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ELAUSYS

EVO-KNX

KNX Interface for Paradox alarm system

User Manual



Document history			
Version.	Date	Author	Comment
1.00	14-AUG-2017	NDE	First issue
2.00	08-FEB-2018	NDE	Update firmware to standard Elausys "Alarm System Gateway V2.00" ETS Application
2.01	20-MAR-2018	NDE	Added details on configuration of the PRT3 interface
2.02	27-JUL-2018	NDE	Added troubleshooting information
2.03	31-JAN-2022	NDE	Added troubleshooting information



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1. INTRODUCTION

The KNX interface module EVO-KNX is a KNX gateway for the Paradox EVO alarm systems. It enables bidirectional communication with the alarm system using the RS232 communication module (PRT3) from Paradox.


It allows integrators to take advantage of a fully integrated alarm system including KNX scenarios, automatic lighting using the motion detectors, arming or monitoring the system using a KNX visualization.

Main features:

- KNX Interface for Paradox EVO alarm systems
- Up to **30 PGM status**
- Up to **96 zone status**
- Control up to **16 virtual inputs**
- Control up to **4 areas** (arm/partial/disarm)
- 9 status per area (alarm, entry, exit, fire,...)
- Recall of KNX **scenes** for each status
- Battery and AC Failure monitoring
- Galvanic insulation from the KNX bus

By default, zone status is configured for zone 1 to 96 of the alarm system. A general parameter allows to change for zone 97 to 192. Having then the possibility to use two gateways in the same installation to cover the 192 zones of the alarm system.

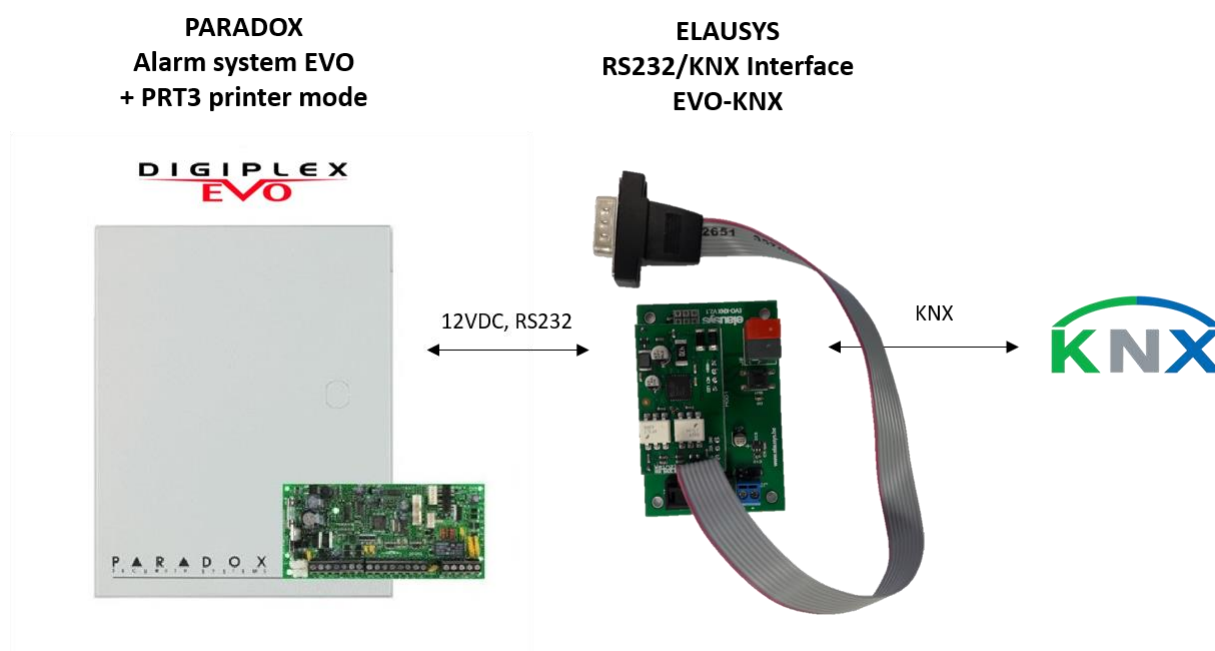
In the same way, areas are configured for areas 1 to 4 of the alarm system but a parameter allows to change the area number to cover the areas 5 to 8 if required.

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2. OVERVIEW


2.1 USAGE & LIMITATION

This interface is intended to be used with a PARADOX EVO or DGP series alarm system. The system must be equipped with a PRT3 module for RS232 communication.



2.1 SOFTWARE

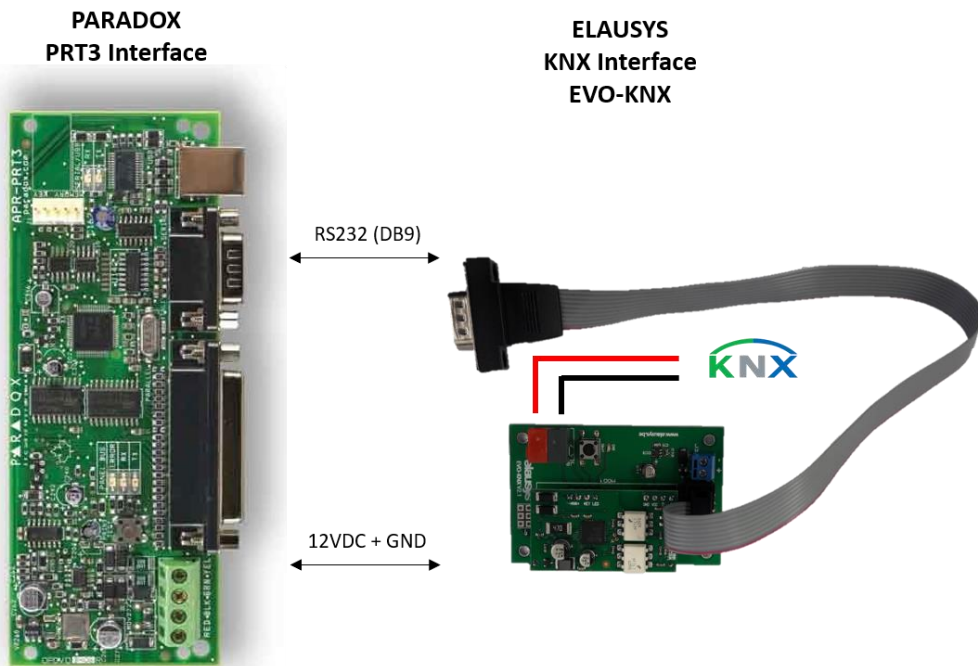
The KNX Interface is configured using the ETS tool, the free ETS Demo version can be [downloaded](#) from the website of KNX Association. The free version allows to configure up to 5 KNX modules in a project, the KNX gateway is only one module.

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2.2 CONNECTION DIAGRAM

Elausys EVO-KNX module requires an external 12VDC power supply which can be provided by the AUX power supply of the alarm system.

The RS232 connection between the PRT3 and the EVO-KNX interface is made using the DB9 connector provided with this module. No additional component or wiring is required. The PRT3 module must be configured at 9600 baud.



2.3 CONFIGURING THE PRT3 INTERFACE

To enable the communication with the EVO-KNX module, the following options must be selected in the PRT3 configuration:

In the PRT3 tab "Options":

APR3-PRT3 Programming

File Edit

Label	Location	Serial #
Module 001		8200305A

Programming Messages

Areas and Zones Options Manual Printing Virtual Inputs Virtual PGMs C-Bus Report Options/Mess:

Section	Feature	Value
[-] Events group auto printing		
[014]1	Print Misc Events	<input type="checkbox"/>
[014]2	Print arming disarming events	<input checked="" type="checkbox"/>
[014]3	Print alarm restore events	<input type="checkbox"/>
[014]4	Print tamper restore events	<input type="checkbox"/>
[014]5	Print troubles restore events	<input checked="" type="checkbox"/>
[014]6	Print special events	<input checked="" type="checkbox"/>
[014]7	Print access events	<input type="checkbox"/>
[-] Printer setup options		
[015]1	Parallel port enabled	<input type="checkbox"/>
[015]3	Offline status ignored	<input type="checkbox"/>
[015]4	Paper empty status ignored	<input type="checkbox"/>
[015]5	Printer fault status ignored	<input type="checkbox"/>
[015]6	Printer busy status ignored	<input type="checkbox"/>
[-] Serial port setup options		
[016]1	Serial port enabled	<input checked="" type="checkbox"/>
[016]4	OFF:Event Reporting; ON:Home Automation	<input checked="" type="checkbox"/>
[016]2/3	Baud rate setting	9600
[016]5/6	Home Automation	Ascii Protocol

In the tab “Areas and Zones”, select the areas and zones that should be enabled in the interface:

APR3-PRT3 Programming

Label	Location	Serial #
Module 001		8200305A

Section	Feature	Value
Areas		
[001]/1	Area1	<input checked="" type="checkbox"/>
[001]/2	Area2	<input checked="" type="checkbox"/>
[001]/3	Area3	<input type="checkbox"/>
[001]/4	Area4	<input checked="" type="checkbox"/>
[001]/5	Area5	<input type="checkbox"/>
[001]/6	Area6	<input type="checkbox"/>
[001]/7	Area7	<input type="checkbox"/>
[001]/8	Area8	<input type="checkbox"/>
Zone status printing		
[002]/1	Zone1	<input checked="" type="checkbox"/>
[002]/2	Zone2	<input checked="" type="checkbox"/>
[002]/3	Zone3	<input checked="" type="checkbox"/>
[002]/4	Zone4	<input type="checkbox"/>
[002]/5	Zone5	<input type="checkbox"/>
[002]/6	Zone6	<input type="checkbox"/>
[002]/7	Zone7	<input type="checkbox"/>
[002]/8	Zone8	<input type="checkbox"/>

If virtual inputs and PGM need to be used, they should be enabled in the respective tabs:

APR3-PRT3 Programming

Label	Location	Serial #
Module 001		8200305A

Programming Messages

Areas and Zones Options Manual Printing Virtual Inputs Virtual PGMs C-Bus Report O

Section	Feature	Value
Virtual Input 1		
[700]34	Input Close	Event
[700]1	Input Enabled	<input checked="" type="checkbox"/>
[700]5	Base Time	seconds
[700]2	Application	CBus Lighting [Hex]
[701]	Timer	5
[702]	Open Group Address	0
[703]	Open Command	ON
[704]	Close Group Address	0
[705]	Close Command	OFF
[706]	Ramp Threshold	0

APR3-PRT3 Programming

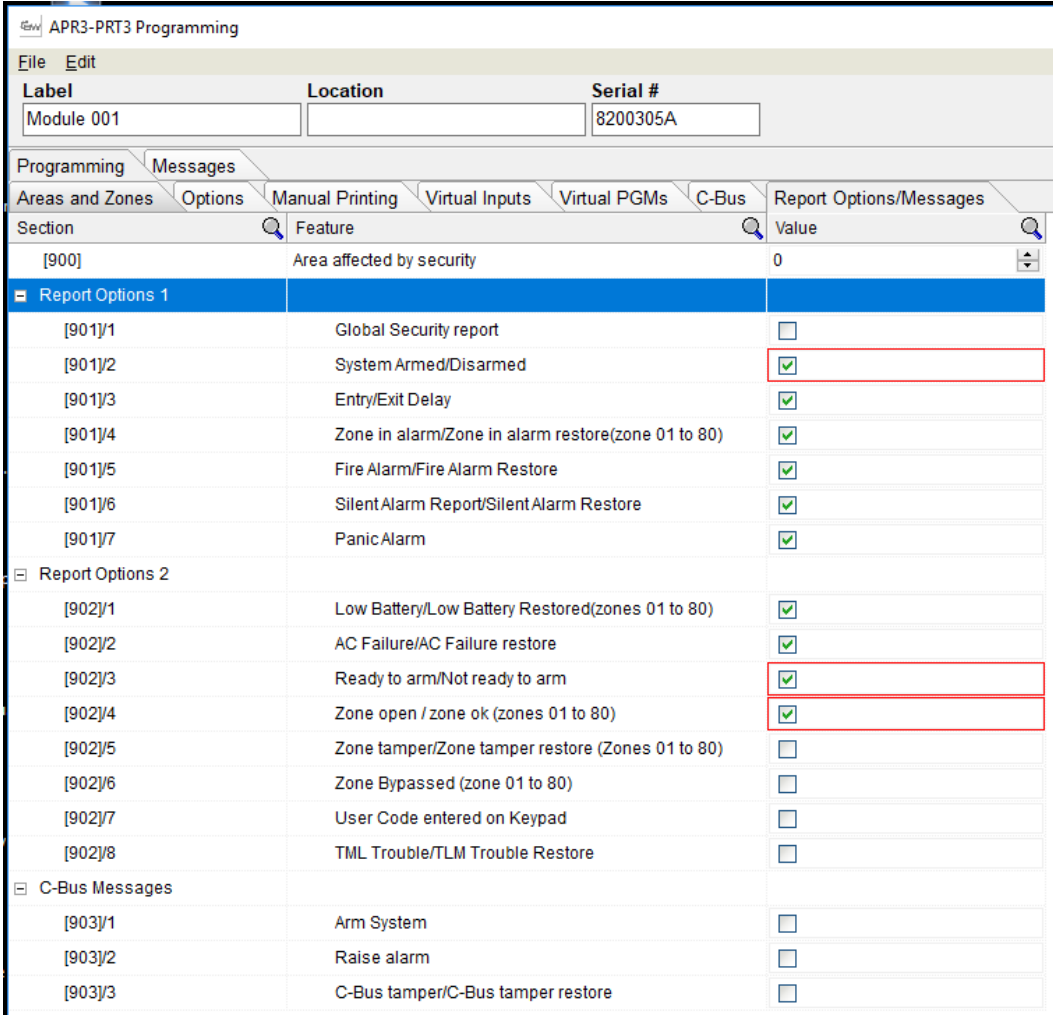
Label	Location	Serial #
Module 001		8200305A

Programming Messages


Areas and Zones Options Manual Printing Virtual Inputs Virtual PGMs C-Bus Report Options/Messages

Section	Feature	Value
Virtual PGMs #01		
[100]	Deactivation Mode	Event
[100](4)	Resend	<input type="checkbox"/>
[101]	PGM Timer	10
[100](3)	Timer Units	seconds
<input checked="" type="checkbox"/>	Activation Event	
[102]	Event	Zone Opened
[103],[104]	Range start	Zone 001
[105]	Range end	Zone 001
	Area (Not Available)	
<input checked="" type="checkbox"/>	Deactivation Event	
[106]	Event	Zone OK
[107],[108]	Range start	Zone 001
[109]	Range end	Zone 001
	Area (Not Available)	

In the tab “Report Options / Messages”, select everything under report options 1 and 2.



Section	Feature	Value
[900]	Area affected by security	0
Report Options 1		
[901]/1	Global Security report	<input type="checkbox"/>
[901]/2	System Armed/Disarmed	<input checked="" type="checkbox"/>
[901]/3	Entry/Exit Delay	<input checked="" type="checkbox"/>
[901]/4	Zone in alarm/Zone in alarm restore(zone 01 to 80)	<input checked="" type="checkbox"/>
[901]/5	Fire Alarm/Fire Alarm Restore	<input checked="" type="checkbox"/>
[901]/6	Silent Alarm Report/Silent Alarm Restore	<input checked="" type="checkbox"/>
[901]/7	Panic Alarm	<input checked="" type="checkbox"/>
Report Options 2		
[902]/1	Low Battery/Low Battery Restored(zones 01 to 80)	<input checked="" type="checkbox"/>
[902]/2	AC Failure/AC Failure restore	<input checked="" type="checkbox"/>
[902]/3	Ready to arm/Not ready to arm	<input checked="" type="checkbox"/>
[902]/4	Zone open / zone ok (zones 01 to 80)	<input checked="" type="checkbox"/>
[902]/5	Zone tamper/Zone tamper restore (Zones 01 to 80)	<input type="checkbox"/>
[902]/6	Zone Bypassed (zone 01 to 80)	<input type="checkbox"/>
[902]/7	User Code entered on Keypad	<input type="checkbox"/>
[902]/8	TML Trouble/TLM Trouble Restore	<input type="checkbox"/>
C-Bus Messages		
[903]/1	Arm System	<input type="checkbox"/>
[903]/2	Raise alarm	<input type="checkbox"/>
[903]/3	C-Bus tamper/C-Bus tamper restore	<input type="checkbox"/>

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3. PARAMETERS

The KNX interface parameters are defined in the “parameters” tab of the device, in the ETS project.


3.1 GENERAL SETTINGS

The following parameters are defined in the General section of the device parameters:

PARAMETER	VALUES	DESCRIPTION
Use PG Control	<ul style="list-style-type: none"> ▪ Not used (default) ▪ Used 	This parameter must be set to “Not used” for the paradox EVO interface. PG Control is not available on this device.
Use PG Status	<ul style="list-style-type: none"> ▪ Not used (default) ▪ Used 	When this parameter is set to “Used”, the PG status group objects are made available.
Number of PG	<ul style="list-style-type: none"> ▪ 16 (default) ▪ 32 	Number of PG control and status group objects to be used
Use Zone Status	<ul style="list-style-type: none"> ▪ Not used ▪ Used (default) 	When this parameter is set to “Used”, the zone status group objects are made available.
Number of zones	<ul style="list-style-type: none"> ▪ 16 (default) ▪ 32 ▪ 48 ▪ 64 ▪ 72 ▪ 96 	Number of zone status group objects to be used.
Zones offset	<ul style="list-style-type: none"> ▪ 0 (default) ▪ 96 	An offset of 0 will use zones 1 to 96 from the alarm system whereas an offset of 96 will use zones 97 to 192

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Use Virtual inputs	<ul style="list-style-type: none"> ▪ Not used (default) ▪ Used 	When this parameter is set to "Used", the virtual inputs group objects are made available.
Number of areas	<ul style="list-style-type: none"> ▪ 1 (default) ▪ 2 ▪ 3 ▪ 4 	Number of areas to control/monitor from the KNX interface
Send area status	<ul style="list-style-type: none"> ▪ ON ▪ OFF ▪ ON/OFF (default) 	Area status object can be configured to send only the changes to ON values, only the changes to OFF values or both ON and OFF values
User code	Text field (format 123456)	When using control commands from KNX, a valid user code of up to 6 digits is required. This applies to area control (arm, disarm,...)
User code lenght	4..6	Number of digits for the user code
Use Power supply status	<ul style="list-style-type: none"> ▪ Not used (default) ▪ Used 	When this parameter is set to "Used", the power supply stauts group objects aobjects are made available.
PG and Zone startup behavior	<ul style="list-style-type: none"> ▪ Switch OFF (default) ▪ Switch ON ▪ Memory 	Internal status of group object after restart. Memory will restore the state of group objects before power lost.
Device Options	Text string	Device options are not available on this device.

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3.2 PGM

PG Status must be enabled in the general parameters to enable PGM status group objects. Depending on the general parameter “Number of PG”, 16 or 32 PGs are listed in the group objects. The Paradox alarm system however uses a maximum of 30 PGM.

The status of each PGM from the Paradox alarm system can be monitored by a Group object. The PGM can be configured in the Paradox system to send status based on specific events.

3.3 ZONE

Depending the general parameter “Number of zones”, up to 96 zones are listed in the group objects.

The status of each zone from the Paradox alarm system can be monitored by a Group object.


The general parameter “Zones offset” allow to use zones 1 to 96 from the alarm system or zones 97 to 192.

3.1 VIRTUAL INPUT

When enabled in the general parameters, 16 virtual inputs are listed in the group objects.

Each virtual input can be controlled by a KNX Group object. The virtual input is configured in the Paradox system in order to trigger specific events.

Sending a value “1” to the group object means “Zone open”, sending a value “0” means “Zone OK”.

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3.2 AREA

Depending the general parameter “Number of areas”, up to 4 areas are listed in the group objects.

Each area can be controlled by using the 3 group objects: Arm, partial arm or disarm. Several statuses are available and have a dedicated group object.

CONTROL OBJECT	VALUE ON	VALUE OFF
Arm (switch)	Arm	Disarm
Partial arm (switch)	Partial Arm	Disarm
Disarm (trigger)	Disarm	Disarm


For each area, a tab is made visible to configure the area parameters.

Areas are configured for areas 1 to 4 of the alarm system but by changing the parameter “Area mapping” it is also possible to cover the areas 5 to 8.

A scene can be assigned to each status. This scene number will be recalled each time the zone status is active (ON).

Leave the scene number to 0 to disable the scene control.

STATE	SCENE
Disarmed	0..64
Entry	0..64
Exit	0..64
Armed	0..64
Partial armed	0..64
Fire alarm	0..64
Siren ON (Audible alarm)	0..64
Panic alarm (Silent alarm)	0..64
Intrusion alarm	0..64

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4. COMMUNICATION OBJECTS

4.1 GENERAL

General communication objects of the device.

GO	NAME	DESCRIPTION
1	Module status	Sends 0 when the module is operating normally, sends an error code when applicable.
2	Firmware	Sends the firmware version of the device at s
233	Call scene	The scene number configured for each area status are sent to KNX whenever the area status is activated

4.2 POWER SUPPLY

GO	NAME	DESCRIPTION
163	AC Failure	Active when the main power supply of the alarm system is down.
164	Battery Failure	Active when the battery is low

4.3 PGM

Each PGM has 1 Group Objects (GO) for the status to KNX.

GO	NAME	DESCRIPTION
2	PGx Status	PG status

This chapter details what GO are available for each PG. The same GO applies to all other PG (x = 1 to 32).

4.4 ZONE

Each ZONE has 1 Group Objects (GO) for the status to KNX.

GO	NAME	DESCRIPTION
67	Zone x Status	Zone status

This chapter details what GO are available for each ZONE. The same GO applies to all other ZONE (x = 1 to 96).

4.5 VIRTUAL INPUT

Each VIRTUAL INPUT has 1 Group Objects (GO) to be controlled from KNX.


GO	NAME	DESCRIPTION
169	Virtual Input x	Virtual input control (open / OK)

This chapter details what GO are available for each Virtual Input. The same GO applies to all other Virtual Input (x = 1 to 16).

4.6 AREA


Each area has 12 Group Objects (GO), 3 for area control and 9 for the area status to KNX.

GO	NAME	DESCRIPTION
185	Area x - Arm	Arm the Area
186	Area x – Stay arm	Stay arm the Area
187	Area x – Disarm	Disarm the Area
188	Area x – State disarmed	Area x status
189	Area x – Entry delay	Area x status
190	Area x – Exit delay	Area x status
191	Area x – State armed	Area x status
192	Area x – State partial armed	Area x status

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193	Area x – Fire alarm	Area x status
194	Area x – Siren ON	Area x status
195	Area x – Panic alarm	Area x status
196	Area x – Intrusion alarm	Area x status

This chapter details what GO are available for each AREA. The same GO applies to all other areas (x = 1 to 4).


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4.7 GROUP OBJECT LIST

GO	Name	Function	Size	Flags	Type ID	Type Name	Range	Description
1	Module status	Status code	1 byte	C R - T -	20.011	DPT_ErrorClass_System		Device error code
2	Firmware	Text string	14 bytes	C R - T -	16.000	DPT_String_ASCII		Device firmware version
3	PG1	On/Off	1 bit	C - W - -	1.001	DPT_Switch	0..1	PG – On/Off (NOT USED)
4	PG1 Status	On/Off	1 bit	C R - T -	1.001	DPT_Switch	0..1	PG – On/Off status
5	PG2	On/Off	1 bit	C - W - -	1.001	DPT_Switch	0..1	PG – On/Off (NOT USED)
6	PG2 Status	On/Off	1 bit	C R - T -	1.001	DPT_Switch	0..1	PG – On/Off status
...	<i>Same for PG3 to PG31</i>							
64	PG32	On/Off	1 bit	C - W - -	1.001	DPT_Switch	0..1	PG – On/Off (NOT USED)
66	PG32 Status	On/Off	1 bit	C R - T -	1.001	DPT_Switch	0..1	PG – On/Off status
67	Zone 1 Status	On/Off	1 bit	C R - T -	1.001	DPT_Switch	0..1	Zone – On/Off status
68	Zone 2 Status	On/Off	1 bit	C R - T -	1.001	DPT_Switch	0..1	Zone – On/Off status
...	<i>Same for Zone 3 to 95</i>							
162	Zone 96 Status	On/Off	1 bit	C R - T -	1.001	DPT_Switch	0..1	Zone – On/Off status
163	AC Failure	On/Off	1 bit	C R - T -	1.001	DPT_Switch	0..1	On/Off status
164	Battery Failure	On/Off	1 bit	C R - T -	1.001	DPT_Switch	0..1	On/Off status
169	Virtual input 1	Open/Close	1 bit	C - W - -	1.001	DPT_Switch	0..1	Open/close input
170	Virtual input 2	Open/Close	1 bit	C - W - -	1.001	DPT_Switch	0..1	Open/close input
...	<i>Same for input 3 to 15</i>							

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GO	Name	Function	Size	Flags	Type ID	Type Name	Range	Description
184	Virtual input 16	Open/Close	1 bit	C - W - -	1.001	DPT_Switch	0..1	Open/close input
185	Area 1 - Arm	On/Off	1 bit	C - W - -	1.017	DPT_Switch	0..1	Arm Area
186	Area 1 – Partial arm	On/Off	1 bit	C - W - -	1.017	DPT_Switch	0..1	Partial arm Area
187	Area 1 – Disarm	On	1 bit	C - W - -	1.017	DPT_Trigger	0..1	Disarm Area
188	Area 1 – state disarmed	On/Off	1 bit	C R - T -	1.001	DPT_Switch	0..1	Area state disarmed
189	Area 1 – entry delay	On/Off	1 bit	C R - T -	1.001	DPT_Switch	0..1	Area entry delay status
190	Area 1 – exit delay	On/Off	1 bit	C R - T -	1.001	DPT_Switch	0..1	Area exit delay status
191	Area 1 – state armed	On/Off	1 bit	C R - T -	1.001	DPT_Switch	0..1	Area state armed status
192	Area 1 – state partial armed	On/Off	1 bit	C R - T -	1.001	DPT_Switch	0..1	Area state partial armed status
193	Area 1 – Fire alarm	On/Off	1 bit	C R - T -	1.001	DPT_Switch	0..1	Area fire alarm
194	Area 1 – Siren ON	On/Off	1 bit	C R - T -	1.001	DPT_Switch	0..1	Area siren ON
195	Area 1 – Panic alarm	On/Off	1 bit	C R - T -	1.001	DPT_Switch	0..1	Area panic alarm
196	Area 1 – Intrusion alarm	On/Off	1 bit	C R - T -	1.001	DPT_Switch	0..1	Area intrusion alarm
...	<i>Same for AREA 2 to 4</i>							
233	Call scene	-	1 Byte	C - - T -	18.001	DPT_SceneControl	1..64	Scene control

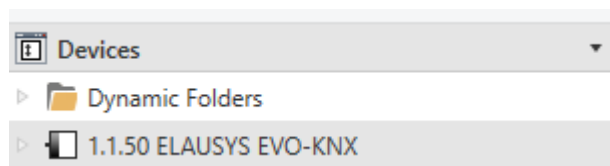
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5. CONFIGURATION

5.1 PHYSICAL DEVICE

ELAUSYS devices are configured using the ETS tool. You should first download and install the free version of ETS tool before you continue.

The EVO-KNX Interface must be assigned a physical address on the KNX network. Assign a free address to the module, in our example we choose 1.1.50.




5.2 PARAMETERS

Once a KNX physical address is set, open the parameter tab to configure the interface. The parameters are grouped into sections: A general section and a section for each area configured.

1.1.50 ELAUSYS EVO-KNX > General

<p>General</p> <ul style="list-style-type: none"> Area 1 Area 2 Area 3 Area 4 	<p>PG</p> <p>Use PG Control : <input checked="" type="radio"/> Not used <input type="radio"/> Used</p> <p>Use PG Status : <input type="radio"/> Not used <input checked="" type="radio"/> Used</p> <p>Number of PG : <input type="radio"/> 16 <input checked="" type="radio"/> 32</p> <p>Zones</p> <p>Use Zone Status : <input type="radio"/> Not used <input checked="" type="radio"/> Used</p> <p>Number of zones : <input type="text" value="96"/></p> <p>Zones Offset : <input checked="" type="radio"/> 0 <input type="radio"/> 96</p> <p>Use Virtual Inputs : <input type="radio"/> Not used <input checked="" type="radio"/> Used</p> <p>Areas</p> <p>Number of Areas : <input type="text" value="4"/></p> <p>Send Area Status : <input type="text" value="ON/OFF"/></p> <p>General</p> <p>User code : <input type="text" value="123456"/></p> <p>User code lenght : <input type="text" value="6"/></p> <p>Use Power Supply Status : <input type="radio"/> Not used <input checked="" type="radio"/> Used</p> <p>PG and Zone startup behavior : <input type="text" value="Switch OFF"/></p> <p>Device options : <input type="text"/></p>
--	---

In the general section, enter a valid user code from the Paradox system to enable area control.

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Enable the required group objects and select the number of PG, zone and areas to be used. Note that the Paradox system is limited to 30 PGMs and only PGM status is available (no PG control). For each Area selected, a tab is available in the left side menu to configure the scene control.

Open the first Area parameters by selecting the section “Area 1”.

By default Area 1 is mapped to area 1 of the alarm system, by changing this value to 5 for example, Area 1 of the KNX interface would be linked to area 5 in the alarm system.


For each status of the Area, set the scene number to be called. Leaving the scene number to 0 will disable it.

1.1.50 ELAUSYS EVO-KNX > Area 1

General	Area mapping :	1
Area 1	Call scene when :	
Area 2	Disarm :	1
Area 3	Entry :	2
Area 4	Exit :	3
	Arm :	4
	Partial armed :	5
	Fire alarm :	6
	Siren ON :	7
	Panic alarm :	8
	Intrusion Alarm :	9

Then repeat the same process for each Area in your project.

When GO and parameters are all configured, download the KNX Interface application to the device. The first download requires to press the programming button on the device to set the device in KNX programming mode then perform a full download.

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5.3 GROUP OBJECTS

A group address (GA) must be assigned to each group object (GO) needed by the application. Open the Group Objects tab of the device and assign a GA to the object scene, PGM, zones, virtual inputs and areas as needed.

14	PG 1 Status	On/Off	PG	1/1/1	1 bit	C	R	-	T	-	switch	Low
16	PG 2 Status	On/Off	PG	1/1/2	1 bit	C	R	-	T	-	switch	Low
18	PG 3 Status	On/Off			1 bit	C	R	-	T	-	switch	Low
20	PG 4 Status	On/Off			1 bit	C	R	-	T	-	switch	Low
22	PG 5 Status	On/Off			1 bit	C	R	-	T	-	switch	Low
24	PG 6 Status	On/Off			1 bit	C	R	-	T	-	switch	Low
26	PG 7 Status	On/Off			1 bit	C	R	-	T	-	switch	Low
28	PG 8 Status	On/Off			1 bit	C	R	-	T	-	switch	Low
30	PG 9 Status	On/Off			1 bit	C	R	-	T	-	switch	Low
32	PG 10 Status	On/Off			1 bit	C	R	-	T	-	switch	Low
34	PG 11 Status	On/Off			1 bit	C	R	-	T	-	switch	Low
36	PG 12 Status	On/Off			1 bit	C	R	-	T	-	switch	Low
38	PG 13 Status	On/Off			1 bit	C	R	-	T	-	switch	Low
40	PG 14 Status	On/Off			1 bit	C	R	-	T	-	switch	Low
42	PG 15 Status	On/Off			1 bit	C	R	-	T	-	switch	Low
44	PG 16 Status	On/Off			1 bit	C	R	-	T	-	switch	Low

Example for Area 1:

Number	Name	Object Function	Description	Group Address	Length	C	R	W	T	U	Data Type	Priority
185	Area 1 - Arm	On/Off	Arm	2/1/1	1 bit	C	-	W	-	-	switch	Low
186	Area 1 - Partial Arm	On/Off	Partial Arm	2/1/2	1 bit	C	-	W	-	-	switch	Low
187	Area 1 - Disarm	On	Disarm	2/1/3	1 bit	C	-	W	-	-	trigger	Low
188	Area 1 - Disarmed	On/Off	State disarmed	2/1/13	1 bit	C	R	-	T	-	switch	Low
189	Area 1 - Entry delay	On/Off	Entry	2/1/9	1 bit	C	R	-	T	-	switch	Low
190	Area 1 - Exit delay	On/Off	Exit	2/1/10	1 bit	C	R	-	T	-	switch	Low
191	Area 1 - Armed	On/Off	State armed	2/1/12	1 bit	C	R	-	T	-	switch	Low
192	Area 1 - Partial Armed	On/Off	State armed parti...	2/1/11	1 bit	C	R	-	T	-	switch	Low
193	Area 1 - Fire Alarm	On/Off	Fire	2/1/5	1 bit	C	R	-	T	-	switch	Low
194	Area 1 - Siren ON	On/Off	Audible alarm	2/1/14	1 bit	C	R	-	T	-	switch	Low
195	Area 1 - Panic Alarm	On/Off	Panic Alarm	2/1/0	1 bit	C	R	-	T	-	switch	Low
196	Area 1 - Intrusion Alarm	On/Off	Intrusion alarm	2/1/4	1 bit	C	R	-	T	-	switch	Low


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Virtual inputs:

Number	Name	Object Function	Description	Group Address	Length	C	R	W	T	U	Data Type	Priority
169	Virtual Input 1	Open/Close	Virtual Input 1	3/0/1	1 bit	C	-	W	-	-	switch	Low
170	Virtual Input 2	Open/Close	Virtual Input 2	3/0/2	1 bit	C	-	W	-	-	switch	Low
171	Virtual Input 3	Open/Close			1 bit	C	-	W	-	-	switch	Low
172	Virtual Input 4	Open/Close			1 bit	C	-	W	-	-	switch	Low
173	Virtual Input 5	Open/Close			1 bit	C	-	W	-	-	switch	Low
174	Virtual Input 6	Open/Close			1 bit	C	-	W	-	-	switch	Low
175	Virtual Input 7	Open/Close			1 bit	C	-	W	-	-	switch	Low
176	Virtual Input 8	Open/Close			1 bit	C	-	W	-	-	switch	Low
177	Virtual Input 9	Open/Close			1 bit	C	-	W	-	-	switch	Low
178	Virtual Input 10	Open/Close			1 bit	C	-	W	-	-	switch	Low
179	Virtual Input 11	Open/Close			1 bit	C	-	W	-	-	switch	Low
180	Virtual Input 12	Open/Close			1 bit	C	-	W	-	-	switch	Low
181	Virtual Input 13	Open/Close			1 bit	C	-	W	-	-	switch	Low
182	Virtual Input 14	Open/Close			1 bit	C	-	W	-	-	switch	Low
183	Virtual Input 15	Open/Close			1 bit	C	-	W	-	-	switch	Low
184	Virtual Input 16	Open/Close	Virtual Input 16	3/0/16	1 bit	C	-	W	-	-	switch	Low

Power supply status:

Number	Name	Object Function	Description	Group Address	Length	C	R	W	T	U	Data Type	Priority
163	AC Failure	On/Off	Power supply	0/0/3	1 bit	C	R	-	T	-	switch	Low
164	Battery Failure	On/Off	Battery	0/0/2	1 bit	C	R	-	T	-	switch	Low

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Zone status:

Number	Name	Object Function	Description	Group Address	Length	C	R	W	T	U	Data Type	Priority
67	Zone 1 Status	On/Off	Zone status	4/0/1	1 bit	C	R	-	T	-	switch	Low
68	Zone 2 Status	On/Off	Zone status	4/0/2	1 bit	C	R	-	T	-	switch	Low
69	Zone 3 Status	On/Off	Zone status	4/0/3	1 bit	C	R	-	T	-	switch	Low
70	Zone 4 Status	On/Off	Zone status	4/0/4	1 bit	C	R	-	T	-	switch	Low
71	Zone 5 Status	On/Off			1 bit	C	R	-	T	-	switch	Low
72	Zone 6 Status	On/Off			1 bit	C	R	-	T	-	switch	Low
73	Zone 7 Status	On/Off			1 bit	C	R	-	T	-	switch	Low
74	Zone 8 Status	On/Off			1 bit	C	R	-	T	-	switch	Low
75	Zone 9 Status	On/Off			1 bit	C	R	-	T	-	switch	Low
76	Zone 10 Status	On/Off			1 bit	C	R	-	T	-	switch	Low
77	Zone 11 Status	On/Off			1 bit	C	R	-	T	-	switch	Low
78	Zone 12 Status	On/Off			1 bit	C	R	-	T	-	switch	Low
79	Zone 13 Status	On/Off			1 bit	C	R	-	T	-	switch	Low
80	Zone 14 Status	On/Off			1 bit	C	R	-	T	-	switch	Low
81	Zone 15 Status	On/Off			1 bit	C	R	-	T	-	switch	Low
82	Zone 16 Status	On/Off			1 bit	C	R	-	T	-	switch	Low
83	Zone 17 Status	On/Off			1 bit	C	R	-	T	-	switch	Low
84	Zone 18 Status	On/Off			1 bit	C	R	-	T	-	switch	Low
85	Zone 19 Status	On/Off			1 bit	C	R	-	T	-	switch	Low
86	Zone 20 Status	On/Off			1 bit	C	R	-	T	-	switch	Low
87	Zone 21 Status	On/Off			1 bit	C	R	-	T	-	switch	Low
88	Zone 22 Status	On/Off			1 bit	C	R	-	T	-	switch	Low
89	Zone 23 Status	On/Off			1 bit	C	R	-	T	-	switch	Low
90	Zone 24 Status	On/Off			1 bit	C	R	-	T	-	switch	Low
91	Zone 25 Status	On/Off			1 bit	C	R	-	T	-	switch	Low
92	Zone 26 Status	On/Off			1 bit	C	R	-	T	-	switch	Low
93	Zone 27 Status	On/Off			1 bit	C	R	-	T	-	switch	Low
94	Zone 28 Status	On/Off			1 bit	C	R	-	T	-	switch	Low
95	Zone 29 Status	On/Off			1 bit	C	R	-	T	-	switch	Low
96	Zone 30 Status	On/Off			1 bit	C	R	-	T	-	switch	Low
97	Zone 31 Status	On/Off			1 bit	C	R	-	T	-	switch	Low
98	Zone 32 Status	On/Off			1 bit	C	R	-	T	-	switch	Low

When GO and parameters are all configured, download the KNX Interface application to the device. The first download requires to press the programming button on the device to set the device in KNX programming mode then perform a full download.

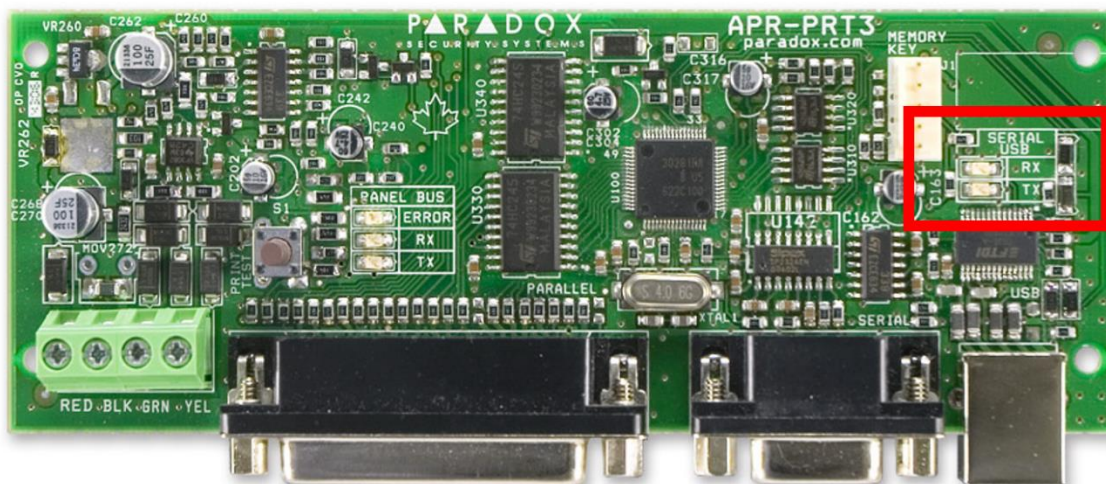
6. FIRMWARE VERSION

This user manual and related ETS application is valid for firmware versions V2.00 and above. A “Firmware” group object is available on the device to read the firmware version as a string. It is also automatically sent at power up.

Number	Name	Object Function	Description	Group Address	Length	C	R	W	T	U	Data Type	Priority
1	Module status	Status code	ModuleStatus	0/0/1	1 byte	C	R	-	T	-	system error class	Low
2	Firmware version	Text string	Firmware	0/0/4	14 bytes	C	R	-	T	-	Character String (AS...	Low


7. TROUBLESHOOTING

In case of troubles to establish the communication, the serial module PRT3 has two LEDs that indicate the status of the serial communication. The RX LED blinks each time a telegram is received by the PRT3 module. The TX LED blinks each time a telegram is sent by the PRT3 module. See picture below.



These LEDs can be used to see if the PRT3 module correctly sends status to the EVO-KNX. When zone reporting is configured, opening or closing a zone should make the TX LED blink once. If this is not the case, the PRT3 configuration is not correct. Verify that all required settings are done according to chapter 2.3.

If the LEDs blink but no telegram is received on the KNX side, verify that the serial cable is properly fit on both cards and that the 12VDC is present on the input terminals. Verify that the ETS application program is loaded in the EVO-KNX gateway and that group addresses are assigned to the required objects. Download the application program and read the firmware version of the EVO-KNX module using the dedicated object.

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IMPORTANT: If no communication can be established, double check the PRT3 settings using the alarm system keypad, it occurs that the settings are not always properly written into the PRT3 module using Babyware software. In that case, settings the parameters from the keypad will solve the problem.

Programming Sections from keypad

To access the Printer Module's programming mode:

- STEP 1: Press and hold the **[0]** key.
- STEP 2: Enter the **[INSTALLER CODE]**.
- STEP 3: Enter section **[4003]** (EVO).
- STEP 4: Enter the Printer Module's 8-digit **[SERIAL NUMBER]**.
- STEP 5: Enter the 3-digit **[SECTION]** you want to program.
- STEP 6: Enter the required data.

Section 016 for the communication options.

- Option 1 : ON
- Option 2 : ON
- Option 3 : OFF
- Option 4 : ON
- Option 5 : OFF
- Option 6 : OFF

Section [016] - Option [1]

Enable Serial Port

When this option is ON (enabled), you can connect the home automation module directly to the Printer Module's 9-pin serial or USB port. Set option **[4]** to ON when using the Printer Module as an interface between a home automation module and the Digiplex system.

Section [016] - Options [2] & [3]

Baud Settings

This option allows you to set the Printer Module's serial port baud rate. Set the Printer Module's baud rate to match that of the home automation module. Refer to the home automation module's documentation to determine what baud rate to set the Printer Module to.

Baud Rate Settings	
[2]	[3]
OFF	OFF – 2400 Baud Δ
ON	OFF – 9600 Baud <input type="checkbox"/>
OFF	ON – 19200 Baud <input type="checkbox"/>
ON	ON – 57600 Baud <input type="checkbox"/>

Δ = default setting

Section [016] - Option [4]

Serial Port Usage

This option allows you to set the Printer Module's serial port usage to either Event Reporting or Home Automation. To set the Printer Module to Home Automation mode, set option **[4]** to ON .


Section [016] - Options [5] & [6]

Home Automation Options

This option allows you to select the home automation protocol for the Printer Module. To select the ASCII Protocol, set options **[5]** and **[6]** to OFF .

Home Automation Settings	
[5]	[6]
OFF	OFF – ASCII Protocol Δ
ON	OFF – Clipsal C-Bus Protocol <input type="checkbox"/>
OFF	ON – N/A
ON	ON – N/A

Δ = default setting

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8. DATASHEET

TECHNICAL DATA	VALUE
Power supply	External 12VDC
Power consumption typ.	< 6 mA
Power consumption KNX bus typ.	< 4 mA @ 29VDC
Operating temperature	5 to + 45°C
Enclosure	None
Dimensions (W x D x H)	66 x 44 x 25mm
Mounting	4 screw holes for direct mounting in the Paradox control panel
KNX terminal	Pluggable micro terminal, Red/Black, 4 pole PUSH WIRE for solid conductor wire 0.6-0.8 mm ²
12VDC input Terminal	Screw terminal 12VDC / GND
RS232 terminal	DB9 connector
Configurable output (PGM)	30
Configurable Virtual inputs	16
Configurable zone status	96
Configurable Areas	4
KNX bus voltage	29 VDC