Analogue Loop-Detector GSD II

The sensor measures the loop of a band-shaped material and provides an analogue output signal proportional to the covering.

Contactless, optoelectronic measurement principle

Visual readout of measurement provided by arrow LED

Secondary-light-proof provided by alternating light mode

Adjustable amplification, delay and zero-point

Integrated inverter

Detection Range up to 4 m

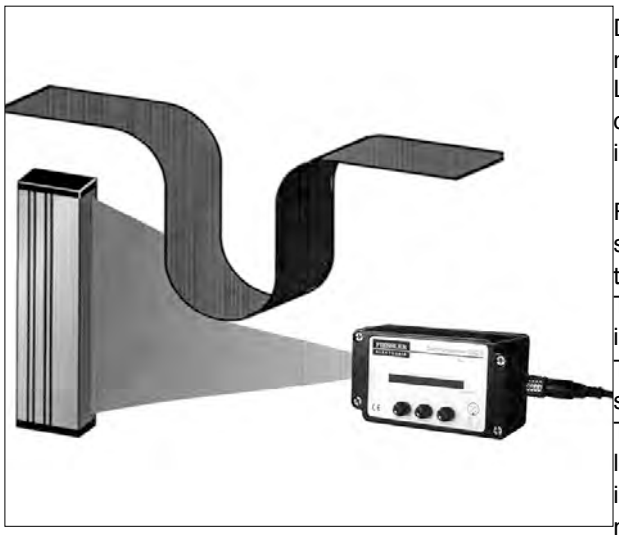
Plug-in connection

Compact housing

DIN EN ISO 9001
Reg.Nr. 96007

CE

Application:

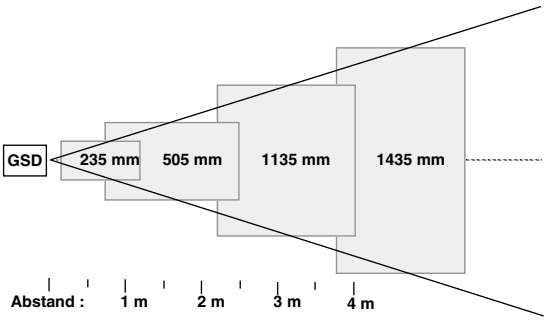


Detection of the loops in a tape-shaped material.
Loop control systems are used as a speed control for two or more machines that are installed in a row.

For keeping constant the loop of a band-shaped material, using a dual-mode control is not effective enough.
The analogue loop-detector transmits an input signal to the variable speed drive. Therefore, a constant loop control and loop shape is enabled.
The analogue loop-detector measures the loop of a belt material. The signal provided is proportional to the covering of the belt material.

Transmitter:

The analogue loop-detector consists of the two components light transmitter and receiver.
The transmitter is available in two different models:
a) with a fluorescent tube for visible light.
b) with infrared emitting diodes (LED) for invisible infrared light.
The transmitter generates an invisible infrared light band through the LEDs.



standard values for the detemination of the transmitter length

The length (L) of the transmitter depends on the distance between receiver and transmitter. Using the graphic above, the required transmitter-length can be determined.

Receiver:

The receiver-optic displays the lightband of the transmitter on the photodetector and generates an output-signal which is proportional to the covering of the transmitter (see table). The receiver evaluates only the alternating light mode of the transmitter. Therefore the analogue loop-detector GSDII is secondary-light-proof. The measuring signal is visualized by a row of LEDs.

	transmitter		
	free	partially covered	covered
Ausgang (0 - 20 V)	20 V	10 V	0 V
Ausgang (0 - 10V)	10 V	5 V	0 V
Ausgang (4 - 20 mA)	20 mA	12 mA	4 mA

Technical data:

range:	0,5 m - 4 m
supply voltage:	24 VDC stabilized (separate power supply for GSDII only)
power consumption:	approx. 80 mA
output voltage:	0 - 20 V ; 0 - 10 V
output current:	4 - 20 mA
adjusting possibilities:	amplification, recovery time 0 - 500 ms, zero-point adjustment
enclosure rating:	optional: IP 64
ambient temperature:	0 ° C to + 50 ° C
connection:	plug-type connector with screws

Power supply:

The following power supply is available:
NG 300: 24 V DC stabilized, max 300 mA

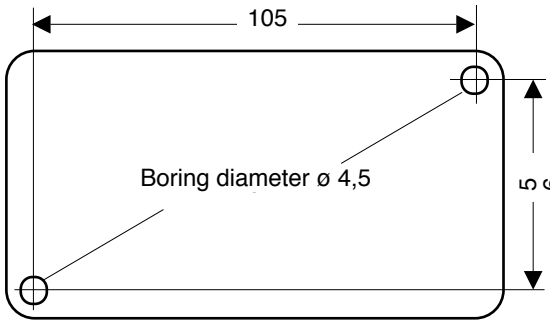
Option:

For an optimum adaptation to the different operating conditions, special designs are possible and available on request. With low expenditure, ranges, enclosure ratings and output voltages can be changed according to your requirement.

Mechanical adjustment:

Adjust transmitter and receiver in a way that both are located on the same center axis.

Mounting:



Connection:

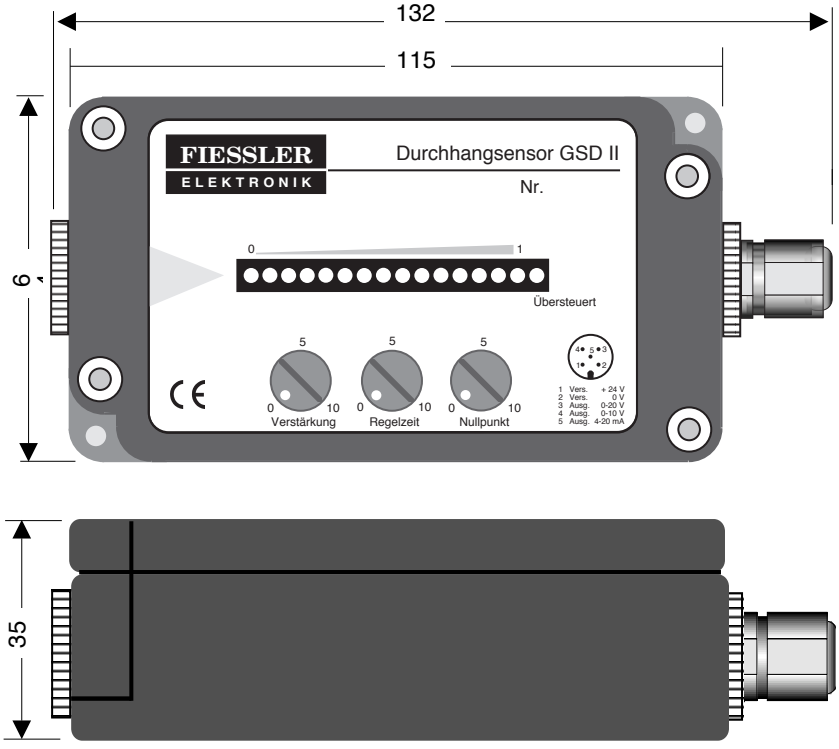
The connection must be made according to the diagram which is printed on the GSDII front panel.

1	=	+ 24 V DC stab.	=	brown
2	=	0 V	=	white
3	=	output 0 - 20 V	=	blue
4	=	output 0 - 10 V	=	black
5	=	output 4 - 20 mA	=	grey

Electric adjustment:

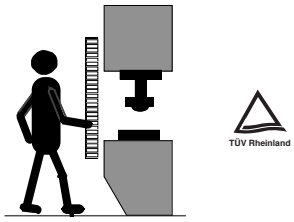
The amplification of the unit is adjusted with the amplification potentiometer ("Verstärkung"). However, make sure that the adjustment is low enough that the red LED (overshoot indicator) does not light up. If this is the case, the output voltage would exceed the maximum value of 20 V, causing an amplifier overshoot. Usually, the output voltage must be set to 20 V after having executed a precise alignment of the measuring device. Make sure that any covering of the detection devices is excluded. (UA = 20 V when output 0 - 20V is used.)
With the zero-point potentiometer ("Nullpunkt") the output voltage value is increased. In this case, the amplifier has a voltage at its output, although no signal is present. This compensation voltage is used for matching variable speed actutators whose stationary state is not obtained in the centre (10 V) of the control voltage range available of 0 - 20 V. This compensating voltage is infinitely variable from 0 - 20 V.
To obtain an optimum matching, a time constant that is adjustable from 0 to 500 ms using the recovery time protentiometer ("Regelverzögerung") is provided within the receiver.
In additon, as an adjustment aid, the receiver incorporates a row of LEDs; the nature of the light change is clearly apparent from their direction of indication.

Dimensions:

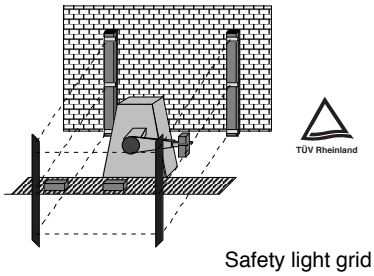


Delivery program

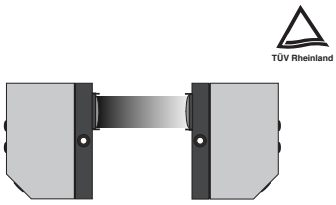
Fiessler Elektronik
Kastellstr. 9 D-73734 Esslingen
Telefon: 0711 / 91 96 97-0
Telefax: 0711 / 91 96 97-50
WWW.fiessler.de
E-Mail:info@fiessler.de



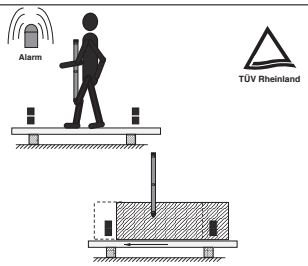
Safety light curtain



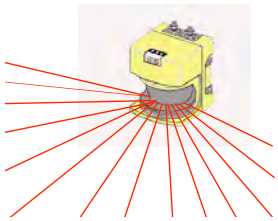
Safety light grid



Single safety light beam

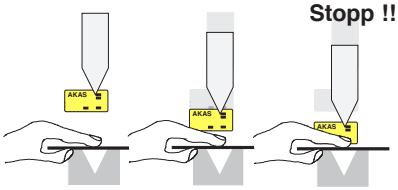


Safety light grid with muting function



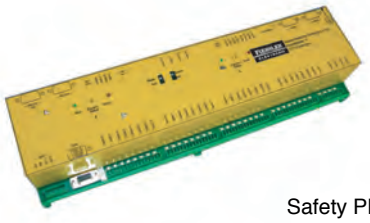
Proximity scanner

Safety mats

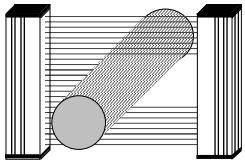


Press brake safety system

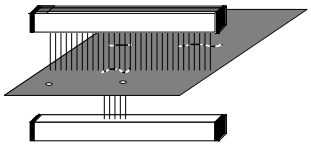
Safety foot pedal



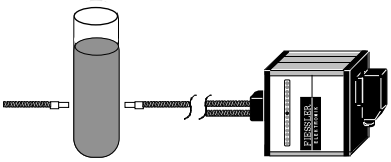
Safety PLC
Safety controllers



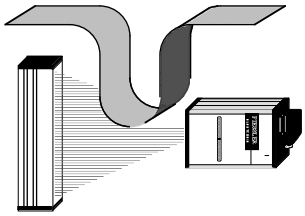
Measuring and controlling light curtains



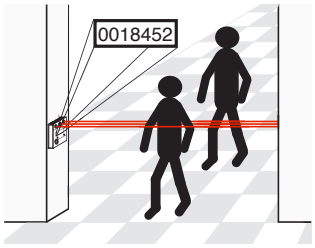
Hole detectors



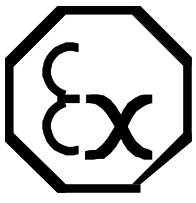
Turbidity sensors

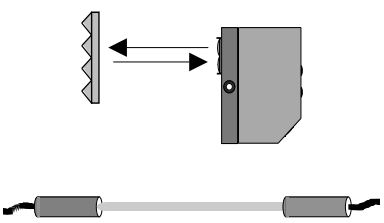


Analogue loop sensors



Counting light barriers





Light barriers for general purposes

Your application