# Модулирующий генератор сигналов HM8030-6

# HM8030-6 Function Generator

## Key features

- Unsurpassed price-performance ratio and enormous flexibility of plug-in system
- Multimeter, LCR meter, function generator and triple power supply can be combined into a set
- Mainframe allows simultaneous operation of two modules
- Space-saving by stacking up to 5 mainframes
- Blank module available for customized instrument design

| Your benefit | Features |
|---|---|
| Unsurpassed price-performance ratio | Very suitable for education; high performance for any type of basic electronic training |
| Flexibility | Four different instruments can be combined into a space-saving set to meet individual requirements |
| Blank module available | ▮ To easily build customized circuitries<br>▮ Power is supplied by the mainframe<br>▮ Can also be used to fill unused slots |

| Key specifications | |
|---|---|
| Function generator | up to 10 MHz, up to 10 $V_{pp}$<br>waveforms: sine, triangle, square wave, pulse, DC |
| Triple power supply | 2 x 0 V to 20 V/0.5 A,<br>1 x 5 V/1 A |
| LCR meter | measurement functions:<br>L, C, R, Θ, Q, D, \|Z\|<br><br>basic accuracy: 0.2 % |
| 4¾-digit multimeter | 50 000 counts<br><br>basic accuracy: 0.05 % |

# Technical Data

## Function Generator
## HM8030-6

All Data valid at 23 °C after 30 min. warm-up period.

| | |
|---|---|
| **Operating Modes** | |
| Sine - Square - Triangle - DC - Pulse free running, internal sweep, or external frequency modulation, with or without DC Offset | |
| **Frequency** | |
| Total Range: | 0,05 Hz . . . 10 MHz (8 Decade Steps) |
| Variable Frequency Adjustment: | x0,09 to x1,1 (12:1) |
| Frequency Stability: | <0,5%/h or 0,8%/24h at constant ambient temperature (medium frequency control position) |
| **Waveform Characteristics** | |
| Sine Wave Distortion | |
| 0,05 Hz to 1 MHz: | max. 0,5% |
| 1 MHz to 10 MHz: | max. 5% |
| Square Wave Risetime: | typ. 15ns |
| Overshoot: (when output is terminated with 50 Ω) | <5% |
| Triangle Non-Linearity: | < 1% (to 100 kHz) |
| **Display** | |
| Frequency: | 5 digit, 7 segment LED; 8 x 5mm each |
| Accuracy: | |
| up to 5 Hz: | ±(3% + 3 Digit) |
| 5 Hz to 10 MHz: | ±(5x10-5 + 1 Digit) |
| LED-Indicator for: | mHz, Hz, kHz und s |
| **Outputs** | |
| Signal Output: | short-circuit proof |
| Impedance: | 50 Ω |
| Output Voltage | |
| into 50 Ω: | 10 Vpp |
| open circuit: | 20 Vpp |
| Pulse Output Voltage | |
| into 50 Ω: | 5 Vpp |
| open circuit: | 10 Vpp |
| Attenuation: | max. 60 dB |
| 2 steps: | 20 dB ±0,2 dB each |
| Variable: | 0 to 20 dB |
| Amplitude Flatness: (sine/triangle) | |
| 0.05 Hz to 0.5 MHz: | max. 0.2 dB |
| 0.5 MHz to 10 MHz: | max. 2.0 dB |
| DC-Offset: variable (on/off, except impulse function) | |
| Offset range into 50 Ω: | max. ±2.5 V |
| Offset-Bereich open circuit: | max. ±5 V |
| Trigger Output: | |
| square wave synchronous to output of approx. | +5 V/TTL |
| **FM input** | |
| (VCF, BNC-connector on rear panel of HM8001-2 and Opt. HO801)) | |
| Frequency change: | approx. 1 : 100 |
| Input impedance: | 6kΩ II 25pF |
| Protection voltage: | max. ±30V |
| **Internal Sweep** | |
| Sweep speed: | 20 ms to 15 s |
| Sweep range: | ca. 1 : 100 |

| | |
|---|---|
| **General Information** | |
| Operating temperature: | +5 °C . . . +40 °C |
| Storage temperature: | –20 °C . . . +70 °C |
| Max. relative humidity: | 5% . . . 80% (without condensation) |
| Supply (from HM8001-2): | +5V/200mA |
| | +16V/300mA |
| | –16V/250mA |
| | (∑= 9,8 W) |
| Dimensions (without 22-pin flat connector): | |
| W x H x D: | 135 x 68 x 228 mm |
| Weight: | approx. 0,80 kg |

## R&S®HM8030-6 function generator

- Frequency range: 50 mHz to 10 MHz
- Output voltage: up to 10 Vpp (into 50Ω)
- Waveforms: sine, triangle, square wave, pulse, DC
- Distortion: < 0.5 % up to 1 MHz, rise and fall time of typ. 15 ns

## instrument modules

| | |
|---|---|
| R&S®HM8030-6 | Function generator |
| R&S®HM8040-3 | Triple power supply |
| R&S®HM8012 | 4¾-digit multimeter |
| R&S®HM8018 | LCR meter |
| R&S®HM800 | Blank module |

**Included in delivery:**
Function generator HM8030-6, Operating manual

**Optional Accessories:**
BNC test cable HZ33/HZ34
50 Ω Through termination HZ22
Silicone Test lead HZ10 S/R