

# Alcyon

## FIRE DETECTION AND PROTECTION SYSTEM Commissioning and maintenance manual



PH377111

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This document is applicable to commissioning and maintenance operations

Order to fill the document :



Insert X in colums « OK » et « note » and « Not relevant » to give the result. If « note » is selected the corresponding observation is to be insert in the corresponding line of the Measurement and notes colum

## CONTROLS TO BE DONE IN ABSENCE OF POWER AND WITH CABLES NOT CONNECTED

### Visual control

1 External visual control	Result		Measure / Comment
	Ok	Note	
■ The panel must be established in accordance with code of practice. ■ Absence of streak, shock. ■ Panel is to be fixed to wall with solidity.			
2 Internal visual control	Result		Measure / Comment
	Ok	Note	
■ Boards shall be properly fixed ■ Internal wiring is done in accordance with code of pratice. ■ Quality of screwing on connectors			

### Control of internal LON FTT bus between modules on cabinet

3 Control of internal LON FTT bus..	Result		Measure / Comment
	Ok	Note	
■ Configuration of Lon module in the cabinet is done in free topology.			

### Control of RS 485 bus to RS repeaters

4 Resistance of the RS bus	Result		Measure / Comment
	Ok	Note	
■ Measured resistance of RS bus shall be more than 100 ohms (no short circuit).			
5 Isolement from earth	Result		Measure / Comment
	Ok	Note	
■ Measured resistance between each conductor and the earth shall be equivalent or superior to 1 MOhms.			
For this measurement, the line is not to be connected on the panel. If measurement is not correct, it is necessary to find the defect of isolation on the line and to put right it.			
6 Number of connected repeater	Result		Measure / Comment
	Ok	Note	
■ Number of repeaters shall be less than 16.			

## Control of power supply line to RS repeaters

7	Power supply	Result		Measure / Comment
		Ok	Note	
	■ Power supply shall be between 15 Vdc 27 Vdc			

## Control of Lon Bus to Lon repeater

8	Resistance of the Lon bus	Result		Measure / Comment
		Ok	Note	
	■ Measured resistance of Lon bus (no short circuit)			
	■ For this measurement, the Lon bus is not to be connected on the panel but has to be connected on all repeaters.			
	■ LON bus is to be configured in "Bus" mode at the origin of the bus. A 105 ohms resistor is to be wired on the last Alcyon Lon repeater.			
	■ Spurs are not allowed.			
9	Control of isolation from earth	Result		Measure / Comment
		Ok	Note	
	■ Measured resistance between each conductor and the earth shall be equivalent or superior to 1 MOhms.			
	■ For this measurement, the line is not to be connected on the panel. If measurement is not correct, it is necessary to find the defect of isolation on the line and to put right it.			

## Control of power supply to Lon repeater

10	Power supply	Result		Measure / Comment
		Ok	Note	
	■ Power supply shall be between 18 Vdc 50 Vdc.			

## Controls on addressable loops

11	Control of resistance on the 0V conductor (with cable having a diameter of 8/10 mm)	Result		Measure / Comment
		Ok	Note	
	■ Resistance must be less than 45 ohms.			
	 ■ Loop maximum length : 1600m ■ Loop + spurs maximum length : 2000m ■ If there is not a loop but a spur configuration mark not relevant column			
12	Control of isolation from earth	Result		Measure / Comment
		Ok	Note	
	■ Resistance between each conductor and the earth shall be equivalent or superior to 1 MΩ.			

## Control on integrated outputs A and B to sounders / strobes

13.	Control of resistance	Result		Measure / Comment
		Ok	Note	
	■ Resistance with end of line is to be comprise between: 3700 ohms and 4100 ohms			
14.	Control of isolation from earth	Result		Measure / Comment
		Ok	Note	
	■ Resistance between each conductor and the earth shall be equivalent or superior to 1 MΩ.			
	 For this measurement, the line is not to be connected on the panel but has to be connected. If measurement is not correct, it is necessary to find the defect of isolation on the line and to put right it.			

## Control on each outputs of 4 / 8 way sounder module

15	Control of resistance between the board and the more distant active end of line	Result		Measure / Comment
		Ok	Note	
	■ Resistance with end of line is to be comprise between: 3700 ohms and 4100 ohms			
16	Control of isolation from earth	Result		Measure / Comment
		Ok	Note	
	■ Measured resistance between each conductor and the earth shall be equivalent or superior to 1 MΩ.			
	 For this measurement, the line is not to be connected on the panel but has to be connected on all repeaters. If measurement is not correct, it is necessary to find the defect of isolation on the line and to put right it.			

# CONTROLS TO BE DONE WITH POWER SUPPLY AND WITH CABLES CONNECTED

## Control of mains

	Mains value	Result	Measure / Comment
	Ok	Note	
■ Remove fuse from terminal block			
■ Mains Value shall be comprise between 198 VAC and 253 VAC			
 Connection to earth shall comply with local requirements			
18 Power from power supply to main board	Result	Measure / Comment	
Ok	Note		
■ Voltage shall be comprise between 26 VdC and 28 VdC.			

## Control of batteries

	Battery configuration	Result	Measure / Comment
	Ok	Note	
■ Compliance between batteries and configuration on power supply			
20 Battery voltage	Result	Measure / Comment	
Ok	Note		
■ Batteries voltage shall be comprise between 24 VdC and 27 VdC.			
 This is to be done with batteries not connected to power supply			
21 Battery charge	Result	Measure / Comment	
Ok	Note		
■ Charge voltage shall be comprise between 26, 6 VdC and 28, 2 VdC.			
■ Charge voltage with batteries connected to power supply shall be comprise between 27 VdC and 28, 5 VdC			
 If fault still is signalled after 2 hours either power supply or batteries are to be replaced This is to be done. If this is not correct, power supply is to be replaced			
22 Batteries fault indication	Result	Measure / Comment	
Ok	Note		
■ Following batteries connection, batteries fault indication will automatically disappears (Power supply fault indicator steady and batteries fault indication on display)			
 If fault still is signalled after 2 hours either power supply or batteries are to be replaced			
23 Mains fault indication	Result	Measure / Comment	
Ok	Note		
■ Remove mains and check that mains fault indication is given (Power supply fault indicator steady and mains fault indication on display)			

## Downloading of configuration with the configuration tool

24	Download the program	Result Ok	Measure / Comment Note
25	Installation of boards with Lon Programmer	Result Ok	Measure / Comment Note
	■ For each board, after a PIN service indicate board number		

## Verification of software version on boards

26	Issues	Result Ok	Measure / Comment Note
	■ Last issue for software version on different modules		
	If this is not the case, download last issue		

## Control of RS repeaters

27	Installation	Result Ok	Measure / Comment Note
	■ Check the address and configuration of each repeater.		
	■ Check connection to RS bus and power supply.		
28	Indicator test	Result Ok	Measure / Comment Note
	■ Push the indicator test button and check that the audible indication is given and that all visible indicators are activated		
29	Check standby indication	Result Ok	Measure / Comment Note
	■ Reset the panel and check that no other indication than Power indication (LED) and POWER ON on display are given		

## Control of Lon repeaters

30	Installation	Result Ok	Measure / Comment Note
	■ After control and connection ensure "pin service" procedure in order to ensure addressing of repeater.		
31	Indicator test	Result Ok	Measure / Comment Note
	■ Push the indicator test button and check that the audible indication is given and that all visible indicators are activated		
32	Check standby indication	Result Ok	Measure / Comment Note
	■ Reset the panel and check that no other indication than Power indication (LED) and POWER ON on display are given		

## Control on addressable loop

33	Control of loop	Result Ok	Measure / Comment Note
	■ Following connection of loop on board ensure panel reset. Check that no fault indication are given for detection zones		

## Control of output to sounders / strobes

34	Control of line	Result		Measure / Comment
		Ok	Note	
	<ul style="list-style-type: none"> <li>■ Following connection of loop on board ensure panel reset. Check that no fault indication are given for detection zones</li> </ul>			
35	Control of process	Result		Measure / Comment
		Ok	Note	
	<ul style="list-style-type: none"> <li>■ Ensure activation of the evacuation zone</li> <li>■ Staff alarm value of T1</li> <li>■ Alert value of delay before evacuate</li> <li>■ Evacuate signal</li> <li>■ Evacuate signal audible on all accessible areas</li> <li>■ Reset the panel</li> </ul>			



This is to be done with proper information to occupants and with owner authorization

## Consumption

36	Standby current	Result		Measure / Comment
		Ok	Note	
	<ul style="list-style-type: none"> <li>■ Measure the standby current</li> </ul>			
37	Alarm current	Result		Measure / Comment
		Ok	Note	
	<ul style="list-style-type: none"> <li>■ Measure the current when there is an alarm</li> </ul>			

# FUNCTIONAL TESTS

## Functional tests

		Result	Measure / Comment
		Ok	Note
38	Standby indication		
	■ Check that no other indication than Power indication (LED) and POWER ON on display are given		
39	Indicators test	Result	Measure / Comment
	Ok	Note	
	■ Push the indicator test button and check that the audible indication is given and that all visible indicators (including display) are activated		
40	Procedure	Result	Measure / Comment
	Ok	Note	
	■ Remove mains		
41	Walk test	Result	Measure / Comment
	Ok	Note	
	■ Set all detection zone in test mode		
	■ Test each detector and call point and verify correct indication are given on display and that remote indicators are activated		
	■ Remote indicator properly located		
42	Short circuit control	Result	Measure / Comment
	Ok	Note	
	■ Ensure a short circuit on each addressable loop and check correct indication are given by general indicator and display		
43	Short circuit control	Result	Measure / Comment
	Ok	Note	
	■ Ensure an open circuit on each addressable loop and check correct indication are given by general indicator and display		
<b>Control of RS repeaters</b>			
44	Control of fire alarm and fault indications	Result	Measure / Comment
	Ok	Note	
	■ Generate a fault and check the corresponding indication on the repeater		
	■ Generate a fire ad check the corresponding indication on the repeater		
<b>Control of Lon repeaters LCD</b>			
45	Control of fire alarm and fault indications	Result	Measure / Comment
	Ok	Note	
	■ Generate a fault and check the corresponding indication on the repeater		
	■ Generate a fire ad check the corresponding indication on the repeater		

# DOCUMENTATION

Ref.	Description	Result		Measure / Comment
		Ok	Note	
46	Operating manual			
	■ Operating manual given to the customer?			
47	Training			
	■ Training of customer ensured?			
48	Functional test			
	■ Functional test report signed by the customer			

## WRITING OF OBSERVATIONS

Write all determined observations, during the procedure. (Regulation, technical, commercial points, service, etc)

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