



## **OPTOELECTRONIC THREAD SENSOR 436-02.01**

### **Application**

For use with practically all textile machinery for the purpose of monitoring all common types of yarn, particularly when the monitoring system is not permitted to exert any additional forces on the thread and when sensors that are sensitive to charges (capacitive sensors) cannot be used because the application involves a highly antistatic preparation.

### **Function**

The thread moves through the light beam ( $\varnothing$  approx. 4 mm) of a forked light barrier. Irregularities in the yarn

modulate the light beam. If the thread is missing or stationary, this modulation will no longer occur. This contactlessly triggers a switching function so that the textile machine can be controlled.

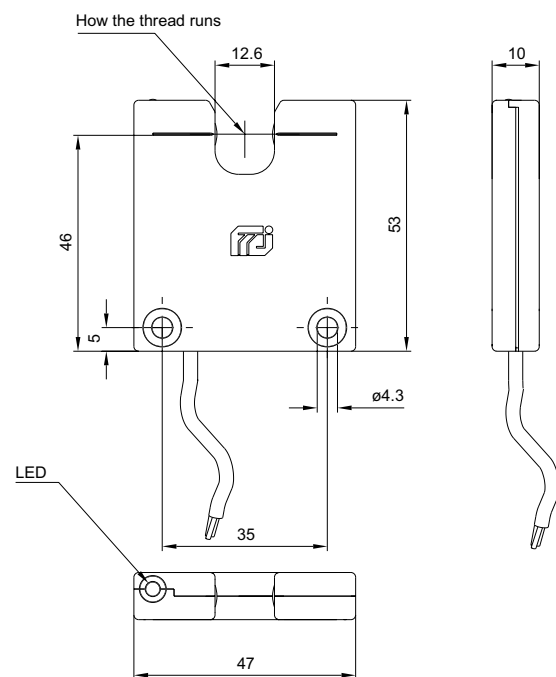
The effect of any ambient light is eliminated by highly effective active filters. The luminous flux is automatically readjusted to compensate for any soiling. The end of this readjustment process is signalled by means of a warning light.

Following switch-on, the device is active and the electrical output is deactivated. Once the switch-in delay (which varies according to the different versions) has elapsed, the thread signal is switched to “alert”. A constantly illuminated LED indicates that the thread is running correctly. In the event of a thread break, the operating voltage is switched contactlessly to the output and the LED goes out. In the event of heavy soiling, the LED will start to flash before this pollution can lead to a device failure.

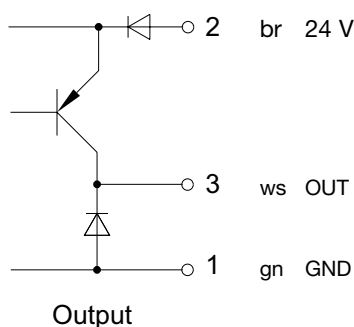


Technical data	
Operating voltage	24 VDC voltage $\pm 20\%$
Permissible ripple	Max. 5% (three-phase bridge)
Current consumption	30 – 60 mA, depending on switching condition and extent to which the optics are soiled
Switching current	200 mA plus connected
Switch-in delay	Approx. 500 ms
Minimum thread speed	Approx. 50 m/min depending on material and titre

## Dimensions [mm]



## Circuit diagram



Version
• 436-01 Switch-in delay approx. 250 ms