Smart-house Controller

BH8-CTRLX-230

- **Programmable smart-house controller**
- **Option for external GSM Modem for monitoring and control via SMS**
- **User-friendly configuration via Windows XP/Vista/Windows 7**
- **Ethernet and SD-card for configuration and smart-house data read/write**
- **Full featured smart-house operations: light function, Rollerblind, Alarm etc.**
- **RS232 connection for external device connection/gateways**
- **H8-housing for DIN-rail mounting (EN50022)**
- **AC or DC power supplied (battery backup)**
- **Web Server functionality for remote control**

INPUT/OUTPUT SPECIFICATIONS

Serial Port		RS 232
COM 1		9600 Baud - 115 kBaud, adjustable
Pin assignment	TxD	Pin 12
	RxD	Pin 13
	GND	Pin 14
Dielectric voltage		
Com.port - smart-house		≥ 2 kVAC (rms)
Ethernet		10/100 MB RJ45
smart-house Output		smart-house bus
Output voltage		8.2 V
Current (absolute max. ratings)		< 450 mA @ 25°C < 300 mA @ 50°C
Short-circuit protection		Yes
Sequence time		
32 in- and outputs		38.6 ms
128 in- and outputs		132.3 ms

SUPPLY SPECIFICATIONS

Power supply	AC-Drive	Overvoltage cat. III (IEC 60664)
Rated operational voltage through term. 21 & 22		85-264 VAC (IEC 60038)
Frequency		47 to 63 Hz
Rated operational power		Typ. 20 VA at max load
Power dissipation		≤ 12 W
Rated impulse withstand voltage	230 V	4 kV
	115 V	2.5 kV
Dielectric voltage		
Supply - smart-house bus		≥ 3 kVAC (rms)
DC in smart-house bus		None
Com. ports - smart-house bus		≥ 3 kVAC (rms)
Supply - Com. ports		≥ 3 kVAC (rms)
DC charge		
U out through term. +35 & -36		13.7V ± 0.1V
Max. charge current (short)		300 mA
Charge current @ 12V DC		app. 40 mA
Power supply	DC-Drive	Overvoltage cat. III (IEC 60664)
Rated operational voltage through term. +35 & -36		13 VDC ± 10%
Reverse polarity protection		Yes
Rated operational power		10 W
Power dissipation		≤ 7 W

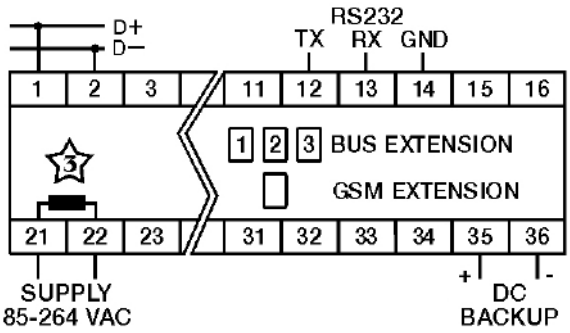
GENERAL SPECIFICATIONS

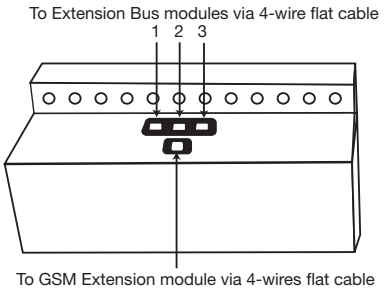
Real-time clock	
Accuracy	Better than ± 1 minute/month
Internal back-up time	Typ. 48 hours
Power ON delay	< 30 s
Indication for	
Supply ON	LED, green
ON Line	LED, yellow
Battery drive	LED, yellow
COM status	LED, red
Ethernet collision	LED, yellow
Ethernet link	LED, green

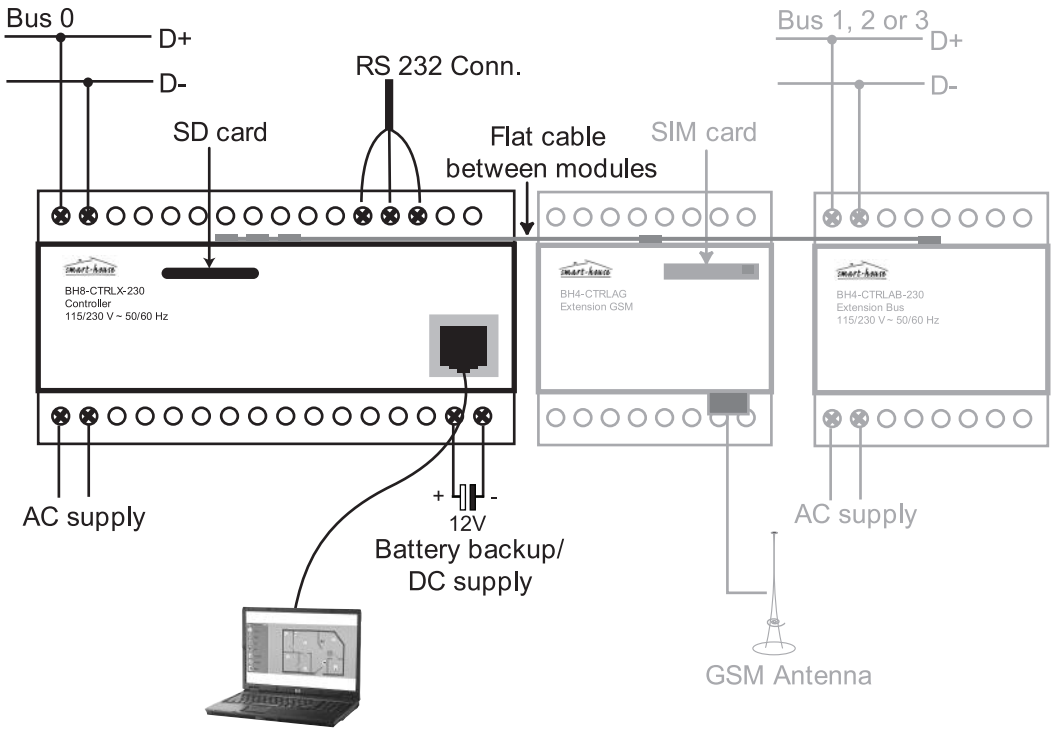
Environment	
Degree of protection	IP 20
Pollution degree	3 (IEC 60664)
Operating temperature	0° to +50°C (+32° to +122°F)
Storage temperature	-20° to +85°C (-4° to +185°F)
Humidity (non-condensing)	20 to 80% RH
Mechanical resistance	
Shock	15 G (11 ms)
Vibration	2 G (6 to 55 Hz)
Dimensions Material (see "Technical Information")	H8-housing
Weight	400 g

Smart-house Controller

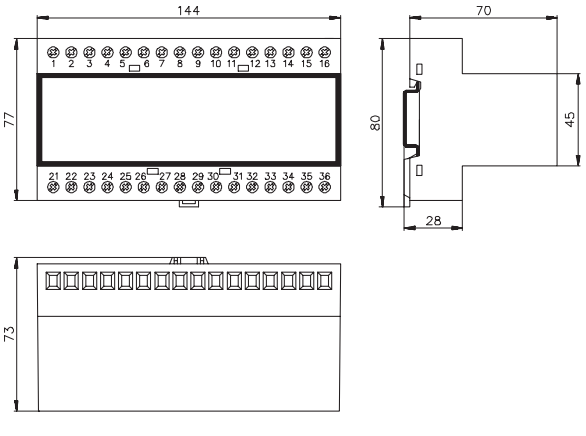
WIRING DIAGRAM







DIMENSIONS (mm)



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MODE OF OPERATION

Intelligent functions
The smart-house controller is a programmable integrated unit specially designed for building automation applications. The controller includes dedicated functions for light control, temperature control, roller blind control and alarm monitoring. And it includes smart functions like sequence control which enables a series of actions to be performed automatically, and simulated occupation to control the lights and roller blinds while the owner is away, based upon the real life behaviour of the inhabitants.

Smart-house Controller Configuration
The smart-house controller is as default configured without intelligent in- and output functions to run modules on the smart-house bus. In order to set up the intelligent functions, the controller has to be configured by the Windows based smart-house Configuration tool. This software is free and delivered on a CD-rom together with the controller.
The smart-house Configuration tool operates on Windows ® XP / Vista / Win 7 PC's.

The smart-house Configuration tool secures a full documentation of the smart-house installation. It is used to create a logic overview of the building, and in each room you may place the smart-house IO modules necessary for the wanted functions. To simplify this operation, the smart-house Configuration tool includes a database of all the smart-house products. Finally, the functions in each room are configured, using the input/output modules installed.

A configuration can be transferred to/from the controller either through the Ethernet or by a standard SD-memory card.

Web Server
The Web Server provides remote access via the internet by using smart-phones with browsing capability.
It provides an actractive and user friendly interface to control air conditioning, lighting, alarms, temperature set points, timers, system time, roller blinds, sequences and weather sensors. Different users can be created with different access to functions and rooms.

Power LED
The green power LED will be on when the module is connected to power.
A bus short will be indicated by the green LED in one of two ways:

1. The light intensity will dim after approximately 30 sek.
2. The LED and the yellow bus LED will be flashing.

Bus LED
At power UP, the yellow bus LED will be constant ON immediately. 8 VDC will be on the bus for charging up bus-supplied modules. After power ON delay, the led will be interrupted in each bus period resulting in weak flashing in the constant light. The more outputs activated on the bus, the more the led is flashing.

GSM Extension Module Option BH4-CTRLAG
The smart-house Controller can be connected to a GSM extension module which enables monitoring and control of smart-house signals via SMS messages to/from mobile GSM telephones.
There are 3 different ways to use SMS messaging:

• The smart-house Controller can be programmed to send out event-based SMS messages. The event can be a channel switching ON or OFF, or it can be an analog signal crossing a set-point.
• Requests for status of digital or analog data can be sent and answered via SMS messages.

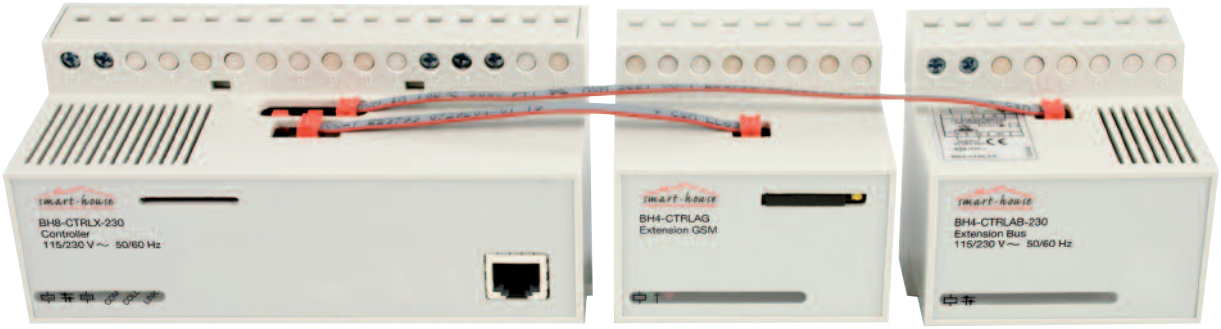
• Status of digital channels can be controlled by sending commands via SMS messages.

In order to make use of the GSM module, the following is required:

• A SIM-card with the pin-code 9090 needs to be inserted into the slot in the front of BH4-CTRLAG. The SIM-card must be a 3V type.
• A GSM antenna needs to be connected to the FME connector on BH4-CTRLAG. If the unit is installed in a metal enclosure, the antenna must be installed outside the enclosure.

Bus extension module option BH4-CTRLAB-230
The smart-house controller can be connected with up to 3 bus extension modules, which each represent a smart-house net enabling 4 x 128 inputs and 4 x 128 outputs.

The Controller is named BUS 0, and the Extension bus modules BUS 1, 2 and 3. The BUS names are used during configuration of the smart-house controller.



TYPE SELECTION

Supply	Ordering no.
115/230 VAC / 12 VDC	BH8-CTRLX-230

ACCESSORIES

External bus module	BH4-CTRLAB-230
External GSM module	BH4-CTRLAG

SCOPE OF SUPPLY

1 x smart-house Controller	BH8-CTRLX-230
1 x CD-rom	SW BH8-CTRLX-230
1 x Ethernet cable	
1 x SD card	