DIGITAL ALARM UNIT Model ALU-MS

KIOUR

Description

Digital alarm unit ALU-MS has the following characteristics:

EN ISO 9001:2008

1. Operates in **MASTER** or **SLAVE** mode.
2. It can connect with other devices through a RS485 network with two ways: either as an independent network where there is one device set in MASTER mode and all the rest are in SLAVE mode or as a PC network where a PC has full control of the network and all the devices are set in SLAVE mode. Each device's address is adjusted from parameter N.70 **Add**. The network needs to be powered with +12÷24 Vdc.
3. NO or NC contact with common at 0V or +24V for adjusting each input independently, see sketch 2.
4. One general relay output 250Vac for siren activation.
5. 14 digital outputs for driving relays where input alarms and LED operation for monitoring can be driven into groups or separately. Maximum total load of outputs is 300mA. There is an external melting safety fuse of 315mA.
6. Time delay for each input can be set from 0÷100 sec.
7. Accepts alarm inputs of 24Vac/dc.
8. Up to 98 devices can connect to a network with common RESET, TEST LAMP and alarm activation.
9. One or more devices connected to a network can become a repeater of any other device. This means that the alarms of the latter device will be forwarded to the repeater device.
10. Capability of adjusting contact 9 in TEST LAMP operation and contact 10 in RESET operation for usage of remote buttons.
11. Adjustment of LED lightening by pressing SET button.

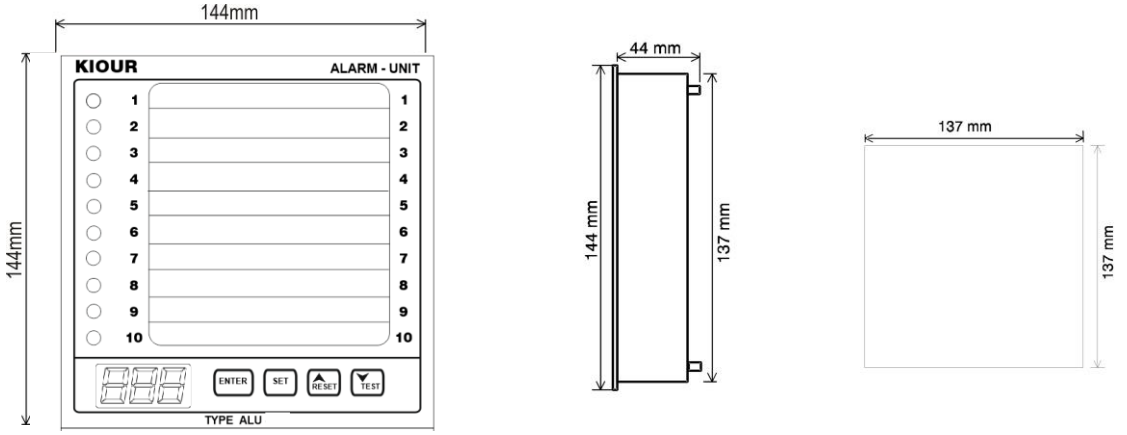
Operation of the device in a network

The device accepts a signal through an input and the corresponding LED starts flashing while the relay (siren) of the device is activated. If the **RESET** button is pressed, the LED stops flashing and remains ON until the signal that caused the alarm is removed from the input. By pressing the **TEST** button, all LEDs light up simultaneously in order to verify good operation of the device.
In MASTER mode the device displays "**nnA**", while in SLAVE mode it displays its address on the network **A 0, A 1**, etc. The **RESET** and the **TEST** buttons are common for all devices within a network. This means that they operate at the same time in all connected devices.

ALARM

Alarm inputs can be driven towards one output either separately or into groups.
Address alarm of the **MASTER** device: when several devices operate in a MASTER - SLAVE network and the MASTER device does not receive any data from one or more SLAVE devices, the indication **A 1, A 2** … starts flashing, which corresponds to the address of the SLAVE device that isn't sending any data to the MASTER device. This causes the activation of the output set from the parameter No.33 **AdF**.
Repeater alarm: when a repeater loses the connection with the mother device, the indication **rEP** starts flashing.
The **lost-communication alarm** in a SLAVE device can be driven either into separate outputs either into the same output defined by the parameter No.33 **AdF.**

Dimensions



Button's function

button	function
ENTER	- enter parameter's menu - confirm a new value of a parameter
SET	cancel a new value of a parameter
RESET	- change parameter within the parameter menu - alarm RESET button outside the parameter menu
TEST	- change parameter within the parameter menu - TEST LAMP button outside the parameter menu

Managing the parameters

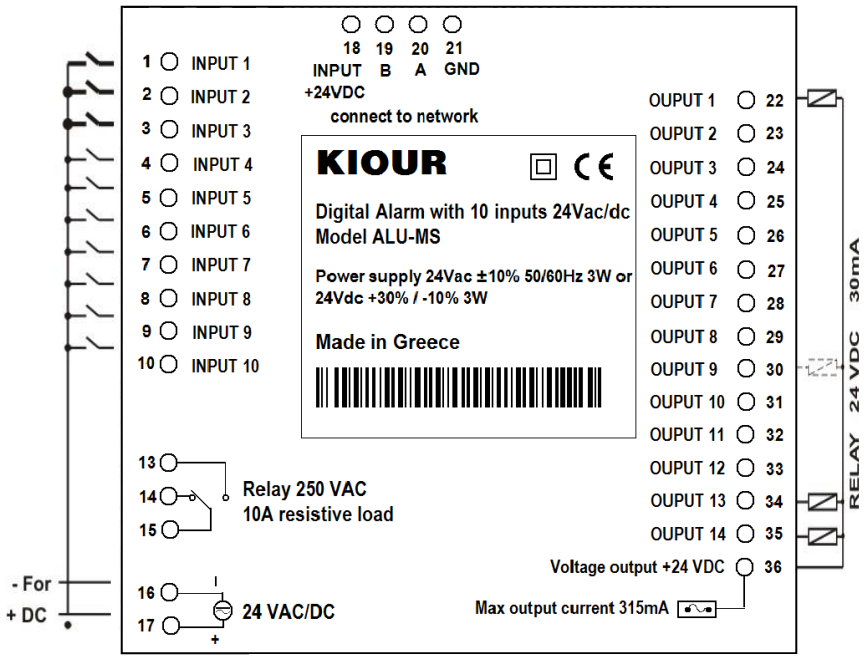
By pressing [**ENTER**] we enter the parameters menu and the first parameter is displayed, **Cod**. By pressing [**SET**] the value of the parameter is displayed and we set number **Cod = 22**.

By pressing [**ENTER**] **we confirm** the new value and with the [RESET], [TEST] we scroll between the parameters.

By pressing [**SET**] **we cancel** the new value and we return to the parameter's name.

By pressing [**ENTER**] again we exit the parameter menu.

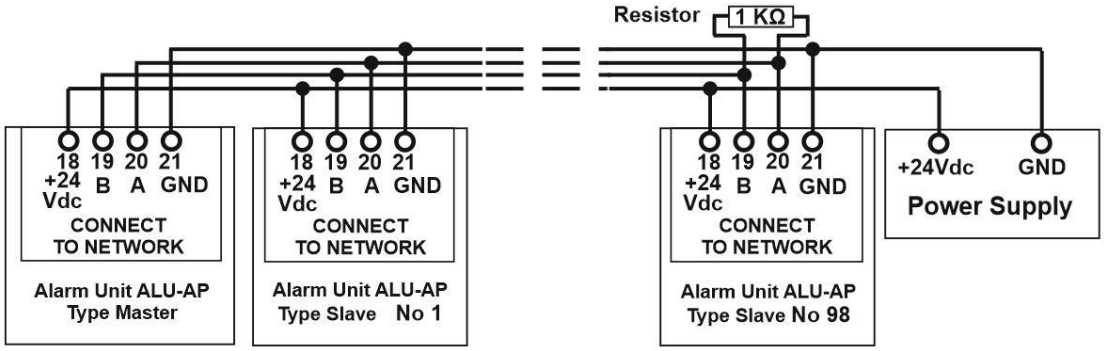
Connection diagram



Connection diagram in a network (up to 98 devices)

Every 50 devices a network amplifier RS485 Type KIOUR **RS485 Amplifier** must interfere.

Sketch 1

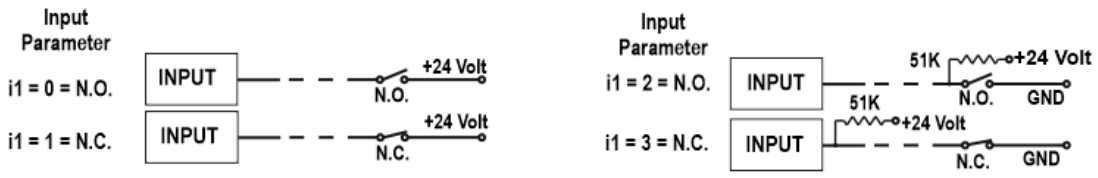


Parameters table

No	Parameter's description		min	max	def	UOM
	SAn	The parameter is not in use and must always have value SAn = 0			0	
1	**Cod**	Entry code in parameter menu = "**22**"	0	250	0	
2	**t1**	Time delay of alarm 1 in input 1	0	100	0	sec
…	**…**	…	…	…	…	…
11	**t10**	Time delay of alarm 10 in input 10	0	100	0	sec
12	**o1**	The alarm of the 1st input can be driven into one of the 14 outputs. For **o 1 = 0**, the alarm is not driven into any output.	0	14	0	
…	**…**	…	…	…	…	
21	**o10**	The alarm of the 10th input can be driven into one of the 14 outputs. For **o10 = 0**, the alarm is not driven into any output.	0	14	0	
22	**d1**	The 1st LED can be driven into one of the 14 outputs. For **d1 = 0**, the LED is not driven into any output	0	14	0	
…	**…**	…	…	…	…	
31	**d10**	The 10th LED can be driven into one of the 14 outputs. For **d10 = 0**, the LED is not driven into any output	0	14	0	
32	**brL**	out of order				
33	**AdF**	The lost communication alarm can be driven into one of the 14 outputs	0	14	0	
34	**i1**	Operation of input with **NO** or **NC contact.** 1. If the contact is tied to +24V: i1 = 0 → NO i1 = 1 → NC 2. If the contact is tied to 0V: i1 = 2 → NO i1 = 3 → NC Further details in sketch 2.	0	3	0	
35	**…**		…	…	…	
43	**i10**	Operation of input with **NO** or **NC contact.** 1. If the contact is tied to +24V: i10 = 0 → NO i10 = 1 → NC 2. If the contact is tied to 0V: i10 = 2 → NO i10 = 3 → NC Further details in sketch 2.	0	3	0	
44	**U1**	out of order				
…	…	…				
63	**U20**	out of order				
64	**rEt**	For **rEt = 1**, the **RESET** and **TEST LAMP** are **activated** on the network, while for **rEt = 0**, the **RESET** and **TEST LAMP** are deactivated.	0	1	1	
65	**diS**	For **diS = 1**, "nna" is displayed where for **diS = 0**, only a **dot** is displayed.	0	1	1	
66	**tE**	Input 9 configuration for **TEST LAMP** mode, where **tE = 0** is for normal mode and **tE = 1** is for TEST LAMP mode.	0	1	0	
67	**rE**	Input 10 configuration for **RESET** mode, where **rE = 0** is for normal mode and **rE = 1** is for RESET mode.	0	1	0	
68	**rEP**	If **rEP = 0**, the device is not a **repeater** of any of the devices If **rEP = 1÷98**, the device is repeater of the device with the corresponding address If **rEP = 99**, the device is a repeater of the network's MASTER device. The MASTER device cannot become a repeater of any device in the network. At the repeater, the RESET and TEST LAMP of the inputs are deactivated, whereas the time delays that are applied to the inputs are the repeater's and not the mother's device.	0	99	0	
69	**tYP**	**MASTER** or **SLAVE mode**, where **tYP = 20** is for MASTER mode and **tYP = 21** is for SLAVE mode	20	21	20	
70	**Add**	1. **Devices network**: A device is programmed in MASTER mode and at its **Add** parameter we enter the number of the SLAVE devices (1÷98). In the respective parameter (**Add**) in the SLAVE devices we enter its unique network address (1÷98). For connecting the devices in a network see sketch 1. 2. **PC – device network:** all devices are in SLAVE mode and the **Add** parameter has the device's unique network address (1÷98).	0	98	0	

Input configuration

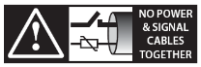
Sketch 2



Technical specifications

Power supply: 24Vac ± 10% or ±24Vdc +30% / -10% 50/60Hz (external fuse 1A)
Maximum consumption: 10W
Internal output fuse: 315mA
General internal alarm relay 250Vac 10A resistive loads
Operating temperature: -15÷+70°C
Storage temperature: -20÷+80°C
The devise is mounted on a panel hole with dimensions 137x137mm
Connection with plug in terminal blocks
IP protection rating: IP62 front side / IP20 back side
Class of equipment: Class II
Internal audible alarm is not included (buzzer)

ATTENTION to prevent electrostatic discharges at the side slots of the device and insertion of sharp objects



ATTENTION: separate the signal cables from the power supply cables to prevent electromagnetic disorders. Signal cables must never be in the same pipe with the power supply cables.

Read and keep these instructions. The device is under a two year good operation guarantee. The guarantee is valid provided the manual instructions have been applied. The device check and service must be performed by an authorized technician. The guarantee covers only the replacement or the service of the device.