User manual

version 1.3

KNXpar

- Management alarm control panels Paradox from KNX bus
- Powered from KNX bus
- Communication indication on KNX and with Paradox control panel
- DIN rail mount (1 module)
- Adjustable address on KNX with program KNXpar.exe (free)

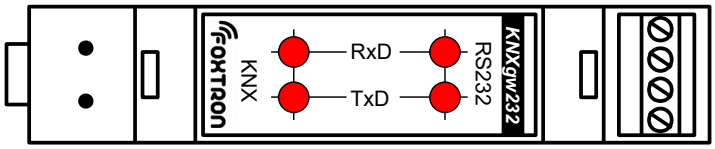
KNXpar is interface between alarm control panels Paradox and KNX bus.

Using KNXpar it is possible to control the alarm control panel and changes in alarm control panel conditions are being sent automatically to the KNX.

KNXpar does not need external power supplier - it is powered from KNX bus.

Technical specification		
consumption (from KNX bus)	10	mA
wires cross section (Paradox)	0,08 – 1,5	mm^2
wires cross section (KNX)	0,6 – 0,8	mm^2
Ingress protection degree (IP)	IP20	
ambient working temperature	0 – 50	°C
storage temperature	-10 – 70	°C
weight	50	g

Signalization	
RS232 RxD	message receiving from alarm control panel
RS232 TxD	message sending to alarm control panel
KNX RxD	Message receiving on KNX addressed to KNXpar
KNX TxD	message sending on KNX

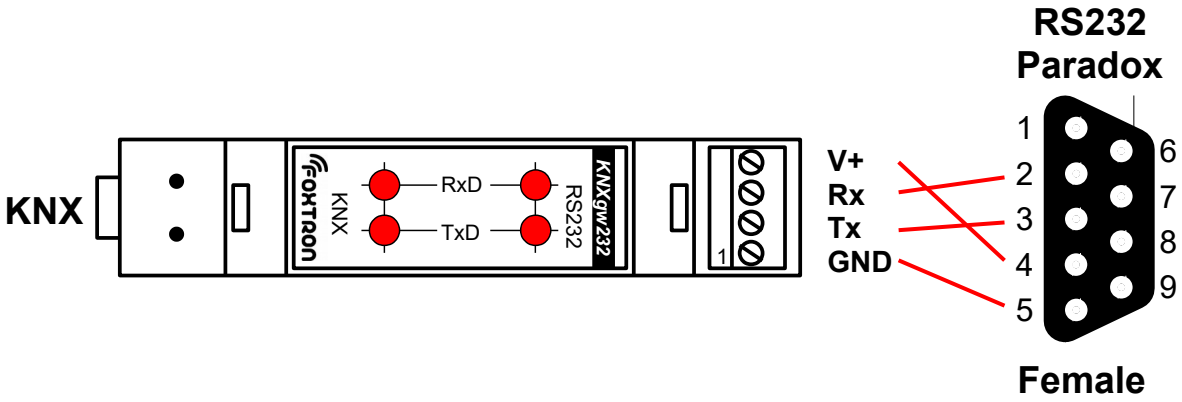


Communication with Paradox control panel

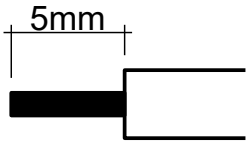
With Paradox control panel communicates KNXpar by serial line RS232 on the module PRT3.

Communication parameters		
Speed	19200	kbps
Data bits number	8	bit
Parity	Not used	
Stop bits number	1	bit

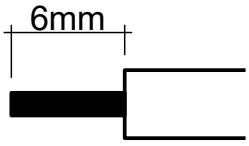
Terminal connection	
GND	Signal ground
Rx	Data transmission
Tx	Receiving data
V+	5-24V – power supply of RS232 part in case of galvanic isolated buses



wire preparation



0,6 – 0,8mm^2



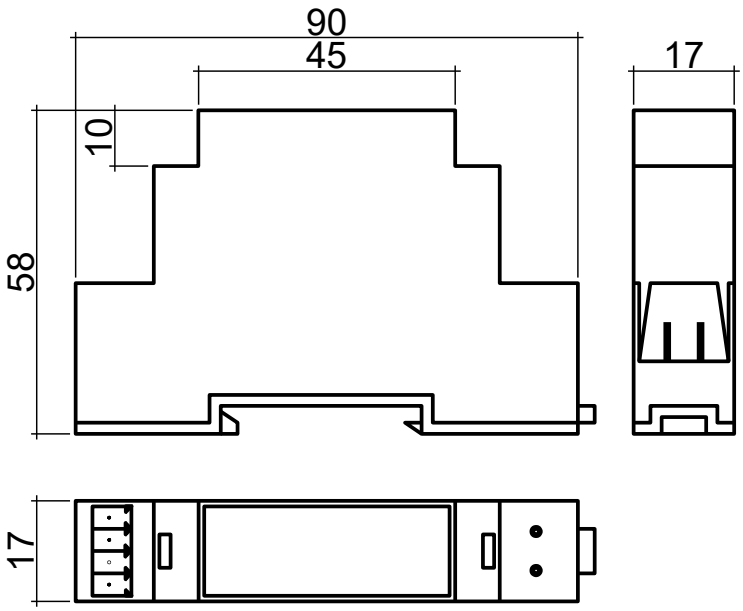
0,08 – 1,5mm^2

Setting of Paradox control panel

The following settings must be made in the Paradox for proper operation.

Parameter	Section	Options	Setting
Enable Serial Port	[016]	[1]	ON
Baud Settings	[016]	[2] [3]	OFF, ON (19200)
Serial Port usage	[016]	[4]	ON (Home Automation)
Home Automation Options	[016]	[5] [6]	OFF, OFF (ASCII Protocol)

Dimensions [mm]

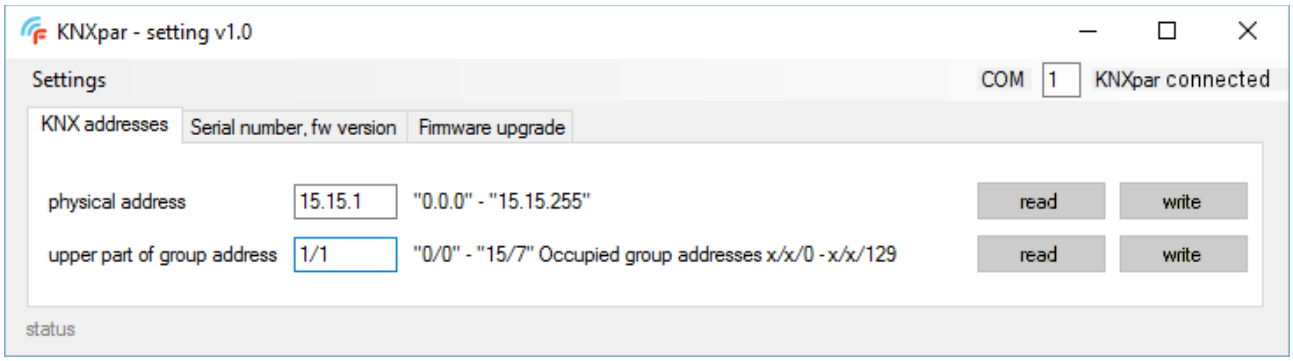


Setup

To setup KNXpar unit serves program KNXpar.exe.

KNXpar is connected with computer by serial line, which is designated in normal usage for communication with Paradox alarm control panel. Before setup it is necessary in item „COM“ to set the number of serial port of the computer to which is KNXpar connected.

Bookmark "KNX address"

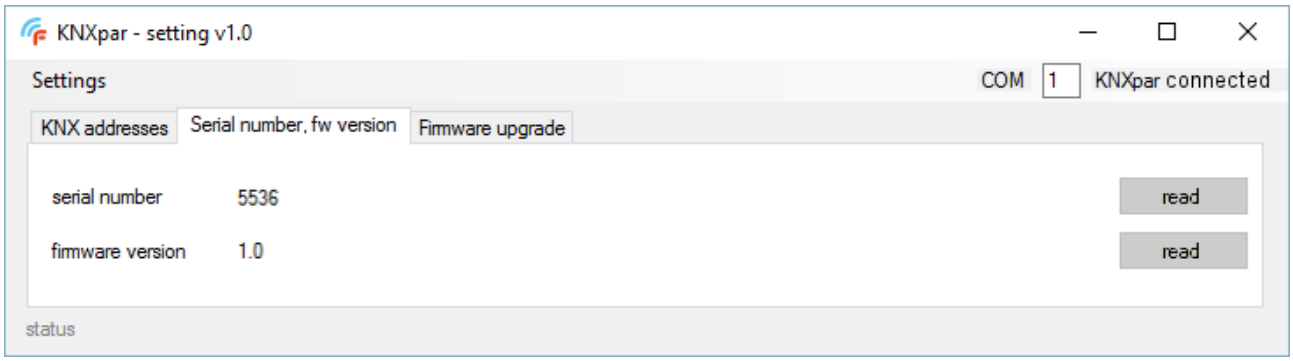


Setup of physical address of the unit and group state address on KNX.

Physical address is given by three numbers in the range of 0-15, 0-15 and 0-255 separated with period. In the picture is shown address 15.15.1

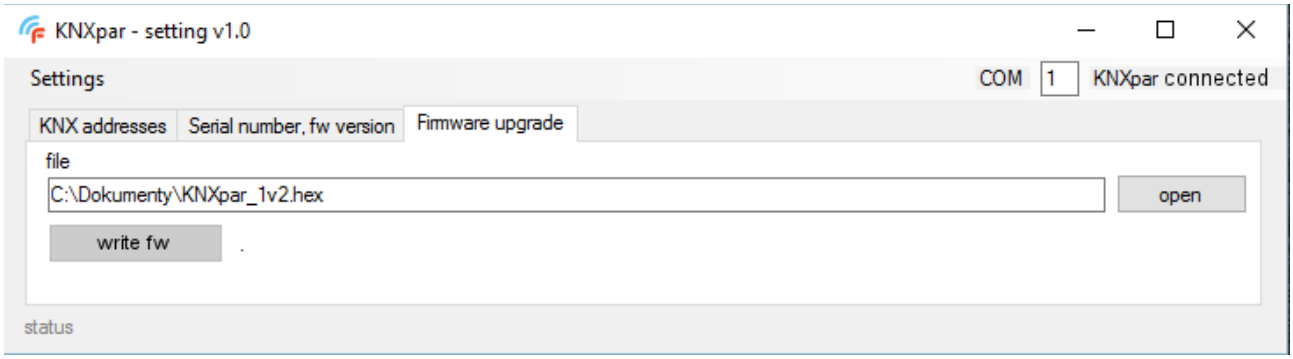
Upper part state address is given by two numbers in the range of 0-15 and 0-7 separated by slash. KNXpar takes 129 address on the KNX bus. Range of these address is given by the shift of „Upper part address state“. In the picture is shown 1/1 which means that used address will be 1/1/0 to 1/1/129. Location of individual states in this range will be described in the part „List of read and controlled states“.

Bookmark "Serial number, fw version"



With “Read” buttons can be serial number and version read from KNXpar.

Bookmark "firmware upgrade"



To overwrite the firmware in KNXpar choose file with new firmware (*.hex) and with button „write fw“ you start firmware overwrite.
Update progress is shown. During the update do not disconnect the unit.

List of read and controlled states

KNX index (x/x/index)	State of Paradox alarm control panel	Data direction	DPT
0	**Communication KNXpar with PRT3Communication failure KNXpar with PRT3**	Paradox → KNX	1 (1b.)
	0 **Communication failure KNXpar with PRT3**		
	1 **Communication KNXpar with PRT3 OK**		
1	**Communication PRT3 with control panel**	Paradox → KNX	1 (1b.)
	0 **Communication failure PRT3 with DIGIPLEX**		
	1 **Communication PRT3 with DIGIPLEX OK**		

2-9 — State of subsystem (Paradox → KNX, 7 (16b.))

15.b.	14.b.	13.b.	12.b.	11.b.	10.b.	9.b.	8.b.	7.b.	6.b.	5.b.	4.b.	3.b.	2.b.	1.b.	0.b.
Not used					**0 – OK 1 – strobe**	**0 – OK 1 – in alarm**	**0 – OK 1 – in programming**	**0 – OK 1 – not ready**	**0 – OK 1 – failure**	**0 – OK 1 – zone in memory**	**stay without delay**	**stay**	**force**	**On the watch**	**off**
											Active is always exactly one of those five states				

10-105 — State of zone (Paradox → KNX, 5 (8b.))

7.b.	6.b.	5.b.	4.b.	3.b.	2.b.	1.b.	0.b.
0 – OK 1 – low battery	**0 – OK 1 – surveillance failure**	**0 – OK 1 – fire alarm**	**0 – OK 1 – in alarm**	**Failure fire**	**tamper**	**opened**	**closed**
				Active is always exactly one of those four states			

106-113 — Turn on the subsystem by code (KNX → Paradox, 12 (32b.))

4.Byte								3.Byte		2.Byte		1.Byte	
7.b.	6.b.	5.b.	4.b.	3.b.	2.b.	1.b.	0.b.						
Not used				**Stay w/o delay**	**stay**	**force**	**common**	**Code for turning on the subsystem**					
								1.password digit	2.password digit	3.password digit	4.password digit	5.password digit	6.password digit
				Active is always exactly one				for 4-digit password = 0					

114-121 — Turn on the subsystem by "key press" (KNX → Paradox, 5 (8b.))

7.b.	6.b.	5.b.	4.b.	3.b.	2.b.	1.b.	0.b.
Not used				**stay w/o delay**	**stay**	**force**	**common**
				Active is always exactly one of those four states			

122-129 — Turn off the subsystem by code (KNX → Paradox, 12 (32b.))

4.Byte	3.Byte		2.Byte		1.Byte	
Not used	**Code for turning on the subsystem**					
	1.password digit	2.password digit	3.password digit	4.password digit	5.password digit	6.password digit
	for 4-digit password = 0					

In the table “List of read and controlled states“ are listed all states which are being read from the alarm control panel and which are possible to write.

In the column “KNX index” is shown the end part of the KNX address. E.g. for “State of subsystem” is listed 2-9. There are 8 subsystems in Paradox alarm control panel. If we set with software KNXpar.exe “Upper part of group address” to 1/1 as listed in chapter “Setup” then the first subsystem will have group address 1/1/2 and the second 1/1/2/ until the eight subsystem will have group address 1/1/9.Sent data will be data type DPT7 and will be 16 bits long as listed in column “DPT”.

Example of communication:

Turn on the subsystem by code – common turn on, password „1234“

On KNX will be send 4B / 32bit framework DPT12 (EIS11) with data:

hex notation: 0x01001234

decimal notation: 16781876

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