HOCHIKI INTRINSICALLY SAFE COMPATIBLE DUAL ZONE MONITOR INSTALLATION INSTRUCTIONS

Products covered: CHQ-DZM(SCI)-IS, CHQ-DZM/DIN(SCI)-IS, CHQ-DZM/M(SCI)-IS

Function

The CHQ-DZM(SCI)-IS is an input monitoring device which connects to the Hochiki ESP analogue system. It is capable of monitoring two zones of intrinsically safe detectors through an intrinsically safe barrier. The unit also provides two controllable outputs, which can be used to drive remote LEDs (if supported by the Control Panel). The unit is available as either a “Smart-Fix” module box or as a DIN Rail mountable unit with both variants featuring an integral short-circuit isolator.

Specification

Order codes		CHQ-DZM(SCI)-IS, CHQ-DZM/DIN(SCI)-IS* and CHQ-DZM/M(SCI)-IS
Transmission method		Digital communication using ESP
Loop	Operating voltage	17 – 41 VDC
	Quiescent current	330 μA
	Current consumption whilst polling	22 mA ± 20 %
	Isolator leakage current (switch open)	8 mA (max)
	Isolator switch current (switch closed)	1 A (max)
External supply	Operating voltage	20-28.8 VDC (24 VDC nominal)
	Current consumption when in fire	70 mA (Both zones in fire)
Output rating		24 VDC 8.5 mA
Zone loading (max)		Up to 20 SLR-E-IS or DCD-1E-IS detectors (or a mixture of both), Up to 20 CCP-E-IS manual call points
E.O.L device (see note below)		10 kΩ resistor
Zone resistance		50 Ω (Max)
Zone capacitance		0.3 μF (Max)
Colour and enclosure material		CHQ Module & CHQ-BACKBOX White ABS DIN Module Green ABS

** Fire alarm control panel compatibility required for these products. See AP0127 for short-circuit isolator specifications.*

NOTE: The EOL resistors supplied with the CHQ-DZM(SCI)-IS comply with Hochiki’s BASEEFA certification for conventional I.S. detectors. The user must check that any EOL resistors used comply with the certification requirements for the proposed installation.

Components

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

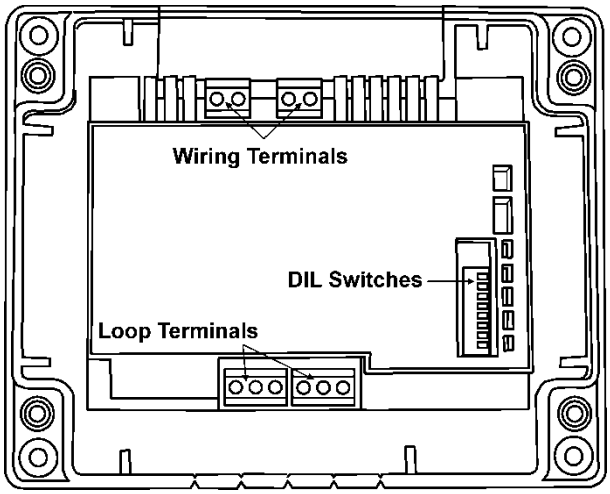


Fig 1

"Smart-Fix" CHQ Module (Back Plate inc PCB Component)

(Note: configuration of Wiring Terminal blocks differs between models)

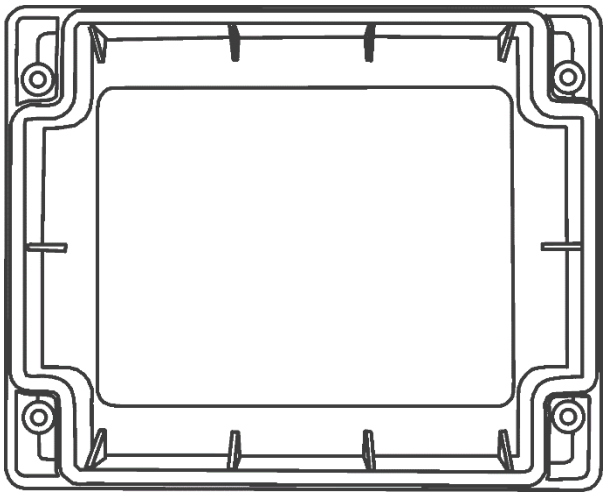


Fig 2

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):

CHQ MODULE	SWITCH **UP**	ON
	SWITCH **DOWN**	OFF
DIN MODULE	SWITCH **UP**	OFF
	SWITCH **DOWN**	ON

- The switches should be set using a small-tipped screwdriver or similar.
- Refer to the Address Chart (Fig 5) on page 3 for a quick reference on addresses.

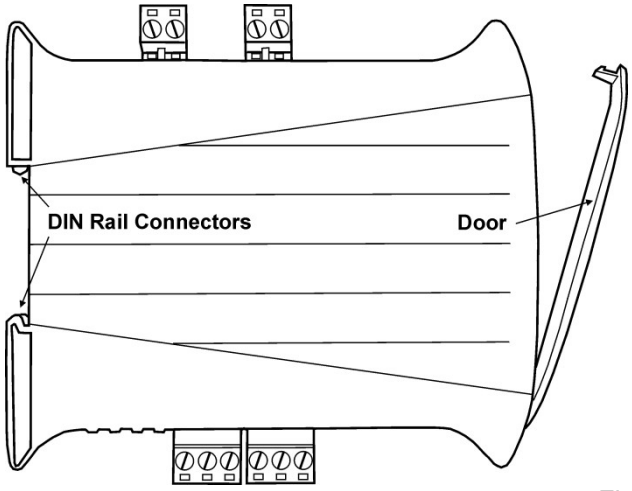


Fig 3

DIN Rail Mountable CHQ Module

Connection Details

The CHQ-DZM(SCI)-IS should be connected to the loop as shown below, the module does not support any line continuity options, therefore, if manual Call Points are to be interfaced to the unit then these should be connected first. Detectors should be connected to the CHQ-DZM(SCI)-IS in accordance with Hochiki's I.S. certification.

NOTE: The CHQ-DZM(SCI)-IS must be installed in the safe area along with the barrier.

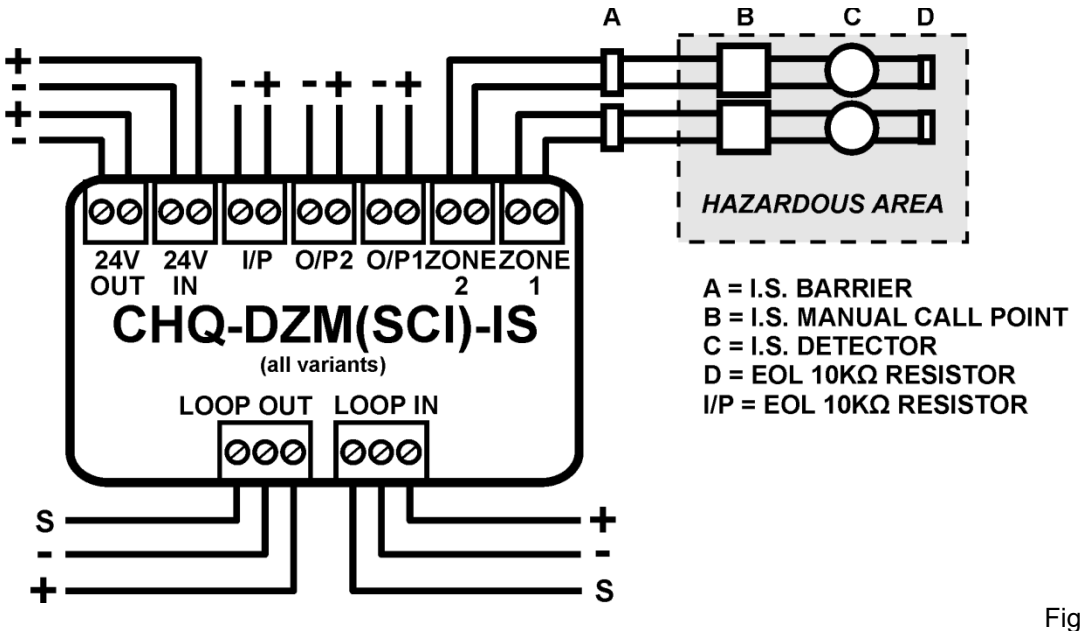


Fig 4

Compatible Barrier Types

The CHQ-DZM(SCI)-IS and CHQ-DZM/DIN(SCI)-IS are capable of supporting the barrier types listed below.

Galvanic Isolators
MTL5561
KFD0-CS-Ex1.51P
KFD0-CS-Ex2.51P
MTL5061 & MTL4061 *(older types)*

Zener Barriers
MTL7728+
MTL7787+
MTL728+ *(older type)*

Setting EOL Monitoring Option

Select the required EOL monitoring option using the 2-bit DIL switch.

CHQ MODULE	SWITCH 1 DOWN	I.S. MODE*
	SWITCH 2 UP	
DIN MODULE	SWITCH 1 UP	I.S. MODE*
	SWITCH 2 DOWN	

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

Installation – "Smart-Fix" Version

Set analogue address before installation (see previous page). 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 diagram on pages 2 (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)).

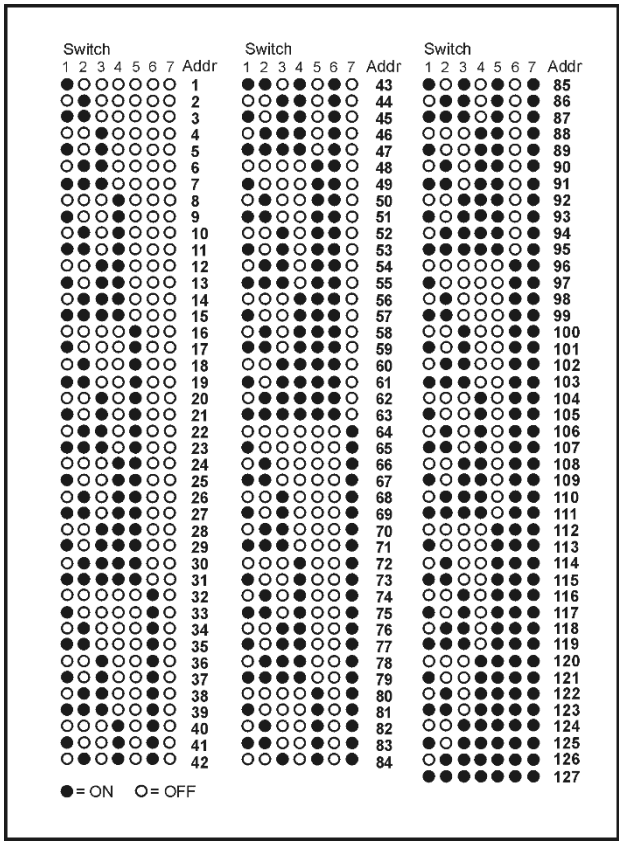


Fig 5

Installation with Back Box

For installations requiring glanded cables, a module back box (CHQ-BACKBOX) is available (sold separately). This is mounted on the fixing surface; the CHQ Module is then fitted to the top of the back box and the CHQ-LID is added creating a sealed enclosure. For further details refer to the CHQ-BACKBOX Instructions (2-3-0-800). For installations utilising heavy-duty cabling (for example, 1.5mm^2 solid conductor) the use of the SMB-1 Box with the SMB-ADAPTOR plate and CHQ-ADAPTOR is recommended. For further details refer to the SMB-ADAPTOR Instructions (2-3-0-1502). Ensure any glands used (not supplied) conform to IP67, if such ingress protection is required.

Installation – DIN Version

Set loop address before installation (see page 2) and write loop address in space provided on door label.

- ❑ DIN modules should be mounted in a suitable enclosure in conjunction with an NS 35 mounting rail with the loop connections at the bottom of the unit. Hochiki recommends the SMB-2 and SMB-3 Boxes designed specifically for this purpose.
- ❑ Terminate and connect field wiring as per the wiring diagram on page 2 (and the terminal block indications on the product label).
- ❑ Suitable anti-static precautions must be taken when handling these products.

Status LEDs

CHQ-DZM(IS) (all variants)	Intrinsically Safe Dual Zone Monitor	Green LED flashes each time the unit is polled by the fire alarm control panel. Amber LED is continually illuminated when unit detects short-circuit fault.

CE UK CA	Protocol specified in TI/006	CHQ-DZM(SCI)-IS	2831-CPR-F2207 0832-UKCA-CPR-F2205	20 23	EN54-17 Short Circuit Isolators EN54-18 Input/Output Modules
		CHQ-DZM(HFP)SCI-IS			
		CHQ-DZM/DIN(SCI)-IS	2831-CPR-F2208 0832-UKCA-CPR-F2206	20 23	

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