

# Модулирующий генератор сигналов HM8030-6



- |                                    |                                   |  |                                       |                                 |
|------------------------------------|-----------------------------------|--|---------------------------------------|---------------------------------|
| <b>Архангельск</b> (8182)63-90-72  | <b>Ижевск</b> (3412)26-03-58      | <b>Магнитогорск</b> (3519)55-03-13     | <b>Пермь</b> (342)205-81-47           | <b>Сургут</b> (3462)77-98-35    |
| <b>Астана</b> (7172)727-132        | <b>Иркутск</b> (395)279-98-46     | <b>Москва</b> (495)268-04-70           | <b>Ростов-на-Дону</b> (863)308-18-15  | <b>Тверь</b> (4822)63-31-35     |
| <b>Астрахань</b> (8512)99-46-04    | <b>Казань</b> (843)206-01-48      | <b>Мурманск</b> (8152)59-64-93         | <b>Рязань</b> (4912)46-61-64          | <b>Томск</b> (3822)98-41-53     |
| <b>Барнаул</b> (3852)73-04-60      | <b>Калининград</b> (4012)72-03-81 | <b>Набережные Челны</b> (8552)20-53-41 | <b>Самара</b> (846)206-03-16          | <b>Тула</b> (4872)74-02-29      |
| <b>Белгород</b> (4722)40-23-64     | <b>Калуга</b> (4842)92-23-67      | <b>Нижний Новгород</b> (831)429-08-12  | <b>Санкт-Петербург</b> (812)309-46-40 | <b>Тюмень</b> (3452)66-21-18    |
| <b>Брянск</b> (4832)59-03-52       | <b>Кемерово</b> (3842)65-04-62    | <b>Новокузнецк</b> (3843)20-46-81      | <b>Саратов</b> (845)249-38-78         | <b>Ульяновск</b> (8422)24-23-59 |
| <b>Владивосток</b> (423)249-28-31  | <b>Киров</b> (8332)68-02-04       | <b>Новосибирск</b> (383)227-86-73      | <b>Севастополь</b> (8692)22-31-93     | <b>Уфа</b> (347)229-48-12       |
| <b>Волгоград</b> (844)278-03-48    | <b>Краснодар</b> (861)203-40-90   | <b>Омск</b> (3812)21-46-40             | <b>Симферополь</b> (3652)67-13-56     | <b>Хабаровск</b> (4212)92-98-04 |
| <b>Вологда</b> (8172)26-41-59      | <b>Красноярск</b> (391)204-63-61  | <b>Орел</b> (4862)44-53-42             | <b>Смоленск</b> (4812)29-41-54        | <b>Челябинск</b> (351)202-03-61 |
| <b>Воронеж</b> (473)204-51-73      | <b>Курск</b> (4712)77-13-04       | <b>Оренбург</b> (3532)37-68-04         | <b>Сочи</b> (862)225-72-31            | <b>Череповец</b> (8202)49-02-64 |
| <b>Екатеринбург</b> (343)384-55-89 | <b>Липецк</b> (4742)52-20-81      | <b>Пенза</b> (8412)22-31-16            | <b>Ставрополь</b> (8652)20-65-13      | <b>Ярославль</b> (4852)69-52-93 |
| <b>Иваново</b> (4932)77-34-06      |                                   |  |                                       |                                 |
- Киргизия** (996)312-96-26-47      **Россия** (495)268-04-70      **Казахстан** (772)734-952-31

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# 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	<ul style="list-style-type: none"><li>■ To easily build customized circuitries</li><li>■ Power is supplied by the mainframe</li><li>■ Can also be used to fill unused slots</li></ul>

Key specifications	
Function generator	up to 10 MHz, up to 10 V <sub>pp</sub> waveforms: sine, triangle, square wave, pulse, DC
Triple power supply	2 x 0 V to 20 V/0.5 A, 1 x 5 V/1 A
LCR meter	measurement functions: L, C, R, $\theta$ , Q, D,  Z   basic accuracy: 0.2 %
4 <sup>3</sup> / <sub>4</sub> -digit multimeter	50 000 counts  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:	0,05Hz . . . 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 Risettime:	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 5Hz:	±(3% + 3 Digit)
5Hz to 10MHz:	±(5x10 <sup>-5</sup> + 1 Digit)
LED-Indicator for:	mHz, Hz, kHz und s

#### Outputs

Signal Output:	short-circuit proof
Impedance:	50 Ω
Output Voltage	
into 50Ω:	10Vpp
open circuit:	20Vpp
Pulse Output Voltage	
into 50Ω:	5Vpp
open circuit:	10Vpp
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. ±2.5V
Offset-Bereich open circuit:	max. ±5V
Trigger Output:	
square wave synchronous to output of approx.	+5V/TTL

#### FM input

(VCF, BNC-connector on rear panel of HM8001-2 and Opt. HO801)

Frequency change:	approx. 1 : 100
Input impedance:	6kΩ    25pF
Protection voltage:	max. ±30V

#### Internal Sweep

Sweep speed:	20ms to 15s
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
	(Σ= 9,8 W)
Dimensions (without 22-pin flat connector):	
W x H x D:	135 x 68 x 228 mm
Weight:	approx. 0,80kg

## 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	4 <sup>3</sup> / <sub>4</sub> -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

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