



# Dry electrodes for EEG

EEG electrodes are produced in 2 types:

- Dry active electrode **MCScap-DrA1**
- Dry passive electrode **MCScap-DrP1**

MCScap-DrA1 is polyurethane hermetic body with PCB of amplifier and thin and durable cable.

Amplifier use for converting high input impedance from dry sensor to low output impedance.

This solution dramatically decreases moving cable noise and external interference to cable.

Dry EEG electrodes are intended for use with soft dry sensors SoftPulse™ produced by Datwyler.

Sensors SoftPulse™ can be in 3 types:

- Flat (for skin without hair)
- Medium with 5 mm long pins (more universal)
- Long with 8 mm long pins (for thick hair)

More information about sensors:

<https://datwyler.com/technology-innovation/advanced-technologies/strategic-fields/wearables-digital-health/softpulse>





Electrodes **MCScap-DrA1** and **MCScap-DrP1** can be preinstalled in **MCScap DRY** electrode cap with common connector. Cap can have different quantity of electrodes and different types of connectors, according to requirements of EEG amplifier model and aims of application.

## Specification

| Active EEG electrode         |   |
|------------------------------|---|
| Amplification                | 1 ±0.0003%  |
| Passband                     | 0 .. 150 kHz @ -3 dB                              |
| Input current                | 10 pA max   |
| Input capacitance            | 7 pF typ  |
| Input offset voltage         | 5 µV typ, 25 µV max                               |
| Voltage noise                | 0.8 µV p-p @ 0.1-10 Hz                            |
| Output impedance             | 27 Ohm 1%   |
| Supply voltage               | monopolar 2.2 .. 5.5 V or bipolar ±1.1 .. ±2.75 V |
| Power supply rejection ratio | 105 dB  |
| Quiescent current            | 1 mA max  |
| Cable outlet diameter        | 1.3 mm  |
| Cable length                 | up to 2000 mm                                     |
| Cable color                  | black   |
| Body size                    | D15 x 8 mm  |
| Body weight                  | < 0,8 g (up to 1,25 g with sensor)                |
| Ingress protection           | IP67 with sensor installed                        |
| Passive EEG electrode        |   |
| Cable outlet diameter        | 1.5 mm  |
| Cable length                 | up to 2000 mm                                     |
| Cable color                  | black   |
| Body size                    | D15 x 8 mm  |
| Body weight                  | < 0,8 g (up to 1,25 g with sensor)                |
| Ingress protection           | IP67 with sensor installed                        |