SCHLÖDER
EMV-Systeme & Komponenten

CDG 6000-75-DC_400
CDG 6000-75_400

Conducted disturbance test generator acc. to IEC / EN 61000-4-6:2014 ISO 11452-4 (BCI)

- Integrated Direct Coupling at CDG 6000-75-DC_400 or without Direct Coupling at CDG 6000-75_400
- 100 kHz – 400 MHz
- 75 W

The test generator generates interferences as defined in IEC / EN 61000-4-6 - Immunity to conducted disturbances, induced by radio-frequency fields. The standard describes a test setup in which these high-frequency interferences can be influenced on a EUT without a complicated structure with antennas, field instrumentation and shielded rooms. By using coupling networks and coupling clamp's sine waves are induced directly into power and signal lines. The test object retains its original place in the device structure, so that the system can be tested in its overall function.

Tests according to ISO 11452-4 (**BCI tests)** are also possible.

Overview:

- **Computer-based system (USB).**
- **Self-calibration of the test system (generator and CDNs)**
- **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 accessory like attenuators, calibration kits, etc. available**
- **Directional Coupler (DC) at model CDG 6000-75_DC_400**
  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 that a built-in directional coupler is in our test system not (necessarily) required. However, the control on the forward power during a test is the preferred method. An external directional coupler can also be connected or a CDG 6000 without DC can be retrofitted with a direct coupling.

Specifications subject to changes without previous notice

Distributed by: Reliant EMC LLC, 3311 Lewis Ave, Signal Hill CA 90755, 408-916-5750, www.reliantemc.com

Technical data

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

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

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

Power Amplifier	CDG 6000-75-DC_400 CDG 6000-75-DC_400
Frequency range	100 kHz - 400 MHz
Gain	51 dB ±1.5 dB
Output power	75 W nom.
Distortion	< 20 dBc at 50 W
Input impedance Output impedance	50 Ohm, VSWR < 1.5 : 1 50 Ohm nom
EUT-fail input	BNC socket

EUT-Monitor input	
Input voltage	0 - 10 V (resolution 2.5 mV), impedance 100 kΩ

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 - 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

Accessories

Coupling Networks (special CDNs upon request)

CDN M1	Ground cable
CDN L1-16 **CDN M2-16/32** **CDN M2-32/63/100-HV** **CDN M2+3-16/32** **CDN M3-16/32** **CDN M3-32/63/100-HV** **CDN M4-16/32** **CDN M4-32/63/100-HV** **CDN M5-16/32** **CDN M5-32/63/100-HV**	Unscrenned power lines AC / DC
CDN CAN-BUS	Bus lines
CDN AF2/ AF3/ AF4 / AF5/ AF8/ AF12	Unscreened, non balanced lines
CDN T2/T4/T8 **CDN RJ11/RJ45**	Unscreened, balanced lines
CDN S1/ S2/ S3/ S4/ S8/ S9/ S15/ S25 **CDN RJ45S** **CDN USB 3.0** **CDN USB-C / USB-P** **CDN HDMI** **CDN Firewire**	Screened lines
CDN D 100	100 Ohm Resistor for direct coupling on the screen

CDN EMCL-20

- EM-Coupling clamp for cables up to Ø 20mm
- Included calibration set and factory calibration
- Option: With matching network **CDN-EMCL-NW_10** starting from 10 kHz

CDN EMCL-35

- EM-Coupling clamp for cables up to Ø 20mm
- Included calibration set and factory calibration

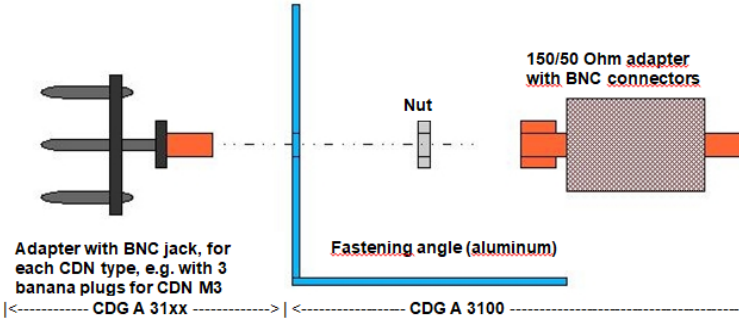
CDN ABCL-20 (Absorbing clamp)

- For cables up to Ø 20mm
- For additional decoupling at immunity testing according to IEC / EN 61000-4-6

CDN Calíbration set

- Mounting angle: **CDG A 3100**
  (Mounting angle, 50 /150 Ω adapter, 50 Ω Termination)
- Calibration adapter: **CDG A 31xx**

To calibrate a CDN the following items are required (for AE- and EUT-site):
2x CDG A 3100 (**fastening angle incl. 50 Ω termination and 150/50 Ohm adapter)**
2x CDG A 31xx (**specific calibration adapter** for CDN)
For additional CDNs, only the CDG A 31xx adapters have to be ordered.



Attenuators

- **CDG 6050** 6dB Attenuator, 20W
- **CDG 6050-100W** 6dB Attenuator, 100W
- **CDG 6050-50W** 30 dB Attenuator, 50W

Termination

- **CDG A 50** BNC Termination,50Ω,1W
- **CDG A 50-10W** BNC Termination,50Ω,10W
- **CDG A 50-50W** BNC Termination,50Ω,50W

CDN BCI-P1

- Clamp for Bulk Current Injection (BCI)
- Frequency range 1 – 400 MHz
- For cables up to Ø 40mm
- Included calibration set

CDG CMP-45

- Current monitoring probe 10 kHz – 400 MHz, foldable
- For cables up to Ø 45mm
- Option: Calibration set **CDG A CMP-45**

CDG CMP-46

- Current monitoring probe 10 kHz – 400 MHz, not foldable
- For cables up to Ø 46mm
- Option: Calibration set **CDG A CMP-46**