

# CDG 6000-75\_10

**Conducted disturbance  
test generator  
10 kHz – 230 MHz**



Option  
Integrated directional coupler  
acc. IEC 61000-4-6, 2014

- Integrated amplifier with 75W
- Test level on CDN or coupling clamp  
CDG 6000-75 amplifier 75 W, max. 40 V with 80% AM, (max. 30V with 6 dB attenuator)
- Computer-based system (controlled by USB).
- Self calibration of the test system (generator and CDN)
- RF-generator, amplifier and RF-voltmeter may as well be used as stand-alone devices
- Connections: EUT “Fail”, EUT monitoring by external multimeter, e.g. DUT signal
- Calibration of coupling / decoupling devices and EM clamp is performed automatically
- Extensive additions like attenuators, calibration kits, etc. deliverable.
- Directional Coupler ( DC )

A directional coupler is used to measure and control the forward power of the amplifier – see the standard IEC / EN 61000-4-6, 2014. The quality of the built-in amplifier allows control of the level data through the system - see chapter 6.4 in the standard with respect of two methods. That means a built-in directional coupler is in our test system not (necessarily) required. It can also be retrofitted. Or an external directional coupler can connect - see also following selection table.

**However, the control on the forward power during a test is the preferred method.**

This means a generator with built-in directional couplers meets the requirements of the standard and the auditors. There are no discussions on the procedure.

Model / Type	Maximum test level with 6 dB, without 6 dB		Directional Coupler (DC) - integrated	Connection for external Directional Coupler
CDG 6000-75_10	30 V	40 V	no	yes
CDG 6000-75-DC_10	30 V	40 V	yes	no

## Introduction

The test generator generates interferences as defined in IEC / EN 61000-4-6 - Immunity to conducted disturbances, induced by radio-frequency fields. The standard described a test setup, in which can influence these high-frequency interferences without a complicated structure with antennas, field instrumentation and shielded rooms on a EUT. Via coupling networks and coupling clamp's sine waves are induced directly into power and signal lines. The EUT keeps its usual place in the installation; the complete unit can be tested in its function.

## Technical data

RF Voltmeter (external input)	
Frequency range	10 kHz to 400 MHz
Measuring range	+30 dBm to – 40 dBm
Input	BNC, 50 Ohm

RF Generator	
Output	BNC, 50 Ohm
Frequency range	10 kHz to 400 MHz
Frequency resolution	1 Hz
Output level range	0 to -63 dBm (level resolution 0.1 dB)
Amplitude modulation	0 to 100%; resolution 1% (internal AF-Generator)
Amplitude modulation (ext.)	BNC jack 1 Hz to 100 kHz, 0 to 100% Input impedance > 100 k $\Omega$
Pulse modulation	1 Hz to 100 kHz, Resolution 0,1 Hz variable duty cycle 5 - 95 %; resolution 1% (internal AF-Generator)

AF Generator	
Output jack	BNC
Frequency range	1 Hz to 100 kHz, resolution 0.1 Hz
Output voltage	0 to 1 V amplitude
Signal	Sine wave / rectangular / triangle

Power amplifier	CDG 6000-75_10		
Frequency range	10 kHz to 250 MHz		
Gain	51 dB $\pm$ 1.5 dB		
Output power	75 W nom.	.	
Distortion	< 20 dBc at 50 W		
Input impedance	50 Ohm, VSWR < 1.5 : 1		
Output impedance	50 Ohm nom.		
EUT-fail input	BNC,		

EUT-Monitor input	
Input voltage	0 - 10 V (resolution 2.5 mV), impedance 100 k $\Omega$

Amplifier Monitor	
Output	BNC, 50 Ω / -40 dB (amplifier output), ±3 dB

Interfaces	
USB-A	Multimeter (for EUT control) and Relays switching unit
USB-B	Connection to Computer

General data	
Temperature range	0 to 40 °C
Housing / weight	19" desktop case (84 TE; 3 HE) / aprox. 11 kg
Width / height / depth	app. 450 / 150 / 480 mm
AC Input	100 - 240 VAC; 50/60 Hz

## Additions

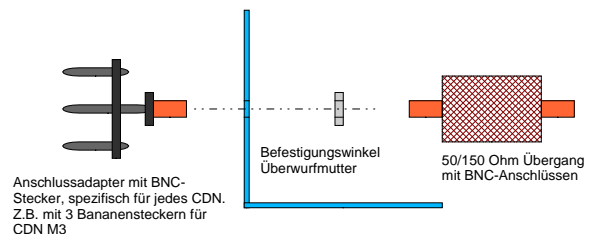
**Coupling / decoupling networks**  
**Standard 150 kHz – 80/230/300 MHz**

**Special CDN's (10 kHz – 230 MHz) available**  
 Further CDN's on demand

<b>CDN M1</b>	Ground cable
<b>CDN L1-16</b>	Unscreened power lines
<b>CDN M2-16/32</b>	
<b>CDN M2-32/63/100-HV</b>	
<b>CDN M2+3-16/32</b>	
<b>CDN M3-16/32</b>	
<b>CDN M3-32/63/100-HV</b>	
<b>CDN M4-16/32</b>	
<b>CDN M4-32/63/100-HV</b>	
<b>CDN M5-16/32</b>	
<b>CDN M5-32/63/100-HV</b>	
<b>CDN CAN-BUS</b>	Bus lines
<b>CDN AF2/AF3</b>	Unscreened, non balanced lines
<b>CDN AF4/AF5/AF8</b>	
<b>CDN T2/T4/T8</b>	Unscreened, balanced lines.
<b>CDN RJ11/RJ45</b>	
<b>CDN S1/S2/S4/S8/S9</b>	Screened lines
<b>CDN S15/S25</b>	
<b>CDN RJ45S</b>	
<b>CDN USB 3.0</b>	
<b>CDN USB-C / USB-P</b>	
<b>CDN HDMI</b>	
<b>CDN Firewire</b>	

### CDN calibration set

- Mounting-set: **CDG A 3100**  
(Mounting plate include 50 / 150 Ohm passage)
- Calibration adaptor - **CDG A 31xx**



It is advisable to use a calibration set.

### CDN-EMCL - EM-coupling clamp -

- for cable up to 20 mm diameter
- include calibration kid
- include factory calibration
- With matching network (option) useful from 10 kHz – 150 kHz (type CDN-EMCL-NW\_10)

### CDG 6050

- 6dB Attenuator, 20W, for test level max. 20W

### CDN D 100

- 100 Ohm connector for RF disturbances, with alligator clip