Product range:

Safety-Light-Curtain

Safety-Light-Grid

Single-Safety-Beam

Safety-Light-Grid with muting function

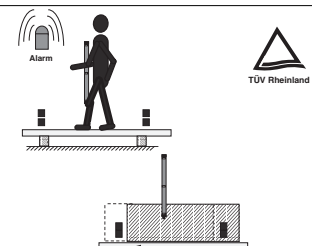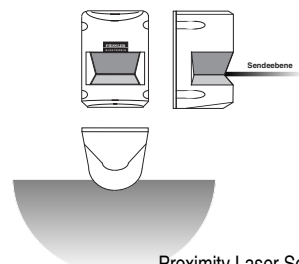Proximity Laser Scanner

Saftety Mats

AKAS®
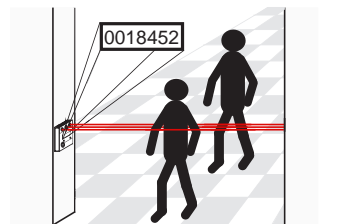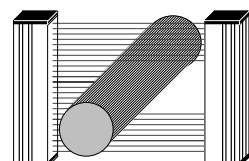
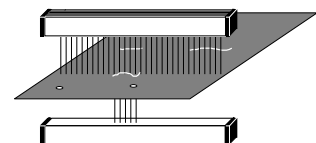**Stopp !!**
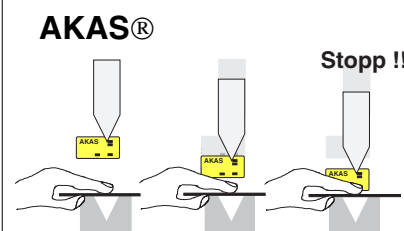
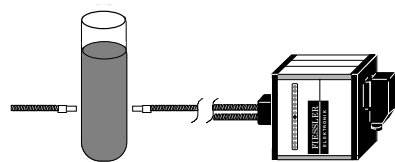The innovative finger guard for press brakes

Safety-Footpedal

Photoeleric Controls For Counting Applications

Switching And Analogue Light-Curtain

Hole-Detector

Cloudiness-Detector
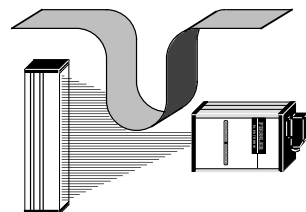
Analogue Loop-Detector
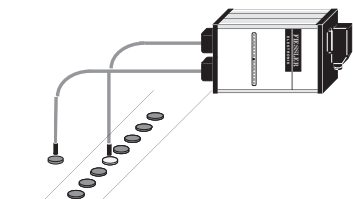
Reference-Sensor

EX-Light-Barriers
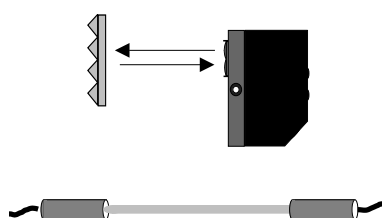
Light-Barrier For General Applications

?

Your Application

Doku Nr. 783 Stand 4.9.2003/ RH/di

FIESSLER ELEKTRONIK Durchhangsensor GSD II Nr.

0 ———————— 1 Übersteuert

5 5 5
0 Verstärkung 10   0 Regelzeit 10   0 Nullpunkt 10

1 Vers.	+ 24 V
2 Vers.	0 V
3 Ausg.	0-20 V
4 Ausg.	0-10 V
5 Ausg.	4-20 mA
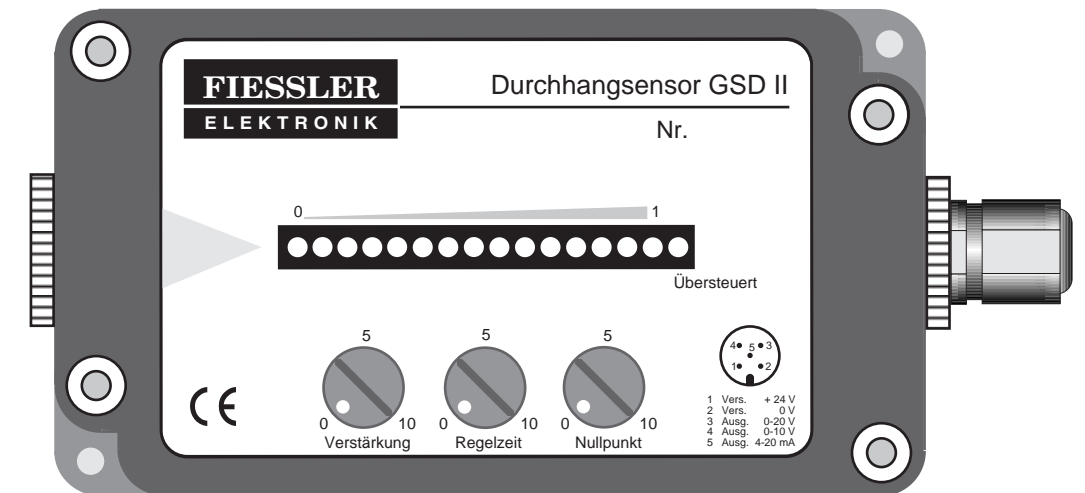
The sensor measures the loop of a band-shaped material and provides an analogue output signal proportional to the covering.

- ○ **Contactless, optoelectronic measurement principle**
- ○ **Visual readout of measurement provided by a row of LEDs**
- ○ **Secondary light proof lprovided by alternating light mode**
- ○ **Adjustable amplification, delay and zero-point**
- ○ **Integrated inverter**
- ○ **Detection Range up to 4 m**
- ○ **Plug-in connection** (cables & plugs sold separately)
- ○ **Sturdy, compact housing**

ZERT Q
DIN EN ISO 9001
Reg. Nr. 96007

CE

application:
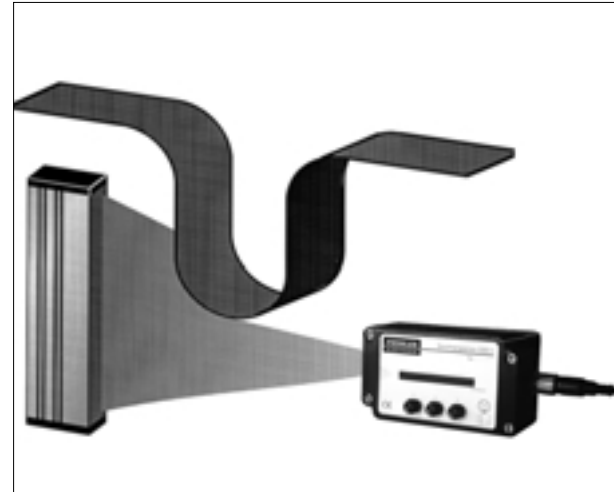
Loop control systems are used as a speed control for two or more machines that are installed in a row.

For keeping constant the loop of a band-shaped material, very often a dual-mode control is not sufficient.
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.
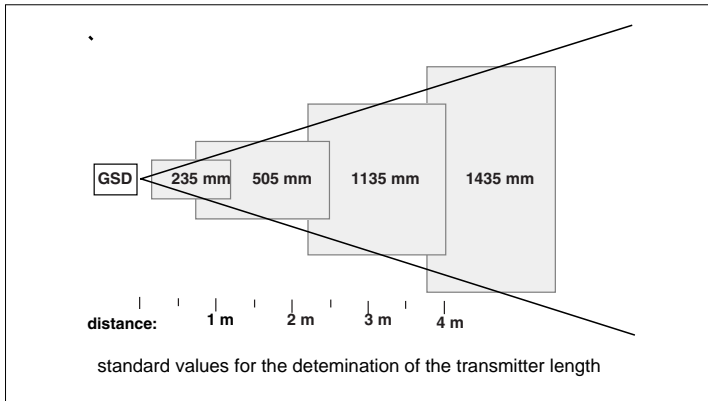The length (L) of the transmitter depends on the distance between receiver and transmitter. In the by-graphic the requested transmitter-length can be determined.

| GSD | 235 mm | 505 mm | 1135 mm | 1435 mm |

distance: 1 m 2 m 3 m 4 m

standard values for the detemination of the transmitter length

receiver:

The receiver-optic images 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
output (0 - 20 V)	20 V	10 V	0 V
output (0 - 10V)	10 V	5 V	0 V
output (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 only 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:	IP 54 (optional: IP 64)
ambient temperature:	0 ° C to + 50 ° C
connection:	plug-type connector with screws

power supply:

The following power supply is suitable :
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 less expenditure range, enclosure rating and output voltage can be changed to full fill your requirement.

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mechanical adjustment:

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

mounting:

105

56

Boring diameter 4,5
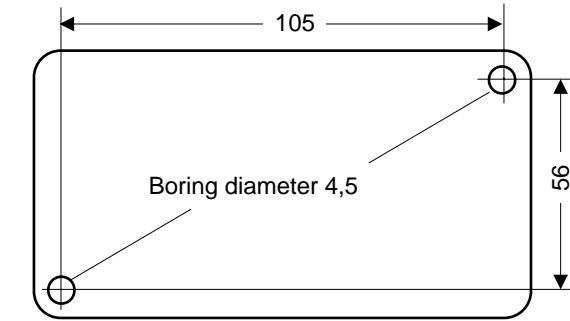
connection:

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, it may not be adjusted so high that the red LED (overshoot indicator) illuminates, because in this state 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. (U_A = 20 V when output 0 - 20V ids used.)

With the zero-point potentiometer ("Nullpunkt") the output voltage value is cancelled. 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:

132

115

64

FIESSLER ELEKTRONIK   Durchhangsensor GSD II

Nr.

0   1

Übersteuert

5   5   5

0   10   0   10   0   10

Verstärkung   Regelzeit   Nullpunkt

35