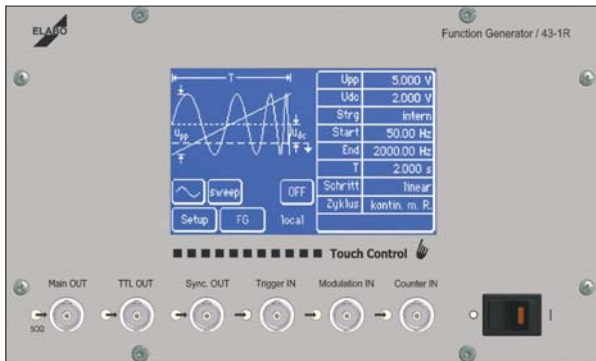


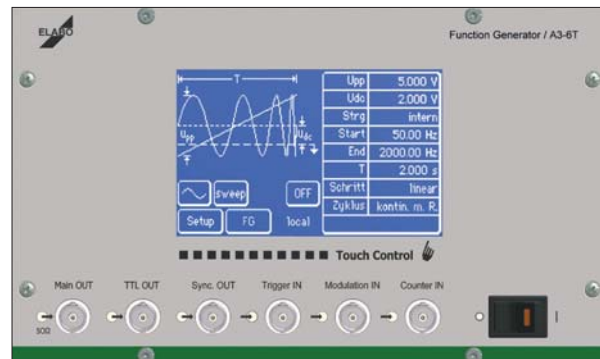
8.16 Function generator

Smart FG Function Generator

10mHz – 20MHz



43-1R.3



A3-6T.3

Highlights

- Quartz-stabilized DDS function generator
- Signals: sine, square, triangle, pulse, DC voltage
- AC output amplitude: 1 mV–20V_{ss} (no load)
- DC offset voltage: $\pm 10V$ (no load)
- Operating modes: continuous, frequency sweep, amplitude ramp/offset ramp, pulse width modulation
- Frequency and event counter
- Trigger/modulation internal/external
- Touch display with blue LED lighting, multilingual
- Ethernet and USB interfaces

Scope of delivery

43-1R.3/A3-6T.3 Cassette 3HU / 42HP

Recommended additional products:

- N2-1A Elabo software package Elution® Device
- N2-5N Elution® device driver for function generator


Smart FG Function Generator

10mHz – 20MHz

Signal forms	
Sine	10mHz–20MHz
Square	10mHz–20MHz
Triangle	10mHz–1MHz
Pulse	10 mHz–1MHz, duty cycle 5–95%, resolution 1%
Frequency resolution	10mHz ≤ 10kHz 100mHz ≤ 100kHz 1Hz ≤ 1MHz 10Hz ≤ 10MHz 100Hz ≤ 20MHz
Frequency accuracy	25ppm
AC output amplitude	1mV-20 V _{ss} (no load) Resolution: 1mV ≤ 2.5V, 2.5mV > 2.5V
DC offset voltage	± 10V (no load) Resolution 1mV ≤ 2.5V, 2.5mV > 2.5V
Modulations	
Frequency sweep	Internal or external (input: 0–5V), controllable - Adjustment via start/stop frequency and sweep time, linear or logarithmic increments - Sweep individual (trigger: button, external, remotely controlled) or continuous (also with return)
Amplitude ramp (sweep) Offset ramp	Internal or external (input: 0–5V), controllable - Adjustment via start/stop amplitude and sweep time, linear increments - Sweep individual (trigger: button, external, remotely controlled) or continuous (also with return)
Pulse width modulation	Internal or external (input 0–5V), controllable - With internal control: adjustment via lowest/highest duty cycle and sweep time, linear increments - Sweep individual (trigger: button, external, remotely controlled) or continuous (also with return) - With external control: 0V: 0%–5V: 100% duty cycle, adjustable
Frequency and event counter	
Measuring range	0,1Hz to 30MHz
Input voltage	0,5V _{eff} to 100V _{eff}
Event counter	Positive edge, switching threshold 1.6V Start, stop, pause, reset
Connections	
Outputs (BNC)	Main OUT: Impedance 50Ω, overvoltage protection, safety cutout TTL OUT: TTL/CMOS level Sync. OUT: TTL/CMOS level
Inputs (BNC)	Trigger IN: TTL/CMOS opto-decoupled, overvoltage protection Modulation IN: 0–5 V input level, overvoltage protection Counter IN: 0–100 V input level, overvoltage protection

Function generator

Function generators form an interesting and versatile group of devices in the area of LF technology: the large frequency range and the multitude of different, time-dependent output voltages make it possible to perform investigations on electrical systems even without non-sinusoidal voltages.

	Technical Data	Order no.
<p>Function generator 3HU / 36HP</p> 	 <p>Insert plate with function generator 0.2Hz...2MHz Setting via potentiometer with scaling and rotary switch in six decade ranges Frequency ranges: 20/200Hz, 2/20/200kHz, 2MHz Signal form: Sinusoidal, Square, Triangle Harmonic distortion of the sine wave: < 1.5% to 100kHz, < 5% to 2MHz Output amplitude: U_{ss} max. 20V with no load typically 10V at 50Ohm Output is no load-safe and short circuit-safe Attenuation - 20db via BNC connector DC offset can be switched 0 to +/- 10V adjustable External wobble: modulation input VCO 0...5V for frequency modification 100:1 Input impedance approx. 17kOhm</p>	<p>43-1V</p>
<p>Power amplifier 3HU / 24HP</p>	 <p>Eurocassette with power amplifier 40 Watt DC 150kHz / 40V_{ss}, suitable for all Elabo function generators 1 illuminated rocker switch 1 BNC connector input 1 BNC connector output Input voltage max. 20V_{ss} Mains connection 207...253V 50Hz</p>	<p>43-1T</p>