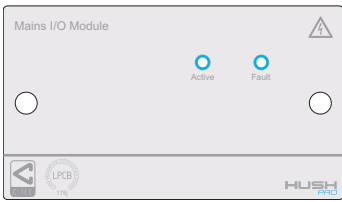


# HP731/HP732 MAINS SWITCHING I/O MODULES INSTALLATION INSTRUCTIONS

Hush-Pro



<b>HP731</b>	HP Mains Switching I/O Module (Fire Level 1)
<b>HP732</b>	HP Mains Switching I/O Module (Fire Level 2/EVAC)

## Product Description

The Hush-Pro HP731 & HP732 Mains Switching Input/Output (I/O) modules are compatible with C-TEC's Hush-Pro BS5839-6 Grade C Controller. The modules have the following features:

- Fully compliant by the LPCB with EN 54-17 and EN 54-18.
- On-board, bi-directional, short-circuit isolator (SC-Isolator).
- Double-gang back box mounting.
- Incorporates single connector switch output, capable of switching Mains and DC voltages.
- Can be used as a single zone monitor or alternatively, as a single switch monitor.

## Operation

When a fire alarm is triggered on the monitored zone, the Mains Switching I/O module sends a signal to the fire controller. HP731 sends a Fire Level 1 signal and HP732 sends a Fire Level 2/EVAC signal. Depending upon programming, the fire controller then returns a signal to the module to change state on the clean contact relay output.

The Mains Switching I/O module monitors the following inputs: open circuit fault, short circuit fault, fire, normal and detector head out (if detector base has a diode fitted).

## Installation

Ensure the Mains Switching I/O modules are installed in accordance with applicable local and/or national regulations. The module is designed for indoor use only and may be flush or surface mounted in a place where the status of the LED indicators are clearly visible.

Two mounting holes are provided on the I/O module for fixing to a standard UK double-gang back box with minimum 25 mm depth, e.g. RS Stock Nos. 776-8438 (plastic), 776-8384 (metal), C-TEC's NCP-26 (plastic interface plate).

DO NOT OVERTIGHTEN THE FIXING SCREWS.

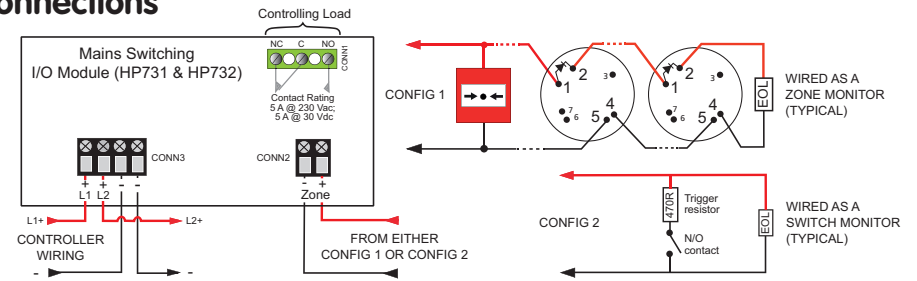
### Isolate Mains supply before installation.



Mains wiring (if used), must be installed in accordance with all applicable national, regional or local standards. In the UK this is BS 7671 IEE Wiring Regulations and BS5839-1, Fire detection and alarm systems for buildings: Code of practice for system design, installation and maintenance.

For PERMANENTLY CONNECTED equipment, a readily accessible disconnect device shall be incorporated external to the equipment. The general requirement for the Mains supply to the HP731/HP732 is fixed wiring, using 3 core cable, (no less than 1mm<sup>2</sup> and no more than 2.5mm<sup>2</sup>), or a suitable three conductor system fed from an isolating switched fused spur, fused at 5A. The Mains supply must be exclusive to the HP731/HP732.

## Connections



Terminal (CONN3)	Function
L1 +	+Ve
L2 +	+Ve
-	-Ve
-	-Ve

- All wiring must conform to local and/or national regulations.
- Correct polarity must be observed.
- Terminals can accept 0.25 mm<sup>2</sup> to 2.5 mm<sup>2</sup> wiring.
- 470R trigger resistor (supplied) and EOL capacitor (supplied). Ensure EOL capacitor is fitted across the terminals of the last device on the conventional zone.

## Technical Specification

<b>Description:</b>	HP731 & HP732 HP Mains Switching I/O Modules
<b>Certified Standards:</b>	EN 54-18: 2005 (Input Output Devices); EN 54-17: 2005 (Short-circuit isolator)
<b>LPCB Certificate Number:</b>	176j *
<b>LPCB Reference Number:</b>	176j/03 *
<b>CPR Certificate Number:</b>	2831-CPR-F1383 *
<b>UKCA Certificate Number:</b>	0832-UKCA-CPR-F0793 *
<b>Declaration of Performance (DoP):</b>	DoP0000048 *
<b>Communication Protocol:</b>	Hush-Pro (C-TEC)
<b>Operating Voltage:</b>	22-40 Vdc
<b>Quiescent Current (Typical):</b>	1.7 mA
<b>Active Current (Typical):</b>	6.0 mA
<b>Input (CONN2):</b>	Single monitored input with 2 modes of operation: either, a single zone monitor, or, a monitored normally-open switch, triggered by a 470R with EOL.
<b>Output (CONN1):</b>	Single switching connection. Clean contact (NC/C/NO) rated at 5 A @ 230 Vac, or 5 A @ 30 Vdc. <b>Note:</b> In exposed environments, this device may be subject to mechanical shocks which are likely to occur, albeit infrequently, in the anticipated service environment. Sufficient anti-glitch protection should be taken to ensure a temporary changeover of the relay contacts, of up to 1 sec, does not activate connected equipment. In non-exposed environments, such protection may not be necessary.
<b>LED Indicators:</b>	Active (Steady Red) - either monitored zone triggered, or monitored switch closed. Fault (Steady Yellow) - a fault detected on the monitored zone/switch.
<b>Dimensions (WxHxD):</b>	147 x 87 x 23 mm (without a back box)
<b>Weight:</b>	122 g (without a back box)
<b>Body Material:</b>	ABS polycarbonate
<b>Operating Temp.:</b>	-10°C to +55°C
<b>Humidity:</b>	Max. 95% RH (non-condensing)

\* Certificates and DoPs available for download on C-TEC's website

### EN 54-17 SC-Isolator Specification (Controllable Isolator)

<b>Maximum Voltage (V max):</b>	40 Vdc
<b>Nominal Voltage (V nom):</b>	40 Vdc
<b>Minimum Voltage (V min):</b>	22 Vdc
<b>Maximum Current Device Isolates, switches from closed to open (I<sub>so</sub> max):</b>	55 mA
<b>Minimum Current Device Isolates, switches from closed to open (I<sub>so</sub> min):</b>	15 mA
<b>Maximum Rated Continuous Current with switch closed (I<sub>c</sub> max):</b>	1 A
<b>Maximum Rated Switching Current under short circuit conditions (I<sub>s</sub> max):</b>	1.6 A
<b>Maximum Leakage Current with switch open (I<sub>l</sub> max):</b>	20 µA
<b>Maximum Series Impedance with switch closed (Z<sub>c</sub> max)</b>	100 mohms



Manufacturer: Computationics Limited (C-TEC), Challenge Way, Martland Park, Wigan, Lancashire WN5 0LD. [www.c-tec.com](http://www.c-tec.com)  
E&OE. No responsibility can be accepted by the manufacturer or distributors of these devices for any misinterpretation of this instruction, or for the compliance of the system as a whole. The manufacturers policy is one of continuous improvement and we reserve the right to make changes to product specifications at our discretion and without prior notice.