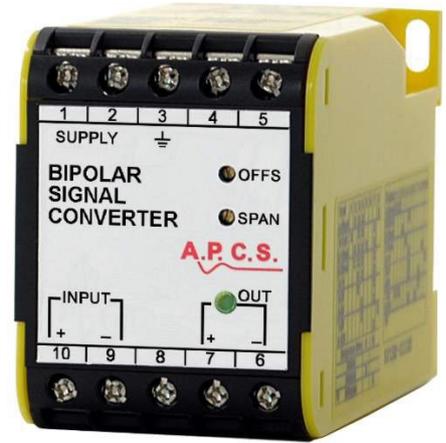


# Bipolar Signal Converter v5 BSC133

## DESCRIPTION

The BSC133 has been designed to produce a bipolar output signal from any type of input signal. Input signals can be bipolar or unipolar process signals such as -10, +10V or 4 - 20mA. A special input conditioning card (optional) permits the use of the BSC133 for low level, AC or sensor inputs. The 4 - 20mA input version also features a 24Vdc (25mA) auxiliary supply output to operate loop-powered transmitters connected to its input. The output drive circuit is factory configured to provide load independent voltage or load independent bipolar current output. Maximum current drive for voltage output is 50mA at  $\pm 20V$  output. Applications requiring output  $>50mA$  up to 2A as is the case with hydraulic drive solenoids can be accommodated using an external bipolar DC-power supply. Models with outputs above 50mA output have an external heat-sink. Final calibration is trimmed using the front accessible 'offs' and 'span' 15-turn trim adjustments. The output signal level is indicated by a green LED on the front, giving a clear indication of module function. All units are fitted with a 0.1 second filter. This filter constant can be increased or decreased if required. RF and power transient protection is also standard as with all APCS modules. The input/output mode can be factory configured for direct or reverse action. The basic BSC133 does not provide galvanic isolation from input to output. Refer to BS1134 for input/output isolation. Various power supply choices are available ranging from 240Vac down to 8Vdc, all provide power isolation.



## General Specifications

Size 0 to 500mA output:	52W x 70H x 110D mm.
Size 500mA to 2A output:	Width increases to 85mm.
Size 2A to 5A output:	Separate heat- sink see option drawing.
Mounting:	DIN-Rail, gear plate.
Termination:	Screw terminals on front.
Protection class:	IP40
Weight:	0.300 kg.
Housing material:	ABS.
Accuracy:	0.2% of span.
Front 'OFFS' adjust:	$\pm 25\%$ typical
Front 'SPAN' adjust:	$\pm 25\%$ typical
Temperature effect:	0.01% per $^{\circ}C$ .
Operating temperature range:	$-10...+60^{\circ}C$ .
Output load effect:	less than 0.25% up to max. load.
Output loop drive:	$\pm 10mA$ into 0 - 2000 $\Omega$ $\pm 20mA$ into 0 - 1000 $\Omega$ .
Output voltage load:	$\pm 10V$ into 200 $\Omega$ minimum. $\pm 20V$ into 400 $\Omega$ minimum. 10 minutes max.
Input/output isolation:	None (use BS1134).
Power requirements:	3W.
Power supply isolation:	2kV rms.
Electromagnetic compatibility:	Complies with AS/NZS 4251.1 (EN 50081.1) 

For input / output combinations refer to TYPE NO. DESIGNATION overleaf.

## Block Diagram

