

## QUICK INSTALLER MANUAL

# LDxL

## FIRE CONTROL PANEL



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# PART 1

## QUICK PROGRAMMING PROCEDURES

### 1.1 DETAILS

This chapter digests the more important programming procedures.

### 1.2 FIRS CONTROL PANEL TURN ON

N°	STEP BY SETP	DESCRIPTION
1	CONTROL PANEL INSTALLATION	Fix the control panel to wall and loose the loops with your cables.
2	230Vac CONNECTION	Connect the control panel with 230Vac.
3	INITIAL TEST VERIFICATION	At first turn on of the control panel, on the display it views the status of two microcontrollers. Check if all items are OK.
4	BATTERIES CONNECTION	Connect the pad-batteries with appropriate clips on the motherboard.
5	SYSTEM FAUL RESTORATION	Every time that the control panel is turn on / restored, it puts it to status of "system fault". Push grey button on the motherboard reported to "system fault restoration".
6	INITIAL TEST VERIFICATION	Check that all items are Ok.
7	LOOP OUT OF SERVICE	Every time that the control panel is turn on / restored, it puts all loops to out of service.
8	LOOP ACTIVATION	As final control, it is necessary to restart all loops.
9	MENU	Push the button relative at the "Menu".
10	LOOP	Select "LOOP" item.
11	o.o.s/rest	Select "o.o.s/rest" item.
12	SELECT ALL LOOPS	Select "SELECT ALL LOOPS" item.
13	LOOP RESTART	Select "LOOP RESTART" item.

If after loop restart the control panel indicates only "power supply" with green led, first turn on of the control panel it is going okay.

### 1.3 INSTALLATION LOOP

N°	STEP BY SETP	DESCRIPTION
1	LOOP INSTALLATION	Connect all detector bases, all buttons, I/O modules and isolators through a cable.
2	LINE CONTINUITY	Check the continuity of line electro conductive cables. A resistance for line electro conductive cables superior to 40 • is too high!!
3	SHIELED CONTINUITY	Check the continuity of line shielded. It must present treble the resistance of line cables at most.
4	ISOLATION BETWEEN +L AND -L	Check the isolation between positive and negative of loop. A value superior to 20KOhm with 127 installed points or gradually increasing values of resistance with installed fewer points can be found with tester at 200KOhm or higher range.
5	ISOLATION BETWEEN ±L AND SHI	Check the isolation between shielded and the positive and negative of loop. Infinite Ohm value must be found for the isolation-make sure you are not powered up.
6	CHECK OF SHI SHORT CIRCUIT	Other verification of the shielded short circuits.

7	LOOP OUT OF SERVICE	Put the loop to out of service.
8	MENU	Push the button relative at the "Menu".
9	LOOP	Select "LOOP" item.
10	o.o.s/rest	Select "o.o.s/rest" item.
11	SELECT LOOP	Select "SELECT LOOP" item and select the loop.

12	<b>OUT OF SERVICE</b>	Select "OUT OF SERVICE" item.
13	<b>LOOP CONNECTION</b>	Connect the electro cables and shielded to loop clips. Only one shielded head is connected.

14	<b>MENU</b>	Push the button relative at the "Menu".
15	<b>LOOP</b>	Select "LOOP" item.
16	<b>o.o.s/rest</b>	Select "o.o.s/rest" item.
17	<b>SELECT LOOP</b>	Select "SELECT LOOP" item.
18	<b>LOOP RESTART / RESTART+INST.ISOLAT.</b>	If into the loop there are not any isolators with zero address, then to select "LOOP RESTART"; else to select "RESTART+INST.ISOLAT." item, in this mode these isolators comes installed and addressed.

## 1.4 POINT ACTIVATION

The point activation is consists on the acquisition of points with zero address from the control panel. After the loop activation procedure, all isolators are acquired (them addresses are from 121 to 127).

<b>N°</b>	<b>STEP BY SETP</b>	<b>DESCRIPTION</b>
1	<b>MENU</b>	Push the button relative at the "Menu".
2	<b>POINT</b>	Select "POINT" item.
3	<b>insert</b>	Select "insert" item.
4	<b>AUTOMATIC INCREASE</b>	Select "AUTOMATIC INCREASE" item.
5	<b>ACTIVATION</b>	Select "ACTIVATION" item.
6	<b>LOOP SELECTION</b>	Select the loop which to do the acquisition.
7	<b>POINT ADDRESS SELECTION</b>	Insert the address of firs point to acquire. The control panel views firs free address.
8	<b>DETECTOR CHECK- VALUES</b>	These values must be changed if the any detectors are on the critical place. Push "Ok" to continue.
9	<b>POINT SEARCH</b>	All points with zero address begin to flash. Search the point with zero address that must be acquired from the control panel. The address that is assigned to point is that one that the control panel is searching.
10	<b>POINT ACQUISITION</b>	With magnet or using the micro-button on the module, assign the address to point. At the time that control panel finds on the loop a point with address found, it acquires this point. When the point acquisition is completed, the control panel begins to find a point with address after.
11	<b>END ACQUISITION</b>	To finish the acquisition, push "Canc" button.

## 1.5 INPUT PROGRAMMING

This procedure permits to programme a I/O module input (for example).

<b>N°</b>	<b>STEP BY SETP</b>	<b>DESCRIPTION</b>
1	<b>MENU</b>	Push the button relative at the "Menu".
2	<b>POINT</b>	Select "POINT" item.
3	<b>view/mod.</b>	Select "view/mod." item.
4	<b>LOOP SELECTION</b>	Select the loop of the I/O module.
5	<b>POINT ADDRESS</b>	Insert the point address to begin the points programming of the system.
6	<b>POINT SETTING</b>	Into this menu, there are all point parameters.
7	<b>INPUT</b>	Change the value of "INPUT" item with "FIRE ALARM" value.

## 1.6 OUTPUT PROGRAMMING

This procedure permits to programme a relay output apiece of a particular status of the control panel (fire alarm, technological alarm, ...).

The information about at the loop outputs (for example those of I/O module), they are at inside of the point information), but they are separated and grouped from "OUTPUT" item.

N°	STEP BY SETP	DESCRIPTION
1	MENU	Push the button relative at the "Menu".
2	OUTPUT	Select "OUTPUT" item.
3	view/mod.	Select "view/mod." item.
4	CONTROL PANEL OUTPUT LOOP OUTPUT	Select the item, where is the output to programme.
5	OUTPUT SELECTION	Select the loop (if loop output) and the output address to programme.
6	OUTPUT SETTING	Inside at this menu, there are all output parameters.
7	ACTIVATION	Change "ACTIVATION" item and to set up its value at: "STATUS".
8	ALLARME INCENDIO	Thought the "Mod." button, to mark the items for which the output must activate.

## 1.7 SETTING AN OUTPUT DELAY

The possibility to set up a delay to an output is subordinate to the various conditions.

1. The control panel must be in supervision Mode.
2. The zone in which you want the delay on the output must be set up as "DELAYED OUTPUT" = "YES".
3. Pressing the command the delay is "Zeroed" (in the cases of programmed output for fire alarm).

Settings for supervised Mode:

N°	STEP BY SETP	DESCRIPTION
1	MENU	Push the button relative to the "Menu".
2	SETTING	Select "SETTING" item.
3	supervis.	Select "SUPERVIS." item.
4	ENABLE	Enable supervised mode.
5	DATE SETTING	Set up the command field valid from the date in which the control panel must be active under this function.
6	TIME SETTING	Set up the command field valid for the time in which you want the control panel to operate under this function.

Settings for delayed zone:

N°	STEP BY STEP	DESCRIPTION
1	MENU	Push the button relative at the "Menu".
2	ZONE	Select "ZONE" item.
3	view/mod.	Select "view/mod." item.
4	LOOP SELECTION	Select loop for the zone.
5	ZONE ADDRESS	Insert the address to the zone which you want to assign the delay output.
6	DELAYED OUTPUT = YES	Set up the validity field to the "DELAYED OUTPUT" with "YES" value.

Output delay setup:

N°	STEP BY SETP	DESCRIPTION
1	MENU	Push the button relative at the "Menu".
2	OUTPUT	Select "OUTPUT" item.
3	view/mod.	Select "view/mod" item.
4	CONTROL PANEL OUTPUT / LOOP OUTPUT	Select the item, in which there is the output to program.

5	<b>OUTPUT SELECTION</b>	Select the loop (if it is loop output) and output address to program.
6	<b>OUTPUT SETTING</b>	Inside this menu there are all the parameters of the output.
7	<b>ACTIV. DELAY</b>	Set up the validity field of command for "ACTIV. DELAY" With the delay value you wish to assign that output.

## 1.8 RESET MODE of FIRE ALARM

The "Reset" button on the keyboard of the Panel allows to reset all events which are no longer pending (the ones who do not have "!" symbol on the second line of description reading).

Once the alarms have been restored, it is possible to set up the reset mode according to the requirements of the user.

Following this, the reset procedure of fire alarm in case of the set up "F.S. AUTO" is on display (all points automatically out of service during the fire alarm).

### Restore Fire Alarm:

N°	STEP	DESCRIPTION
1	<b>Reset</b>	Press button "Reset".
2	<b>PASSWORD 2</b>	Insert password level 2.
3	<b>Restore alarms</b>	The Control Panel will restore all alarms and events which have been reset in automatic (the ones who do not have "!" symbol on the second line of description reading).
4	<b>All points in fire alarm out of service</b>	In restoration phase, the Control Panel will find all points in fire alarm which have not been automatically reset and will put all the points still in alarm into out of service.
5	<b>Out of service zone in fire alarm</b>	If all points of a zone are put into out of service; also the zone will be put out of service.

In the case that the zones have been put out of service as a result of Alarm reset (event which occurs whenever the points of a zone are put out of service), so one must, before anything, put the zones back into service and then do the same with the points.

### Restore of Zone out of service:

N°	STEP	DESCRIPTION
1	<b>MENU</b>	Press the command button which refers to "Menu".
2	<b>ZONE</b>	Select the command "ZONE".
3	<b>vis./mod.</b>	Select the command "vis./mod.".
4	<b>SELECT LOOP</b>	Select the loop which belongs to the zone.
5	<b>ZONE ADDRESS</b>	Insert the address of the zone.
6	<b>ZONE INFORMATION</b>	Inside this menu you find all the zone's parameters.
7	<b>FUORI SERVIZIO: NO</b>	Impostare il campo di "FUORI SERVIZIO" a SI.

Repeat the same procedure for all the other Zones which are in put of service if you want to put them back into service.

### Restore Points out of service:

N°	STEP	DESCRIPTION
1	<b>MENU</b>	Press the command in reference to voice "Menu".
2	<b>POINTS</b>	Select the voice "POINTS".
3	<b>vis./mod.</b>	Select the voice "vis./mod.".
4	<b>SELECT LOOP</b>	Select the loop to which the point belongs to.
5	<b>POINT ADDRESS</b>	Insert the point's address.
6	<b>POINT INFORMATION</b>	Inside this menu you find all the point's parameters.
7	<b>OUT OF SERVICE: NO</b>	Set up the field command of "OUT OF SERVICE" at YES.

Repeat the same procedure for all the other Points which are in put of service if you want to put them back into service.

## 1.9 RESET of CONTROL PANEL for the DEFAULT SET UP

In the case you require to reset the Control Panel at it's original set up of Factory Standard; you must follow the steps below:

1. Reset all points' database.
2. Restore all default set up.
3. Reset events.

Please NOTE: the fields which carry the name of the points and zones remain unvaried.

### Reset Points database:

N°	STEP	DESCRIPTION
1	MENU	Press the button in reference to the "Menu".
2	POINTS	Select the voice "POINTS".
3	Data base Reset	Select the voice "d.b. reset".
4	Confirm with ok	Select the "Ok" button to confirm the points' database reset.
5	Re-start control Panel	Once the reset is confirmed, the control panel will re-start going into "System Fault" ; press the " Restore system Fault" placed on the main board inside the Panel. If there were Loops in service, they will be put back into service automatically - to restore the restore of the "System Fault" it is not necessary to wait for the Loop to re-start itself.

### Restore Default set up:

N°	STEP	DESCRIPTION
1	MENU	Press the command in reference to "Menu".
2	SET UP	Select the voice "SET UP".
3	rest.default	Select the voice "restore default".
4	Confirm with OK	Select the voice to correspondent command "OK" to confirm the reset of the points' data base.
5	Re-start control Panel	Once the reset is confirmed, the control panel will re-start going into "System Fault" ; press the " Restore system Fault" placed on the main board inside the Panel. If there were Loops in service, they will be put back into service automatically - to restore the restore of the "System Fault" it is not necessary to wait for the Loop to re-start itself.

### Reset data base Events:

N°	STEP	DESCRIPTION
1	MENU	Press the command in reference to "Menu".
2	DIAGNOSTICS	Select the voice "DIAGNOST.".
3	History reset.	Select the voice "Hist. res.".
4	Confirm with OK	Select the voice to correspondent command "Ok" to confirm the reset the events' data base.
5	Re-start control Panel	Once the reset is confirmed, the control panel will re-start going into "System Fault" ; press the " Restore system Fault" placed on the main board inside the Panel. If there were Loops in service, they will be put back into service automatically - to restore the restore of the "System Fault" it is not necessary to wait for the Loop to re-start itself.

## PART 2

### HOW TO SOLVE THE PROBLEMS

<b>Problem</b>	<b>Cause</b>	<b>Solution</b>
<b>System fault</b>	<ol style="list-style-type: none"> <li>1. It usually appears for the first installation.</li> <li>2. One of the two microprocessors does not work properly.</li> </ol>	<ol style="list-style-type: none"> <li>1. Press the resetting key on the motherboard and type in the requested level code. The control panel will start up again without losing the made programming. The loops are put in out of service. If the correct level code is not typed in, the system fault will continue to exist.</li> <li>2. Control panel under repair.</li> </ol>
<b>LOOP OVERLOAD</b>	Properly uninstalled points have been inserted in the loop.	Remove the last installed points.
<b>DOUBLE ADDRESS</b>	There are two or more elements with the same address in one loop.	Their elements flash. It is necessary to remove them from the loop physically and such a point from the control panel. Afterwards it is necessary to zero the removed points (refer to the element manual for the procedure of the address zeroing) and install them again.
<b>S.C.AFTER ISOLATOR x-L</b>	<p>In the loop a short circuit and a cut off on the line +LOOP or -LOOP is present.</p> <ol style="list-style-type: none"> <li>1. If the line +L is aborted, one of the two cut off ends short-circuits itself with the -L.</li> <li>2. A loop thin cable might have come off the clip and the thin cable has short-circuited itself with the other one.</li> </ol>	<p>The fault message points out the loop where the problem has appeared (L = 1, ..., 4) and the isolator/side-control panel where there has been the short circuit (x = A, B, 121, ..., 127).</p> <p>If x=A and L=2, the short circuit will be on the side a of the loop 2.</p> <p>If x=123 and L=1, the short circuit will be either before or after the isolator with address 123 of the loop 1.</p> <p>Once the starting point from where to begin the fault research has been identified, the loop will have to be put in out of service and to be disconnected from the control panel. Search for the short circuit along the line with the tester and afterwards the line cut resetting the fault.</p>
<b>LOOP SECT. S.C. x-y-L</b>	In the loop a short circuit is present between +L and -L in the section pointed out by the line isolators x and y.	<p>The fault message points out the loop (L = 1, ..., 4) and the section where the short circuit (x = A, B, 121, ..., 127) is present.</p> <p>If x=A, y=121 and L=2, the short circuit will be on the side A of the loop 2 and the isolator 121.</p> <p>If x=123, y=124 and L=1, the short circuit will be between the isolator 123 and 124 of the loop 1.</p> <p>Once the section interested by the short circuit has been identified, the loop will have to be put in out of service and to be disconnected from the control panel. Search for the short circuit along the line with the tester, resetting therefore the fault.</p>
<b>-L/+L SHORT CIRC. L</b>	In the loop L (L = 1, ..., 4) a short circuit has taken place between the line and the shielded generic mistake.	Put the loop in out of service (if it has not already set up by the control panel) and disconnect the loop from the control panel. Search for the short circuit along the line with the tester, resetting therefore the fault.
<b>±L/SHI SHORT CIR. L</b>	In the loop L (L = 1, ..., 4) a short circuit between the line (+L or -L) and the shielded has taken place.	Put the loop in out of service (if it has not already set up by the control panel) and disconnect the loop from the control panel. Search for the short circuit along the line with the tester, resetting therefore the fault.
<b>±L INTERRUPT. L</b>	In the loop L (L = 1, ..., 4) an interruption has taken place along the positive line (+L) or negative (-L).	Put the loop in out of service (if it has not already set up by the control panel) and disconnect it from the control panel. Search for the interruption along the line with the tester, resetting there fore the fault.
	If -L, there could be an addressable isolator not added from the control panel.	To put in out of service the loop and to restart this with research of new isolator. If the internal address at this isolator is present in the control panel, to find the isolator to install and remove the address. Repeat the procedure to restart loop with research of new isolator.



<b>BATTERY/FUSE FAULT</b>	<ol style="list-style-type: none"> <li>1. The fuse related to the batteries has broken down.</li> <li>2. the batteries are disconnected.</li> <li>3. the batteries have broken down.</li> </ol>	<ol style="list-style-type: none"> <li>1. Check the fuse related to the batteries.</li> <li>2. Check the batteries.</li> <li>3. Check the batteries.</li> </ol>
<b>POWER SUPPLY MISSING</b>	<ol style="list-style-type: none"> <li>1. Power supply missing.</li> <li>2. power supply broken fuse.</li> <li>3. broken power supplier 30V.</li> </ol>	<ol style="list-style-type: none"> <li>1. Check the connection to the power supply 220V network of the control panel.</li> <li>2. Check the fuse of the power supply block.</li> <li>3. Check the voltage presence on the output cables of the power supply block.</li> </ol>
<b>LOW DC POWER</b>	Problems to the power supply circuit.	Check the connections between the power supply block and the control panel motherboard. Check the voltages between the clip – and the clips + and FAULT; the voltage must be of 30V. if the measured voltage is lower, take the voltage back to 30V acting on the trimmer placed on the power supply block.
<b>BAT. CHARGER FAULT</b>	Wrong connection of batteries.	Check that the two batteries are installed properly (in series and between –B1 and +B2).
<b>DIRTY SMOKE DETEC.</b>	The smoke sensor has generated this fault signal because it has revealed dirt or dust in its chamber (superior to about 80%).	The smoke sensor will continue to function but it requires a careful cleaning of its chamber. It is necessary to disassemble it, take it off the line and then re-insert into the loop.
<b>FUSE/EXTRN. POWER FAULT</b>	The external power supply fuse is faulty.	Check the fuse of the external power supply unit and substitute it.
	The auxiliary power supply is faulty or the current supply source is interrupted.	Verify the current tension which should be at 27,6Vcc. In case of missing tension, verify the power continuance between the line and the power supply unit.
	The function “use of power supply” may be enabled even without any external power supply connected.	Verify and disable the function if it is not utilized. (chapter <b>Errore. L'origine riferimento non è stata trovata.</b> )
<b>-L/SHI SHORT CIR. L</b>	Short circuit between the –L and the GND.	Check if exist a dispersion on the ground of loop negative: at loop disconnected from control panel, check with tester that the impedance between loop negative and the ground is not infinity. In the case of impedance of infinity value, check that the shield is connected at a clip 1 and not on the clip 4 of the base of detectors.
	Short circuit between the +L and the GND.	Check if exist a dispersion on the ground of loop positive: at loop disconnected from control panel, check with tester that the impedance between loop positive and the ground is not infinity. In the case of impedance of infinity value, check that the shield is connected at a clip 1 and not on the clip 4 of the base of detectors.

## PART 3 TECHNICAL CHARACTERISTICS

### GENERAL

Case size:	1 loop model: B x H x P 325x440x90mm. 2,4 loop models: B x H x P 410x510x90mm.
Case material:	Painted steel.
Fixing:	At wall, with installation fixed.
Protection degree:	IP40.
Weight:	10Kg (without batteries).
Operating Temperature:	- 5 = + 45°C.
Relative humidity:	<95% relative humidity, no condensed.
Control panel keypad cleaning	It is possible to clean the control panel keypad with a with a humid cloth. Not to use aggressive agents.

### LOOP

Detection circuit:	1-2-4 loop. Every loop supports the communication with 127 elements (detectors, buttons, input/output modules and isolators).
Maximum points number for loop:	120 between detectors, buttons and modules; 7 addressable isolators; 100 passive isolators.
Point types:	Into the loop it is possible to install: detectors (smoke, heat e smoke-heat), buttons, I/O modules and isolators.
Definable zone:	Up to 63 configurable zones per loop.

### LOCAL POWER SUPPLY

Power supply voltage:	230Vac + 10% - 15%, 50Hz.
Power supply:	< 50VA.
Power supply fuse:	T 400mA 250V (delayed).
Power supply output:	30Vdc.
Battery charger output	27.6Vdc nominal at 20°C.
Battery charger fuse:	F 1.6A L 250V (fast).
Battery:	Loop1: at Pb 2x 12V – 7.2Ah; loop2: at Pb 2x 12V – 18Ah; loop4: at Pb 2x 12V – 18Ah.
Aux. power supply:	27.6Vdc.
Aux. power supply fuse:	F 1.6A L 250V (fast).

## OUTPUTS

Alarm siren output:	Open circuit and short circuit check device; resistance at end of power line: 5,6K• 1/4W; maximum power output: 28.5Vdc 315mA.
Alarm siren output fuse:	F 315mA L 250V (fast).
Fault siren output:	Open circuit and short circuit check device; resistance at end of power line: 5.6K• 1/4W; maximum power output: 28.5Vdc 315mA.
Fault siren output fuse:	F 315mA 250V (fast).
Aux. relay:	2 programmable relay no supervised exits not directly in power in circuit (contact C/NO/NC); contacts: max. 1A, 40Vac/dc.
24V output:	Maximum power output: 28.5Vdc max 315mA.
24V output fuse:	F 315mA 250V.
Open collector output:	4 open collector outputs; max. 27mA; resistance in series of 1K• .

### IN COMPLIANCE WITH THE FOLLOWING STANDARDS:

EN 54-2, EN 54-4 (Directive 89/106/EEC)

EN 55022, EN50130-4 (Directive 89/336/EEC)

EN 61000-3-2, EN 61000-3-3 (Directive 89/336/EEC)

EN60950-1 (Directive 73/23/EEC)