Operation of the Z option for the HDI

The Z option enables a second analogue output from an HDI which already an appropriate option to ensure that two probes can be connected to it. This means that the unit has either the 2 (two probe input) or L (Lemo connector) option installed. The second analogue output is of the same type as the factory fitted (single) analogue output option, namely A (4 – 20 mA output), V (scalable analogue voltage output, for example 2 mV/mm) or T (0 – 10 V output).

The Z option is not available for an HDI unit without the 2 or L options.

Installation of the Z option

The electronics for the Z option are factory fitted. The second analogue signal is presented on the lower two pins of the Molex connector labelled Y INH X; as a result, the External Inhibit function, normally presented at these pins, is not available from the back panel.

Moreover, the upper two pins + ANL - are permanently allocated to channel A, and the lower two pins Y INH X to channel B. Unlike the standard HDI with a single analogue output, the channel allocation to each of the two pairs of pins of the Molex connector are **not** affected by changing the display channel.

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 ANL2

Operation of the two analogue outputs

The analogue signal from either pair of pins of the Molex connector (+ANL -for Channel A and Y INH X for Channel B) are unaffected by any change to the displayed channel. Apart from this, the behaviour of either analogue output is identical to that of the single analogue output of a standard HDI.

The HDI with A, V or T analogue output provides for 4 mA/0 V/0 V (respectively) at 0 mm of helium, and 20 mA/Scaled voltage/10 V when at the maximum value (the active length of the probe) of the channel corresponding to the two pins being monitored at the Molex connector.

In addition, if there is an error condition, the output is 4 mA/0 V/0 V.