

Operation of the 2 option for the HDI

The 2 option for the HDI allows for two probes to be connected to the HDI simultaneously. It is then possible to change the probe being monitored by the HDI by the use of the front panel buttons, with no need to change any physical connections. It can also allow for foreground and background operation of two probes, which is usually of use via the remote interface, or when the control and alarm (C) option and/or the two analogue output (Z) is also selected

Description

An HDI with the 2 option can be identified by there being two probe sockets on the back panel. A second probe cable is also supplied with the unit, unless either the P or P2 option is selected, where one or both of the probe cables are substituted with just the mating connector for the socket. This might be appropriate for installations using wire ended helium probes.

The two sockets are labelled ‘A’ and ‘B’ corresponding to the two channels of the HDI. If the two sockets are each labelled with two characters, then the HDI unit has a special 2 option as described below.

Operation

As well as the hardware, the unit has to be configured. While this is also done at the factory before shipment, it should be noted that the following configuration menu option needs to be set for correct operation:

S25 INP2

When connecting one or two probes to the HDI, ensure that the correct probe is connected to the correct input socket; otherwise the HDI may mis-read, or give OPEN when that channel is selected as the display channel. The notes below are useful for identifying the wiring of the probe should the probe test sheet not be available.

Selection of the channel to be displayed (and hence which probe is being monitored), is done internally in the HDI, under control of the front panel buttons.

Notes on the wiring configuration of a particular probe

1. Helium probes with the 7M connector and with an active length less than 555 mm will ordinarily be wired for channel A, those with an active length greater than

555 mm wired for channel B. It is suggested that wire ended probes are wired to follow this convention where appropriate.

2. Nitrogen probes are preferred to be in the A configuration, as this also corresponds to the stand-alone V configuration.
3. Where there is a conflict of priorities in channel assignments for the two probes, a special 2 option installed.

Special 2 option

As well as the standard configuration of the 2 option, there also exist the special 2 options, which allow two probes with the *same* channel wiring to be connected at the same time. The special 2 option is highlighted when it is incorporated in the system.

The special 2 option is required under a number of circumstances, and a couple of examples are provided here:

1. The helium probes that are to be used with the HDI may also be used with other HDIs (or other controllers), already installed. To introduce a probe wired to operate on the opposite channel to that anticipated from its active length could cause confusion.
2. The HDI will be used to monitor a two probes with identical active lengths (for example probes installed in a number of helium storage dewars), and where no distinction can be made as to which probe could be connected to channel A or B. For example two probes, both wired for channel A, could be connected to the two sockets of the HDI when it has a special 2 option.

This may also apply where probes have different active lengths, but still remain with the same channel wiring. Care should be taken in the this case as to which probe is connected to which socket..

Identification of the special 2 option

There are three types of the 2 option, one standard and two special. Although the socket labelled 'B' always goes to channel B, it may be wired so as to connect a probe wired for channel A, in other words be a conversion socket. This is one of the two special -2 options, the other variant being for the similar changeover being applied to the channel A socket. The three 2 options are designated as follows:

A B The standard 2 option, with the channel A socket wired for a channel A probe, and channel B wired for a channel B probe.

AA BA The channel A socket is wired for a channel A probe, as is channel B, which is, in effect, a conversion socket, so that a probe wired for channel A can be monitored on channel B on the HDI.

AB BB The channel B socket is wired for a channel B probe, as is channel A, which is, in effect, a conversion socket, so that a probe wired for channel B can be monitored on channel A on the HDI.

As well as identification on the back panel, full details are given on the HDI system configuration and packing list, supplied with each HDI unit.

When using the two special 2 options, the user must be warned to be sure that they have connected the probes they wish to be monitored to the correct socket, and not accidentally swapped them. The use of these special 2 options is entirely at the users own risk.

Should there be a need, at a later date, for an HDI with a special 2 option to monitor a probe wired for the other channel, for example the special 2 option AB BB, needing to monitor a probe wired for channel A, it is possible to get a special crossed interconnecting cable; please enquire from the sales staff at Twickenham.