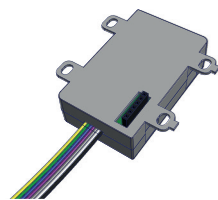


HP734/HP735 MINI IO MODULES  
INSTALLATION INSTRUCTIONS

Hush-Pro

Product Description



The Hush-Pro HP734 & HP735 Mini IO Modules are compatible with C-TEC's Hush-Pro fire BS5839-6 Grade C Controller. The modules incorporate a monitored switch input and a changeover relay output. A compact design allows it to fit into equipment with limited space.

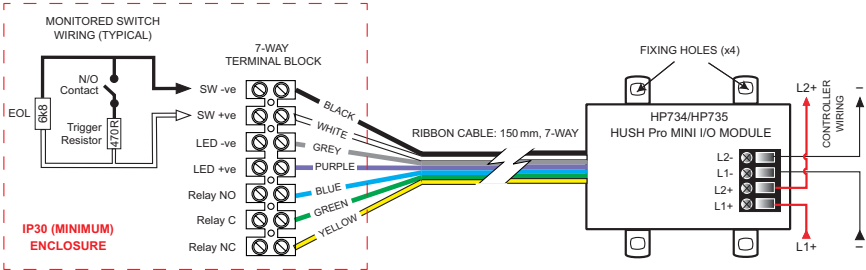


|       |                                        |
|-------|----------------------------------------|
| HP734 | HP Mini I/O Module (Fire Level 1)      |
| HP735 | HP Mini I/O Module (Fire Level 2/EVAC) |

The modules have the following features:

- Fully compliant by the LPCB to EN 54-17 and EN 54-18 9.
- On-board, bi-directional, short-circuit isolator (SC-Isolator).
- Monitored switch input.
- Changeover relay and fire LED outputs.
- Levels reportable to the controller from the input: normal, fire, S/C fault and O/C fault.
- 2 levels issuable from the controller to the output: active and normal.
- Module supplied with a 7 way ribbon cable (150 mm length), 7 way terminal block, trigger resistor and EOL resistor.

Connections



| Terminal | Function |
|----------|----------|
| L1 +     | +Ve      |
| L2 +     | +Ve      |
| L1 -     | -Ve      |
| L2 -     | -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.
- 7-way terminal block (supplied) can accept up to 1.5 mm<sup>2</sup> wiring < 3 m length.
- 470R trigger resistor (supplied) and 6k8 EOL resistor (supplied) for monitored switch. EOL device and terminal block must be fitted inside a suitable enclosure with a minimum IP30 rating (not supplied).

Installation

Ensure the module is installed in accordance with applicable local and/or national regulations. The module may be surface fixed using suitable screws (not supplied) in the four fixing holes. The mounting enclosure is also designed to be mounted in a secondary unit such as a single gang back box.

**Note:** Cables connected to the 7-way terminal block must be less than 3 metres in length.

Technical Specification

|                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Description:</b>                      | HP734 & HP735 HP Mini IO 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/01 *                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>CPR Certificate Number:</b>           | 2831-CPR-F2049 *                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>UKCA Certificate Number:</b>          | 0832-UKCA-CPR-F0790 *                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Declaration of Performance (DoP):</b> | DoP0000068 *                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Communication Protocol:</b>           | 'Hush-Pro' (C-TEC)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Operating Voltage:</b>                | 22-40 Vdc                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Quiescent Current (Typical):</b>      | 1 mA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Active Current (Vmin):</b>            | 5.7 mA (Typical); 6.8 mA (Max)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Fault Current (@Vmin):</b>            | 5.3 mA (Typical); 6.3 mA (Max)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Input:</b>                            | Single monitored, normally-open switch (SW -ve, SW +ve) triggered by a 470R with 6k8 EOL resistor.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Outputs:</b>                          | One single-pole, changeover relay (C/NO/NC), non-monitored. Relay rating: 1 A @ 30 Vdc or 0.3 A @ 125 Vac.<br><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. Single 2-wire fire LED drive output (LED -ve, LED +ve). |
| <b>LED Indicators:</b>                   | Single Red (Relay Active & Polling).<br>Single Yellow (Monitored Input Fault).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Body Material:</b>                    | Clear ABS polycarbonate enclosure                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Dimensions:</b>                       | 65 mm x 60 mm x 20 mm (excluding terminal block & ribbon cable)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Weight:</b>                           | 47 g (including terminal block & ribbon cable)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Operating Temp.:</b>                  | -10°C to +55°C                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Humidity:</b>                         | Maximum 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.