EN

Operation and installation manual

CO K5X 002 – KNX RF/TP Coupler

Application

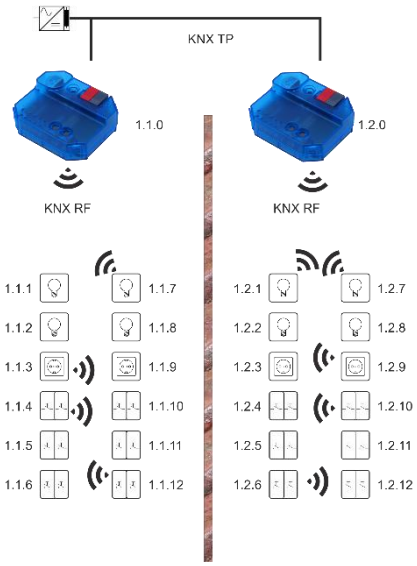
The KNX RF/TP Coupler is a compact KNX radio coupler. It connects KNX RF devices of a radio line with the KNX Bus Twisted Pair.

The device has a filter table for group addresses. The coupler supports long frames and is compatible with the ETS® software ETS5 or higher.

The buttons on the front panel allow disabling the telegram filter for testing purposes. The LEDs indicate operating conditions as well as communication errors on the KNX bus.

The power is supplied via the KNX bus.

Coupler function



KNX RF/TP Coupler as line coupler

The individual address assigned to the KNX RF/TP Coupler in the form of x.y.0 (x, y: 1..15) sets up, that the device operates as a line coupler.

The KNX RF/TP Coupler has a filter table and thus contributes to reducing the bus load. The filter table supports the extended group address range (main group 0..31) and is automatically generated by the ETS.

Installation and Connection

The device can be flush-mounted, the housing fits into a standard flush-mounted box.

When choosing the installation location the range of RF devices to be associated with the gateway has to be considered. Shielding objects (e.g. metal cabinets) or interfering transmitters (e.g. computers, electronic transformers, ballasts) near the gateway should be avoided.

The connection to the KNX bus is made with a bus connector. The correct polarity of the terminal referred to the printing inside the unit has to be considered.

The KNX RF/TP Coupler features the following controls and displays:

1 *Button P KNX Prog*
2 *LED P KNX Prog*
3 *KNX bus connector*
4 *LED S State*
5 *LEDs 1-8*
6 *Button A*
7 *Button B*

An external power supply is not necessary as the device is powered by the KNX bus.

The device is not working without bus power.

KNX Programming mode

The KNX programming mode is activated/deactivated by pressing the KNX programming button 1. When the programming mode is active, the programming LED 2 lights red.

A gateway ex-factory has the default individual address 15.15.0.

Manual operation and status display

The State LED 4 lights up if the device is successfully powered by the KNX bus. This LED blinks red, when the application is not running, e.g. after a failed ETS download. The State LED 4 lights up orange to indicate that manual operation is active.

The LEDs 1-4 5 show TP traffic.

The LEDs 5-8 5 show RF traffic.

Manual operation TP

Pressing button A 6 short, enters the manual operation for TP mode.

By pressing button A 6, routing runtime telegrams (group telegrams) will be enabled/disabled. This will be indicated by LEDs 1 and 2 5.

By pressing button B 7, routing management telegrams (individual addressed and broadcast telegrams) will be enabled/disabled. This will be indicated by LEDs 3 and 4 5.

Press button A 6 or button B 7 long to exit the manual operation mode.

Manual operation RF

Pressing button B 7 short, enters the manual operation for RF mode.

By pressing button A 6, routing runtime telegrams (group telegrams) will be enabled/disabled. This will be indicated by LEDs 5 and 6 5.

By pressing button B 7, routing management telegrams (individual addressed, broadcast and system broadcast telegrams) will be enabled/disabled. This will be indicated by LEDs 7 and 8 5.

Press button A 6 or button B 7 long to exit the manual operation mode.

Factory default settings

The following configuration is set by factory default:

Individual device address:	**15.15.0**
Routing (TP line → RF line):	
Individual addressed telegrams:	**Filter**
Group addressed telegrams:	**Block**
Routing (RF line → TP line):	
Individual addressed telegrams:	**Filter**
Group addressed telegrams:	**Block**

Reset to factory device settings

It is possible to reset the device to its factory settings:

- Disconnect the KNX Bus connector 3 from device
- Press the KNX programming button 1 and keep it pressed down
- Reconnect the KNX Bus connector 3 of device
- Keep the KNX programming button 1 pressed for at least another 6 seconds
- A short flashing of the all LEDs 2, 4 and 5 visualizes the successful reset of the device to factory default settings.

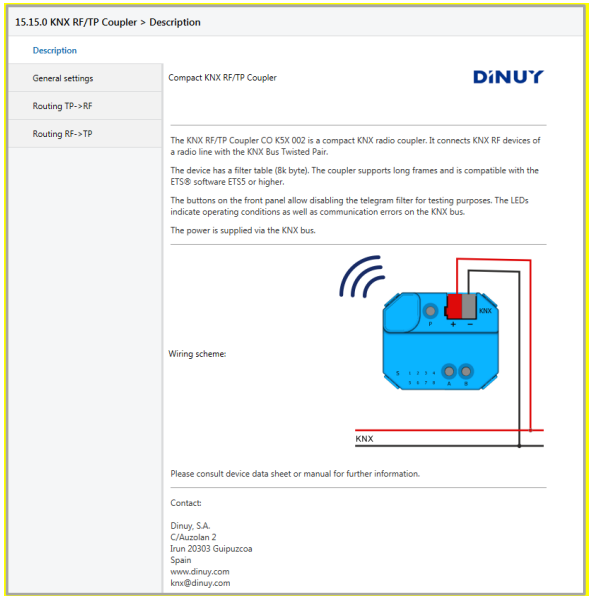
ETS database

The ETS database (for ETS 5) can be downloaded from the product website of the KNX RF/TP Coupler: www.dinuy.com.

ETS parameter dialogue

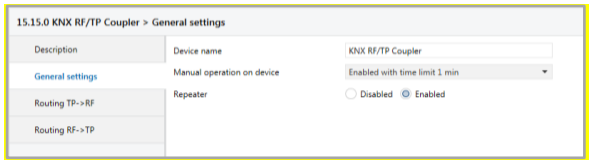
The following parameters can be set using the ETS.

Description



The first page shows general information about the device.

General settings



Device name (30 Characters)

An arbitrary name can be assigned for the KNX RF/TP Coupler. The device name should be meaningful, e.g. “Living Room”.

Manual operation on device

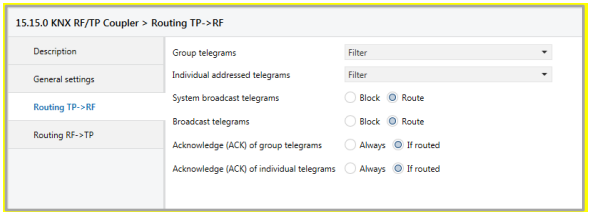
This parameter sets the duration of the manual mode. Upon completion the normal display mode is restored.

Repeater

Disabled:	Received telegrams will not be repeated.
Enabled:	Received telegrams will be repeated to extend the RF range.

The KNX RF/TP Coupler can also be used as a repeater. In this case, the individual address has the form x.y.z, where z must not be equal to 0. The filter settings in the parameter dialog of the ETS are ineffective in repeater mode.

Routing (TP line → RF line)



Group telegrams

Block: No group telegrams are routed to the RF line.

Route: All group telegrams are routed to the RF line independent of the filter table. This setting is for test purposes only.

Filter: The filter table is used to check whether or not the received group telegram should be routed to the RF line.

Individual addressed telegrams

Block: No individually addressed telegrams are routed to the RF line.

Route: All individually addressed telegrams are routed to the RF line. This setting is for test purposes only.

Filter: The individual address is used to check whether the received individually addressed telegram should be routed to the RF line.

System broadcast telegrams

Block: No received system broadcast telegrams are routed to the RF line.

Route: All received system broadcast telegrams are routed to the RF line.

Broadcast telegrams

Block: No received broadcast telegrams are routed to the RF line.

Route: All received broadcast telegrams are routed to the RF line.

Acknowledge (ACK) of group telegrams

Always: A acknowledge is generated for every received group telegram (from the TP line).

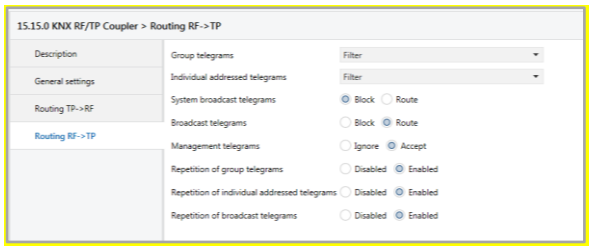
Only if routed: A acknowledge is only generated for received group telegrams (from the TP line) if they are routed to the RF line.

Acknowledge (ACK) of individual telegrams

Always: A acknowledge is generated for every received individual addressed telegram (from the TP line).

Only if routed: A acknowledge is only generated for received individually addressed group telegrams (from the TP line) if they are routed to the RF line.

Routing (RF line → TP line)



Group telegrams

Block: No group telegrams are routed to the TP line.

Route: All group telegrams are routed to the TP line independent of the filter table. This setting is for test purposes only.

Filter: The filter table is used to check whether or not the received group telegram should be routed to the TP line.

Individually addressed telegrams

Block: No individually addressed telegrams are routed to the TP line.

Route: All individually addressed telegrams are routed to the TP line. This setting is for test purposes only.

Filter: The individual address is used to check whether the received individually addressed telegram should be routed to the TP line.

System broadcast telegrams

Block: No received system broadcast telegrams are routed to the TP line.

Route: All received system broadcast telegrams are routed to the TP line.

Broadcast telegrams

Block: No received broadcast telegrams are routed to the TP line.

Route: All received broadcast telegrams are routed to the TP line.

Management telegrams

Ignore: The received management telegram from the RF line will be ignored.

Accept: The received management telegram from the RF line will be accepted.

Repetition of group telegrams

Disabled: The received group telegram is not resent to the TP line in case of a fault.

Enabled: The received group telegram is resent up to three times in case of a fault.

Repetition of individual addressed telegrams

Disabled: The received individually addressed telegram is not resent to the TP line in case of a fault.

Enabled: The received individually addressed telegram is resent up to three times in case of a fault.

Repetition of broadcast telegrams

Disabled: The received broadcast telegram is not resent to the TP line in case of a fault.

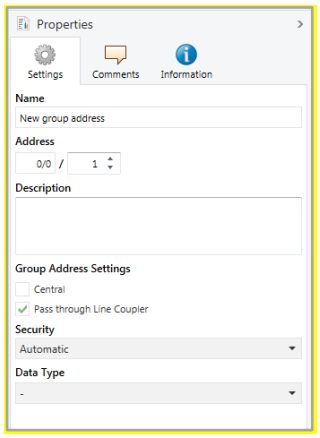
Enabled: The received broadcast telegram is resent up to three times in case of a fault.

Filter table

The filter table is automatically created by the ETS. The group addresses of the telegrams which shall be forwarded via the coupler are added to the filter table. The contents of the filter table can be displayed via the preview:

Preview of the filter table

The filter table can be extended by manually adding group addresses. This requires activating "Pass through Line Coupler" in the property window of the corresponding group address.



Property window of a group address

WARNING

- The device must be mounted and commissioned by an authorized electrician.
- The prevailing safety rules must be heeded.
- The device must not be opened.
- For planning and construction of electric installations, the relevant guidelines, regulations and standards of the respective country are to be considered.

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