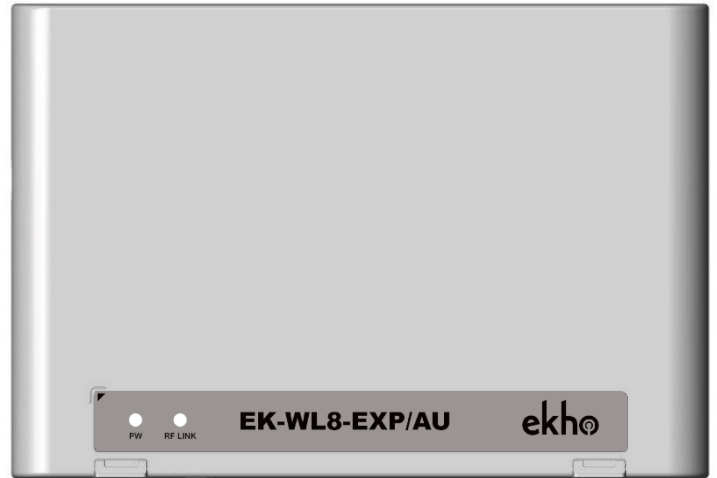# GENERAL DESCRIPTION

EK-WL8-EXP is an expander module which is used for transmitting signals and extending a wireless network. The expander receives signals from nearby sensors/modules and transmits these to the translator module, which then updates the main control panel about the system events. 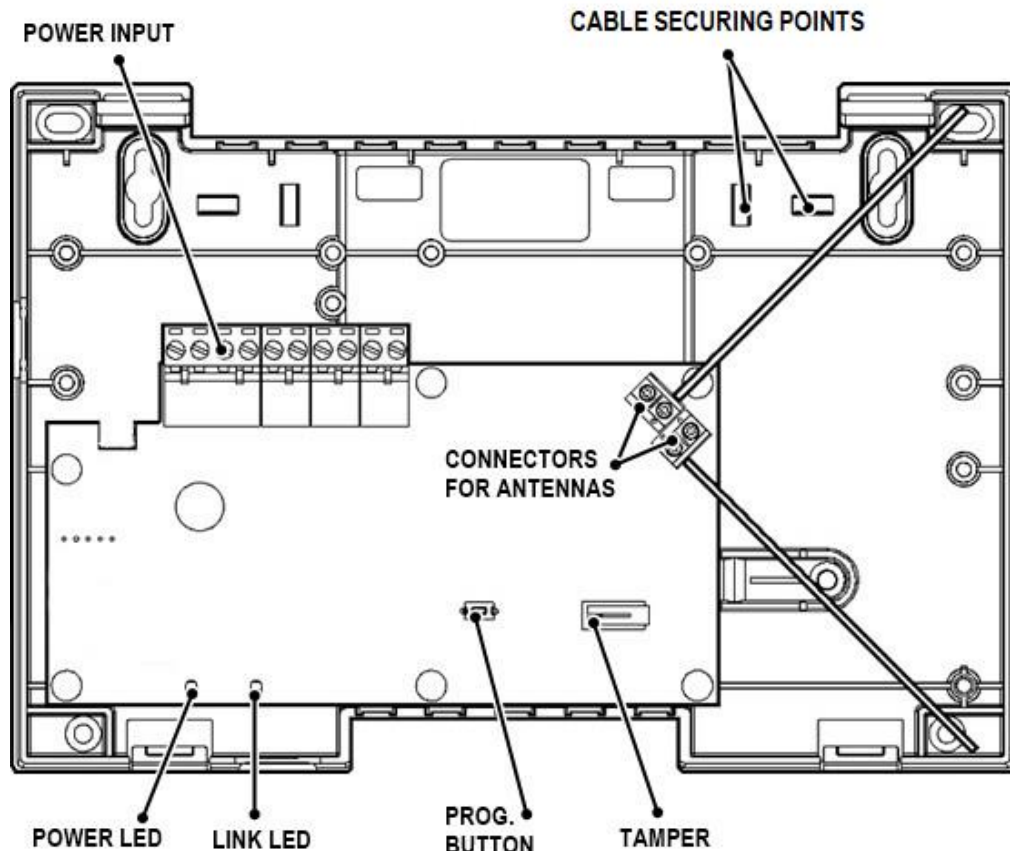The signal can also be transmitted through a number of expanders. When two or more expanders are used a backup communication route to the translator module can be created.

The device is supplied with a mounting kit, (an optional back is available EK-BOX-01)

The product complies with the requirements of the AS ISO 7240.18 and AS ISO 7240.25 standards.

GENERAL OVERVIEW

FEATURES

- Bi-directional wireless communication
- Intelligent algorithms
- Tamper switch
- Automatic frequency and amplitude adjustment

TECHNICAL SPECIFICATION

Communication range to a device	1200 m (open space)
Communication range to another expander	2000 m (open space)
Radio frequency	918-926 MHz
Modulation type	GFSK
Operating frequency channels	6
Radiated power	Not more than 25 mW
Receiver category (EN300-220-1)	1.5
Power supply voltage range	from 11Vdc to 28Vdc
AC or DC input voltage range	from 11Vdc to 28Vdc
Max power consumption	80 mA
Max number of expanders in one system	126 max*
Dimensions	210x145x40 mm
Weight	320 g
Max tolerated humidity	93% RH
Operating temperature range	from –10 °C to +55 °C

Dependant on system capacity

NOTE Check the latest version of the product specification document STFV.425551.030-E-PS for further data, obtainable from the manufacturer.

PROGRAMMING

The "Prog." button on the expander module is used for initializing the expander in the system. Please refer to the translator manual for full instructions on how to add an expander to the system. The expander can also be initialized using the "Ekho Configuration" software.

INSTALLATION

Install the expander module using screws. It is recommended to install the device at least 2 meters from the ground.

Ideally, the device should be installed at a certain distance from metallic objects, doors, and power lines, as they can cause the communication distance to drop. It is also important to avoid installing the device near electronics and computer equipment in order to protect them from potential electromagnetic interference.
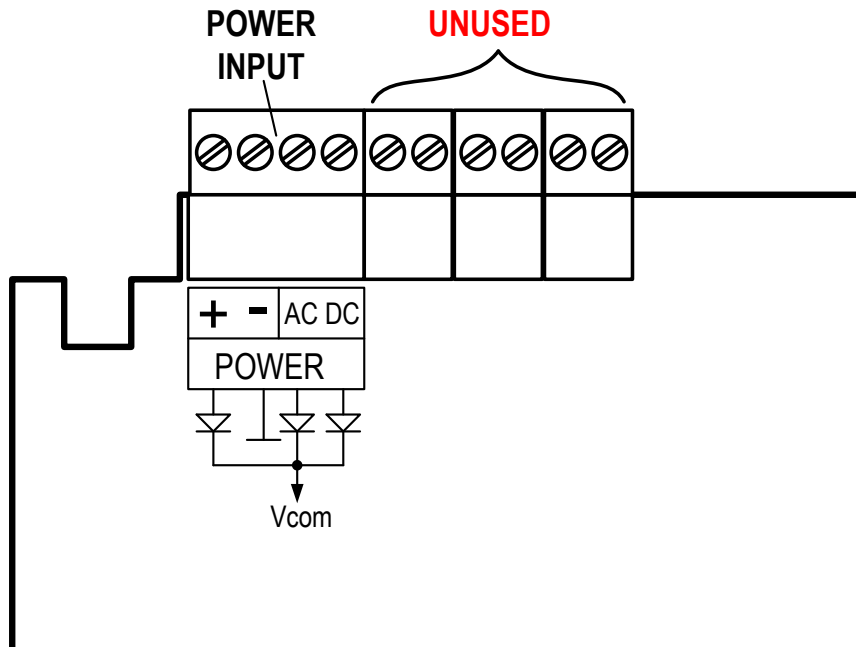
To secure the cover, you should insert the two rivets into the holes.
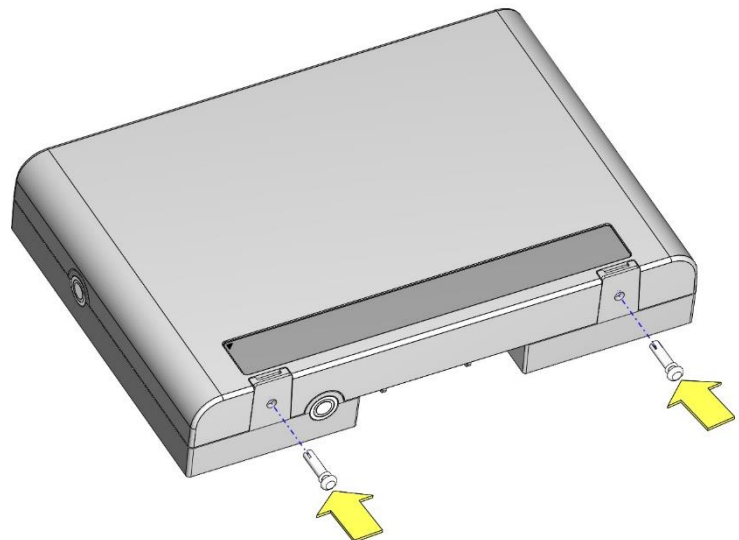
To open the cover, remove the two rivets by gently pulling on the two cover clips.
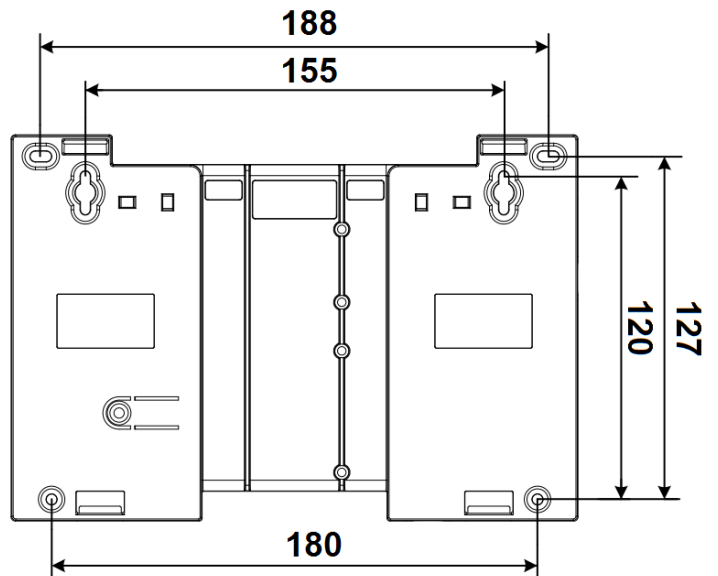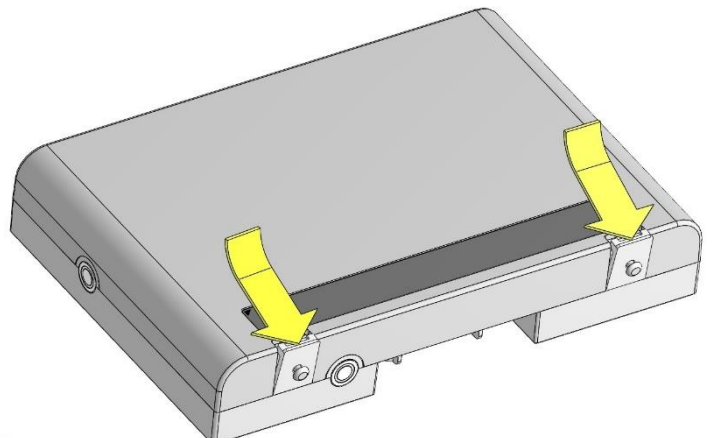
CONNECTORS

NOTE Other terminal blocks that are not described (marked "UNUSED") do not affect the operation of expander and are not used.

POWER

The expander is powered via an external power supply.
Use any 12V or 24V power supply and connect it to the +/- inputs on the device.

ATTENTION The power supply should have an output current limit of 8A and should meet the requirements of AS ISO 7240.4. The AC and DC inputs are used for monitoring the state of the external power supply (this option should be enabled in EK-WL8-TRH menu[1]).

The expander measures the voltage levels between "-" and each of the AC/DC inputs, a fault event will be generated if the voltage drops below 10.5 V. These inputs can be directly connected to the open collector outputs on the power supply. In other cases, you will need to provide power to these inputs through a normally closed fault relay on the power supply. The AC and DC input monitoring can be disabled via the translator menu.

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[1] Main and Backup power monitor modes should be set "ON"

Expander power consumption:

Power supply	Voltage, Vdc	Current consumption, mA
External power supply	12	65
	24	35

INDICATION AND TESTING

The device has an LED which indicates its state according to the following:

LED	Color	State of the device
PW	Green	Normal state
	Yellow	Main or backup power supply fault
Link	Green	Normal state
	Yellow	No communication with the translator or other expanders

If the device is powered on with the cover open, it will activate the "connection quality evaluation mode". The connection strength is indicated with the "Link" LED for 15 minutes according to the following:

Excellent (score 5)	-	two green flashes
Good (score 4)	-	one green flash
Bad (score 3)	-	one yellow flash
No connection (score 2)	-	two yellow flashes

NOTE

You can check the RF quality in the installed position in two ways: from the translator's menu or from the Ekho Configuration software.

By using the "Maintenance/Device/Control" option within the translator menu, it is possible to turn the "RF link Quality" mode on or off. The expander will automatically exit this mode after 15 minutes.

ANALOG DATA

The expander provides the translator module with analog data regarding the air temperature and RF link quality. This information can be viewed in the "Ekho Configuration" software.

Please refer to the software manual for full instructions on how to use the Ekho Configuration software for system maintenance.

WARRANTY

All expanders are covered by a 3-year limited warranty. The warranty is voided by mechanical or electrical damage caused by incorrect handling or usage. The expander must be returned via an authorized supplier for repair or replacement along with full information on the identified problem.

WARNINGS & LIMITATIONS

Devices use high quality electronic components and plastic materials that are highly resistant to environmental deterioration. However, after 10 years continuous operation it is advisable to replace them to reduce the risk of reduced performance caused by external factors. Ensure the devices are only used with compatible control panels. Detection systems must be checked, serviced and maintained on a regular basis to confirm correct operation.

Refer to and follow National Codes of Practice and other internationally recognized fire engineering standards. Appropriate Risk Assessment should be carried out initially to determine correct design criteria and updated periodically.

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