are connected to terminals P1 and P2 of type 6949, the filter configuration can be modified in remote mode, enable switching of calls from one switchboard to another.

CONTROLS AND ADJUSTMENTS

A - B) Pushbuttons for programming parameters of type 6949.
C) Trimmer for adjustment of current generator (typical value 25mA D.C., already factory-set).
D) DIP-switch for function programming.
E) LED for function programming phase.
F) ON/OFF jumper for current generator on/off activation (ON = jumper activated, OFF = jumper deactivated).
G) Connector for connection of programmer type 950B.

TERMINALS

+I) The terminal is activated to switch off the monitor connected to the cable riser at the start of a call and at the end of a conversation. The terminal is connected to power supply 6948 if specified on the diagram.

CH) The terminal is activated when a call is made from the entrance panel or when the entrance panel is used to call an internal unit via a main entrance panel or switchboard. The terminal remains active for the time set in parameter 7. The terminal is connected to power supply 6941 or 6948 if specified on the diagram.

P1, P2) The terminals enable control, by means of two external switches, of the conversion of functions in switchboard call mode. To be used when there is more than one switchboard in the same system.

-) Common contact terminal for P1 and P2.

F2) The terminal is activated when type 6949 receives the code for the second auxiliary function. The terminal remains active for the time set in parameter 5. The terminal is connected to power supply 6941, 6942 or 6948 if specified on the diagram.

F1) The terminal is activated when type 6949 receives the code for the first auxiliary function. The terminal remains active for the time set in parameter 5. The terminal is connected to power supply 6941, 6942 or 6948 if specified on the diagram.

SR) The terminal is activated when type 6949 receives a door lock release code. The terminal remains active for the time set in parameter 6. The terminal is connected to power supply 6941, 6942 or 6948 if specified on the diagram.

1) The terminal enables digital communication between the switchboard, monitor, interphone, digital distributor and the stairway entrance panel.

6) The terminal enables the transmission and reception of digital codes between type 6949 and the switchboard or between type 6949 and a main entrance panel.

5) Supply voltage terminal. The supply voltage must be between 11.5V D.C. and 13.5V D.C.

4) Negative supply voltage terminal.

V+) +5V D.C. output terminal. Connected only if specified on the wiring diagram

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Configuration
The operating mode of type 6949 is selected on the DIP-switch (as shown in the figures below).

Operation as converter of codes from 4 to 8 digits and vice versa, from panel to panel. Converts codes without activation of terminals CH and +I.

Operation as converter of codes from 4 to 8 digits and vice versa, from panel to interphones/monitors. Enables replacement of a panel by converting the codes and executing commands CH and +I.
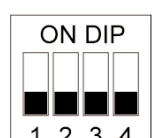
Digital signal amplifier with 4-digit encoding, from panel to panel. Executes code repetition without activation of terminals CH and +I.

Digital signal amplifier with 4-digit encoding, from panel to interphones/monitors. Enables replacement of a panel by repeating the codes and executing commands CH and +I.
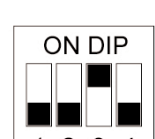
Digital signal amplifier with 8-digit encoding, from panel to panel. Executes code repetition without activation of terminals CH and +I.

Digital signal amplifier with 8-digit encoding, from panel to interphones/monitors. Enables replacement of a panel by repeating the codes and executing commands CH and +I.
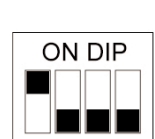
Pseudo stairway panel for building complexes with 4-digit encoding.
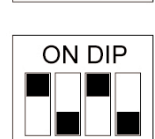
Pseudo stairway panel for building complexes with 8-digit encoding.
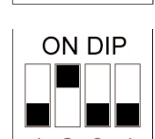
Call filter with switchboards type 945B in parallel and 4-digit encoding.
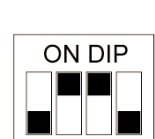
Call filter with switchboards type 945B in parallel and 8-digit encoding.

PRELIMINARY OPERATIONS

On completion of installation of all devices and connections, power up the system, and check, by means of the LEDs on the power supplies, that all the power supplies used are in fact supplying power.

Before programming devices, wait at least ten seconds after the system has been powered up.

Then check and, if necessary, program the operating parameters of the entrance panels and/or switchboard.

The interphone and monitor call codes should be programmed after programming (if required) the technical parameters of the entrance panels and/or switchboard and other specific devices.

PROGRAMMING

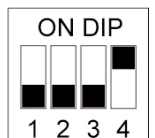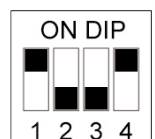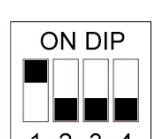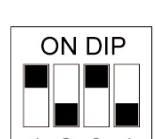Type 6949 requires two programming phases: configuration of the device type and technical parameter programming.

Configuration

The operating mode of type 6949 is selected on the DIP-switch (as shown in the figures below).

Technical parameter programming

The technical parameters are programmed according to the configuration of type 6949. There are three programming modes: via the keypad on a main entrance panel (type 8946, type 8942, 3942, 3946) or a porter switchboard (type 945B), with programmer type 950B, or with a Personal Computer by means of type 94CT.

A) Programming with panel or switchboard.

Programming is via an entrance panel or a switchboard connected to terminal 6 of type 6949. The following settings are recommended with the switchboard or panel in the vicinity of type 6949.
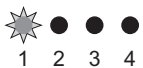
Entry to programming mode:
1) Press pushbutton "PS4-Reset" (point B of figure on page 91).
2) Wait for LEDs 1 and 4 to flash simultaneously.
3) Press and hold pushbutton "P1" (point A of figure on page 91), until LED 1 (green) illuminates.

Repeat the operation from point 1 if the LED does not light up within approx. 5 seconds.

4) On illumination of the LED release the pushbutton.

In the following conditions, type 6949 is set to parameter 1; to move through the parameters in sequence, press pushbutton "P1" as required.

The parameter number is indicated by illumination of the LEDs, as shown in the table below. To modify the value of a parameter, enter the code on the panel or switchboard and press "C" to confirm. Confirmation of reception and memorisation of the code is indicated by deactivation of the LED(s). Each time a code is memorised, type 6949 exits programming mode; to program other parameters, repeat the procedure from point 1. To exit programming mode without modifying parameters, press the pushbutton "PS4-Reset".

LED	N° parameter	Minimum value	Maximum value	Default value	N° parameter	Description
☀●●● 1 2 3 4	1	0	9999	0	Predigit number	Description-Used as converter from 4 to 8 digits, modifies codes from/to panel or switchboard from 4 to 8 digits. Used as filter for calls to switchboards, modifies calls and functions as specified in the table on page 71.
●☀●● 1 2 3 4	2	1	99999999	1	Initial user	Minimum number of call (filter on calls in transit from terminal 6 to 1).
●●☀● 1 2 3 4	3	1	99999999	99999999	Final user	Maximum number of call (filter on calls in transit from terminal 6 to 1).
●●●☀ 1 2 3 4	4	0	99999999	0	Panel number	ID code of type 6949 (for calls/analysis from switchboard).
☀●●☀ 1 2 3 4	5	1	255	1	Time of functions F1 and F2	Time of activation of functions F1 and F2 in seconds.
●☀●☀ 1 2 3 4	6	1	255	1	Door locktime	Time of door lock activation in seconds.
●●☀☀ 1 2 3 4	7	1	255	1	Ringtone duration	Time of activation of call signal in seconds.
☀☀☀☀ 1 2 3 4	8	-	-	-	Programming parameter	Enables programming of type 6949 with previous programmer type 950.

☀ LED on   ● LED off

B) Programming with programmer 950B.

Power up type 6949 and connect it to the programmer type 950B by means of the plug connector (point G of the figure on page 91).
1) Wait for the text "ELVOX 950B PRG" to appear on the programmer display.
2) Press one of the arrow keys (up or down) on the programmer to display the text "PROGRAM. PARAM."
3) Press the pushbutton "OK" on the programmer and wait for the text "PROGRAM [Tecn. Prog.]" to be displayed
4) Press the down arrow key to scroll through the parameters listed in the table below.
5) To modify and assign a new value to the parameter, use the numerical keys.
6) To confirm modifications and move on to the next parameters, press "OK".
7) To exit the programming mode, press "EXIT".

N.B. the parameters can only be scrolled though from top to bottom, without the option to move back through the list; to return to a previous parameter, exit the programming mode and re-enter.

N° parameter	Display 950B	Minimum value	Maximum value	Default value	Description
1	Initial user	1	99999999	1	Minimum number of call (filter on calls in transit from terminal 6 to 1).
2	Final user	1	99999999	99999999	Maximum number of call (filter on calls in transit from terminal 6 to 1).
3	Panel number	0	99999999	0	ID code of type 6949 (for calls/analysis from switchboard).
4	Digit number	0	9999	0	Used as converter from 4 to 8 digits, modifies codes from/to panel or switchboard from 4 to 8 digits. Used as filter for calls to switchboards, modifies calls and functions as specified in the table on page 71.
5	--->--------	-	-	-	Not used
6	---->-------	-	-	-	Not used
7	Panel prefix	1	99	0	Enables changeover of codes with the same first two digits equal to the value set in the parameter, also when the codes are outside the range between the initial and final users. If the value is 0 the function is disabled.
8	----->------	-	-	-	Not used
9	English	0	1	1	Modifies the descriptions on the display of 950B. 0 = Italian 1 = English
10	->----------	-	-	-	Not used
11	-->---------	-	-	-	Not used
12	Door lock enable	0	3	1	Door lock enable - For building complexes, enables activation of the door lock in sequence (0 = No, 1 = Yes). If the value is set to 3 the door lock opening "in reverse" is also enabled, i.e. from a switchboard below.
13	------------	-	-	-	Not used
14	-->---------	-	-	-	Not used
15	--->--------	-	-	-	Not used
16	---->-------	-	-	-	Not used
17	----->------	-	-	-	Not used
18	----->------	-	-	-	Not used
19	------>-----	-	-	-	Not used
20	Ringtone duration	1	255	1	Time of activation of call signal
21	------------	-	-	-	Not used
22	Time of function F1	1	255	1	Time of activation of function F1 in seconds.
23	Time of function F2	1	255	1	Time of activation of function F2 in seconds.
24	Door locktime	1	255	1	Time of door lock activation in seconds.
25	------------	-	-	-	Not used
26	Reserved parameter	0	255	1	Not used

C) Programming with software 94CT.
See description of type 94CT.

SWITCHBOARD CALL CONVERSION TABLE

Value of parameter Predigit and Digit Preset	Command converted to Switchboard call	Command passed without conversion
0001	Switchboard call	None
0002	Switchboard call	F1
0003	Switchboard call	F2
0004	Switchboard call	F1 e F2
0005	F1	None
0006	F1	F2
0007	F2	None
0008	F2	F1
0009*	F3 e F4 e F5	None

* Set the value PREDIGIT to 0009 in the case of 4 switchboards in parallel.

Using two external switches, connected to terminals P1 and P2, commands received from other switchboards in parallel can also be switched to output to the switchboard as interphone calls, as shown in the following table.

Value of parameter Predigit and Digit Preset	Command converted to Switchboard call with terminal P1	Command converted to Switchboard call with terminal P2
0001	F2	F1
0002	F2	Switchboard call
0003	F1	Switchboard call

In the case of 4 switchboards in parallel, the switchboard that receives the calls from interphones via commands F3/F4/F5 cannot receive other commands if the external switches are used; vice versa the other switchboards receive the commands F3/F4/F5 (not converted).

DESCRIPTION OF FUNCTIONS:

Initial User (2) and Final User (3). To be programmed in the case of building complex type systems. The two values must only be set when type 6949 is used as a pseudo stairway panel. These two parameters ensure that 6949 only passes calls from another main entrance panel or switchboard with a number within the minimum and maximum set range. This application is required in building complexes with stairway panels (secondary) and with interphones/monitors connected directly to the main entrance panel or switchboard without stairway panels.

Entrance panel number (4). This is the identification code of type 6949 to be programmed when using switchboard type 94CT, to enable remote programming and analysis of type 6949 parameters. NB: Note that the panel number must be individual and different from the call codes of the interphones and monitors.

Digit Preset (1). The meaning of this parameter changes according to the application of type 6949.
If type 6949 is used as a converter from 4 to 8 digits (and vice versa), the parameter is used to identify the first 4 digits of the 8 of the call/function codes.
Example: if the parameter is 1213 and the 4-digit code of the interphone is 0720, the call code received from an 8-digit switchboard is 12130720.
If type 6949 is used as a filter for calls to switchboards, the following parameter controls the conversion of the functions in switchboard call mode according to the table alongside.

Panel prefix. Enables changeover of codes with the first two digits equal to the value set in the parameter. Code changeover is enabled also when the codes are outside the range between "initial user" and "final user". If the parameter value is 00 the function is disabled.

English To be programmed as required. The function refers exclusively to the programming phase of the panel with type 950B. If the parameter is set to "1", the programmer Type 950B displays the parameters in English, otherwise in Italian.

Door lock release enable. To be programmed in the case of building complex type systems. If enabled allows activation of terminal "S" for door lock release of type 6949 used as a stairway panel, when a monitor or interphone sends an opening code while in conversation with the main entrance panel. This enables activation of the lock related to 6949 and the lock related to the main entrance panel. If the value is 3, the lock connected to 6949 can be opened from a main entrance switchboard to 6949, using the Panel Number to call type 6949 from the switchboard and the key button to activate terminal S.

Ringtone duration (7). If the system envisages stairway panels (building complex) or the presence of a switchboard, the duration of the call signal from the main entrance panel must be greater than 1 second with respect to the time set on the stairway panels or switchboard. In other cases the parameter can be modified as required by the installer. This parameter represents the time, expressed in seconds, for which the panel activates terminal CH. Terminal CH enables activation of the current generator on power supplies Type 6941 and 6948.

F1 function time (5). To be programmed as required. Time expressed in seconds, for which type 6949 activates terminal F1. Terminal F1 enables activation of a relay connected to terminals R1 and 4 of power supplies type 6941, 6942 and 6948.

F2 function time (5). To be programmed as required. Time expressed in seconds, for which type 6949 activates terminal F2. Terminal F1 enables activation of a relay connected to terminals R2 and 4 of power supplies type 6941, 6942 and 6948.

Door lock release time (6). To be programmed as required. Time expressed in seconds, for which type 6949 activates terminal S. Terminal F1 enables activation of a relay connected to terminals 15 and S1 of power supplies type 6941, 6942 and 6948.