

Switching Amplifier with Impulse Summation

SI 5.20 GW

FEATURES

- **2 Inputs:**
2-wire initiator (Namur) or potential free contact or optocoupler or reflecting light barrier or NPN/ PNP input
- **2 transistor outputs: 230 V, 100 mA**
- **Impulse summator**
- **Signal multiplier**
- **Pulse storage per channel**
- **Pulse duration adjustable**
- **Galvanic 3-way isolation of 1,5 kV**

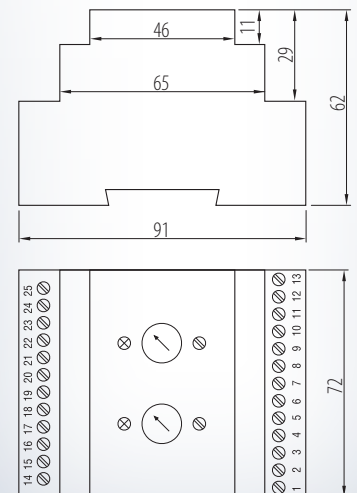
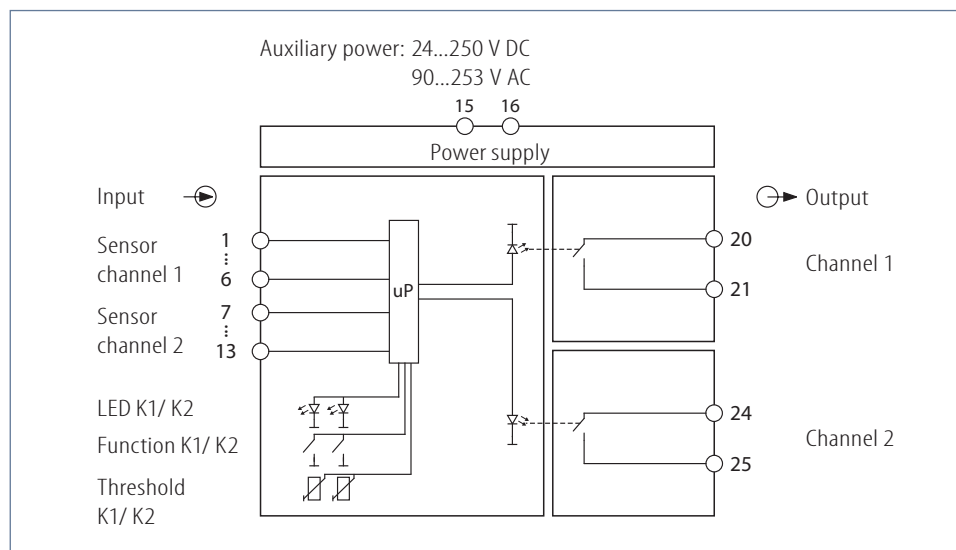


FUNCTION

The 2-channel Switching Amplifier enables the preparation of digital pulses. The preparation of pulses is used for various applications, e.g. determination of quantities, piece and event counting, supply of a sensor and processing for digital PLC-inputs.

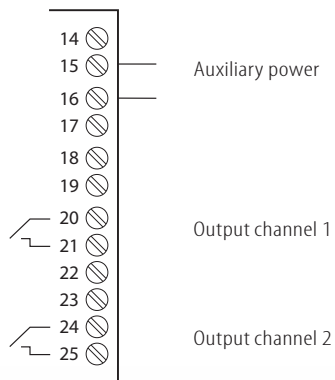
The input signals are processed both with inductive or capacitive proximity switches and optoelectronic sensors. The following input signals can be processed: two-wire initiator according to EN 50227 (former DIN 19234) for NAMUR-sensors, reflecting light barriers, potential free contacts and sensors with transistor output.

The SI 5.20 GW can be compared with a pulse converter which prolongs the input pulses and prepares the signals. In function as an impulse summator the input pulses can be produced at the same time or temporally overlapping. The built-in microprocessor is able to store up to 100 input signals; thus, a protected feeding of the prepared signals is guaranteed. The inputs and outputs are galvanically isolated between each other and the auxiliary power.

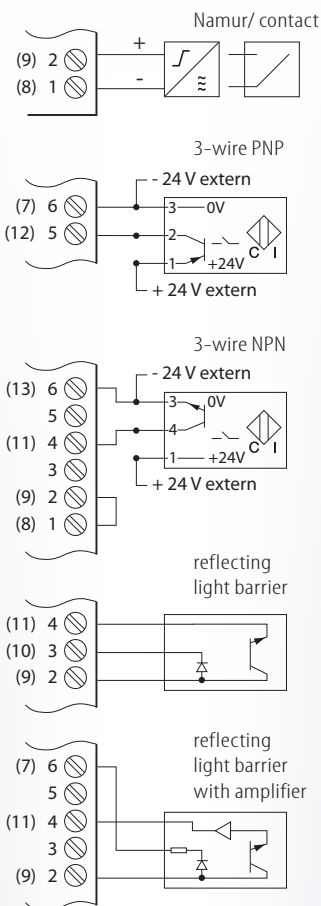


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Connection diagram:



Input channel 1 (channel 2):



Input:

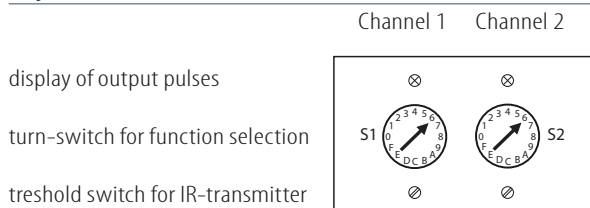
Transmitter	Short-circuit current	Switching point
Namur	8 mA	1,6 mA
Reed contact	8 mA	1,6 mA
IR-transmitter	5 mA	1 mA, adjustable by front trimmer
Transistor	5 mA	1 mA

Connection: see connection diagram

Output:

Transistor outputs: LED pulse-display at front side
 load: max. 230 V AC/ DC, max. 100 mA AC/ DC
 connection: see connection diagram

Adjustment:



S1/ S2	Function	Wipe time	Pulse storage	Output
0	output=input	no	without	
1	switching amplifier	50 ms	without	
2	switching amplifier	100 ms	without	
3	switching amplifier	300 ms	without	
4	switching amplifier	2000 ms	without	
5	switching amplifier	100 ms	with	
6	switching amplifier	300 ms	with	
7	switching amplifier	2000 ms	with	
8	IN1 + IN2	50 ms	with	
9	IN1 + IN2	100 ms	with	
A	IN1 + IN2	300 ms	with	
B	IN1 + IN2	2000 ms	with	
C	IN1 + IN2	50 ms	with	inverse
D	IN1 + IN2	100 ms	with	inverse
E	IN1 + IN2	300 ms	with	inverse
F	IN1 + IN2	2000 ms	with	inverse

When setting function to addition of the inputs (IN1 + IN2) both outputs run in parallel. Thus, a signal multiplication can be generated also.

Environmental conditions:

Storage temperature: -40...+70 °C
 Operating temperature: 10...55 °C
 Isolation voltage:
 1,5 kV eff. 1 sec. input/ output
 1,5 kV eff. 1 sec. output 1/ output 2
 1,5 kV eff. 1 sec. auxiliary power

Auxiliary power:

Wide range:
 24...250 V DC
 90...253 V AC
 < 3 W
 Influence of auxiliary power: < 0,1 %

Characteristics of transmission:

min. input pulse duration: 6 msec.
 Setting time: < 200 msec.
 Pulse storage per channel: 100 Impulses

Directive:

EMC Directive: 2014/30/EU*
 Low Voltage Directive: 2014/35/EU
 *minimum deviations possible during HF-radiation influence

Mounting details:

Housing for top hat rail
 Type of protection: IP 20 housing
 IP10 clamps
 Mounting rail fixed according to
 EN 50022-35 x 6,2 mm
 Width: 72 mm
 Weight: 200 g
 Material: PC-ABS
 Flammability class: VO (UL 94)
 Approval: CE
 Connection: screw clamps
 ≤ 2,5 mm²

Ordering information:

Type: SI 5.20 GW wide range

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