I/O Breakout Cable
Data Sheet

20160224

SPECIFICATIONS

> **Input Voltage Range:** 0-3V
> **Output Voltage Range:** 0-3V or ±1.5V (if reference is GND)
> **Maximum Output Current:** 200mA (with no other sensors connected to the hub)

Fig. 1. I/O breakout cable image

GENERAL DESCRIPTION

This accessory allows the connection, within the specified electric values, of a wide range of analog or digital third party sensors to the biosignalsplux hub. This allows, for instance, the acquisition and visualization in real time on OpenSignals of a third party sensor, using the biosignalsplux hub.

WARNING

Usage of this input interface **VOIDS THE ELECTRICAL WARRANTY** of the hub and sensors.

DISCLAIMER

BEWARE when using this accessory as to preserve electrical isolation of the user. We expressly disclaim any liability whatsoever for any direct, indirect, consequential, incidental or special damages, including, without limitation, lost revenues, lost profits, losses resulting from business interruption or loss of data, regardless of the form of action or legal theory under which the liability may be asserted, even if advised of the possibility of such damages.

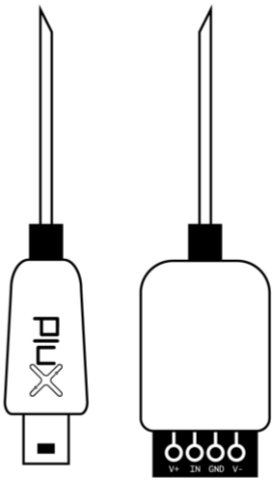

Fig. 2. Interface pinout

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PINOUT ON ANALOG PORT	
V-	0V
GND	1.5V
V+	3V
IN	Analog input

PINOUT ON DIGITAL PORT	
V-	0V
GND	DIGITAL OUTPUT
V+	3V
IN	DIGITAL INPUT

TRANSFER FUNCTION

$[0\ V,\ 3\ V]$

$$IN(V) = \frac{ADC}{2^n - 1}.VCC$$

$VCC = 3V$ (operating voltage)

$IN(V)$ – Input voltage in Volt (V)
ADC – Value sampled from the channel
n – Number of bits of the channel[1]

PHYSICAL CHARACTERISTICS

> **W x L x H:** 1.0x1.8x0.4cm
> **A:** 105.0±0.5cm
> **S:** White, Black, Blue, Green, Red, Yellow, Gray or Brown

ORDERING GUIDE

Reference	Package Description

[1] The number of bits for each channel depends on the resolution of the Analog-to-Digital Converter (ADC); in biosignalsplux the default is 16-bit resolution ($n = 16$), although 12-bit ($n = 12$) and 8-bit ($n = 8$) may also be found.