

# STM

## V91N-BP/N (-20/-21)

amplifier for nanoSPOT - sensors

### nano • SPOT®

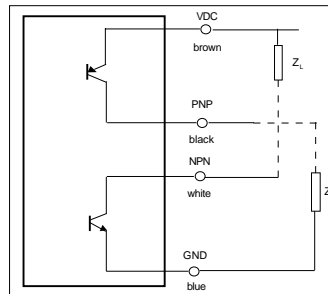
max. frequency response: 500Hz  
 functional principle: modulated light  
 power supply indicator: LED green (STAB)  
 function indicator: LED yellow  
 operating voltage: 10 ... 30 VDC (max.)  
 output current: 100mA  
 current consumption: 20mA / 60mA  
 (Ø / peak)  
 weight: 55g  
 casing material: ABS  
 operating temperature: -10°C ... +55° C  
 protection class: IP65

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8020106

### Wiring and Connection



### Sensor

Option -20/-21: socket 719, 3pin  
 1 + emitter  
 2 GND/shielding  
 3 + receiver



### In-/Output

Option -20: PVC-cable, 4wires, 2m  
 brown +VDC  
 white NPN-signal output  
 blue -GND  
 black PNP-signal output

Option -21: connector M8, 4pin

1 (brown) +VDC  
 2 (white) NPN-signal output  
 3 (blue) -GND  
 4 (black) PNP-signal output



### Attention!

Connect amplifier to 10-30 VDC only!

Do not lay amplifier cable parallel to a power line!

If the green LED does not shine, then the signal is unstable.

### Caution!

Sensor and amplifier are only authorized to detect objects. Do not use amplifier and sensor for personnel safety applications!

### Light-On/Dark-On Switching

Choose the output logic by shifting the L on / D on switch.

#### light-on:

the signal output switches to „on“ when light reaches the receiver

#### dark-on:

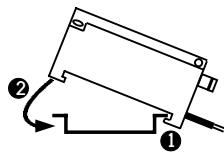
the signal output switches to „on“ when light beam is interrupted

### Function Indicator

The green LED indicates a stable signal.

The yellow LED indicates the state of the output (on/off).

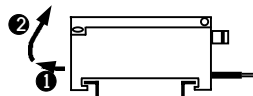
### Assembly



Put device onto DIN rail clip as shown. Then, connect sensor cable.

### Disassembly

First unplug sensor cable connector. Then take amplifier off the DIN rail clip as shown.

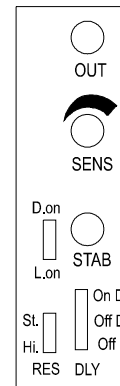


### Sensitivity Setting

The range of sensitivity may be selected either in standard (St.) or high-resolution mode (Hi.) by shifting the RES switch. In high-resolution mode the maximum sensing distance reduces to approximately 33% of the standard specified value (please refer to sensor datasheet).

### Setting of Pulse Stretching Function

The DLY switch can set pulse duration of 50ms. You can select between On Delay (On D) and Off Delay (Off D).



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