

copyright © 2023 Ronyo Technologies s.r.o. revision: 1.6. 2023 Anarya Alarm<sup>®</sup> 💯

RFID object protection system for guarding materials, automobiles, construction machinery, etc. Automatic control of PTZ cameras, very easy installation

### About the system

The Varya perimeter system can also be used to guard objects and objects in open space. This item protection system mode is branded as **Anarya Alarm**. The Anarya Alarm system uses the same FLU central unit, the same FLM monitoring units and the same FLA or FLG detectors as the Varya Perimeter system, but in a different configuration. If the detectors of the Anarya Alarm system are in "Guarded" mode, any movement or manipulation of the FLA detector will trigger an alarm.



### fig. 1 - FLA-07 detector

The detectors communicate by radio (868 MHz) with the receiving unit (FLU or FLM) with a standard period of 3 seconds in a "star" topology. Installation of the system is very easy and fast, the system does not require maintenance if regular revisions are observed. The batteries in the detectors are replaceable and their capacity is about 8 years. The ANARYA Alarm system enables communication with EMS systems and with rotating PTZ cameras or drones, which it precisely guides to the location of the breach. The outputs of the Anarya system can be integrated into additional monitoring systems, e.g. using the SNMP-2 protocol.









## **FLA-07 detector**

The detector is suitable for installation in an industrial environment. Installation is carried out using two screws or screws, with which the detector is fixed vertically to the guarded object. Installation can also be done by gluing or using the NEO FLA-07 magnetic pad. The NEO pad is suitable for installation in an industrial environment on metal objects. Battery life is approx. 8 years. Operating temperatures:  $-25^{\circ}C / +70^{\circ}C$ . The detector and FLA are waterproof, with IP67 protection. Dimensions:  $163^{*}52^{*}42$  mm.



### FLG-07 detector



manufacturer

Ronyo





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# Limits of Anarya system

Max number of all modules (tags, etc..) is 250 Max range of interval of ID detectors in object protection (GUARD) = 200 Max number of tags in the radio range of one FLM unit: 50 \* pcs (when tag transmission period = 3 s) Max number of tags in the radio range of one FLM unit: 100 \* pcs (when tag transmission period = 6 s) The maximum number of FLM units is 10. The maximum number of FLQ units is 4. (from FW FLU: v4.7.27) The maximum number of FLE units is 6. (from FW FLU: v4.7.38) The maximum number of areas is 200. (from FW FLU: v4.7.13) The maximum number of declarations for SNMP communication is 80. The maximum number of SNMP clients is 3. The maximum number of Ronyo-Server clients is 3. The maximum number of PTZ cameras is 64. The maximum number of presets for PTZ cameras (total) is 80 The minimum time between two alarms in one sector is 45 s. The min battery voltage of FLA-06 - 2.6 V. The min battery voltage of FLA-07 - 2.2 V. The min battery voltage of FLG-07 - 2.6 V. (from FW FLU: v4.7.05) Tag types for ANARYA system: FLA-07, FLG-07, FLA-07io, FLA-07s, FLA-07b, FLA-06, FLG-06

### \* .... Note:

Tags broadcast randomly. Their transmission can be completely interrupted by the transmission of another tag. Therefore, one can only statistically calculate the probability of how many successive transmissions will be interrupted by the transmission of other tags. The system operator must consider how long a blackout in receiving messages (due to these disturbances) can be tolerated.

# Savings period for broadcasting FLA tags

FLA type tags support two broadcast periods.

- Standard transmission period "PER" (Default = 2 s. This parameter can be changed by the user)
- Energy-saving transmission period "LEP" (Default = 15 s. This parameter can be changed by the user in the range of 2-60 s).



If tags are mostly in not motion and have a Energy-saving transmission period "LEP" set, this setting affects: - Their battery life. The service life will be significantly extended.

- Max number of tags within range of one FLM unit (see \*). This max quantity limit will increase significantly.



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Anarya Alarm<sup>®</sup> (

copyright © 2023 Ronyo Technologies s.r.o. revision: 1.6. 2023 The basis of the Anarya Alarm system is optionally one of the variants listed below.

- only the central FLU unit supplemented with the AO-ALTE-OM56 antenna
- only central FLU unit supplemented by 2 antennas connected via SMA-splitter (2 reception points)
- central FLU unit supplemented by an antenna with an additional FLM unit (2 reception points)
- central FLU unit supplemented by an antenna with several FLM units (several reception points)

## System architecture: FLU + 2 antennas



antennas to the unit's FLU connector. This increases the range of coverage for receiving broadcasts from FLA tags. .

# Architektura systému: FLU + 2x FLM



The central unit can be supplemented with additional receiving points, e.g. 2 FLM units. FLM units are set to "object protection" mode. The FLM units are connected to the FLU central unit by RS485 or LAN or both, which is the ideal condition. Communication via LAN is necessary for remote monitoring of FLMs and for changing their firmware. The RS485 bus represents a time-stable stable data connection of modules over medium distances.

### Antenna GSM-TG09









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## FLA-07b detector for guarding paintings

The FLA-07b detector is used to guard paintings. The installation is done easily by inserting the detector into the back of the painting's frame. The installation is completely non-invasive and the artwork cannot be damaged in any way. The detector's sensitivity can be adjusted by software so that the detector detects not only manipulation with the painting but also finger touches on the canvas. The detector's dimensions are **57\*(49+15)\*14** mm. This detector allows you to turn on the transmission saving mode (when the detector is motionless), which ensures a much longer battery life.



fig. 17a - FLA-07b detector installed on the exhibit



fig. 17c - FLA-07b detector



fig. 17b - FLA-07b detector in the painting's frame



fig. 17d - dimensions FLA-07b

# The importance of measuring ACC values of the FLA-07b detector





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#### FLA-07io **Description of interface**

The FLA-07io detector can be used in the Varya Perimeter system (in synchronized token mode) or in the Anarya Alaerm system (in unsynchronized beacon - GUARD mode).





FLA-07io

## **Description of conductors**

IN	orange	input binary	input inactive = idle state	input active <sup>(1)</sup> = Alarm
EOL	blue	input of double balance	input 4k7 = idle state, input 14k7 = Alarm	see table no. 4a for more details
OUT	green	output of open collector	output inactive = open collector	output active <sup>(2)</sup> = grounded <sup>(3)</sup>
GND	braun	graund	common ground for both inputs and output	

(1) ... Input activation is done by connecting to GND.

(2) ... When activated, the output is "grounded" via the output transistor. This output is used for switching external resistive loads, small currents.

(3) ... This output is implicitly set to the "Disturbance" event - if this detector is the cause of the alarm and the other detectors in the section do not detect the "wind" event,

# Connecting the IN input



# **Connecting the EOL input**



### tab. 4a - table of tolerances <sup>(1)</sup>

input value of EOL (Ohm)	FLA detector status
0 - 2.700	Sabotage
3.500 - 6.400	idle state
7.300 - 21.300	Alarm
23.500 - nekonečno	Sabotage

## Status description FLA-07io

otatus u		4-0/10	Events in Ronyo Server	Events in Ronyo Server	Event in Perimon <sup>(1)</sup>
 interface	Description	Activation description	Agenda Detectors/Movement	configuration of FLU/FLE outputs (2)	mode: tokens
IN	binary input	input IN: Off	quiet		-
IN	binary input	input IN: 0 Ω <sup>(3)</sup>	violation	Alarm - violation	Alarm
EOL	Balance input	input EOL: 4k7	quiet		-
EOL	Balance input	input <b>EOL</b> : 4k7 - > 14k7	external alarm <sup>(1)</sup>	Alarm - detector ESS activated	FLG [opening] <sup>(6)</sup>
EOL	Balance input	input EOL: 14k7	external alarm	Alarm - detector ESS activated	FLG [open <b>ed</b> ] <sup>(8)</sup>
EOL	Balance input	input <b>EOL</b> : 14k7- > 4k7	quiet		FLG [closing] <sup>(7)</sup>
EOL	Balance input	input <b>EOL</b> : 4k7 - > <mark>0 Ω/Off</mark>	external tamper <sup>(1)</sup>	Alarm - tamper ESS activated	FLG [ <b>sab</b> begin] <sup>(6)</sup>
EOL	Balance input	input EOL: 0 Ω/Off	external tamper	Alarm - tamper ESS activated	FLG [sabotage] <sup>(8)</sup>
EOL	Balance input	input <b>EOL</b> : 0 Ω/Off - > 4k7	external tamper	Alarm - tamper ESS activated	FLG [sab end] (7)

(1) ... Applies to FW version = 0x62 or younger in FLA-07io detector

(2) ... The event can be configured for Varya Perimeter or Anarya Alarm system

(3) ... Input activation is performed by connecting to GND for more than 3 s.

(6) ... The FLA-07io detector sends this message 4 times at the beginning of this event

(7) ... The FLA-07io detector sends this message 4 times at the end of this event

(8) ... The FLA-07io detector sends this message once every minute and only for the duration of this event



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# Anarya Alarm surveillance software

Tome	History	Users O	bject types	FLM Detectors	Sectors	Areas	FLE FLU	Camera PTZ	Viewer 3D	Close			0	n-line	
multi Sy Def	ple adding ystem part: tector type: from ID: to ID: er of tags:	/removing QUARD - I FLA-07 - ot 12 501 12 700 200	Main Area ject protection	Configura Config	configuration:       Detector ID: 1011 ■         Type:       FLA-07 - object protection ■         Coordinates:       X         Y       Z         Magnetic sensor bypass:       ✓         ACC sensor bypass:       ✓								show following form: Catil detectors ON-LINE state of detectors Measuring of detectors by FLR		
Operating states Technical parameters															
ID	Type	Sector	Area	🔺 Object type	Channel	l evels	Inclination sens	Arm status	Wind	Movement	Sabotage	Failure	Mag. se	nsor	
ID	Type	Sector <sup>▼▲</sup>	Area	✓ Object type ✓	Channel	Levels	Inclination server	Arm status	Wind	Movement	Sabotage	Failure	Mag. se bypass	nsor	
ID 12 501	Type FLA-07	Sector A	Area area B	Object type     Object protection	Channel	Levels	Inclination sens	Arm status	Wind	Movement v quiet	Sabotage	Failure v ok	Mag. se bypass no	nsor	
ID 12 501 12 502	Type FLA-07 FLA-07	Sector sector 07 sector 07	Area area B area B	Object type     Object protection     Object protection	Channel 23 23	Levels 15-30 15-30	Inclination sense medium (cca 60°) medium (cca 60°)	Arm status armed armed	Wind	Movement quiet violation	Sabotage ok ok	Failure ok ok	Mag. se bypass no no	insor	
ID 12 501 12 502 12 503	Type FLA-07 FLA-07 FLA-07	Sector VA sector 07 sector 07 sector 07	Area area B area B area B	Object type     Object protection     Object protection     Object protection	Channel 23 23 23 23	Levels 15-30 15-30 15-30	Inclination sense medium (cca 60°) medium (cca 60°) medium (cca 60°)	Arm status armed armed armed	Wind	Movement quiet violation quiet	Sabotage ok ok ok ok	Failure ok ok ok	Mag. se bypass no no no	ensor	
ID 12 501 12 502 12 503 12 504	Type FLA-07 FLA-07 FLA-07 FLA-07	Sector V sector 07 sector 07 sector 07 sector 07	Area area B area B area B area B area B	Object type Object protection Object protection Object protection Object protection Object protection	Channel 23 23 23 23 23 23	Levels 15-30 15-30 15-30 15-30	Inclination sets medium (cca 60°) medium (cca 60°) medium (cca 60°) medium (cca 60°)	Arm status armed armed armed armed	Wind - - - -	Movement quiet violation quiet quiet	Sabotage ok ok ok ok ok	Failure ok ok ok ok ok	Mag. se bypass no no no no no	ensor	
ID 12 501 12 502 12 503 12 504 12 505	Type           FLA-07           FLA-07           FLA-07           FLA-07           FLA-07           FLA-07           FLA-07	Sector V sector 07 sector 07 sector 07 sector 07 sector 07	Area area B area B area B area B area B	Object type Object protection Object protection Object protection Object protection Object protection Object protection	Channel Channe	Levels 15-30 15-30 15-30 15-30 15-30	Inclination sents medium (cca 60°) medium (cca 60°) medium (cca 60°) medium (cca 60°) medium (cca 60°)	Arm status armed armed armed armed armed	Wind	Movement quiet violation quiet quiet quiet	Sabotage ok ok ok ok ok ok	Failure ok ok ok ok ok ok	Mag. se bypass no no no no no no	nsor	
ID 12 501 12 502 12 503 12 504 12 505 12 506	Type           FLA-07           FLA-07           FLA-07           FLA-07           FLA-07           FLA-07           FLA-07           FLA-07           FLA-07	Sector V sector 07 sector 07 sector 07 sector 07 sector 07 sector 07	Area area B area B area B area B area B area C	Object type     Object protection	Channel Channe	Levels 15-30 15-30 15-30 15-30 15-30 15-30 15-30 15-30	Inclination sets	Arm status armed armed armed armed armed off	Wind  wind	Movement quiet violation quiet quiet quiet quiet	Sabotage ok ok ok ok ok ok ok	Failure     ok     ok     ok     ok     ok     ok     ok     ok     ok	Mag. se bypass no no no no no no no	ensor	
ID 12 501 12 502 12 503 12 504 12 505 12 506 12 507	Type           FLA-07	Sector V sector 07 sector 07 sector 07 sector 07 sector 07 sector 07 sector 07	Area area B area B area B area B area B area C area C	Object type     Object protection	Channel Channe	Levels 15-30 15-30 15-30 15-30 15-30 15-30 15-30 15-30	Inclination sets	Arm status armed armed armed armed armed off	Wind  wind wind	Movement quiet violation quiet quiet quiet quiet	Sabotage ok ok ok ok ok ok ok ok	Failure ok ok ok ok ok ok ok ok tag jumps >70	Mag. se           bypass           no	ensor	
ID 12 501 12 502 12 503 12 504 12 505 12 506 12 507 12 508	Type           FLA-07           FLA-07	Sector V sector 07 sector 07 sector 07 sector 07 sector 07 sector 07 sector 07 sector 07	Area area B area B area B area B area B area C area C area C	Object type     Object protection	Channel  Cha	Levels 15-30	Inclination sets	Arm status armed armed armed armed armed off off	Wind	Movement violation quiet quiet quiet quiet quiet quiet door open	Sabotage ok ok ok ok ok ok ok ok ok	Failure       ok       ok	Mag. se           bypass           no           no           no           no           no           no           no           no           no           point           no           no           no           no           no           no           no           no           no           no	ensor	

Fig. - Operating screen for users ("Detectors on-line" agenda)

Home	History	Users	Object type	es FLM Detec	ctors S	ectors	Areas	FLE	FLU	Camera PT	Z Vi	ewer 3D	Close						on-line
mul S De	tiple addin System par etector type	g/removing t: Perimete e: FLA-06 -	r - Main Are detector - pe	cor ea 💽	nfiguration Dete	i: ctor ID: 1 Type: F	011 LA-06 - d	etector - pe	rimeter 💽	service c	omman ID ID	ds: : 12 503 : 12 503		Check detec Detector sefi	tor status test		show fol O Edit de O ON-LI O Measu	lowing form: etectors NE state of del uring of detecto	: tectors ors by FLR
numl	to ID	12 501 12 700 200		Мар	netic sen ACC sen	sor bypass		ſ 2	-	0% OdBm		12 503 12 503		Set ACC corr	rection to th put power to t	e detector		on-l	line
	Operating states Technical parameters																		
ID	Туре	Sector	Area	Object type	Channe	ACC	Ø ACC	Samples	RSSI-1	RSSI-2	Jumps count	Jumps /40min	Power	Ucc bat	Temp.	SW version	Verified	Synch.	Time
12 501	FLA-07	Sector 07	Area B	Object protection	23	-	19	520	-51 dBm		0	0%	10 dBm	3.55V	20°C	v.02	ves		3 s
12 502	FLA-07	Sector 07	Area B	Object protection	23	-	21	490	-52 dBm		0	0%	10 dBm	3.54V	20°C	v.02	yes		3 s
12 503	FLA-07	Sector 07	Area B	Object protection	23	+15%	18	518	-54 dBm		125	0%	10 dBm	3.55V	20°C	v.02	yes		3 s
12 504	FLA-07	Sector 07	Area B	Object protection	23	-	25	502	-49 dBm		0	0%	10 dBm	3.56V	21°C	v.02	yes		0 s
			A D	Object protection	00	200/	22	605	-48 dBm		0	0%	10 dBm	3.56V	20°C	v.02	yes		1 s
12 505	FLA-07	Sector 07	Area B	Object protection	23	-30%	~~	0000	10 0.0111										
12 505 12 506	FLA-07 FLA-07	Sector 07 Sector 07	Area B Area C	Object protection	23	-30%	23	499	-51 dBm		3	0%	10 dBm	3.55V	20°C	v.02	yes		3 s
12 505 12 506 12 507	FLA-07 FLA-07 FLA-07	Sector 07 Sector 07 Sector 07	Area B Area C Area C	Object protection Object protection Object protection	23 23 23	-30%	23 19	499 558	-51 dBm -72 dBm		3 0	0% 0%	10 dBm 10 dBm	3.55V 3.54V	20°C 21°C	v.02 v.02	yes yes		3 s 0 s
12 505 12 506 12 507 12 508	FLA-07 FLA-07 FLA-07 FLG-07	Sector 07 Sector 07 Sector 07 Sector 07	Area C Area C Area C Area C	Object protection Object protection Object protection	23 23 23 23	-30%	23 19 20	499 558 623	-51 dBm -72 dBm -50 dBm		3 0 0	0% 0% 0%	10 dBm 10 dBm 10 dBm	3.55V 3.54V 2.51V	20°C 21°C 20°C	v.02 v.02 v.02	yes yes yes		3 s 0 s 3 s

Fig. - Operating screen for technicians (Detectors on-line agenda)

# **Configuration options**

All acceleration tags (detectors) of the Anarya Alarm system use a 3-axis acceleration sensor to detect the slightest movements, shocks, vibrations of the object on which they are placed. The sensitivity of all tags can be conveniently set by the user using the Ronyo Server program. Each tag can have a different sensitivity. The system can declare a fault condition in the event of a tag failure, and the consequence of the failure will be the absence of its regular transmission.

The system can declare an alarm condition if a tag moves far enough that it is no longer in the system's radio range.

## Unit FLU-05

- dimension: 260x180x62 mm
- Polyester box
- Ucc= 8.5 28 V DC



## Unit FLM-05

- dimension: 260x180x62 mm
- Polycarbonate box
- Ucc= 8.5 28 V DC





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