

These headboxes have been designed, after careful evaluation of users' needs, to offer simple solutions for connecting the D185 to standard electrodes.

The **D185-HB1** and **D185-HB4** offer permanent MEP stimulating electrode connections. The **D185-HB3** provides a remotely controlled, reversible, switched connection of the MEP electrodes which are normally isolated and also provides isolation of SEP recording electrodes from the preamplifier whilst MEP stimulation is in progress. The foot switch **D185-FS1** provides extra control when both hands are already busy.

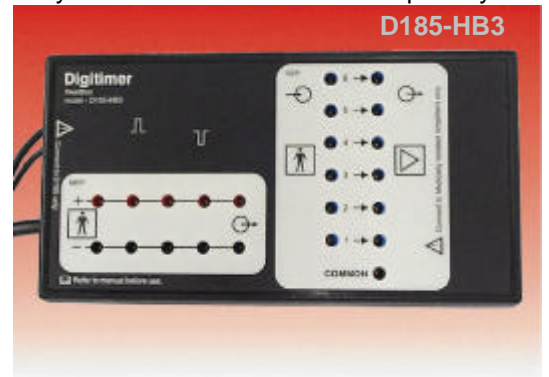
D185-HB1 is a 4.5m extension of the output sockets terminating in a small box that can be positioned near the site of stimulation. The box has ten (10) 1.5mm DIN "Touch-proof" sockets for those who wish to use protocols with up to five (5) linked cathodes and/or up to five (5) linked anodes.



D185-HB1

D185-HB3 extends the features of the D185-HB1 by including the facility to present either 'normal' or 'reverse' polarity stimuli. The control of the polarity is provided by the D185-CB1 which is permanently wired to the D185-HB3.

It has been found that some EP systems do not perform well when the artefact from the MEP stimulus is coupled, via the SEP recording electrodes, into the same recording amplifier set as the recorded limb signals. The D185-HB3 provides six (6) channels of isolation for SEP recording electrodes that operate when the MEP stimulus is presented. The isolation of the MEP electrodes from the D185 stimulator, when not in use, also helps with minimised mains interference.

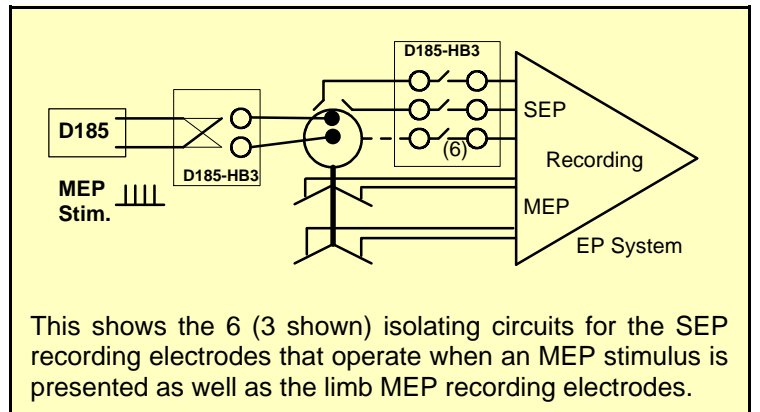


D185-HB3

The D185-CB1 provides the operator control for the D185-HB3. The selection of a 'Normal' (Anode on Red sockets) or 'Reverse' (Anode on Black sockets) is made by the rocker switch. Pressing the Trigger button initiates a command to the appropriate relay in the headbox and a trigger pulse to the D185. This can also be initiated using a D185-FS1 foot switch.



D185-CB1



The D185-CB1 provides the operator control for the D185-HB3. The selection of a 'Normal' (Anode on Red sockets) or 'Reverse' (Anode on Black sockets) is made by the rocker switch. Pressing the Trigger button initiates a command to the appropriate relay in the headbox and a trigger pulse to the D185. This can also be initiated using a D185-FS1 foot switch.



D185-HB4

D185-HB4 is like the D185-HB1, having a high grade electrical cable 4.5m long, but terminated with a single pair of 1.5mm DIN "Touch-proof" sockets moulded into the remote end.

D185-FS1 is a medical grade foot switch that is sealed to IP68 so as to meet all the requirements of EN 60601 for use within operating theatres.



D185-FS1

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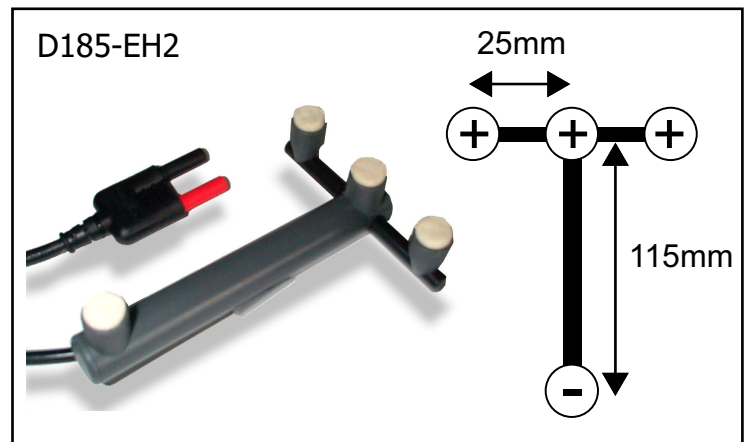
37 Hydeway
Welwyn Garden City
AL7 3BE. UK

Tel: +44 (0)1707 328347 Fax: ... 373153
sales@digitimer.com - www.digitimer.com

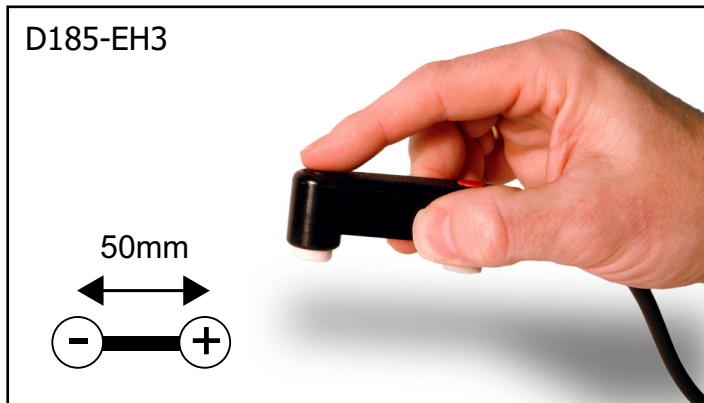
D185 MultiPulse Stimulator - Electrode Holders

D185-EH2

The D185-EH2 "**Depth Electrode**" features 1 cathode and 3 anodes and has been specifically designed for lumbar stimulation during neurological diagnostic testing. The use of multiple anodes along with an ~11cm separation between the cathode and the anodes facilitates the flow of current deep into lumbar regions. The fitted cable is 2m long and includes a moulded plug for connection to the D185 stimulator output sockets.



D185-EH3



D185-EH3

The D185-EH3 "**Standard Electrode**" is a small handheld electrode holder which features a single anode and cathode of 12mm diameter, separated by 50mm. The D185-EH3 is suitable for stimulation sites other than the lumbar region. The fitted cable is 2m long and includes a moulded plug for connection to the D185 stimulator output sockets.

D185-EH4

The D185-EH4 has the same specifications as the stimulating electrode which was originally supplied with our now discontinued D180 stimulator. The electrode has a single felt pad anode and cathode separated by 60mm. The fitted cable is 2m long and includes a moulded plug for connection to the D185 stimulator output sockets.

Each of the electrode holders is supplied with a set of 12mm felt pads. Replacements felt pads for all the electrode holders above are available in packs of 10 (part code: D180-PADS) from Digitimer or our local representative .



References

Claus, D. **Motorisch evozierte potentiale (MEP)**. In K. Lowitzsch et al. Das EP-Buch. Thieme-Verlag Stuttgart, 1 Edition (2000) 173-232.

Gardill, K. **High Voltage Stimulation - Practical Application and Clinical Examples**. Neurophysiol. Lab. 27/2 (2005) 61-88.

Both references were published in German, however, a complimentary English translation of the paper by Klaus Gardill can be provided by Digitimer upon request.

Digitimer Limited, 37 Hydeway, Welwyn Garden City, AL7 3BE, UK

Tel. +44 (0)1707 328347 Fax +44 (0)1707 373153

Email: sales@digitimer.com Web: www.digitimer.com