



SIGNAL SPLITTER (v3) BSSP235

DESCRIPTION

The BSSP235 is an isolating converter providing true 4-way galvanic isolation up to 2kV rms. The BSSP235 produces two isolated unipolar output signals from one input signal. The BSSP235 comes in three, coding plug selectable, models to accept either Process, mV or Bipolar input signals. No special tools or components are required for range changing in the field. A 20Vdc/22mA sensor supply is available at the input section, this can be useful for loop powered field transmitters. Final calibration is trimmed using the front accessible zero and span 15-turn trim adjustments. Maximum current drive is 20mA and maximum voltage drive is 20V. Both outputs are isolated from each other. The wide swing DC-power supply (8-60V) covers all popular DC sources. All units are fitted with a 500mS filter that can be link changed to 5mS for fast response. Surge protection for power supply and input is standard with all BASI modules.



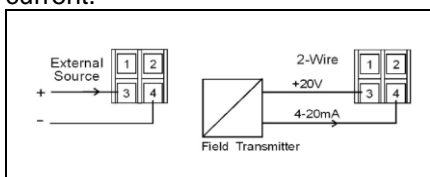
General Specifications

- Size:** 23.5W x 71.5H x 109D (mm).
- Mounting:** Clip for 35mm DIN-Rail.
- Housing material:** ABS.
- Termination:** Top mounted screw terminals.
- Protection class:** IP40 (IP55 Enclosure Opt).
- Weight:** 0.120 kg. Protection class: IP40.
- Calibration accuracy:** <0.2%.
- Front 'SPAN' adjust:** ±25% typical.
- Front 'ZERO' adjust:** +20/ -10%
- Typical Linearity:** <0.1%.
- Long term drift:** <0.1%.
- Temperature effect:** Typically 0.025% of span per °C.
- Operating temperature:** -10...+60°C.
- Output drive:** 10mA into 0 - 2kΩ, 20mA into 0 - 1kΩ
- Input impedance:** Current 51Ω.
Voltage 2M7Ω (10V/5V range). 560kΩ (2V/1V range).
mV 140kΩ (250-1000mV ranges).
30kΩ (40-200mV ranges).
- Supply/Input/output 1/2 isolation:** 2kVrms. Auxiliary
Output: 20Vdc with 22mA drive
(Suitable for 2-wire transmitter supply).
Electromagnetic compatibility: Complies with
EN 50081-1, EN 50082-1, EN 61010-1

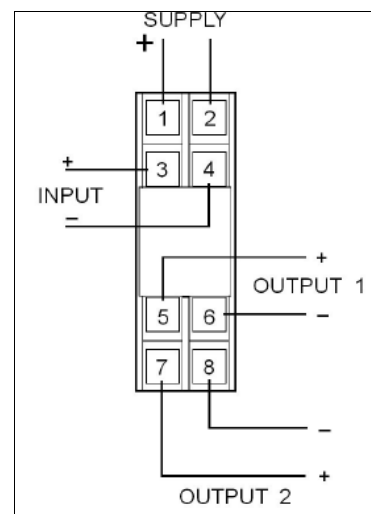
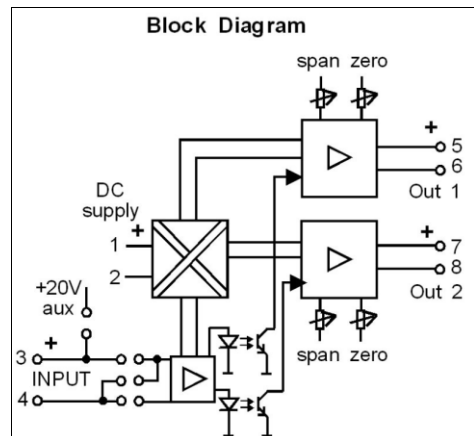


Connections

When externally sourced signals are used terminal 3 is the positive input.
When a 2-wire field transmitter is used, terminal 3 is a 20V power supply used to supply the loop current.



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



BASI Instrument AB
P.O. Box 53

Tel: +46 40-880 09
SE-275 06 VOLL SJÖ.....SWEDEN

Fax: +46 40-92 98 77
E-mail: info@basi.se

Signal Splitter

BSSP235

No. DS 35:10-E Issue: 528/07/11

TYPE NO. DESIGNATION

Power Supply:

- 3 = 8 - 60Vdc. *) 5 = 20 - 48Vac.
 *) 4 = use 6 *) 6 = 60 - 160Vdc / 48 - 150Vac.

Input:

- 1 = Process Signals, Table 2 (# 4-20mA external source).
 2 = Millivolt Signals, Table 4 (# 75mV). Specify required range from selected table
 3 = Bipolar Signals, Table 5 (# ±10V).
 Bipolar millivolt Signals use option 3 below and 9 here at no extra charge.
 *) 9 = Other. (Specify).

Output 1:

- 1 = Output selectable Table 6/ SW2, (# 4-20mA). Specify required range from table 6 SW2
 *) 9 = Other. (Specify, disable links).

Output 2:

- 1 = Table 6/ SW3, (# 4-20mA). Specify required range from table 6 SW3
 *) 9 = Other. (Specify, disable links).

Action:

- 1 = Out 1 Dir, Out 2 Dir. 3 = Out 1 Rev, Out 2 Dir.
 2 = Out 1 Rev, Out 2 Rev. 4 = Out 1 Dir, Out 2 Rev.

Options:

- 0 = None. 3 = Bipolar Millivolt Signals, DS23523 (# ±75mV).
 *) 1 = Customised response time (Specify).
 *) 2 = Range splitting (specify SP see note). *) 9 = Other.

*) = Price Extra. All extra price inputs disable future use of the program links on both the input and the output.
 # = Default factory setting unless specified otherwise when ordering.

Range Splitting

The Range Splitting Split Point (SP) normally set at 0.5 is specified when ordering.

If SP = 0.5 then

- 0-50% IN = 0-100% at OUT1
- 50-100% IN = 0-100% OUT2.Input

Response time Table 1

Table 1	SW1/1
5mS	
500mS	X

Process input Table 2

Table 2	SW1						
Input	2	3	4	5	6	7	
4-20mA	X	X	X			X	
0-20mA	X	X	X		X		
0-10mA	X	X	X	X	X		
0-1V		X	X			X	
0-2V		X			X		
0-5V			X		X		
1-5V			X				X
0-10V						X	

2 Wire or others Table 3

Table 3	SW1			
Input	8	9	8a	9a
2-wire			X	X
All others	X	X		

Note the two wire setting is only used when set on the 4-20mA range.

Millivolt input Table 4

Table 4	SW1						
Input	2	3	4	5	6	7	
0-40mV		X	X	X			
0-50mV		X	X	X	X		
0-75mV		X	X				
0-100mV		X	X		X		
0-150mV		X		X	X		
0-200mV		X			X		
0-250mV			X	X	X		
0-400mV			X				
0-500mV			X		X		
0-600mV				X			
0-750mV				X	X		
0-1000mV					X		

Bipolar input Table 5

Table 5	SW1						
Input	2	3	4	5	6	7	
±20mA	X	X	X		X		
±10mA	X	X	X	X	X		
±1V		X	X		X		
±2V		X			X		
±5V			X		X		
±10V					X		

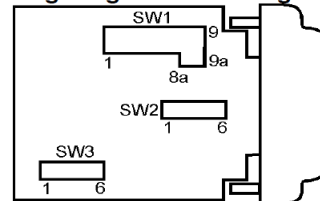
Output(s) Table 6

Table 6	SW2 / SW3					
Output	1	2	3	4	5	6
4-20mA	X		X			
0-20mA		X				
0-10mA				X		
0-5V		X				X
1-5V	X		X			X
0-10V		X			X	

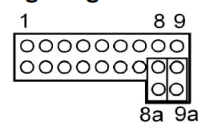
To change ranges

1. Disconnect power unclip housing lid and withdraw unit from housing.
2. Set coding plugs as required.
3. Reassemble unit and connect power.
4. Adjust "Span and "Offs" pots to recalibrate.
5. Change the label information to the new input/output values.

Coding Plug Location Diagram



Coding Plug SW1 Detail



In the interest of development and improvement, BASI reserve the right to amend, without notice, details contained in this publication.
 BASI will accept no legal liability for any errors, omissions or amendments.