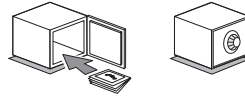
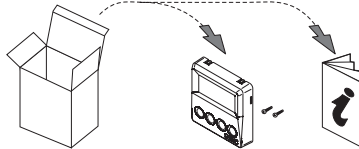


**Important: Retain these instructions**



### 1 UNPACKING



SDU-LON Installation  
Instructions TG200599

### 2 STORING



-10 °C → +50 °C  
+14 °F → +122 °F



0 %RH → 95 %RH



### 3 INSTALLATION



**WARNING:** Other than removing front panel (step 3), do not open unit. **DANGER high voltage.** No serviceable parts inside.



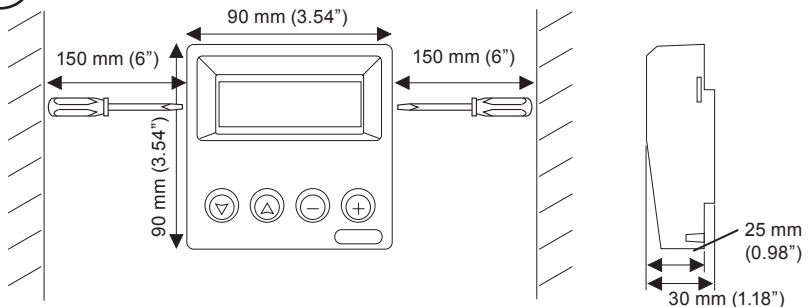
It is recommended that the installation should comply with the HSE Memorandum of Guidance on Electricity at Work Regulations 1989. For USA install equipment in accordance with the National Electric Code.



Note that this product may involve LonWorks® system integration as referred to in step 12: this procedure should only be performed by an installer with LonWorks engineering expertise.

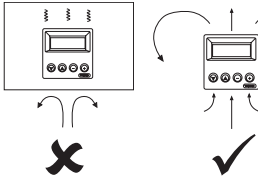
1

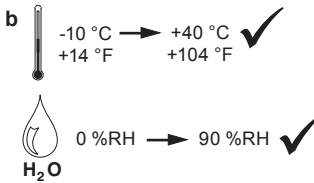
#### Dimensions




3 INSTALLATION (continued)

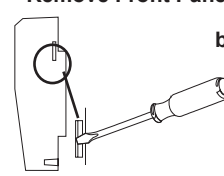
**2 Requirements (continued)**

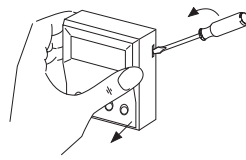
**a** 

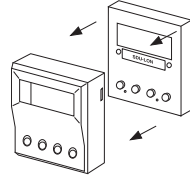
**b** 

**c** 

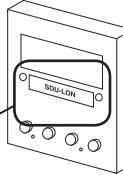
**3 Remove Front Panel**

**a** 

**b** 

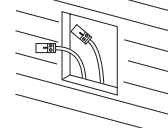
**c** 

**4 Check SDU type**



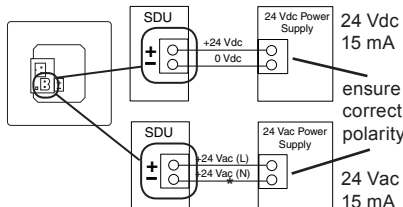
Check SDU-LON

**5 Route Cables**



**6 Configure SDU**  
if required to change operating mode, restrictive set, or language

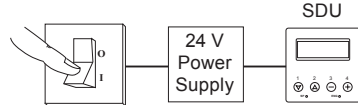
**a Connect Input Power**



24 Vdc Power Supply 24 Vdc 15 mA ensure correct polarity

24 Vac Power Supply 24 Vac 15 mA

**b Switch on Power**



24 V Power Supply SDU

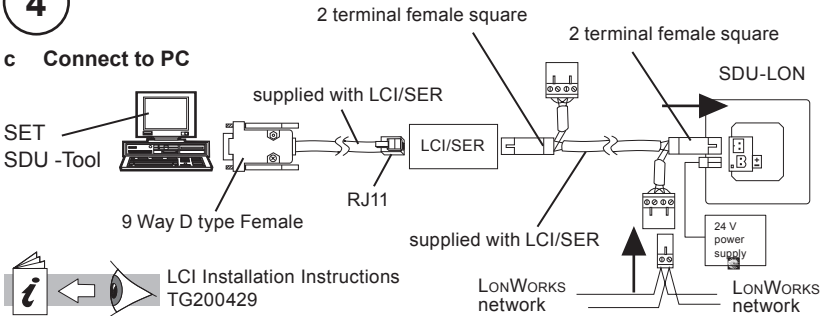
*\* If one side of the 24 Vac input power is connected to 0 V, that side must be connected to the SDU - (negative) terminal*

3 INSTALLATION (continued)

4

Configure SDU (continued)

c Connect to PC



d Set up SDU Configuration File

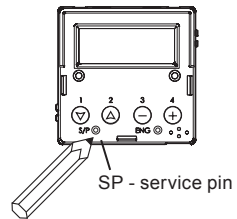
SDU Tool

Backup File to Disk

Set up:

- Mode: Unrestricted/Restricted
- Home Page: Show/Don't show
- Restrictive mode list: Select required modules
- Language: Translation of standard text

e Identify SDU to SDU Tool



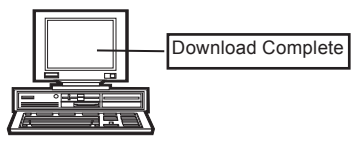
f Download Language

SET SDU Tool

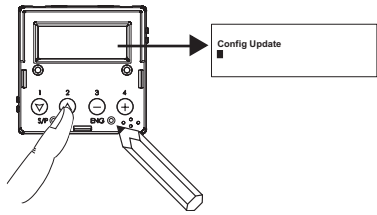
Select Language  
Download to SDU

SDU Data Sheet TA200559  
SDU Tool Manual TE200600

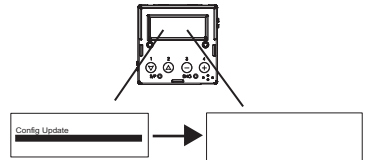
g Download Completed



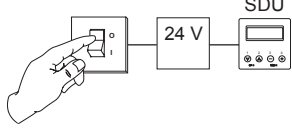
h Set SDU into Download Mode



i Transfer Completed

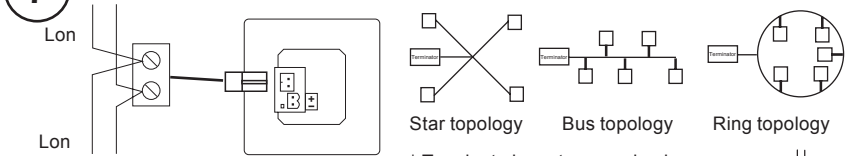


j Switch off Input Power



3 INSTALLATION (continued)

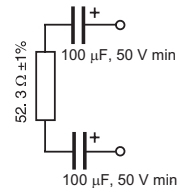
**7 Connect to LonWorks Network**



Normal Trend Lan cable is not recommended.  
Do not use screened cable.

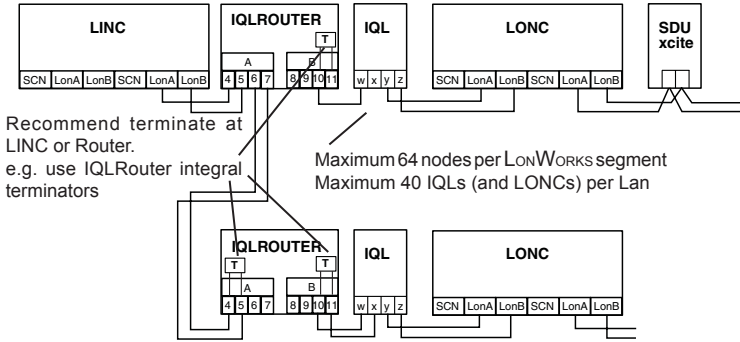
Cable	Max bus length	Max node to node
Belden 85102	500 m (545 yds)	500 m (545 yds)
<b>IQ system</b> TP1/0/16/HF/200 (Belden 8471)	500 m (545 yds)	400 m (430 yds)
UL Level IV, 22 AWG	500 m (545 yds)	400 m (430 yds)
JY(St) Y2 x 2 x 0.8	500 m (545 yds)	320 m (350 yds)
TIA568A Cat.5, 24 AWG	450 m (490 yds)	250 m (270 yds)

Terminator  
e.g. LONTERMINATOR

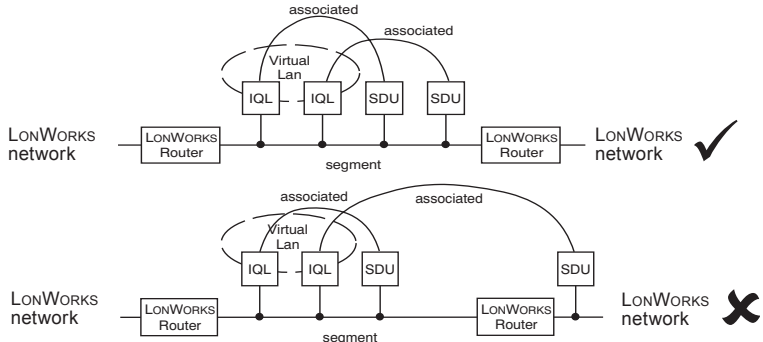


Do not allow wires to cross on a loop

Terminal size 0.5 to 2.55 mm<sup>2</sup> (20 to 14 AWG)



Note that: If two SDU/LONs are associated with IQLs which are on the same Lan, the SDU-LONs must be on the same segment (i.e. on the same section of LonWorks network separated by routers).



If the system is installed on a LonWorks Management Tool (as in step 12), this rule does not apply.

3 INSTALLATION (continued)

**8 Connect Input Power**

ensure correct polarity

\* If one side of the 24 Vac input power is connected to 0 V, that side must be connected to the SDU - (negative) terminal

**9 Switch on Input Power**

**10 Check Start Up Reset**

\* One of these will show 'Failed'

Comms failure or no sensor set up  
Connect to IQ

Displays first labelled sensor - if set to defaults  
SENSOR 1 FLOOR 1 Space Temp 20.3 DegC

SDU-LON V2.05  
FLASH CHECK \*  
EEPROM CHECK \*

SDU-LON V2.05  
FLASH CHECK OK  
EEPROM CHECK OK

SDU-LON V2.05

**11 Check LonWorks Network Connected**

LonWorks (green)

SDU faulty

failed to install on LonWorks network; check step 7

installed on LonWorks network

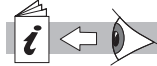
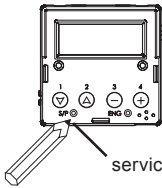
3 INSTALLATION (continued)

12

**Install on LonWorks Management Tool**

If other IQ System devices on LonWorks are installed on LonWorks Management Tool (LMT).

When installing SDU-LON on LonWorks Management Tool, push service pin button when requested.



See LonWorks network management tool manual. See IQ System LonWorks Products Engineering Manual (TE200292). LonWorks System integrator must have LonWorks engineering expertise.



SDU Data Sheet TA200559 for LonWorks network variables (NVs)

The SDU must also be associated with its IQL using the LMT  
 The following network variables need to be set up using the LMT:  
**nciInstallState**: set to CFG\_EXTERNAL  
**nciHostNodeAddr**: set to associated IQL LonWorks node address  
**nciSubnetAddr**: set to associated IQL LonWorks subnet address  
**nciMsgCode**: set message code of associated IQL  
**nciDomainIndex**: set to domain index of associated IQL

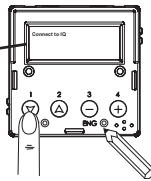
13

**Associate SDU with its IQL** not if installed on LonWorks Management Tool

Either use IQLTool2 running in SET and connected to a LonWorks network using LCI or use buttons as follows:

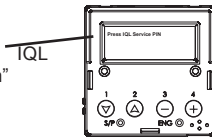
a

"Connect to IQL"



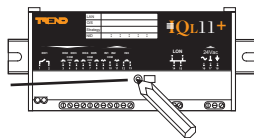
b

"Press Service Pin"



c

service pin button



d

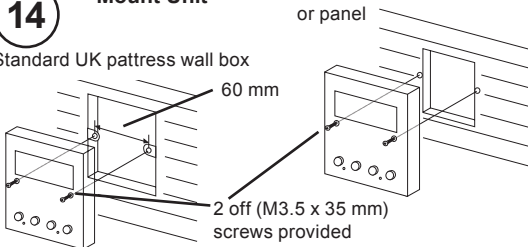
4 secs



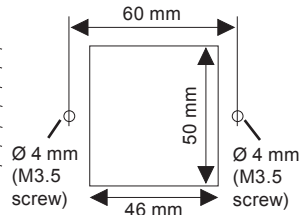
14

**Mount Unit**

Standard UK pattress wall box



or panel



3 INSTALLATION (continued)

**15** **Replace Front Panel**

A hand is shown sliding a front panel into a rectangular device housing. The panel has a display and four buttons labeled 1, 2, 3, and 4. The housing has a corresponding slot and a circular opening at the bottom.

**16** **Check Display**

The display shows the text: "Sensor 1", "Floor 1 Space Temp", and "20.3 DegC". Below the display are four buttons labeled 1, 2, 3, and 4, and a "YES" button.

Sensor 1  
Floor 1 Space Temp  
20.3 DegC

Displays first labelled sensor if set to defaults

**17** **Check Operation - Monitor**

*Note that the full sequence listed below may only be shown in Unrestricted modes. The Restricted modes show only those pages on the Restricted list. The Home page is optional (see step 6d).*

The flowchart starts at the "Home page" (displaying "Plant Room 1" and "2003/02 08:04"). Pressing the down arrow button leads to "Sensor" (displaying "Sensor 1", "Floor 1 Space Temp", "20.3 DegC"). From "Sensor", pressing the up arrow button leads to "Knob" and pressing the down arrow button leads to "Switch". From "Knob", pressing the up arrow button leads to "Driver" and pressing the down arrow button leads to "Digital Input". From "Switch", pressing the up arrow button leads to "Time Zone" and pressing the down arrow button leads to "Time". From "Driver", pressing the up arrow button leads to "Time Zone" and pressing the down arrow button leads to "Time". From "Digital Input", pressing the up arrow button leads to "Time Zone" and pressing the down arrow button leads to "Time". From "Time Zone", pressing the up arrow button leads to "Time" and pressing the down arrow button leads to "Calendars". From "Time", pressing the up arrow button leads to "Calendars" and pressing the down arrow button leads to "Sensor (last)". From "Calendars", pressing the up arrow button leads to "Sensor (last)" and pressing the down arrow button leads to "Sensor 1". From "Sensor (last)", pressing the up arrow button leads to "Sensor 1" and pressing the down arrow button leads to "Sensor 2". From "Sensor 1", pressing the up arrow button leads to "Sensor 2" and pressing the down arrow button leads to "Sensor (last)". From "Sensor 2", pressing the up arrow button leads to "Sensor (last)" and pressing the down arrow button leads to "Sensor 1".

Home page

Sensor

Knob

Switch

Driver

Digital Input

Time Zone

Time

Calendars

Sensor 1

Sensor 2

Sensor (last)

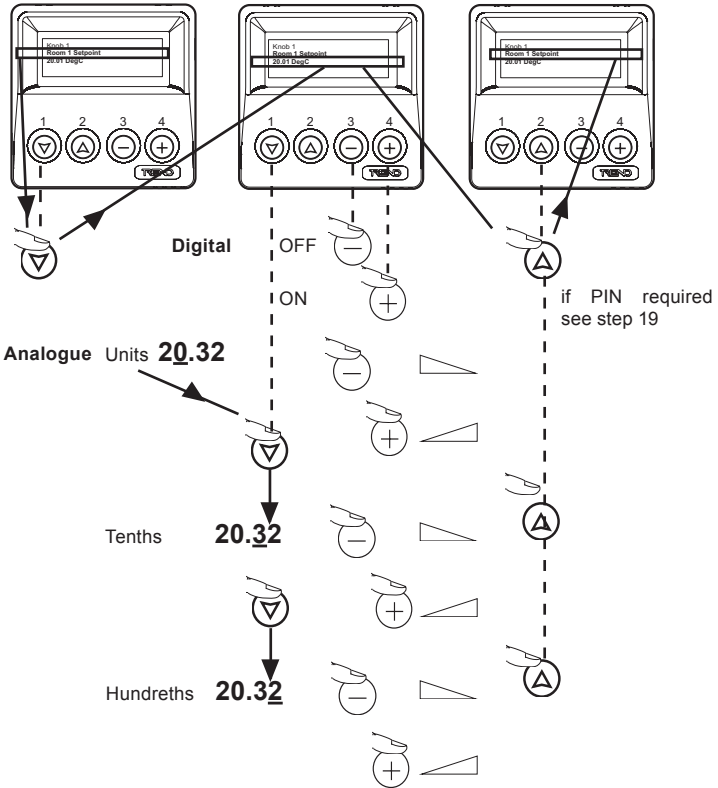
*Note that only modules with labels (not necessarily sequential) will be displayed.*

*Note that if there are no modules of type (sensors, knob, switch, driver, digital input) set up with a label it will jump to the next type display.*

3 INSTALLATION (continued)

18

Check Operation - Adjust

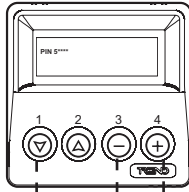


3 INSTALLATION (continued)

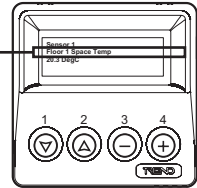
19

Enter PIN

If required

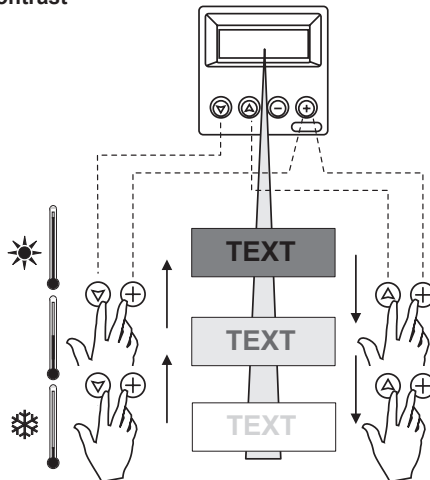


- a - [Down Arrow] [Minus] [Plus] PIN 5\*\*\*
- b - [Down Arrow]
- c - [Minus] [Plus] PIN X5\*\*
- d - [Down Arrow]
- e - [Minus] [Plus] PIN XX5\*
- f - [Down Arrow]
- g - [Minus] [Plus] PIN XXX5
- h - [Down Arrow]



20

Set Contrast



3 INSTALLATION (continued)

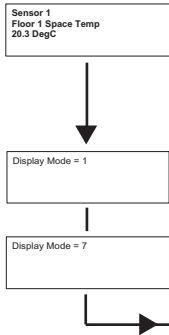
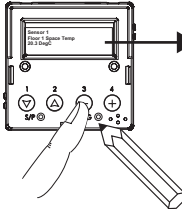
21

**Set SDU Mode**

If required

*Note that the alarm log is permanently disabled for SDU-LON so the SDU mode selects restricted/unrestricted and home page*

- a Remove front panel - see step 3
- b Set mode



Default - Display Mode 0:  
No home page, alarm log disabled

Mode	Page Set	Home Page	Alarm Log
0	Unrestricted	No	No
1	Unrestricted	Yes	No
2	Unrestricted	No	No
3	Unrestricted	Yes	No
4	Restricted	No	No
5	Restricted	Yes	No
6	Restricted	No	No
7	Restricted	Yes	No

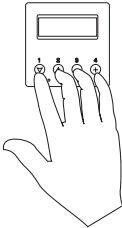
*Note that if the home page is enabled, the controller's identifier [R(D)] should be set up, otherwise the first line of the home page will show the label of the previous item displayed.*

- c Replace front panel - see step 15

22

**Engineering Resets**

If need temporary Unrestricted mode for commissioning or need Manual reset (e.g. after multiple mode changes as in step 20)



Hold 5 secs - 10 secs

Hold 10 secs or greater

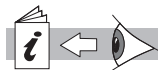
**Temporary Unrestricted Mode** - returns to previous mode 20 seconds after last key press.  
**Manual Reset**

3 **INSTALLATION** (continued)

**23**

**Set up Parameters**

If required



SDU Data Sheet  
TA200559

Set up the following parameters for IQL using SDU:

Knobs

Switches

Time Zone	Day of week (1 to 14)	Period (1 to 3)
	Start hours, minutes	Stop hours, minutes

Time  
hrs, minutes, day of month, month, year  
daylight saving on, day of month, month  
daylight saving off, day of month, month

Calendars	Use (next, Free, every)
	Start date                      Stop date
	Special day type for the zone

*Note that if a 963 is to centrally control the IQL's occupation state, then the SDU time zone's times should be left nulled at 00:00.*

*Note that if a 963 is centrally synchronising time, it should do so using a timemaster which will in turn synchronise the SDU.*

## 4 DISPOSAL

**WEEE Directive:**

At the end of their useful life the packaging and product should be disposed of by a suitable recycling centre.

Do not dispose of with normal household waste.

Do not burn.

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**Trend Control Systems Limited**

Albery House, Springfield Road, Horsham, West Sussex, RH12 2PQ, UK. Tel:+44 (0)1403 211888 Fax:+44 (0)1403 241608 [www.trendcontrols.com](http://www.trendcontrols.com)

**Trend Control System USA**

6670 185<sup>th</sup> Avenue NE, Redmond, Washington 98052, USA. Tel:(425) 869-3900 Fax:(425) 869-8445 [www.trendcontrols.com](http://www.trendcontrols.com)