

## Optical transmission system for analog signals

### General information

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The measuring system can be used for optical digital transmission of analog signals at a resolution of 10 Bit min. and an analog bandwidth of 10 MHz. The system consists of a battery powered transmitter, combined filters and voltage dividers, a simplex optical fibre and a battery powered receiver. The transmitter is able to withstand the high fieldstrength commonly used at immunity tests in the automotive area in TEM-cells, stripline antennas and anechoic chambers. The measured signal is filtered, digitized and transmitted optically and potential-free to the receiver where the analog voltage signal is recovered from the high speed digital signal and could be measured with a high impedance voltage measuring system, e.g. a digital storage Oscilloscope.

### Technical data

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input channels:	1
resolution:	14 Bit each channel
data rate:	80 MS/s
analog Bandwidth:	DC to 10 Mhz (-3 dB)
input voltage range:	2 ranges: +/- 6 V and +/- 15 V, BNC connectors, other ranges with external voltage dividers
input impedance:	1 M $\Omega$ , 8 pF
output voltage:	+/- 6 V and +/- 15 V BNC connectors
output impedance:	150 $\Omega$ (short circuit proof)
power supply:	internal 5 X NiMH cells, 4 Ah, operating time 7-8 h
dimensions:	L x W x H: 136 mm x 86 mm x 65 mm Weight: 800g
other:	optical fibre with FSMA connectors external filters (18 MHz, 1 MHz, 100 kHz and others) and voltage dividers

### Optical fibre

Type:	Simplex-multimode optical fibre 62,5/ 125 $\mu$ m or 100/ 140 $\mu$ m
Optical connectors :	FSMA