TechBook

in.xtend™
keypad extension system

Increases range
Easy to install
Compact

GECKO®

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Warnings

⚠️ **WARNINGS**
Before installing or connecting the unit, please read the following.

* ALWAYS INSTALL THE PRODUCT ACCORDING TO THE INSTRUCTIONS PROVIDED.

* THIS PRODUCT SHOULD NOT BE INSTALLED IN PROXIMITY TO HIGHLY FLAMMABLE MATERIALS.
  ANY SURROUNDING MATERIALS SHOULD BE RATED UL94–HB, OR HIGHER.

* THIS PRODUCT SHOULD BE INSTALLED IN A LOCATION THAT WILL MINIMIZE THE POSSIBILITY OF WATER
  INGRESS.

* DO NOT CREATE ANY OPENINGS IN THE PRODUCT.

* ANY CABLES SUPPLIED CANNOT BE EXTENDED AND/OR MODIFIED, UNLESS AUTHORIZED BY THE
  MANUFACTURER OF THE PRODUCT.

* THE VARIOUS PARTS OF THE PRODUCT MAY HAVE PLASTIC HOUSINGS. THESE CANNOT BE EXPOSED TO ANY
  CHEMICAL SUBSTANCE SUCH AS (BUT NOT LIMITED TO) OILS, GREASES, SOLVENTS, RUST INHIBITORS, ETC.
  FOR EXAMPLE, WD-40® AND LOCTITE® ARE NOT CONSIDERED COMPATIBLE.

Compatibility requirements

in.xtend module:
Model: 0608-521013   IN.TR-KX-PK
Model: 0608-521014   IN.TR-KX-KY

Compatible spa packs:
in.xm, in.xm2, in.xe, in.ye, in.yt and in.yj with appropriate software revisions.

Compatible keypads:
K-5, K-8, K-52, K-45, K-56, K-72, K-73, K-85, IN.K100, IN.K3XX, IN.K4XX and IN.K6XX (Static).

Don't let cable length limit you — install your keypad away from your spa pack with the in.xtend system.
The in.xtend-pk (in.tr-kx-pk) connects to the spa pack, the in.xtend-ky (in.tr-kx-ky) connects to the keypad,
and the two in.xtend modules communicate with each other through an Ethernet cable.

Overview

Model: 0608-521013
IN.TR-KX-PK

Model: 0608-521014
IN.TR-KX-KY

"C" enclosure keyings

Fastening
bracket

Fastening
bracket

in.xtend
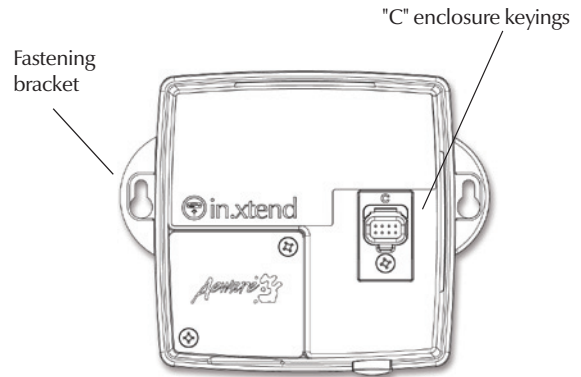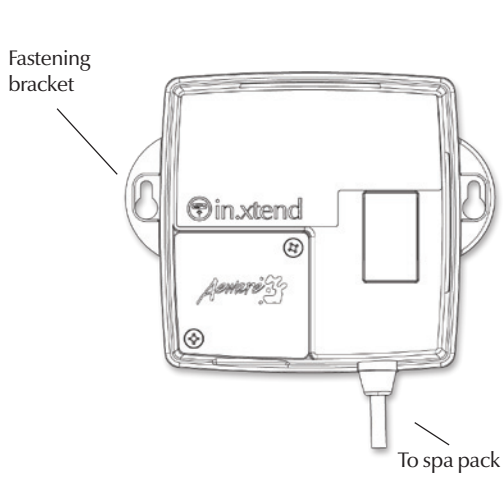
in.xtend

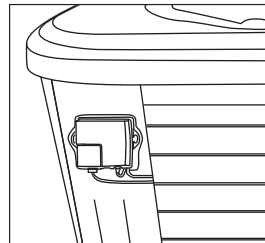To spa pack

OEM installation

The in.xtend-pk must be installed under the skirt.
This unit is connected to the spa pack.

The in.xtend-ky must be installed near the keypad.
This unit is connected to the keypad.

We recommend that you install the units with #8 pan
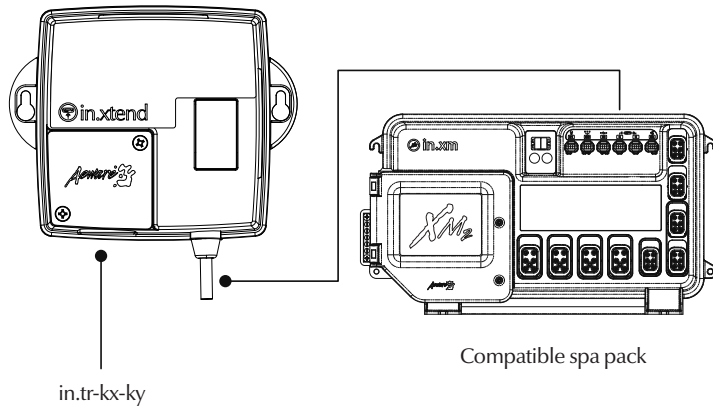head screws.

Connections

Turn off the power before connecting the in.xtend-pk to the spa pack, the in.xtend-ky to the in.xtend-pk (with an Ethernet cable) and the keypad to the in.xtend-ky.

Spa pack and in.xtend-pk connection

The in.xtend-pk is connected to the spa pack through the orange "C" connector.

Compatible spa pack

in.tr-kx-ky

Keypad and in.xtend-ky connection

The keypad is connected to the in.xtend-ky through the orange "C" enclosure keying of the in.xtend-ky.

in.tr-kx-py
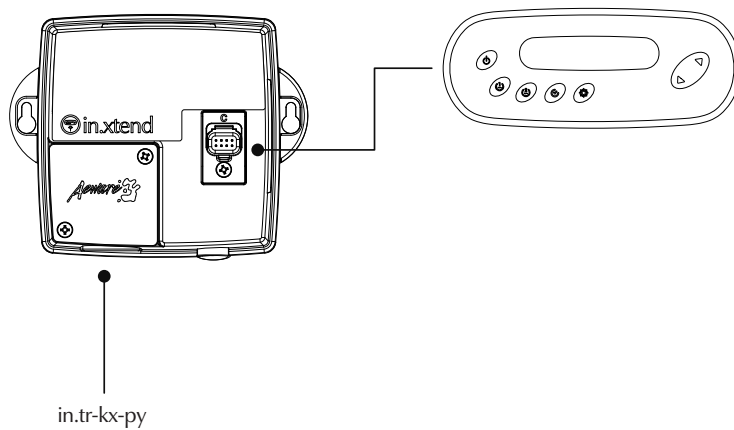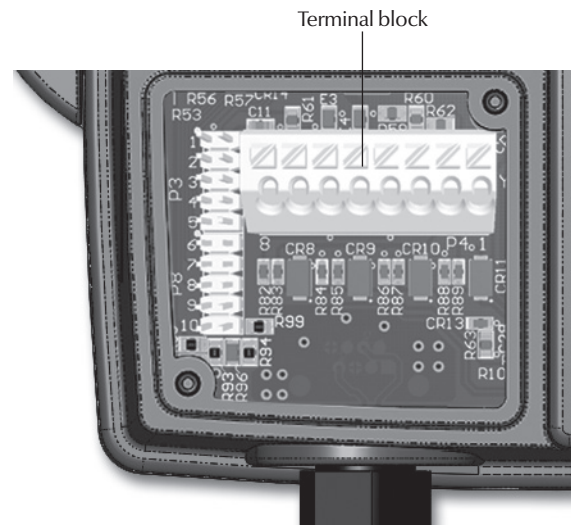
in.xtend-pk and in.xtend-ky connection

Terminal block

The connection between the in.xtend-pk and the in.xtend-ky is done through a CAT5E cable (not provided).

The terminal block to connect the CAT5E cable is located in the front panel area.

Open the front panels of both in.xtend boxes. Insert a CAT5E cable in the strain relief of each in.xtend box.

Bare 1 ½″ (~40 mm) on both extremities of the CAT5E and ½″ (~15 mm) on each inside wire.

Connect each wire as in the diagram.

The connections are identical on both in.xtend-pk and in.xtend-ky.

Use a small screwdriver to push on the spring button. Keep pushing on the spring button while inserting the wire.

Make sure every wire is well inserted in terminal block P4. Lock the strain relief.

Leave the front open until the first power-up is complete to make sure the whole system is fully functional.

Brown
White/Brown
Blue
White/Blue
Green
White/Green
Orange
White/Orange
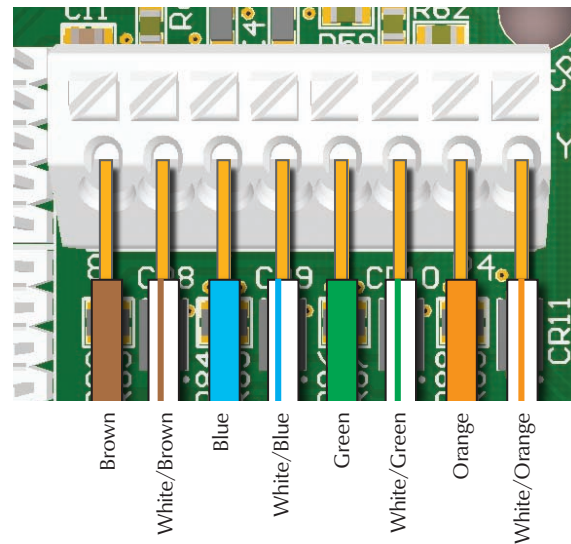
## Keypad configuration selection

As each keypad has its own output configuration (number of outputs which can be controlled, excluding light), the in.xtend-pk has a jumper to select the right configuration. This is based on the individual options of the keypad (1 OP, 2 OP, etc). The correct output configuration can be found in the keypad model name, such as in.k450-...**3OP**-... . The jumper connector is located in the front (see image).

Jumper connector
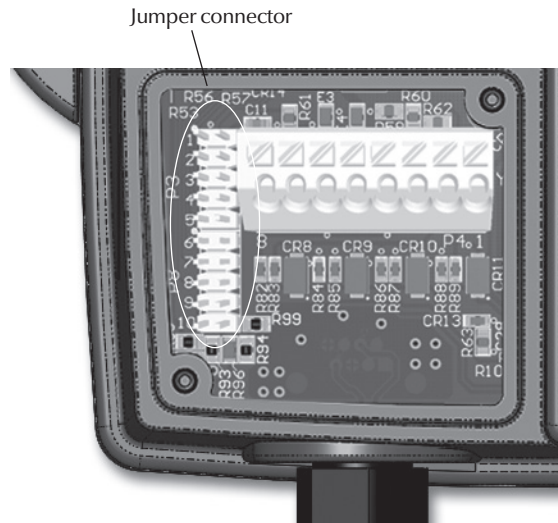
Select the correct configuration according to the following table:

Outputs	K-5	K-8, K-45, K-52, K-56, K-72, K-73, K-85	in.k100	in.k3XX	in.k4XX	in.k6XX
1 OP		Pos 4		Pos 2	Pos 8	
2 OP		Pos 5		Pos 1	Pos 9	
3 OP	Pos 1	Pos 1	Pos 1		Pos 10	Pos 2
4 OP	Pos 2	Pos 2				
5 OP		Pos 3	Pos 2			Pos 1

Maximum distance

The maximum distance depends on the keypad. See below for the maximum distance possible for each keypad, when used with a CAT5E cable (24AWG):

Keypad	Maximum distance (24AWG)
K-5	300' (~90 m)
K-8, K-45, K-52, K-56, K-72, K-73, K-85	300' (~90 m)
in.k100	300' (~90 m)
in.k3xx	70' (~20 m)
in.k4xx	300' (~90 m)
in.k6xx	200' (~60 m)

Troubleshooting

LED

The in.xtend-ky has one red LED. This LED is lit if the 12 V signal (White/Brown wire) is not properly connected. If the LED is lit nothing will work. Turn off the power, make sure all wires are properly connected and turn on the power again.

LED
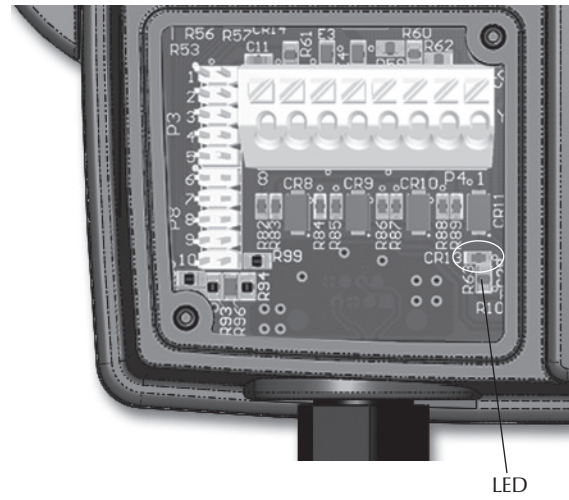
Inversion in wire connection

If there is an inversion between the wires, nothing will work at the power-up, and the keypad won't display any information. In this case, turn off the power, make sure all wires are properly connected and turn on the power again.

Wrong configuration selection

If after ensuring that all wires are connected the keypad still doesn't display the correct information the wrong jumper configuration may be selected. In this case, turn off the power, select the right keypad configuration, and turn on the power again.

If you don't remember the right configuration, try each one and test every key on your keypad for each configuration. There is only one configuration that makes your keypad fully functional. Remember to turn off the power before selecting another configuration.

Please note that the last three positions (positions 8 to 10) are used only for an in.k4xx keypad.
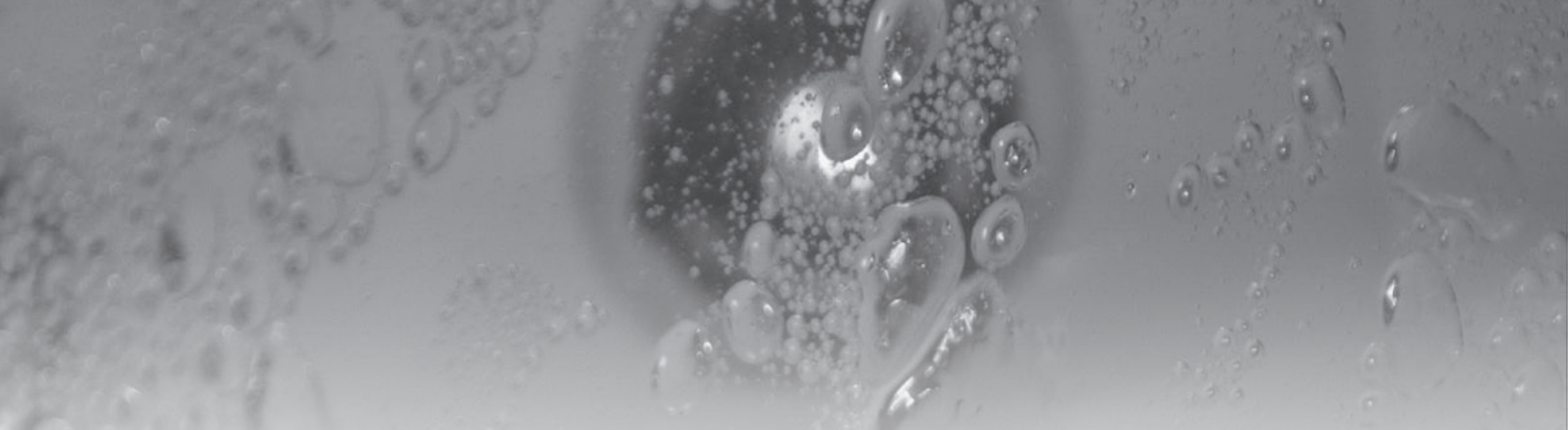
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