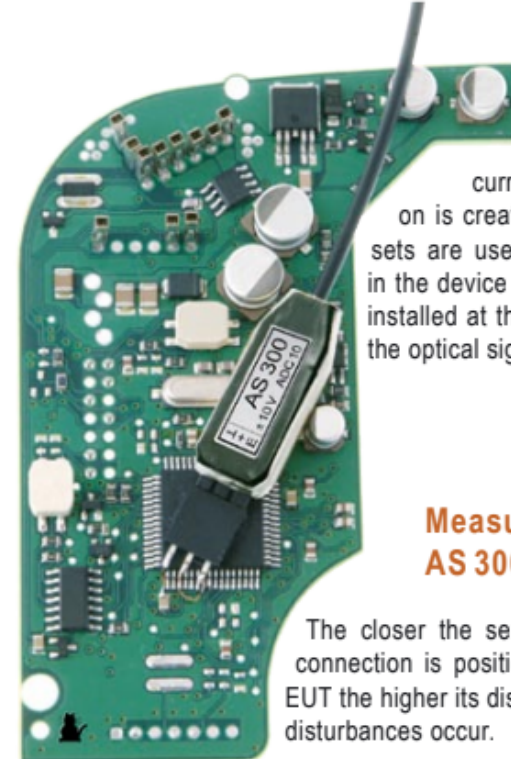
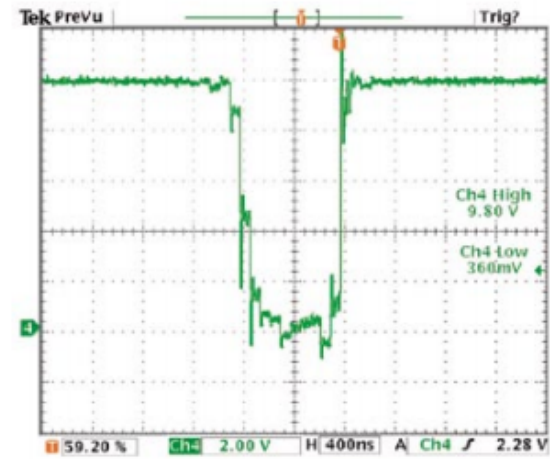


## Measurement Method

### Critical signals monitoring

The A 100, A 200 and A 300 analog optical fibre sensor sets measure electrical analog signals under the influence of extreme electromagnetic stress such as capacitive / inductive and conducted RF interference.

The electromagnetic compatibility (EMC) of electrical devices must be tested and examined to ensure their trouble free operation. Special measurement technology is not only required to carry out EMC tests such as radiated RF tests in an anechoic chamber, TEM cell, under a stripline or conducted RF tests according to EN 61000-4-6. The developer can also use it for preliminary tests at his workplace to obtain additional information from the device under test. Small sensors can be used in the electronic system to detect signals such as: supply voltages (e.g. switching and linear controllers), reference voltages and analog signals (e.g. operation amplifiers, ADC, DAC).



Measurement setup AS 300 sensor

The closer the sensor with its housing and GND connection is positioned to the GND system of the EUT the higher its disturbance immunity and the fewer disturbances occur.

Because of the optical signal transmission to the oscilloscope, no additional disturbance current path or disturbance diversion is created if analog optical fibre sensor sets are used to monitor the analog signals in the device under test. An optical receiver is installed at the oscilloscope's input to convert the optical signals back into analog signals.

## Fieldbus analysis

The bi-directional transfer for signals via optical fibre allow monitoring of highspeed CAN or LIN signals during extreme interference conditions.

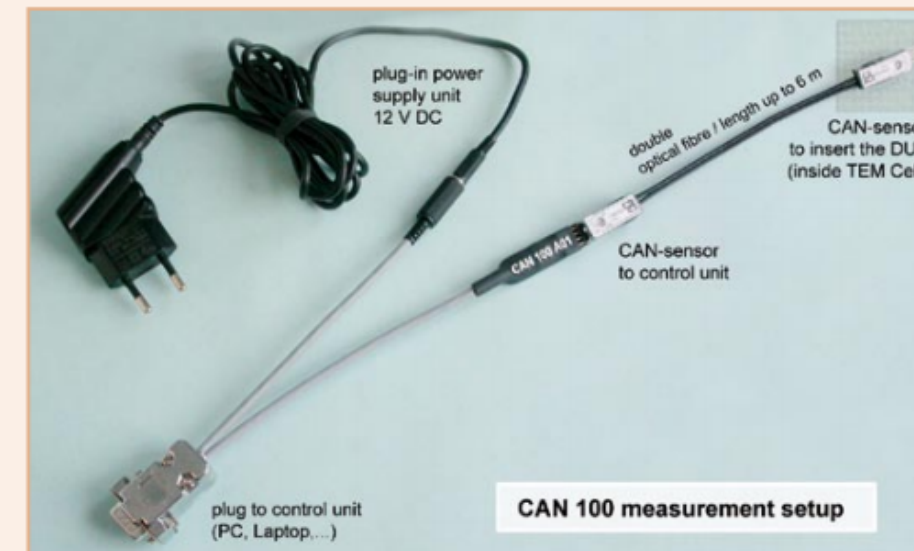
### LIN 100 sensor

**Technical data**  
 Dimensions: 37x12x8 (mm)  
 Voltage supply: 8 - 15 V (as master)  
 8 - 30 V (as slave)  
 Transmission rate: 1 - 20 kbit/s  
 Operating range: max. 10 m  
 Optical fibre connection: 2x Ø 2.2 mm  
 Current consumption: approx. 30 mA (slave, recessive)  
 approx. 45 mA (master, dominant)



### CAN 100 sensor

**Technical data**  
 Dimensions: 37x12x8 (mm)  
 Voltage supply: 4.5 - 7.0 V  
 CAN transceiver: SN65HVD251  
 Transmission rate: 10 kbit/s - 1 Mbit/s  
 Operating range: max. 10 m of 10 kbit/s  
 max. 6 m of 1 Mbit/s  
 Optical fibre connection: 2x Ø 2.2 mm  
 Current consumption: approx. 40 mA (recessive)  
 max. approx. 80 mA (master, dominant)



CAN 100 measurement setup

## Optical Signal Acquisition

# ANALOG

## Potential - free signal analysis

