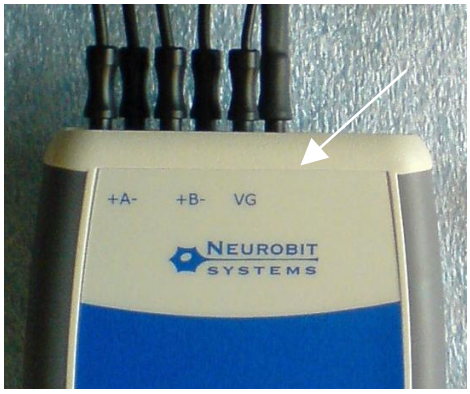
# The use of shielded EEG electrode wires with Neurobit Optima

Optima equipment enables the use of actively shielded electrode cables reducing artifacts associated with wire and subject movements. Each electrode cable is ended with two Touch Protected (TP) DIN 42802 plugs: one for electrode signal (the wire marked with a color tube) and the second for shield.




Additional socket (SH) for cable shields (on the right side of the VG socket, as shown on the right image above) is used.

Shields of all used sensors are connected to the shield socket with TP splitter (4 TP sockets to one TP plug – for Optima 2). The left image below shows connections for two-channel EEG measurements with bipolar derivations.


The right image above shows connections for two-channel EEG measurements with referential (unipolar) derivations. In this case yet another TP splitter (2 TP plugs to 1 TP socket) is used to connect "–" inputs of both channels to common reference electrode.

For both derivations, the configurations of device channels in software remain the same as for common electrodes with non-shielded wires (see hints in the device manual).