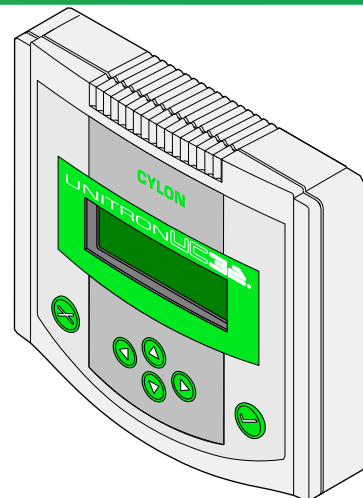# UCKRA420

The **UCKRA420** is a keypad interface for the **Unitron** system, which allows conditions on a **Unitron** site to be viewed and changed. It can also be used to configure **UC32** controllers.

- 80 alpha-numeric characters arranged as 4 lines x 20 characters.

- Access available to all points on a UnitronUC32 site, subject to preprogrammed password.

- Supertwist LCD with backlight.

- Single-turn pot for contrast adjustment

The **UCKRA420** keypad is part of the **UnitronUC32** range of products, which offers the following benefits:
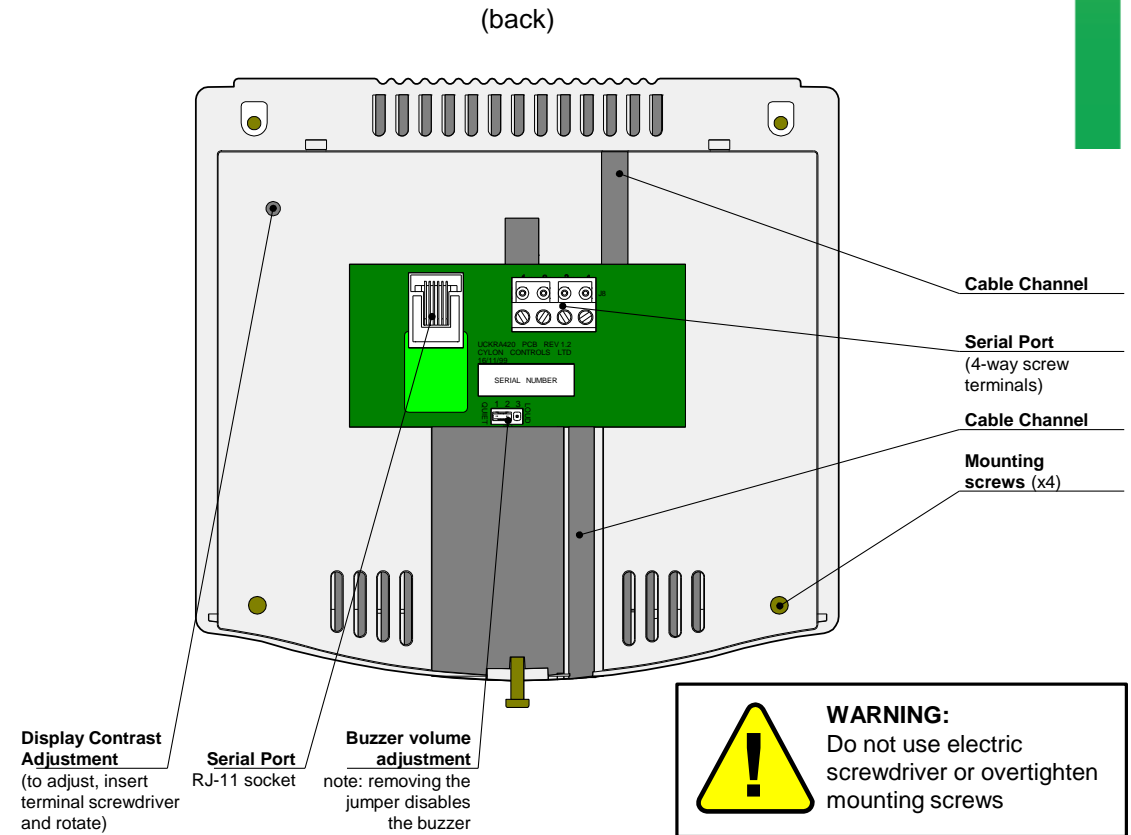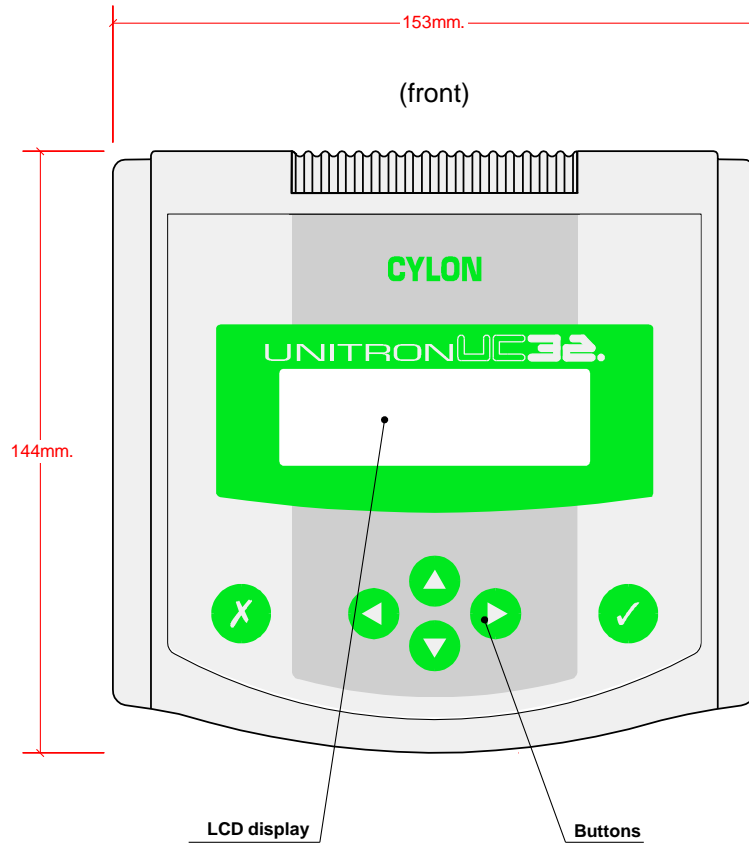
Unique Flexibility with UniPuts™

The **UnitronUC32** range uniquely presents **UniPuts™** – a revolutionary answer to flexible point configuration, offering maximised utilisation of controller capacity along with flexibility in strategy changes. Built on a modern web-based architecture, the **UnitronUC32** range has a wide application scope with the flexibility of being stand-alone or network enabled.

Cost Effective, low entry point for building control

The **UnitronUC32** range offers reduced costs in terms of training, implementation, rollout and maintenance. Modular, extendible packages along with low installation costs mean a low entry point for building control. The future-proof **UnitronUC32** range provides forward & backward compatibility, meaning an effortless upgrade path for existing **Unitron** Systems.

Highly programmable and extendable through web-enabled HVAC technology

The **UnitronUC32** range offers an advanced web-based 32-bit architecture, with advanced programmability through the **Cylon Engineering Centre**. Inbuilt diagnostics, along with expanded data logging and strategy storage, is further enhanced by **Uniputs**[TM], offering up to 8 Universal inputs, up to 8 **Uniputs**[TM] (AI/DI/AO/DO) and up to 8 **Uniputs**[TM] with relays.

153mm.

(front)

144mm.

CYLON

UNITRON UC32.

LCD display

Buttons

(back)

Cable Channel

Serial Port
(4-way screw
terminals)

Cable Channel

**Mounting
screws** (x4)

UCKRA420 PCB REV 1.2
CYLON CONTROLS LTD

SERIAL NUMBER

**Display Contrast
Adjustment**
(to adjust, insert
terminal screwdriver
and rotate)

Serial Port
RJ-11 socket

**Buzzer volume
adjustment**
note: removing the
jumper disables
the buzzer

WARNING:
Do not use electric
screwdriver or overtighten
mounting screws

UK Patent GB 2 400 991
Irish Patent 84413

Cylon
CONTROLS

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Specifications:

Size	154 x 144 x 35 mm (6.1 x 5.7 x 1.4")
Enclosure	Injection moulded ABS
Mounting	Panel Door, Panel Backplate, or Pattress Box

ENVIRONMENT

Note: *This equipment is intended for field installation within another enclosure.*

Ambient Temperature	0° - 50°C (32°-122°F) ambient.
Ambient Humidity	0% - 90% RH non-condensing
EMC Immunity	EN 50082-1
EMC Emission	EN 55011 Class B

WIRING

Note: *Use Copper or Copper Clad Aluminium conductors only.*

Termination	RJ-11 Socket or 4 way-screw terminals
Cable for screw terminals	4-core AWG 24 (min) unshielded
Cable for RJ-11 connector	Pre-made Cylon cable (length 2m)
Maximum cable length	50m

ELECTRICAL

Note: *UCKRA420 keypad is hot-plugable, i.e. it can be connected to a powered-up controller*

Supply Requirements	Power is received from associated controller

COMMUNICATIONS

RS232 port	@ 9600 Baud

INTERFACE

Display	80 alpha-numeric characters arranged as 4 lines x 20 characters.
	Supertwist LCD with backlight.
	Single-turn pot for contrast adjustment

UCKRA420 Installation Instructions

Note: *mounting options are available for US, UK and European Pattress Boxes.*

The **UCKRA420** may be mounted

    a) in a Panel Door (see *Section 6* below)
    b) on a Panel Backplate (see *Section 4* below)
or   c) on a Pattress Box (see *Section 3* below)

In all cases, the mounting bracket is removed from the **UCKRA420** (see *Section 1* below), and cable attached by either RJ-11 or Screw-Terminal connectors as detailed in *Section 2* on page 2.
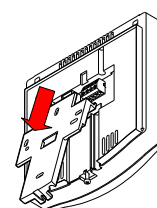

Section 1 - Removing the Mounting Bracket
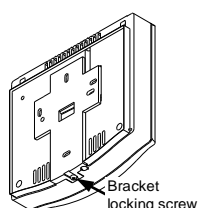
Loosen the Bracket locking screw at the bottom of the **UCKRA420**. (It is not necessary to fully remove the screw)
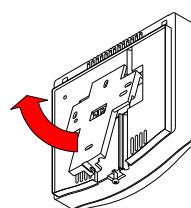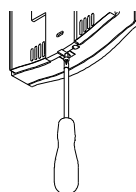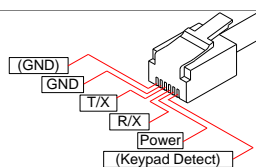
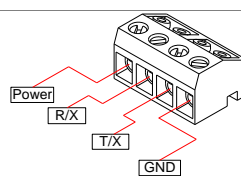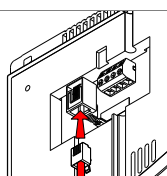Lift the bottom of the bracket away from the **UCKRA420**, until it is clear of the locking screw.

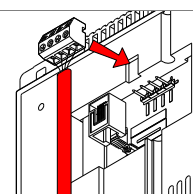Unclip the top of the bracket by pulling the bracket downwards

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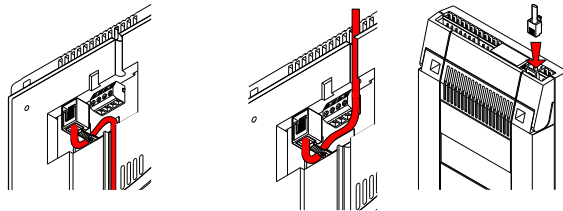**Section 2 - Connecting the UCKRA420 to UCxxPG-R controller**

1. RJ-11 connector

2. Screw-terminal connector

Connect a cable to the **UCKRA420** using an RJ11 plug OR a Screw-Terminal connector
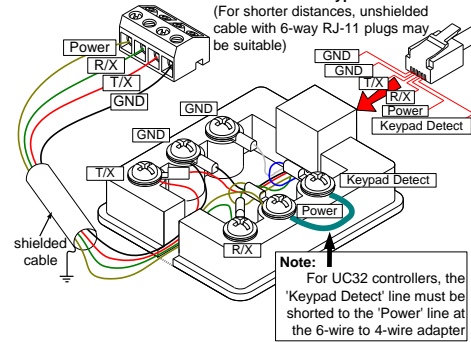

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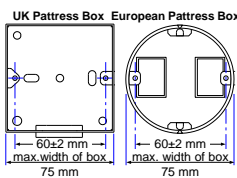**1. Downward cable channel** OR **2. Upward cable channel**

Route the cable through one of the cable channels so that the mounting bracket can be re-attached.

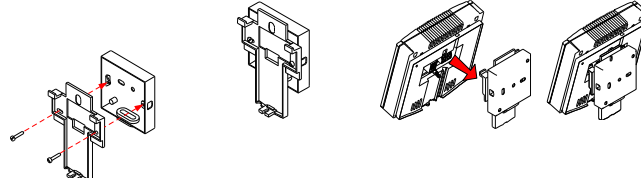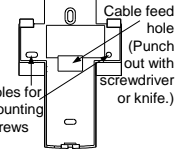Connect the other end of the cable to the RJ-11 port of a UC controller

Using the 4-way screw-terminal connection with UC32
This configuration uses shielded cable to extend the connection between a UC32 controller and a UCKRA420 keypad.

(For shorter distances, unshielded cable with 6-way RJ-11 plugs may be suitable)

Power
R/X
T/X
GND
GND
GND
T/X
R/X

GND
GND
T/X
R/X
Power
Keypad Detect

Keypad Detect
Power
R/X

shielded cable

Note: For UC32 controllers, the 'Keypad Detect' line must be shorted to the 'Power' line at the 6-wire to 4-wire adapter

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Section 3 - Mounting the UCKRA on Pattress Boxes

UK Pattress Box
European Pattress Box

60±2 mm max. width of box
75 mm

60±2 mm max. width of box
75 mm

Mounting Bracket
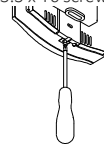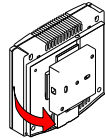Cable feed hole (Punch out with screwdriver or knife.)
Holes for mounting screws

The **UCKRA420** can be mounted on pattress boxes where the holes are 60±2 mm apart.

Attach the mounting bracket to the pattress box with two M3.5 x 16 screws as shown.
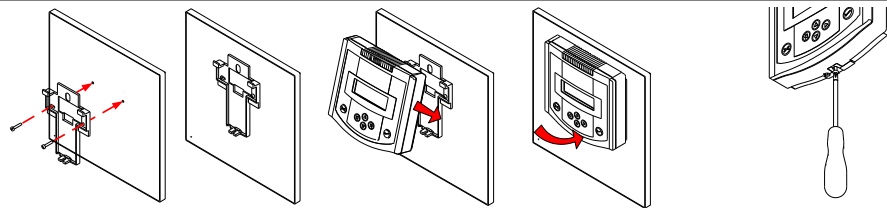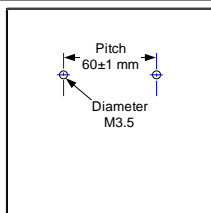
Place the **UCKRA420** on the Mounting bracket by clipping the top first.

Swing the **UCKRA420** so that it is flat against the mounting bracket.

Tighten the Mounting Bracket locking screw at the bottom of the **UCKRA420**.

Section 4 - Surface-Mounting the UCKRA420 (e.g. on a Panel Backplate)

Pitch 60±1 mm
Diameter M3.5

Drill two holes in the flat surface, diameter = M3.5 pitch = 60±1 mm

Attach the mounting bracket with two M3.5 x 16 screws as shown.

Place the **UCKRA420** on the Mounting bracket by clipping the top first.

Swing the **UCKRA420** so that it is flat against the mounting bracket.

Tighten the Mounting Bracket locking screw at the bottom of the **UCKRA420**.

Section 5 - Mounting the UCKRA420 on a Panel Door

Width 134±2
Height 122±1
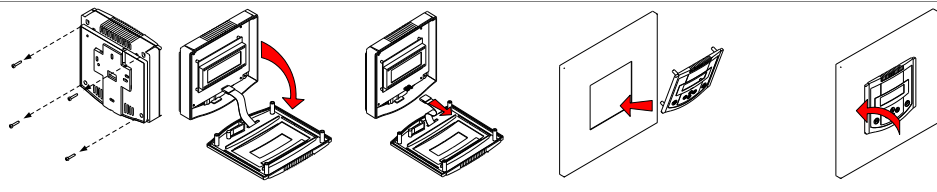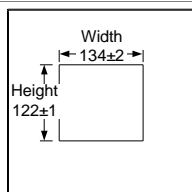
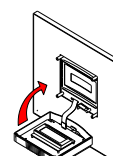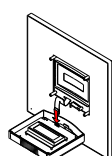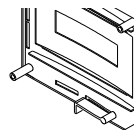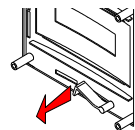Make a cut-out in the Panel Door 122±1 mm high x 134±2 mm wide.

Remove the 4 screws from the back of the **UCKRA420**.

Take the faceplate from the front of the **UCKRA420**.

Disconnect the keypad connector ribbon cable from the PCB as shown.

Place the faceplate in the Panel Door, hooking the clip onto the bottom of the cutout.

Swing the faceplate upwards until it sits in the cutout.
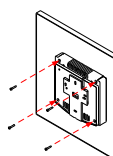
Pull the clip away from the door and down, so that it sits flat inside the cutout.

Connect the keypad connector ribbon cable from the PCB as shown.

Fit the main body onto the faceplate on the back of the Panel Door.

Secure the main body onto the faceplate with the 4 screws as shown.

Warning:
Do not overtighten the four mounting screws when mounting the Keypad on a panel door.

UK Patent GB 2 400 991
Irish Patent 84413

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