

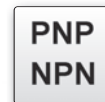
signal inverters, pulse stretchings 1900

design	17.5 x 85 x 65mm socket / connector Ø9mm	
cable socket	signal inverter	<p>pn<math>\bar{p}</math> / <math>\bar{p}</math>n<math>\bar{p}</math></p> <p>pn<math>\bar{p}</math> / npn</p> <p>pn<math>\bar{p}</math> / <math>\bar{p}</math>n<math>\bar{p}</math></p>
module	stretching static	10msec to 10sec
	stretching dynamic	10msec to 10sec



- ✓ small design for industrial use
- ✓ easy mounting
- ✓ high sampling frequency
- ✓ inversion of a sensor signal

**signal inverter  
pulse stretching**



**description**

The signal inverters in the **VYR9** series convert the output signal of a sensor in such a way that it corresponds to the requirements of a successive electronic circuit or a relay. For example, with the pnp-output signal of a sensor, this is how pnp-break contacts (pnp/nc), npn-make contacts (npn/no) or npn-break contacts (npn/nc) are achieved.

For sensors using M12-connectors or a cable connection there are appropriate interconnections available for connecting to these signal inverters.

The **VY85** is in the position, for example, to convert a sensor's PNP-make contact switch signal into any other type of switch signal (e.g. PNP-break contact switch signals or NPN). In addition, the device offers pulse stretching, the time ranges of which can be pre-selected through plug-in jumpers and set using a potentiometer. As a consequence, the subsequent control can also process the shortest of pulses reliably.

In the variant with static pulse stretching, the output is active as long as the input is assigned. In the case of activated pulse stretching, short input pulses are elongated to the set

time. No further lengthening takes place if the input pulse is pending for longer than the set time.

If the pulse stretching is activated in the variant with dynamic functioning, the output is only active for the set time. This applies then, regardless of the busy time of the input. If the input signal is pending for longer than the set time, the output is only activated again if the input signal has de-energized in the meantime.

Signal inverters are used for all applications in which a signal sensor is not available with the required output signal.

Further client-specific programming is possible on request!

**application examples**

- ▶ pulse stretching for signals which are too short (transient)
- ▶ reliable detection of signals with memory-programmable controls
- ▶ conversion into the correct signal voltage and logic (pn $\bar{p}$ /n $\bar{p}$ n and break contact/make contact)

article-no. version output	VYR90270 signal inverter pnp-inverted	VYR91170 signal inverter npn	VYR91270 signal inverter npn-inverted

**TECHNICAL DATA**

input signal	pnp	pnp	pnp
output signal	pnp-inverted	npn	npn-inverted
operating voltage	10 ... 36V DC	10 ... 36V DC	10 ... 36V DC
current consumption (w/o load)	-	-	-
output current (max. load)	250mA	250mA	250mA
sampling frequency	5kHz	5kHz	5kHz
display (signal)	-	-	-
pulse stretching	-	-	-
adjustment	-	-	-
short-circuit protection	+	+	+
reverse polarity protection	+	+	+
design	Ø9mm	Ø9mm	Ø9mm
housing material	aluminium	aluminium	aluminium
temperature range	-10 ... +60°C	-10 ... +60°C	-10 ... +60°C
system of protection (EN 60529)	IP67	IP67	IP67
connection (sensor side)	M8-socket, 3-pin	M8-socket, 3-pin	M8-socket, 3-pin
connection (output side)	M8-connector, 3-pin	M8-connector, 3-pin	M8-connector, 3-pin
connection accessories	e.g. <b>VK200075</b> , 2m, PUR	e.g. <b>VK200075</b> , 2m, PUR	e.g. <b>VK200075</b> , 2m, PUR
mounting accessories	-	-	-

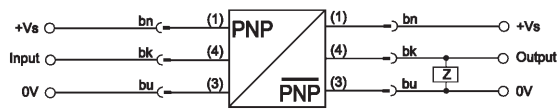
**signal inverters, pulse stretchings 1900**

article-no.	VY850001	VY850002
version	static stretching / inversion	dynamic stretching / inversion
output	pnp / npn / pnp-inverted / npn-inverted	pnp / npn / pnp-inverted / npn-inverted
<b>TECHNICAL DATA</b>		
input signal	pnp or npn	pnp or npn
output signal	pnp / npn / pnp-inverted / npn-inverted	pnp / npn / pnp-inverted / npn-inverted
operating voltage	10 ... 30V DC	10 ... 30V DC
current consumption (w/o load)	-	-
output current (max. load)	2 x 300mA	2 x 300mA
sampling frequency	20kHz	20kHz
display (signal)	2 x LED	2 x LED
pulse stretching	10 ... 100msec / 100msec ... 1sec / 1sec ... 10sec	10 ... 100msec / 100msec ... 1sec / 1sec ... 10sec
adjustment *	10-turn shaft trimmer / 3 jumpers	10-turn shaft trimmer / 3 jumpers
short-circuit protection	+	+
reverse polarity protection	+	+
design	17.5x85x65mm	17.5x85x65mm
housing material	plastic	plastic
temperature range	-10 ... +60°C	-10 ... +60°C
system of protection (EN 60529)	IP40	IP40
connection (sensor side)	terminals	terminals
connection (output side)	terminals	terminals
connection accessories	-	-
mounting accessories	DIN-rail DIN EN 60715 TH35	DIN-rail DIN EN 60715 TH35
* adjustment behind coverage		

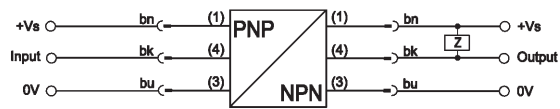
# 1900 signal inverters, pulse stretchings

## connection

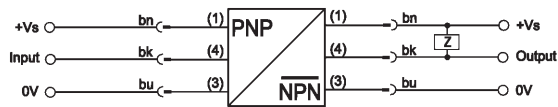
### VYR90270



### VYR91170

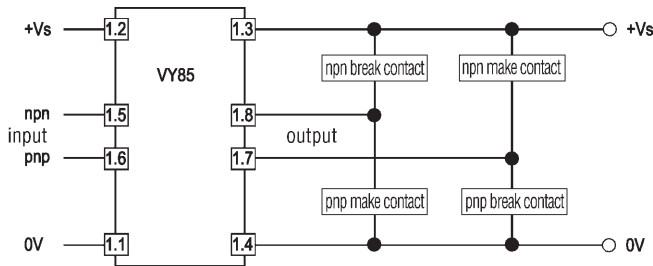


### VYR91270



wire colors: bn = brown (1), wh = white (2), bu = blue (3), bk= black (4)

### VY850001 and VY850002



The list of articles contains the standard versions only. Kindly request the availability of other output- and connection functions.

We will be pleased to supply the matching cable socket for your devices with connector. Please refer to the list in catalog chapter "accessories" under "cable sockets ipf-SENSORFLEX®" or search our website for "VK".

**Warning:** Never use these devices in applications where the safety of a person depends on their functionality.