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Data Sheet 5.51-3/4

## Optical Measuring Channel up to 250 MS/s, Type HiRES Channel FO

### Application

The HiRES Channel FO is especially designed for use in environments with high electromagnetic interference level, which makes it among others suitable for measurements in high current and high power test labs as well as for measurements for EMC testing applications.

### The complete measuring channel consists of

- The HiRES Interface FO built into the HiRES Base device
- The HiRES Probe FO for acquirement of measuring data, located in the test area close to the signal source
- A fiber-optic cable between Probe and Interface
- Either one (or for HiRES Probe 100-14 FO optionally two) HiRES Power Packs, plus HiRES Charging Unit
- Option: External voltage dividers for up to 2 kV input voltage

### Main features

- Probe separated from receiver module by fiber-optic cable for placement of probe close to signal source, measurements on floating potential
- Short electrical connection to signal source eliminates cable damping
- Elimination of ground loops
- Coupling: DC / AC / GND
- User selectable filters
- Increased safety: No electrical connection from measuring signal to operator room
- Automatic optical fiber length compensation for channel synchronization (otherwise 5ns/m delay)
- Fiber length up to 2 km
- Fiber degradation / attenuation detection
- Input voltage range and filters switched by software
- Probe built in rugged external case for use under rough test field conditions

Table 1: Main parameters

Version		HiRES Probe 250-14 FO	HiRES Probe 100-14 FO
Dimensions (approx.)			
Probe	mm	190 x 140 x 70	310 x 84 x 37
Power pack	mm	included in probe	310 x 84 x 34
Connector type		SMA	BNC
Input impedance		1 M $\Omega$ / 25 pF	1 M $\Omega$ / 50 pF
Sampling rate	MS/s	250	100
Analog bandwidth (-3 dB)	MHz	> 75	> 35
User selectable filters			
Anti-alias	MHz	70	25
Low pass		1.0 MHz, 200 kHz	
Analog inputs		1 (single-ended)	
Amplitude resolution	bit	14	
Full scale input voltage range	V	$\pm 10$ (up to $\pm 2000$ with input divider)	
Overvoltage protection	V	$\pm 300$ (up to $\pm 3200$ with input divider)	
DC Accuracy $\pm 100$ mV - $\pm 10$ V	%	$\pm 0.2$ (full scale)	
DC Accuracy $\pm 50$ mV	%	$\pm 0.5$ (full scale)	

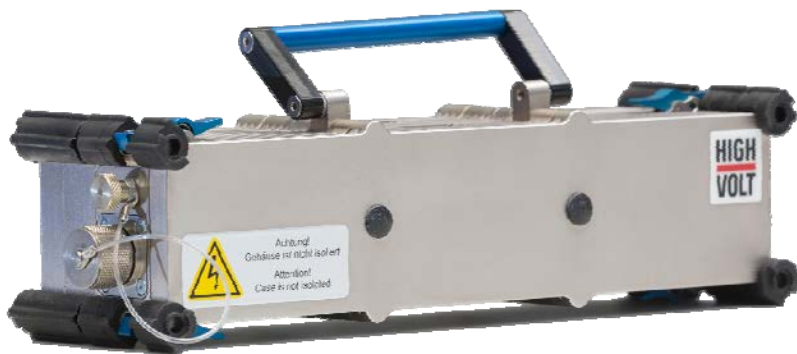


Figure 1: HiRES Probe 100-14 FO (with one HiRES Power Pack)