

# CHQ MODULES INSTALLATION INSTRUCTIONS



Products Covered: CHQ SZM (Single Zone Monitor), CHQ-DIM (Dual Input Monitor)

## Introduction

The CHQ "Smart-Fix" Range of Modules consists of the following models:

CHQ-DIM CHQ-DIM(SCI) CHQ-DIM/DIN CHQ-DIM/DIN(SCI)	<b>Dual Input Module</b>	CHQ-DZM CHQ-DZM(SCI) CHQ-DZM/DIN CHQ-DZM/DIN(SCI)	<b>Dual Zone Monitor</b>
CHQ-DRC CHQ-DRC(SCI) CHQ-DRC/DIN CHQ-DRC/DIN(SCI)	<b>Dual Relay Controller</b>	CHQ-MRC CHQ-MRC(SCI) CHQ-MRC/DIN CHQ-MRC/DIN(SCI)	<b>Mains Relay Controller</b>
CHQ-DSC CHQ-DSC(SCI) CHQ-DSC/DIN CHQ-DSC/DIN(SCI)	<b>Dual Sounder Controller</b>	CHQ-SZM CHQ-SZM(SCI) CHQ-SZM/DIN CHQ-SZM/DIN(SCI)	<b>Single Zone Monitor</b>

Note: (SCI) indicates Module incorporates a short-circuit isolator. DIN indicates Module housing is designed to fit standard "Top Hat" DIN Rail.

## Components

Standard "Smart-Fix" Modules (including (SCI) versions) are supplied as two individual components (see Fig 1 & 2). DIN versions are supplied as one unit (see Fig 3).

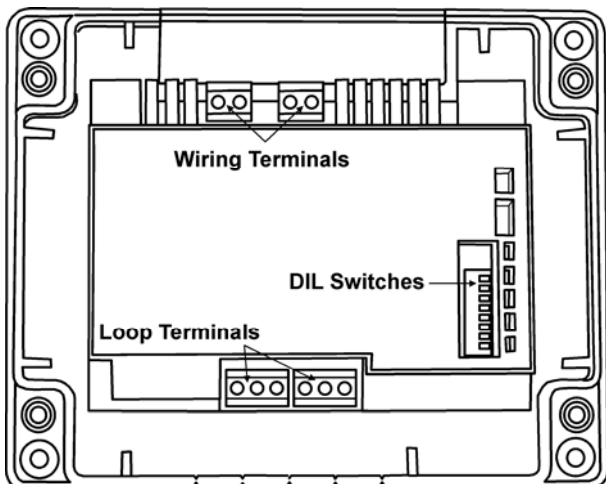


Fig 1

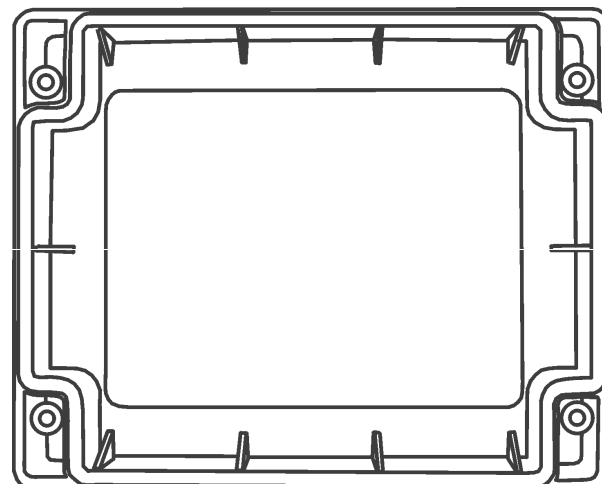


Fig 2

**"Smart-Fix" CHQ Module (Back Plate inc PCB Component)**  
(Note: configuration of Wiring Terminal blocks differs between models)

**CHQ-LID Transparent Module Lid**  
(Supplied with four screws and acrylic retaining washers)

## Setting the Loop Address

- ❑ The analogue address of the Module is set using the first 7 switches of the 8-bit DIL switch, which in the case of the Standard CHQ is located through the cut-out section on the top of the PCB cover. On the DIN version, this switch is located on the edge of the PCB behind the clear door (see Fig 3).
- ❑ The switches are numbered 1 to 8 (left to right) and each switch should be in the UP position for "ON" and DOWN for "OFF" and should be set using a small-tipped screwdriver or similar.
- ❑ Refer to the Address Chart (Fig 10) on page 4 for a quick reference on addresses.

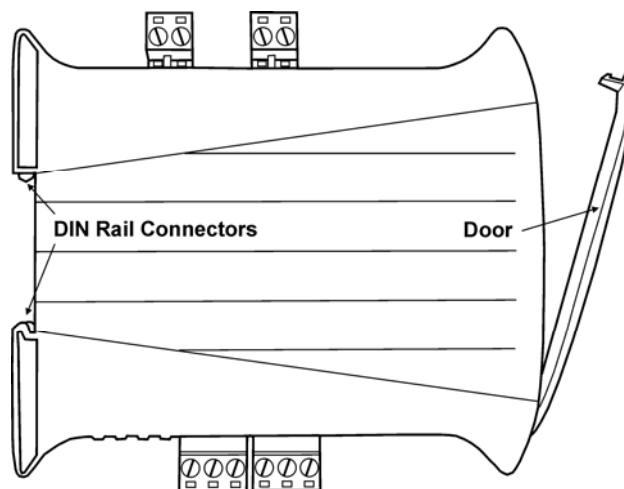


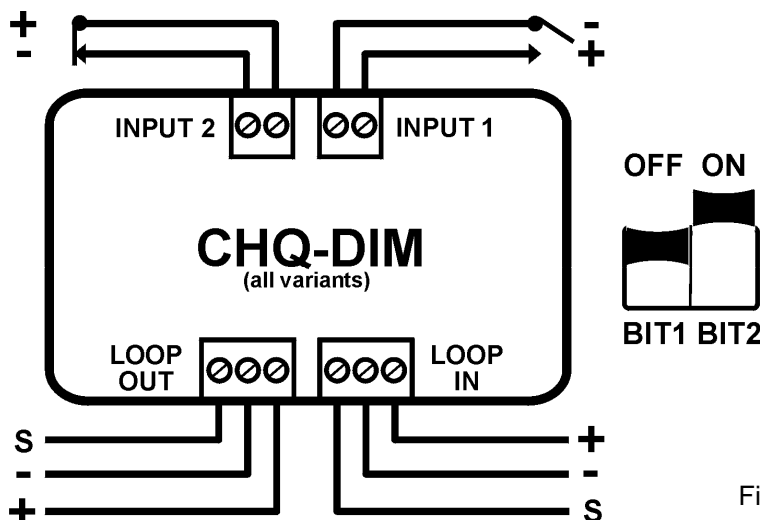
Fig 3

**DIN Rail Mountable CHQ**

(continued on page 4)

### CHQ-DIM DUAL INPUT MONITOR

This device is a loop-powered module designed to interface to a variety of inputs, such as, door contacts, sprinkler flow/door switches and plant equipment fault contacts, this module is particularly suited to applications where a fast response is required to the input change.



#### Setting Contact Monitoring

Both volt free input contacts can be configured to be either N/O or N/C, by setting the 2-bit DIL switch (see Fig 4).

DIL Switch Bit 1 = INPUT 1  
 DIL Switch Bit 2 = INPUT 2  
 ON = Normally Closed (N/C)  
 OFF = Normally Open (N/O)

#### LOOP CONNECTIONS

**S** = Cable Screen (if required)  
**-** = Loop Negative (-ve)  
**+** = Loop Positive (+ve)

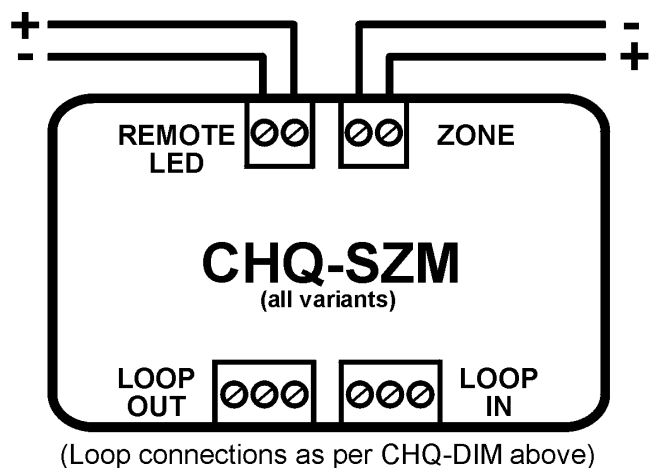
Fig 4

Order codes	CHQ-DIM / CHQ-DIM(SCI) / CHQ-DIM/DIN /CHQ-DIM/DIN(SCI)* <sup>1</sup>	
Transmission method	Digital communication using ESP	
Loop:-Operating voltage	17 - 41 VDC	
Quiescent current	280µA	
Current consumption whilst polling	22mA ± 20 %	
Current consumption with inputs active	4.3mA (Both inputs active)* <sup>2</sup>	
Current in short-circuit	8mA (CHQ-DIM/DIN(SCI))	
Maximum short-circuit current (Loop)	1A (CHQ-DIM/DIN(SCI))	
Input line resistance	ON threshold <50Ω, OFF threshold >100KΩ	
Weights & Dimensions	CHQ-DIM	324g
	CHQ-DIM(SCI)	327g
	CHQ-DIM/DIN	110g
	CHQ-DIM/DIN(SCI)	113g
		L=157mm x W=127mm x D=35mm (CHQ Module plus Lid) D=79mm (CHQ Module plus Lid plus CHQ-BACKBOX) (add 235g to module weight when using CHQ-BACKBOX)
Colour and enclosure material	CHQ Module & CHQ-BACKBOX White ABS, DIN Module Green ABS	

\*<sup>1</sup> Fire alarm control panel compatibility required for these products.

\*<sup>2</sup> Note: - Add 85µA per input for normally closed contact monitoring

**CHQ-SZM SINGLE ZONE MONITOR** is a loop-powered module that provides a single fully monitored input for the connection of up to six Hochiki conventional smoke or heat detectors, OR one Hochiki beam detector, or any number of conventional call points, the unit also contains an output for remote fire indication.



Note: The end of line device (EOL) is supplied with the unit – do NOT discard in error! The EOL device MUST be fitted at the last detector on the zone, note the polarity.

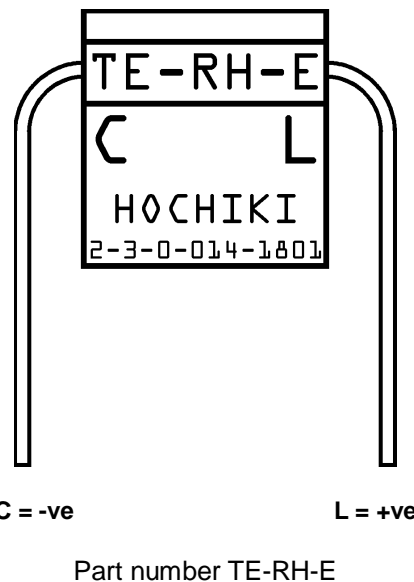


Fig 5

Order codes	CHQ-SZM / CHQ-SZM(SCI) / CHQ-SZM/DIN / CHQ-SZM/DIN(SCI) *1		
Transmission method	Digital communication using ESP		
Loop:-Operating voltage	17 - 41 VDC		
Quiescent current	260µA		
Current consumption whilst polling	22 mA ± 20 %		
Current in short-circuit	8mA (CHQ-SZM/DIN(SCI))		
Maximum short-circuit current (Loop)	1A (CHQ-SZM/DIN(SCI))		
E.O.L device	TE-RH-E (polarity conscious)		
Zone voltage	15.3V - 17.1V		
Zone resistance	50Ω (Max)		
Zone capacitance	0.3µF (Max)		
Detectors per zone	Number of conventional detectors per zone DCA, DFB, DFE – No limit SLG, SLK, SLR, SIF, SIH, SIJ, DCC, DCD, DFJ – 6 max SPB-ET or SRA-ET– Only one and no other detectors HF-24 – Only one and no other detectors Conventional Call Points – No limit		
Weights & Dimensions	CHQ-SZM	325g	L=157mm x W=127mm x D=35mm (CHQ Module plus Lid) D=79mm (CHQ Module plus Lid plus CHQ-BACKBOX) (add 235g to module weight when using CHQ-BACKBOX)
	CHQ-SZM(SCI)	328g	
	CHQ-SZM/DIN	111g	
	CHQ-SZM/DIN(SCI)	114g	
Colour and enclosure material	CHQ Module & CHQ-BACKBOX White ABS, DIN Module Green ABS		

\* Fire alarm control panel compatibility required for these products.

This module does not support any line continuity options; therefore, if manual Call Points are to be interfaced then these should be connected first.

### Installation – "Smart-Fix" Version

Set analogue address before installation (see page 1). The fixing surface should be dry and stable.

- ❑ Hold the back plate up against the fixing surface and mark the position of the four corner fixing holes.
- ❑ Determine which cut-out sections along the top and bottom edges of the module require removing to accommodate the cables being used.
- ❑ Remove cut-outs by scoring with a sharp knife before breaking off with pliers or snips.
- ❑ Mount the back plate using appropriate fixings (not supplied) for the fixing surface.
- ❑ Terminate and connect field wiring as per the wiring diagrams on pages 2 & 3 (and the terminal block indications on the product label).

The transparent lid (CHQ-LID) is supplied with four screws and eight retaining washers.

- ❑ Push the screws through one of the retaining washers and then through the holes in the lid from front to back, pushing another retaining washer onto the end inside the lid.
- ❑ Screw the lid onto the back plate; do not over tighten the screws as this could damage the unit.

Note, a white plastic version of the lid is available (sold separately – CHQ-LID(WHT)).

### Installation – "Smart-Fix" with Back Box

For those installations requiring glanded cables, a module back box (CHQ-BACKBOX) is available (sold separately).

This features ten knock-out cable entries (glands are not supplied). Ensure glands used conform to IP67, if such ingress protection is required. The CHQ-BACKBOX is mounted on the fixing surface; the CHQ Module is then fitted to the top of the back box. Finally the CHQ-LID is added creating a sealed enclosure. For further details refer to the CHQ-BACKBOX Instructions (2-3-0-800).

### Installation – DIN Version

Set analogue address before installation (see page 1) and write loop address in space provided on door label.

- ❑ Clip onto an appropriate DIN Rail, which should be mounted within an approved enclosure with the loop connections at the bottom of the unit.
- ❑ Terminate and connect field wiring as per the wiring diagrams on pages 2 & 3 (and the terminal block indications on the product label).
- ❑ To comply with EMC regulations, these products must be fitted in a protective enclosure.
- ❑ Suitable anti-static precautions must be taken when handling these products.

### Status LEDs

Refer to the table below for Status LED indications:

CHQ-DIM (all variants)	Dual Input Module	Green LED flashes each time the unit is polled by the fire alarm control panel and is continuously illuminated when either input is active. Amber LED is continually illuminated when unit detects short-circuit fault.
CHQ-SZM (all variants)	Single Zone Monitor	

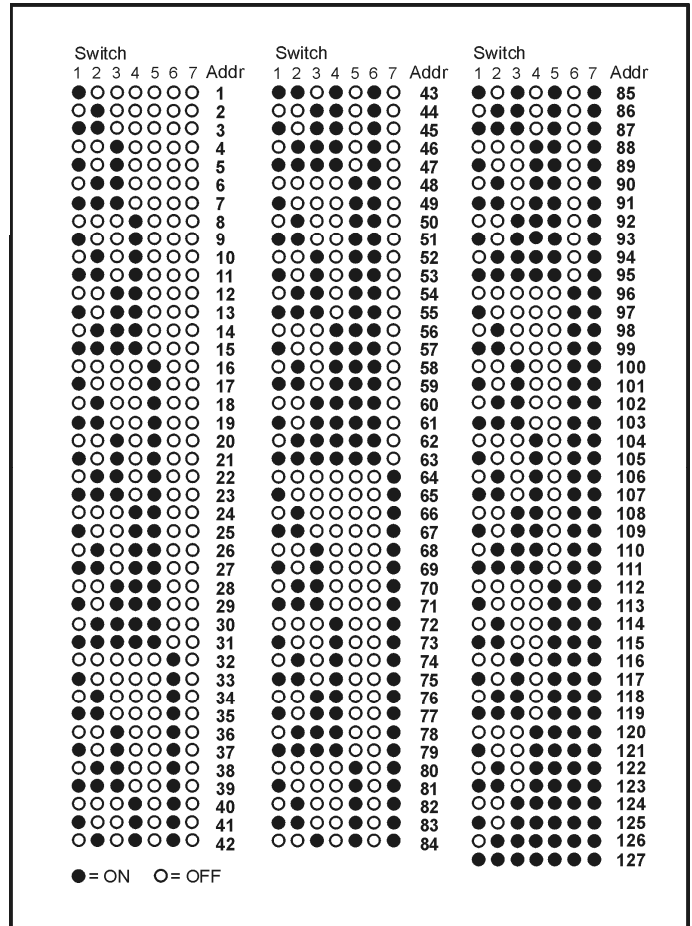


Fig 10



**Hochiki Europe (UK) Ltd**  
 Grosvenor Road, Gillingham Business Park,  
 Gillingham, Kent, ME8 0SA, England  
 Telephone: +44(0)1634 260133  
 Facsimile: +44(0)1634 260132  
 Email: sales@hochikieurope.com  
 Web: www.hochikieurope.com

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