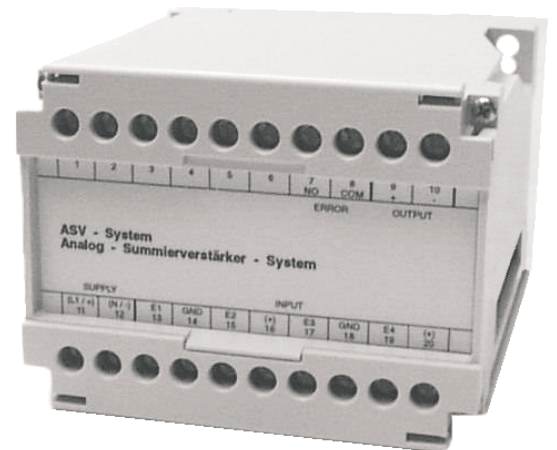


# 4-Input Summing Amplifier

in Top Hat Rail-Case  
for all electrical measuring applications

## Characteristics

- 4 analog inputs 0(4) - 20 mA, 0 - 10 V selectable by DIP-Switches
- Adding of input signals
- 1 configurable analog output 0(4) - 20 mA; 0 - 10 V selectable by DIP-switches
- Accuracy  $\pm 0,1$  % of end scale value
- Supply voltage 115/230 VAC optionally 24 VAC/VDC
- 2-wire transmitters can be supplied directly by the device

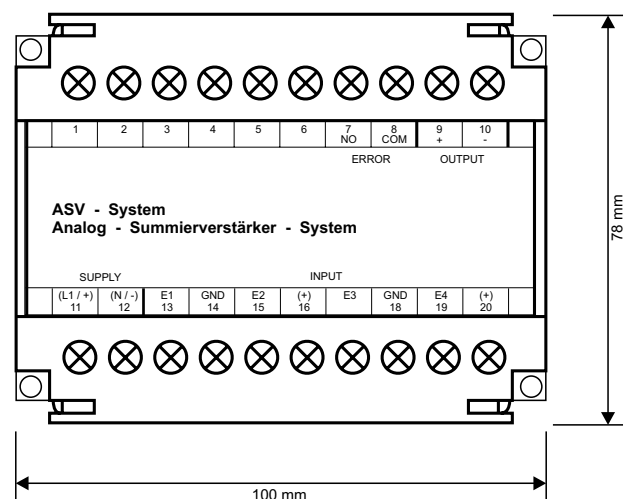


## Description

The 4-input analog summing amplifier is designed for use in all applications for electrical measurement. Thanks to the top hat rail-case, it is very simple to integrate it in existing switch cabinet installations.

Its range of use is for all industrial applications where up to 4 analog signals have to be added to one signal, for example in connection with resistance strain gauge amplifiers like ALM or DLM-Systems, when several analog signals of DC-Sensors shall display a total load. Here, the inputs may have different signals. The ZERO and GAIN trimmers for every input are, as well as the DIP-switches for inputs and output, accessible without the need of opening the device by openings in the side respectively in the bottom of the case.

If an input signal 4 - 20 mA generated by a 2-wire transmitter shall be measured, the transmitter can be supplied directly by the device by using terminal 16 and/or 20 (+15 V) without the need of an external power supply.



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## Technical Data

### Inputs

Input:	max. 4 analog inputs 0 (4) - 20 mA; 0 - 10 V
Input Selection:	by DIP-switches
Adjustment:	by internal trimmers (access from outside possible) Zero and Gain per input adjustable seperately

### Outputs

Current Output:	1 x summation output 0 (4) - 20 mA
Voltage Output:	1 x summation output 0 - 10 V
Output Selection:	by DIP-switches

### Accuracy

Linearity Error:	< 0,02 % of measured value
Temperature Coeff.:	< 50 ppm/°C

### Power Supply

Supply Voltage:	115/230 VAC, 24 VAC/DC, 24 VDC electrically isolated
Power Consumption:	approx. 5 VA

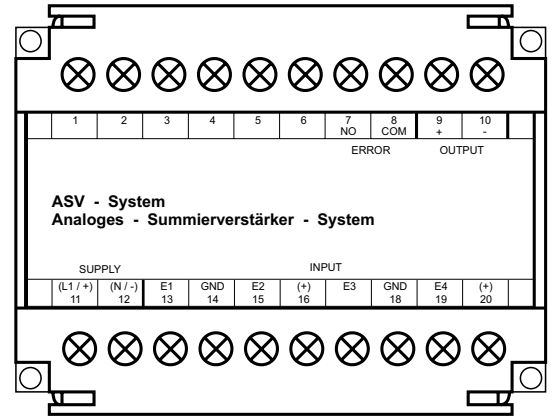
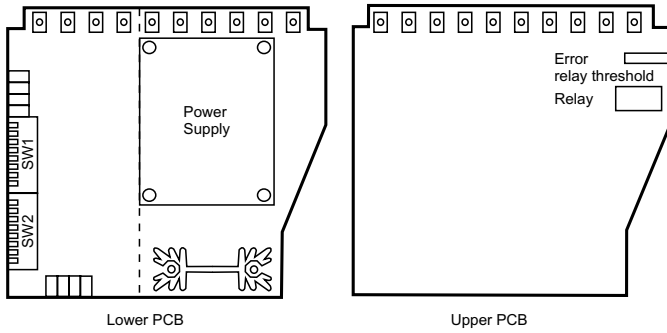
### Ambient Conditions

Operating Temperature:	-10°C - 60°C
Storing Temperature:	-20°C - 70°C

### Dimensions

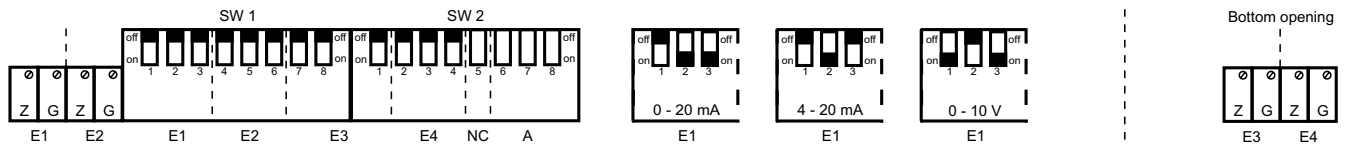
Case:	20-terminal top hat rail-case with terminal cover plate according to DIN
Dimensions:	78 x 100 x 114 mm (including terminal cover plate)
Fixing:	snap-in fixing on top hat rail
Case Material:	Polycarbonate / GV / V-0 (terminal carrier plate) ABS / V-0 (hood)
Color:	grey
Weight:	approx. 0,6 kg
Connection:	20 flat terminals with terminal screws and self-lifting terminal plates M 3,5 up to 2 x 2,5 mm <sup>2</sup>

# Operating, Adjustment hints



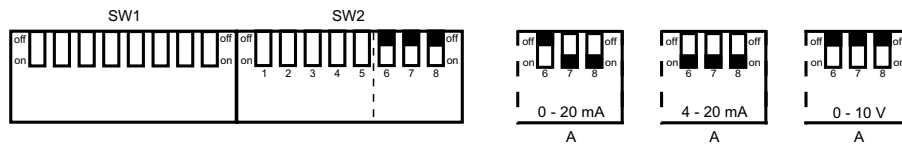
## Adjustment

1. Connect supply voltage
2. Select desired inputs by DIP-switches.



3. Fine adjustment of the single signals (input 1 - 4) by trimmers Zero and Gain. (Every single input signal is measured at the output. The value at the corresponding input is given to the output with 1:1 - ratio.) This process has to be done for every input. All devices are adjusted by factory for 4 x input 0 - 20 mA and output 0 - 20 mA.

4. Select desired output by DIP-switches:



5. Every input in use has to be connected to its "Zero"-Signal (by calibrator or by admitting the corresponding physical value to the connected sensor). Check the Zero value of output signal.
6. Connect every input in use to its single rating signal (by calibrator or by admitting the corresponding physical value to the connected sensor). Check the end scale value of output signal. If gain corrections are necessary, adjust the corresponding internal trimmer "Gain" until the rating signal is reached.
7. Connect the "Zero"-signals to the inputs again and check the output signal. For the ranges 0 - 20 mA, 4 - 20 mA and 0 - 10 V, it might be necessary to repeat 5 and 6 several times until both adjustments are correct.
8. Switch 5 of the right switch block (SW2) has no function.

## Ordering key

**S U X X X X X X XXX**

No.	4 x analog input	1 x analog output	Supply				Measuring
0	0 - 20 mA	0 - 20 mA	230 VAC				without
1	4 - 20 mA	4 - 20 mA	115 VAC				
2	0 - 10 VDC	0 - 10 VDC	24 VAC/DC				
3			24 VDC electr. isolated				