

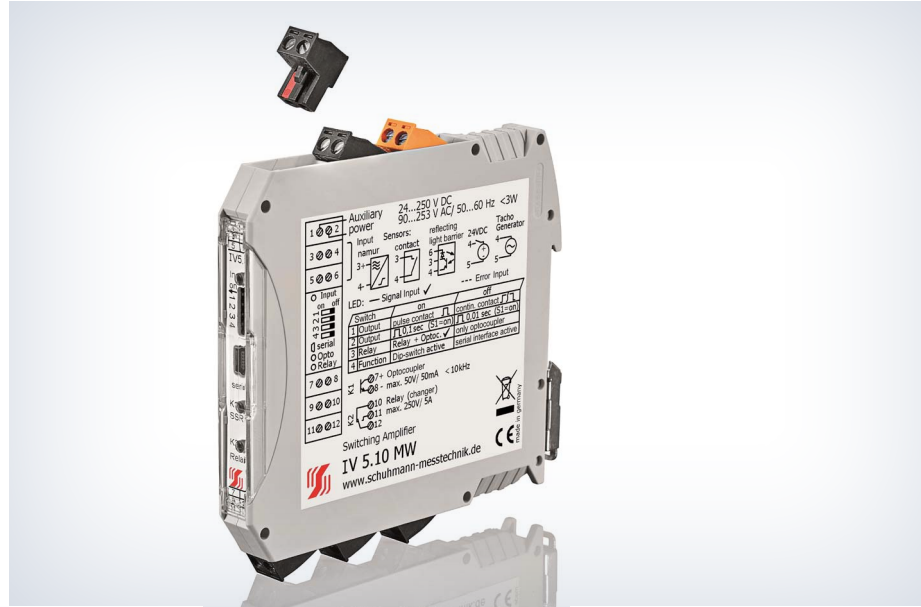


# Switching Amplifier, continuous pulse max. 10 kHz

## IV 5.10 MW

### FEATURES

- **Input, max. 400 Hz/  
at continuous pulse max. 10 kHz:**  
2-wire proximity switch (NAMUR) or  
potential-free contact or  
reflecting light barrier or  
24 V DC signal/ tacho generator
- **Output, simultaneously:**  
1 optocoupler (max. 10 kHz), 1 relay
- **Adjustable via DIP switches:**  
- function  
- pulse duration
- **Parameterization without  
auxiliary power via PC-interface:**  
- wipe time, inverse, memory, etc.
- **Galvanic 3-way isolation**



### FUNCTION

The Switching Amplifier IV 5.10 MW is being used for binary signal transmission out of control circuits into signal circuits.

The activation has to be carried out by a 2-wire proximity switch according to EN 50227 (NAMUR) or potential-free contacts. A reflecting light barrier or a 24 V DC signal/ tacho generator can also be used for this.

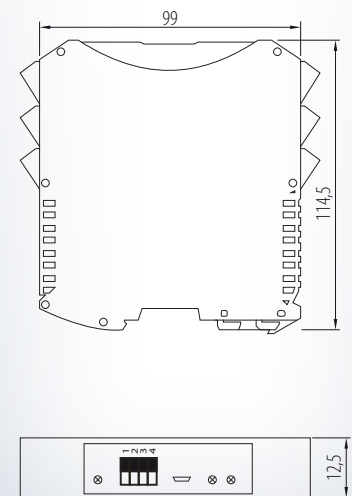
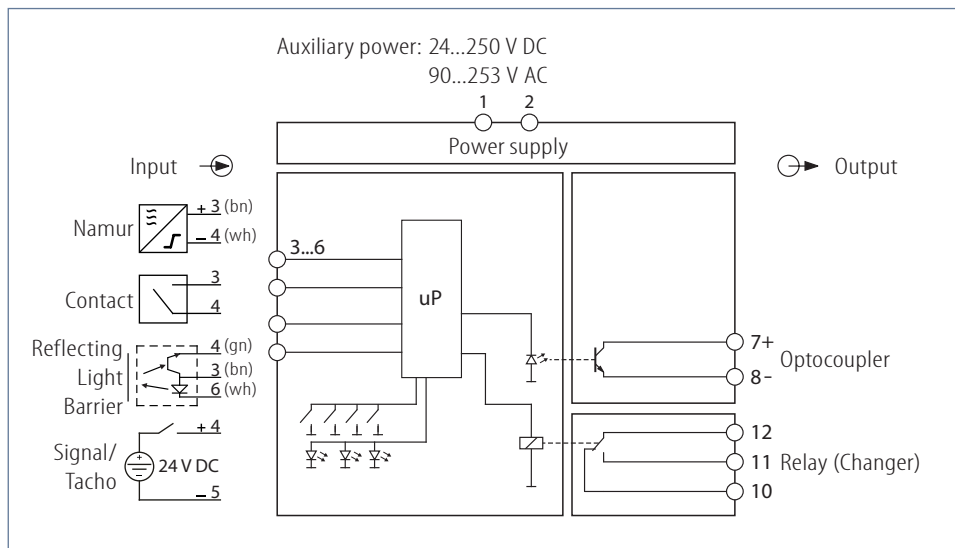
It is possible to specify different operating modes by the KALIB-Software, e.g. specific wipe times. Additional functions such as starting characteristics, input filter, pulse memory and limits for short circuit or wire break detection can be set.

The simultaneous outputs can be parameterized separately and also be used as an alarm contact for wire break or short circuit.

The change between pulse contact (max. 400 Hz) and continuous pulse (max. 10 kHz) is made via DIP-switch S1. The pulse duration can be changed with the DIP-switch S2 or the KALIB-Software.

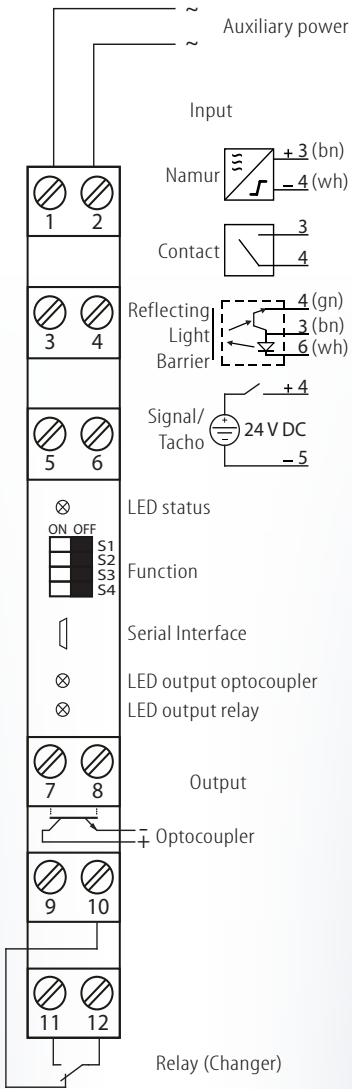
The IV 5.10 MW has an optocoupler (max. 10 kHz) and a relay output (1 changer). At higher frequencies the relay can be deactivated via DIP-switch S3 or the KALIB-Software.

Factory setting:  
wipe pulse, duration: 0,1 sec., relay active.



# IV 5.10 MW

Connection diagram:



## Input:

Namur EN 50227 or potential free contact or reflecting light barrier:

maximum current, voltage:  $I_{max} = 8 \text{ mA}; U_{max} = 8 \text{ V}$   
 min. impulse duration:  $> 25 \mu\text{s}$  (default filter 1 ms, changeable via KALIB-Software)  
 connection: terminal 3 +, 4 -

24 V DC signal/ tacho, connect.: terminal 4 +, 5 -

## Output:

Optocoupler output:

load: max. 50 V/ 50 mA/  $< 10 \text{ kHz}$   
 connection: terminal 7+, 8-

Relay output: 1 changer

load: max. 250 V AC/ 5 A  
 connection: common 12, normally closed 10, normally open 11

## Adjustment:

Switch	Function	ON	OFF
S1	output	pulse contact	continuous pulse (1:1)
S2	output	pulse contact 100 msec. (S1=ON)	pulse contact 10 msec. (S1=ON)
S3	relay	relay active	relay not active
S4	function select.	DIP-switch values (S1...S3) active	

ON OFF

Switch	Function	ON	OFF
S1	KALIB-Software values active*1, DIP - switch S1...S3 without function.		
S2			
S3			
S4	function select.		KALIB-Software values active

ON OFF

The extended parameterization is being made via PC and the interface adapter **USB2/ USB-Simulator** in connection with the **KALIB-Software** (DIP-switch S4=OFF).

\*1Each output can be configured separately (DIP-switch S4=OFF, DIP-switch S1...S3 without function):

input filter: off; 0,5 - 20 msec. frequency input filter (factory setting: 1 ms)  
 wire break limits: 10,00...46,99 % adjustable in 0,02 % steps  
 short circuit limits: 52,99...94,99 % adjustable in 0,02 % steps  
 mode: off/ contin. pulse/ pulse contact\*/ Namur wire break and short circuit/  
 pulse memory overflow (only relay)/ pulse failure/ impulse generator

\*wipe time ON/ OFF: each 0,002...30,000 sec. adjustable in 1 msec. steps

\*pulse memory: 2...10000 pulses

extended functions: inverse operation, start state (on/ off), start time (0...30 sec.)

## Display:

LED status: green, active input signals are in standard range, device ready for use  
 green, flashing Namur wire br. or short circ./ pulse mem. overfl./ pulse failure  
 LED's output: yellow, active output active

## Environmental conditions:

Storage temperature:  $-40...+70 \text{ }^\circ\text{C}$   
 Operating temperature:  $0...55 \text{ }^\circ\text{C}$   
 Isolation voltage:  
 1 kV eff. 1 sec. input/ output  
 3,75 kV eff. 1 sec. auxiliary power

## Auxiliary power:

Wide range: 24...250 V DC  
 90...253 V AC  
 $< 3 \text{ W}$   
 Influence of Aux. power:  $< 0,1 \%$

## 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 40 housing  
 IP 20 clamps  
 Mounting rail fixed according to  
 EN 50022-35 x 7,5mm  
 Width: 12,5 mm  
 Weight: 100 g  
 Material: Polyamide (PA)  
 Flammability class: V0 (UL94)  
 Approval: CE  
 Connection: plugg. screw clamps  
 $\leq 2 \times 2,5 \text{ mm}^2$

**For safety reasons we recommend to mount the housing for top hat rail with a distance of approx. 5 mm to each other. Please check switch position before initial operation!**

## Ordering information:

Type: **IV 5.10 MW** wide range  
 Accessories: USB2/ USB-Simulator with KALIB-Software

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