

16-channel Switching Amplifier BP-SV 16 Profibus-Interface



Features:

- module for top hat rail*
- auxiliary power
20...253 V AC/DC*
- pluggable connections*
- additional LEDs per channel*
- Profibus-DP communication*
- transmission rate 9,6 kBaud
to 12 MBaud*
- address assignment on front*
- input frequency range selectable*
- input for NAMUR sensors according to EN 50277 (former DIN 19234)*
- for mechanical contacts,
optocouplers*
- wiring control*
- transmission of permanent contacts*
- pulse storage per channel*



Application:

The Switching Amplifier Module is suited for the direct connection to a Profibus-DP network which can be applied in plant engineering and construction as well as mechanical engineering.

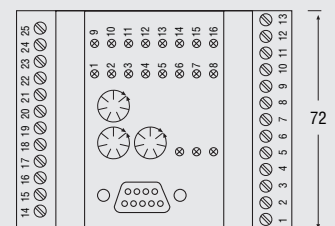
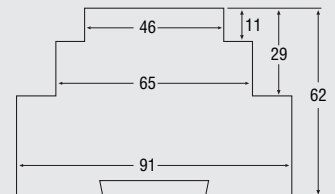
With Profibus-Interface a simple and cost saving connection to a modern guidance system is possible.

Function:

The 16-channel Switching Amplifier allows the connection of binary signals to Profibus-DP fieldbus. Each individual input can be connected with NAMUR sensors, mechanical contacts or optocouplers. The status of the signal will be transmitted by bit. Another bit indicates errors such as short-circuit or wire break. LEDs indicate the individual inputs and the status in red or green. Via front side selecting switch the following functions can be chosen:

1. Adjustable input pulse length, input filters
1 ms, 50 ms, 100 ms, 500 ms.
2. Differentiation NAMUR or contact signal (error detection).
3. Recording of permanent contacts (continuous signal processing, 1:1 transmission).

The integrated microprocessor is able to store up to 250 impulses per channel, thus the output of the prepared signals is guaranteed. In case of a storage overflow the corresponding error bit is set. In case of a break in bus communication the pulses are buffered. LEDs for diagnostics of Profibus-DP communication and a 9 pole Profibus connection are installed on front side.





BP-SV 16

Indicating elements

Profibus-DP

Element	LED	Indication
RUN	green	operation
BF	red	bus error
DIA	red	diagnostic error
status	green	pulse indication input
status	red	input signal error

Status indication of 16 LEDs

Auxiliary power:

Voltage: 20...253 V AC/DC
Wide range power

Input

Input signal 1...16

Sensor supply 8,2V according to NAMUR EN

Switching points:

Error, wire break < 0,23 mA

Error, short-circuit ≥ 6,5 mA

Status 0 < 1,2 mA

Status 1 > 2,1 mA

Transmissible frequency 250 Hz (500 Hz)

Galvanic isolation 500 V supply / inputs/bus

Note:

Contact inputs can also be controlled, parallel to contact 10 kΩ resistance as well as in line 1 kΩ to contact/parallel resistance.

Profibus-DP module

Fieldbus:	Profibus DP
rate of transmission:	9,6 kBit/s...12 MBit/s, slave-interval 2 ms
connection of Fieldbus:	9pol. Sub D socket
addressing:	0...99 via front side turn switch
connection:	screw- or spring tension clamps

If there is no communication to Profibus-DP master, pulse recordation continues

Reference value Input signals

	Input channel	Error detection
Byte A	1...8	
Byte B		1...8
Byte C	9...16	
Byte D		9...16

The actual GSD-data file is available:
www.schuhmann-messtechnik.de

Environmental conditions:

Storage temperature: -40...+70 °C

Operating temperature: 0...55 °C

Isolation voltage: ≤ 4 kV auxiliary voltage AC/DC
500 V Bus

Electromagnetic compatibility law

Germany in accordance with

EMC Directive: 2004/18/EG*

Low-Voltage Directive: 2006/95/EG

Mounting details:

Housing for top hat rail

Type of protection: IP 20 housing/IP 10 clamps

Dimensions: 91 x 72 x 62 mm

Rail-mounting fixed according to
EN 50022-35 x 7,5mm

Weight : 290 g

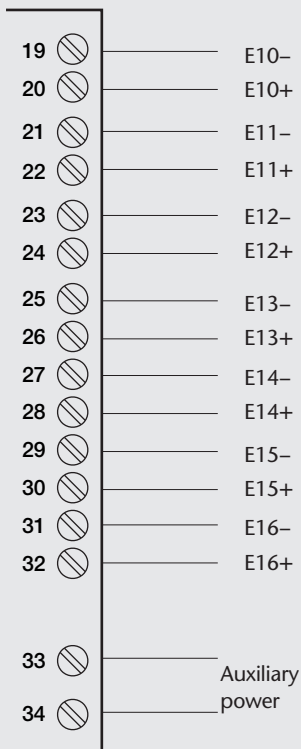
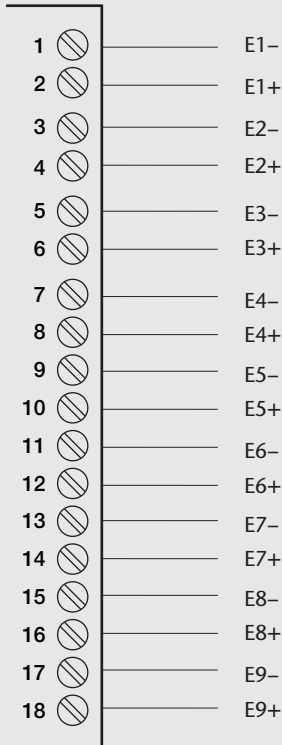
Selecting switch

DS	Signal	Input	Pulse length
1	Namur	1-16	> 1 ms
2	Namur	1-16	> 4 ms
3	contact	1-16	> 1 ms
4	contact	1-16	> 4 ms
5	contact	1-16	> 50 ms
6	contact	1-16	> 100 ms
7	contact	1-16	> 500 ms
8	Nam/contact	N1-8 K9-16	N>4 ms K>1 ms
9	Nam/contact	N1-8 K9-16	N>4 ms K>4 ms
A	Nam/contact	N1-8 K9-16	N>4 ms K>50 ms
B	Nam/contact	N1-8 K9-16	N>4 ms K>100 ms
C	Nam/contact	N1-8 K9-16	N>4 ms K>500 ms
D	contact 1:1	1-16	> 1 ms
E	contact 1:1	1-16	> 500 ms
F	-		

Ordering information:

Type: **BP-SV 16** 16-channel Switching Amplifier

BP-SV 16.04 for special inputs
e.g. 24 V DC, 100 V DC,
48 V DC,
pulse extension



* minimum deviations possible during HF-radiation influence