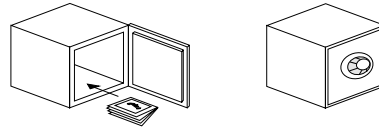


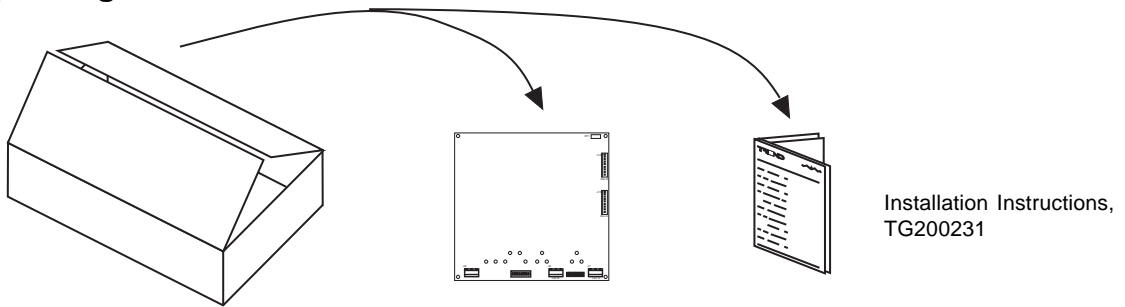
**Important: Retain these instructions**



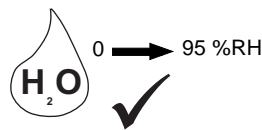
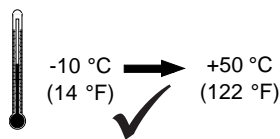
## Contents

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## 1 Unpacking

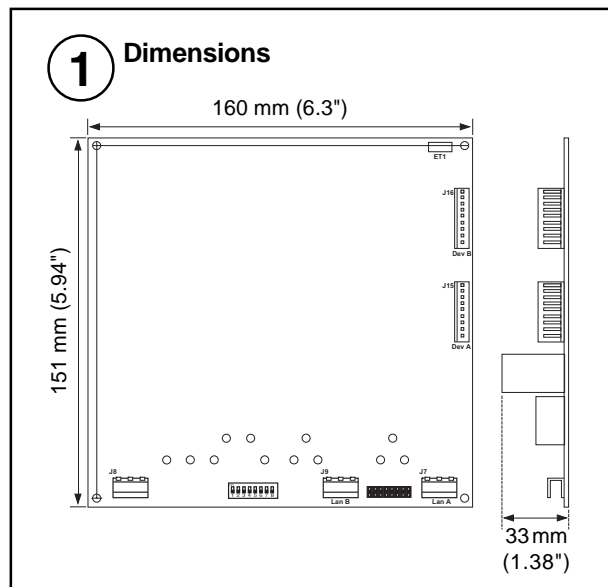



## 2 Storing



## 3 Installation


### 3.1 Installation - Mounting



 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.

**WARNING:** Opening the panel may expose dangerous voltages.  
417-IEC-5036



**Caution:** The INC2 contains static sensitive devices. Suitable anti-static precautions should be taken throughout this operation to prevent damage to the unit.

BS EN100015/1 Basic Specification: protection of electrostatic sensitive devices.



3.1 Installation - Mounting (Continued)

### 2 Requirements

**a**

**b**

**c**

**d**

### 2 Mount the Node

The INC2 can be fitted into enclosures and controllers as shown in the table below:

NETB/NETBB	✓
IQ101+/102+	✓
IQ111+	✓
IQ131+	✓
IQ25x	✓*
IQ241/242	✓
IQ231/233	✓

\* INC2 board fits with 3 screws in normal node position or fits in NDP position (if no NDP). Must use NDP position if RDS fitted.

See appropriate enclosure/controller installation instructions for more details about node installation.

### 3 Connecting Power

**INC2 consumption <=5 VA**

**DO NOT APPLY  
POWER**

3.1 Installation - Mounting (Continued)

**4 Connecting Earth (ground)**

**WARNING: This apparatus must be earthed (grounded)**

**5 Connect Network (Lan A)**  
 (unless RS232 receiver/transmitter Device A being used e.g. leased line modem)

Normally **Local Lan** dumb/normal switch set to dumb, any address  
 dumb/normal switch set to normal, address <100  
*Note that EINC's, INC's and LINC's cannot be on same Lan*  
**Internetwork segment A** if dumb/normal switch set to normal (internetwork buffer), address >=100

Network Engineering Manual, 92-1735.

Cable	1k2 baud (1090 yds)	4k8 baud (1090 yds)	9k6 baud (1090 yds)	19k2 baud (765 yds)	No. of Wires
Belden 9182	1000 m (1090 yds)	1000 m (1090 yds)	1000 m (1090 yds)	700 m (765 yds)	2
Belden 9207	1000 m (1090 yds)	1000 m (1090 yds)	1000 m (1090 yds)	500 m (545 yds)	2
<b>IQ system TP/1/1/22/HF/200</b> (Belden 8761)	1000 m (1090 yds)	1000 m (1090 yds)	700 m (765 yds)	350 m (380 yds)	2
<b>IQ system TP/2/2/22/HF/200</b> (Belden 8723)	1000 m (1090 yds)	1000 m (1090 yds)	500 m (545 yds)	250 m (270 yds)	4

terminal size 0.5 to 2.5 mm<sup>2</sup>  
(14 to 20 AWG)

**LAN A**

polarity independent **2 wire**

**LAN A**

**LAN A**

additional terminals

**6 Connect Network (Lan B)**  
 (unless RS232 receiver/transmitter Device B being used e.g. leased line modem)

Always **Internetwork**

Network Engineering Manual, 92-1735.

Cable	1k2 baud (1090 yds)	4k8 baud (1090 yds)	9k6 baud (1090 yds)	19k2 baud (765 yds)	38k4 baud (545 yds)	No. of Wires
Belden 9182	1000 m (1090 yds)	1000 m (1090 yds)	1000 m (1090 yds)	700 m (765 yds)	500 m (545 yds)	2
Belden 9207	1000 m (1090 yds)	1000 m (1090 yds)	1000 m (1090 yds)	500 m (545 yds)	350 m (380 yds)	2
<b>IQ system TP/1/1/22/HF/200</b> (Belden 8761)	1000 m (1090 yds)	1000 m (1090 yds)	700 m (765 yds)	350 m (380 yds)	250 m (270 yds)	2
<b>IQ system TP/2/2/22/HF/200</b> (Belden 8723)	1000 m (1090 yds)	1000 m (1090 yds)	500 m (545 yds)	250 m (270 yds)	125 m (135 yds)	4

terminal size 0.5 to 2.5 mm<sup>2</sup>  
(14 to 20 AWG)

**LAN B / IWRK**

polarity independent **2 wire**

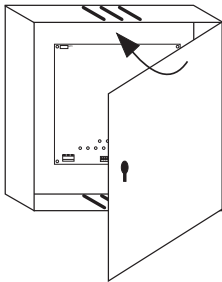
**LAN B / IWRK**

**LAN B / IWRK**

additional terminals

3.1 Installation - Mounting (Continued)

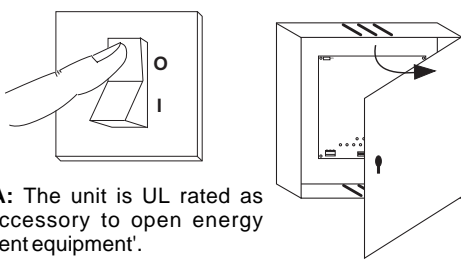
**7 Close Panel/Box**



**INC2/USA:** The unit is UL rated as 'UL916 accessory to open energy management equipment'.


3.2 Installation - Configuration

**1 Switch off and open panel/covers**




**INC2/USA:** The unit is UL rated as 'UL916 accessory to open energy management equipment'.

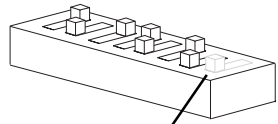
**WARNING:** Opening the panel may expose dangerous voltages.  
417-IEC-5036



**Caution:** The INC2 contains static sensitive devices. Suitable anti-static precautions should be taken throughout this operation to prevent damage to the unit.  
BS EN100015/1 Basic Specification: protection of electrostatic sensitive devices.



**2 Set Dumb/Normal switch**



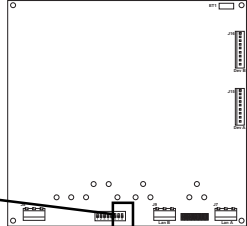
e.g.

1	2	4	8	16	32	64	NORM
							ON

ADDRESS

**Dumb**  
Sets traditional INC only mode:  
(Lan/Internetwork gateway, Lan A always a Lan, never Internetwork)

**Norm**  
Sets Internetwork repeater or Lan/Internetwork gateway dependent on address (see step 4 below)



3.2 Installation - Configuration (Continued)

**3 Set the INC2 Internetwork Address**  
(Lan number)

e.g. Address = D

Address = 2+16+64 = 82

SET / NOTSET

address ✓ 1, 4 to 9, 11 to 114  
✗ 0, 2, 3, 10 or >119

if **dumb** (traditional INC only mode) address defines Lan number on Internetwork (Lan/Internetwork gateway)

if **normal** if address < 100, address defines Lan number on Internetwork (Lan/Internetwork gateway)

if address = > 100, address is for configuration only (Internetwork repeater)

**4 Set Lan A Network Baud Rate**  
(or Device A RS232 baud rate if connected to RS232 receiver/transmitter)

**Baud A**

Network Baud Rate = R1 (or RS232 to DeviceA)

move link to set baud rate (**Baud A**)

e.g. 9k6

**5 Set Lan B Internetwork Baud Rate**  
(or Device B RS232 baud rate if connected to RS232 receiver/transmitter)

**Baud B**

Internet Baud Rate = R2 (or RS232 to Device B)

or High Baud Rate, 38k4

Note: needs extra link

Note that 38k4 baud is only supported if connecting to other node 2 devices (e.g. 3xtend/EINC L) communicating over the internetwork. This baud rate is not supported through the LAN A terminals.

3.2 Installation - Configuration (Continued)

**6 Connect to RS232 Device A**  
 if Device A is a RS232 receiver/transmitter  
 (e.g. leased line modem)

**Note:** Connecting a cable to an RS232 connector disables corresponding Lan communications.

10 Way, Female, Molex links between pins 2-4, 3-5

25 Way, Female, 'D type' black sheath

**7 Connect to RS232 Device B**  
 if Device B is a RS232 receiver/transmitter  
 (e.g. leased line modem)

**Note:** Connecting a cable to an RS232 connector disables corresponding Lan communications.

10 Way, Female, Molex links between pins 2-4, 3-5

**8 Switch On**

**9 Check Node Controller**

(a) PWRON (green) ✓ Check input power

(b) W/DOG (red) ✓ INC2 Faulty

**10 Check Lan A**  
 Not if RS232 receiver/transmitter connected to Dev A

(a) RXA (yellow) ✓

(b) TXA (yellow) ✓

(c) OKA (green) ✓

Network Address Invalid 0, 2, 3 or >119

INC2 Faulty

Check network cabling for short circuits with a multimeter (NOT Megger)

Check baud rate. Power up other nodes until faulty node is found (OK). Correct fault.

3.2 Installation - Configuration (Continued)

**11 Check Lan B**  
 Not if RS232 receiver/transmitter connected to Dev B

RXB (yellow) ?  
 TXB (yellow) ?  
 OKB (green)

Network Address Invalid 0, 2, 3 or >119

LAN B / IWRK OKB INC2 Faulty  
 OKB Check network cabling for short circuits with a multimeter (NOT Megger)  
 OKB Check baud rate. Power up other nodes until faulty node is found (OK ). Correct fault.

**12 Close panel/covers**

**INC2/USA:** The unit is UL rated as 'UL916 accessory to open energy management equipment'.

Network Engineering Manual 92-1735  
 IQ Configuration Manual 90-1533  
 INC2 Data Sheet TA200209

Top Menu  
 INC2  
 User address

**13 Configure**  
 Recommend use of SET

e.g. select address module

Select from lanmap or set addresses as below:  
 • If on local Lan, or autodialled Lan, set Lan = 0, address = 126 (Note address used for old INC, Lan 126, address 126, still works)  
 • If using Internetwork, or autodialled remote Lan, set Lan = switch setting, address = 126

to eXit module having changed parameter  
 to Quit module and discard changes

Note that a PIN may be required to make changes in configuration mode. If the PIN has been forgotten the user should contact Trend Technical Support quoting the generator number (User module) whereupon a default PIN will be supplied. This will only work during the same configuration mode session i.e. the utility must not be exited between reading the generator and entering the default PIN. After the PIN is entered a new PIN should be set up and remembered.

3.2 Installation - Configuration (Continued)

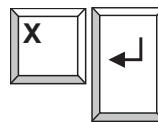
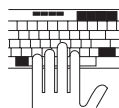
**14** Settings that may be changed

Set up following parameters if required

Parameter	Setting	Function	Condition	Note		
addRes	Identifier	15 alphanumeric characters - not \(\{;?* characters	Identifier for the lan (Lan A)	Always set for supervisors/Display Panels		
	Local Network alarms to	Address	node address 1, 4 to 9, 11 to 119	node address of INC2 alarm target for Lan A alarms	If Lan A alarms to be reported	1
		Remote lan	Lan number 1, 4 to 9, 11 to 119	Lan number of INC2 alarm target for Lan A alarms	If Lan A alarms to be reported	1
	Internetwork alarms to	addrEss	node address 1, 4 to 9, 11 to 119	node address of INC2 alarm target for Lan B alarms	If Lan B alarms to be reported	1
		remoTe lan	Lan number 1, 4 to 9, 11 to 119	Lan number of INC2 alarm target for Lan B alarms	If Lan B alarms to be reported	1
alarm language tyPe	0 to 9 (digits)	Selects language of network alarms	If language to be changed	2		
User	Pin	number	Protects changes in configuration mode	Default is blank (unprotected). Set up if security required.		
	generator	number	random number for default PIN generation	Read only, give to TechniCare for default PIN		

1. If set to zero - no alarms reported
2. Language tyPe values:  
0=English, 1=Spanish, 2=Finnish, 3=Swedish, 4=Norwegian, 5=Danish, 6=German, 7=Italian, 8=Portuguese, 9=French.

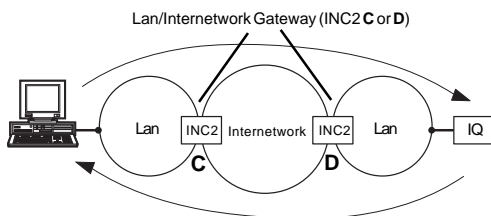
**15** Exit Configuration



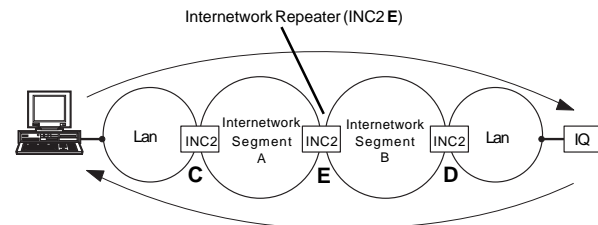
→ "Exit from Utility"

**16** Check INC2 Operation

If Lan/Internetwork Gateway



If Internetwork Repeater (dumb/normal = normal and address =>100)



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.

Manufactured for and on behalf of the Environmental and Combustion Controls Division of Honeywell Technologies Sàrl, Ecublens, Route du Bois 37,Switzerland by its Authorized Representative, Trend Control Systems Limited.

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