

## SB-010 0-10V SIGNAL BOOST AND ISOLATION UNIT

### Description

SB-010 signal boost and isolation unit can be used to eliminate parasitic currents (ground loops) that interfere with 0-10V control voltages by isolating and boosting the 0-10V signal. The boosted signal is also immune to EM interference and can be used in noisy environments. The unit can be used with active (0-10V voltage source) or passive (100k resistor) inputs. Its output is compatible with all DMS series dimmers.

### Features

- Provides isolation between 0-10V source and DMS dimmer
- transmits the signal via encoded digital signal, immune to any EM interference or wire voltage drop
- Compact housing
- Low cost

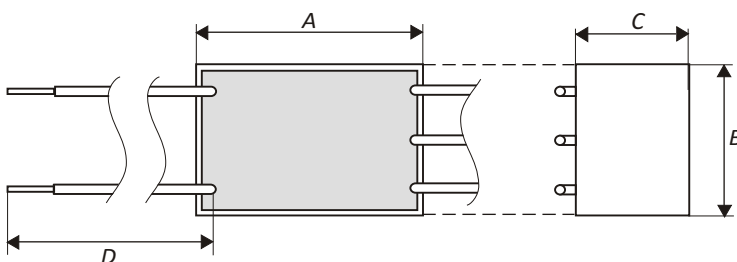
### Applications

- Ground loop elimination
- Reduction or elimination of the 0-10V signal voltage drop errors due to the long signal wire resistance
- Reduction of 0-10V signal errors in environments with strong EM interference

### Specifications

TECHNICAL DATA	SB-010
Isolation voltage	5000V
Supply input voltage range nom. (+V <sub>in</sub> ):	12 - 24 V DC
Supply input voltage (min-max) (+V <sub>in</sub> ):	6 - 30 V DC
Max. supply current	7mA
Input type	0-10 V control voltage, Pot 100K Ohm
Input and output connections:	Stripped wires AWG21 (0.5mm <sup>2</sup> )
Housing dimensions (W x D x H):	30mm x 15mm x 20mm (1.2" x 0.6" x 0.8")

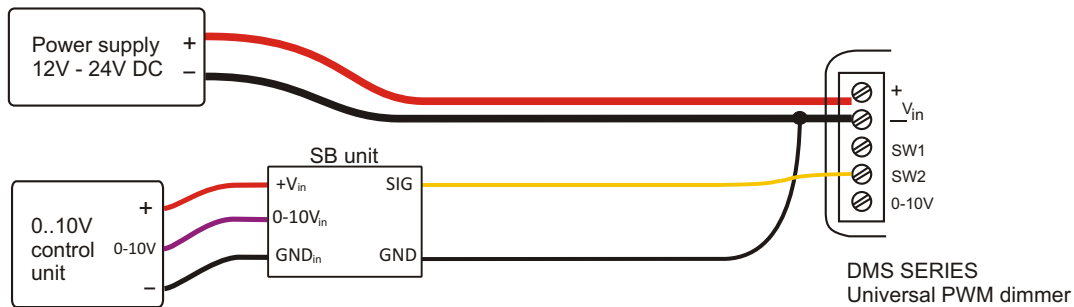
### Dimensions



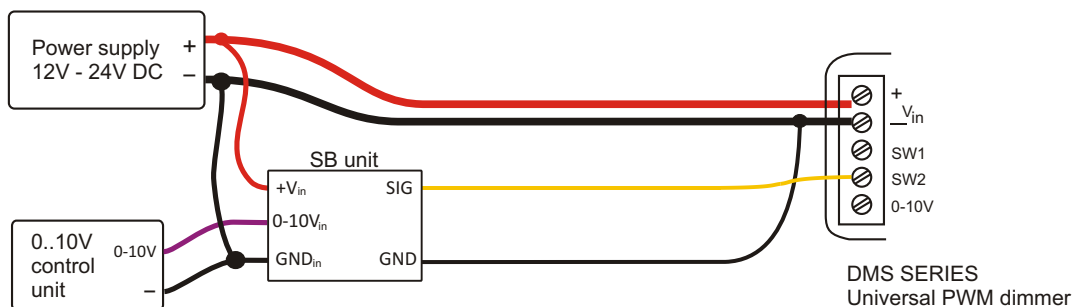
A (width)	30 mm (1.2")
B (height)	20 mm (0.8")
C (depth)	15 mm (0.6")
D (width)	125 mm (5")

## Installation

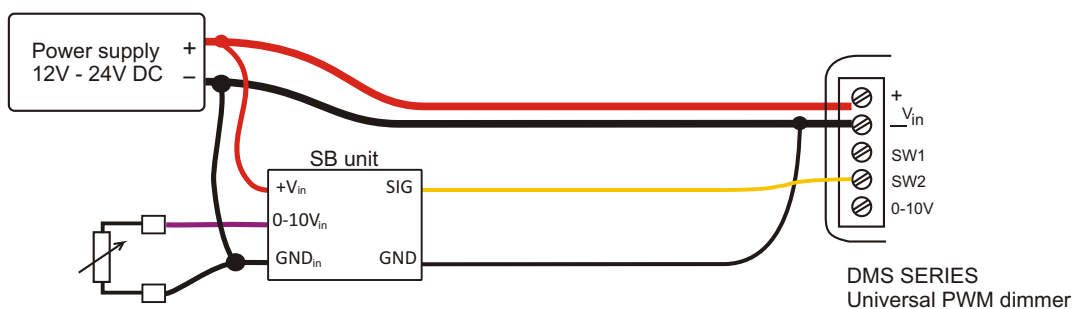
Connect the unit according to the control signal used. The SB-010 signal boost and isolation unit should be connected as close as possible to the 0-10V signal source (wires between the 0-10V source and SB unit should be short). SB units power supply should preferably be connected to the same voltage source powering the 0-10V signal unit if available (see connection diagrams below). If 0-10V control unit does not have power output available (or with potentiometer controls), the SB power supply should be connected as close as possible to the main power supply to reduce voltage fluctuations to the SB unit.



**Wiring diagram for 0-10V control with power supply output**



**Wiring diagram for 0-10V control without power supply output**



**Wiring diagram for potentiometer control**