

# Isolating Switching Repeater TS 500

## 1- and 2- channel device

### Features

- Input for switching contact, proximity switch Namur type acc. to DIN EN60947-5-6 or opto-coupler
- Switchable line fault detection for broken and shorted lines
- Output relay SPDT contact or electronic (transistor passive)
- Supply voltage 230V AC or 24V DC
- Power on LED, status / error LED
- 22.5mm case for DIN rail mounting



### General information

Isolating switch-coupler TS500 can be used for monitoring and controlling digital signals. The input is suitable for switching contact, proximity switch acc. Namur DIN EN60947-5-6, or passive electronic outputs of other devices. The output can be delivered as relay SPDT or transistor (voltage free).

### Short information

- |                      |  |
|----------------------|--|
| Operating mode       | The Operating mode between input and output can be selected by DIP switches at the front panel (open-circuit or close-circuit working).  |
| Line fault detection | When operating with Namur proximity switches the controlling function for broken line and shorted line can be activated by DIP-switch. In case of an error, the output will be inactive and the status LED's are flashing. For switch type sensors resistors must be installed (see page 3). |

## Technical data

### Power supply

Supply voltage	: 230 V $\pm$ 10 % AC, 47 ... 63 Hz : 24 V $\pm$ 15 % DC
Power consumption	: < 2 W
Operating temperature	: -10 ... 55 °C (14 ... 131 °F)
Rated voltage	: 250V AC, pollution degree 2, overvoltage cat. II
Test voltage	: 3 kV DC, between input/output/supply voltage

### Inputs

No load voltage	: approx. 8 V (acc. to DIN EN60947-5-6, Namur)
Short circuit current	: approx. 8 mA (acc. to DIN EN60947-5-6, Namur)
Switching points	: inactive $\leq$ 1.2 mA, active $\geq$ 2.1 mA, hysteresis approx. 0.5mA
Broken line detection	: $\leq$ 0.1 mA
Shorted line detection	: $\geq$ 7.5 mA

### Relay Output

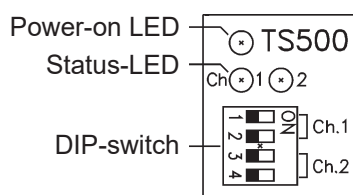
Switching capacity	: < 250 V AC < 250 VA < 2 A; < 100 V DC < 50 W < 2A Max.
switching frequency	: 5 Hz
Max. switching delay	: 20 ms (2-channel: 50 ms)

### Transistor output (voltage free)

Max. voltage	: 35 V DC
Max. current	: 50 mA (short circuit protection)
Voltage drop	: $\leq$ 3.5 V (at load 50 mA)
Max. switching frequency	: 2 kHz (50 % key ratio)
Max. switching delay	: 300 $\mu$ s

<b>Case</b>	: Standard DIN rail case of polycarbonate 8020 UL94V-1
Weight	: approx. 200 g
Protection	: Case IP30, terminals IP20 ( BGV A3)
Connection	: Screw terminal with pressure plate, max. 2.5mm <sup>2</sup> , wire

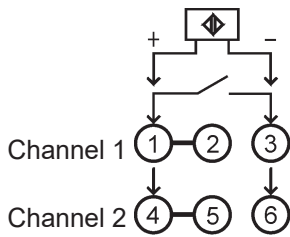
## Front panel controls



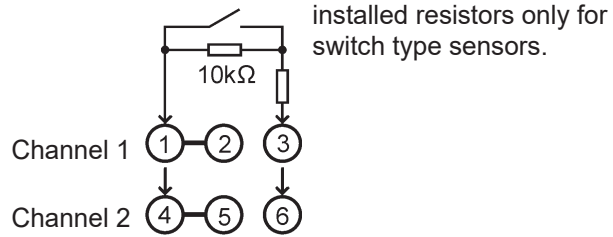
Way of effect	Ch.1 Channel 1	Ch.2 Channel 2
non inverted (N.O.)	S1 off	S3 off
inverted (N.C.)	S1 on	S3 on
<b>Broken line/shorted line</b>		
non active	S2 off	S4 off
active	S2 on	S4 on

## Connection diagram

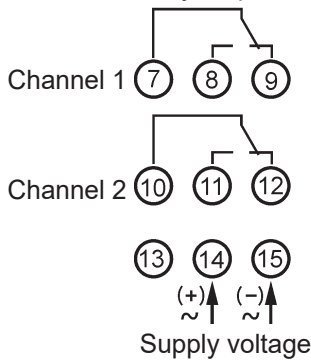
Namur-input  
Switching contact



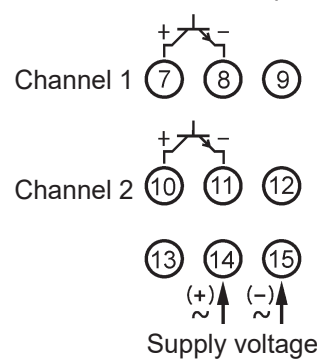
Line fault detection  
with switching sensor



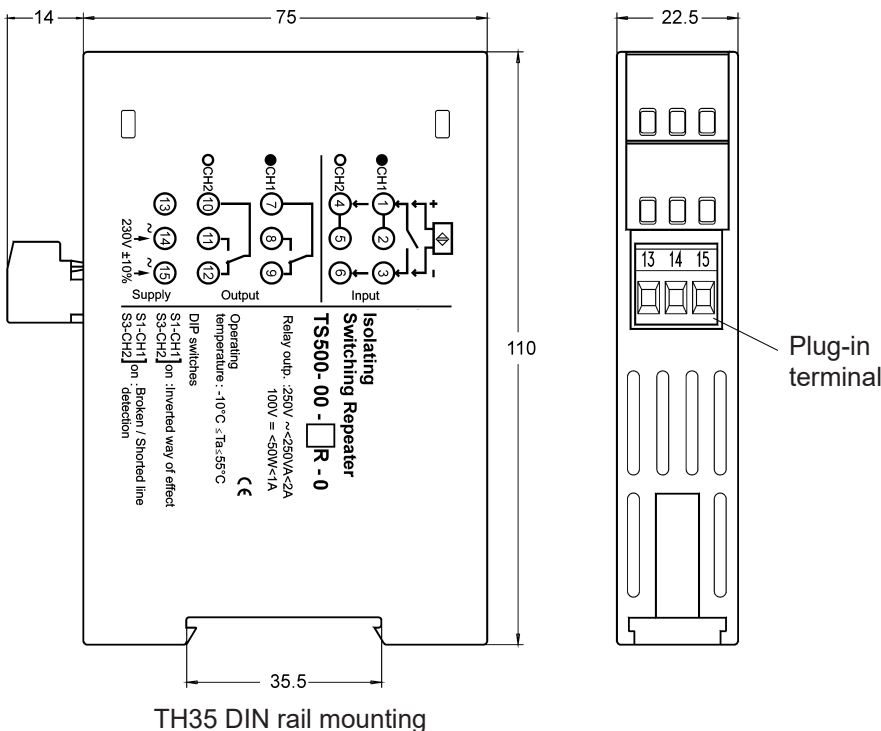
Relay output



Transistor output

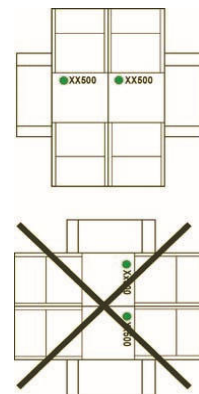


## Dimensions



### Caution!

Mounting of multiple units without distance is only permitted in horizontal orientation.



## Ordering code

TS500-  1. -  2. -  3.

**1. Devicetype**

00 Standard

**2. Output**

1R 1-channel with relay output

2R 2-channel with relay output

1T 1-channel with transistor output

2T 2-channel with transistor output

**3. Supply voltage**

0 230 V AC ±10 % 50-60Hz

5 24 V DC ±15 %

**Note:**

The TS500 is available as Ex-ia version!