

MGA CT 50-CS101 / MGA CT 100-CS101

Coupling transformer with differential amplifier

CS101, MIL-STD-461

- Integrated 0,5 Ω - resistance (active cooling)
- Integrated differential amplifier
- Additional connection cables included in the scope of delivery
- In connection with the coupling transformer **MGA CT 50A**, tests according to **DO-160 Section 18** are possible.



Figure similar

Fully automatic tests in conjunction with the MGA 1033 magnetic field generator.

Overview

The MGA CT 50-CS101 is the complete solution for tests according to MIL-STD-461 with the MGA 1033. In addition to the usual 50 A version, a 100 A type - the MGA CT 100-CS101 - is also available.

When testing for conducted immunity on power lines according to MIL-STD-461, CS 101, a coupling transformer is used.

Due to the high common-mode voltage on the mains side, a differential amplifier is built into the coupling transformer, which enables simple measurement of the copied-in differential voltage.

Key facts

- Integrated actively cooled 0.5 Ω resistor for test level calibration.
- Integrated differential amplifier for measuring the coupled test voltage.
- For optimal measurement, the gain is matched to the frequency response of the CS101 test level.
- Automated test environment with the MGA 1033.
- All necessary connection cables included in the delivery.

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Technical data

MGA CT 50/100-CS101

Frequency range	10 Hz - 150 kHz
Turns ratio	2 : 1 (step down)

Primary

Inductance	~ 4 mH (unloaded)
Strombelastbarkeit	16 A
Input voltage (saturation)	15 Hz: > 12,5 Vrms 30 Hz: > 25 Vrms
Connector	safety socket \varnothing 4 mm

Secondary

Inductance	~ 1 mH (unloaded)
Current carrying capacity	
MGA CT 50-CS101	50 A (AC or DC)
MGA CT 100-CS101	100 A (AC or DC)
Connector	safety sockets \varnothing 6 mm (> 32 A), with integrated jack \varnothing 4 mm (< 32 A)

Resistor

Precision resistor	0,5 Ω , 1%, 100 W permanent, actively cooled
Connector	safety sockets, \varnothing 4 mm

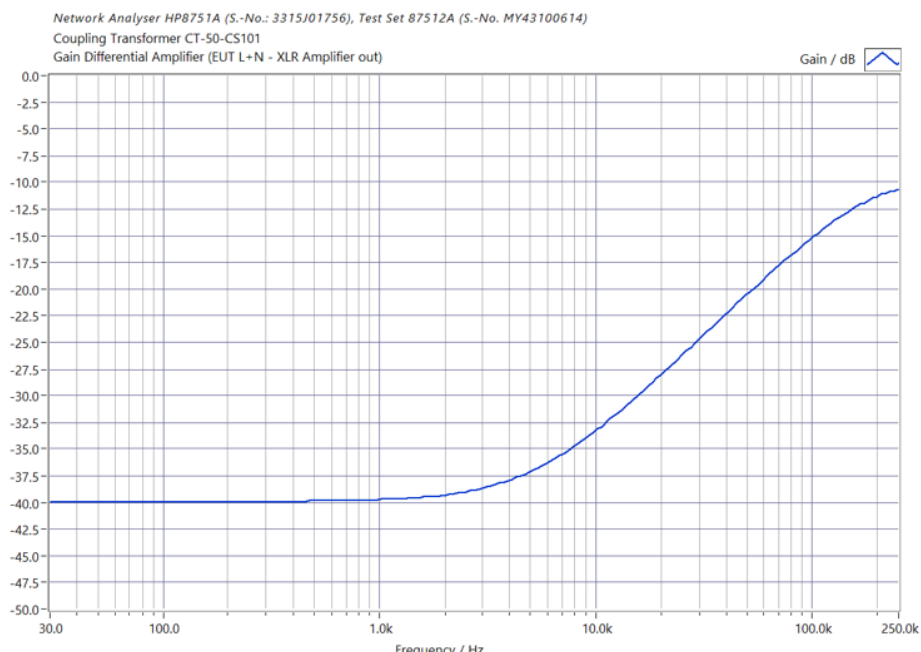
Differential amplifier

Frequency range	10 Hz - 150 kHz
Gain	0,01 (DC and low frequencies) increasing with frequency (see graph), individually calibrated
Common-mode negative-pressure	> 60 dB (400 Hz)
Output noise	< 1 mV (DC - 2 MHz)
Output voltage	max. \pm 10 V, \pm 10 mA
Connector	Input: 4 mm safety sockets Output: 3 pole XLR connectors

General data

Power supply	ext. 24 V/1 A power supply unit
Dimensions (W x H x D)	480 mm x 180 mm x 315 mm
Weight	appr. 13 kg

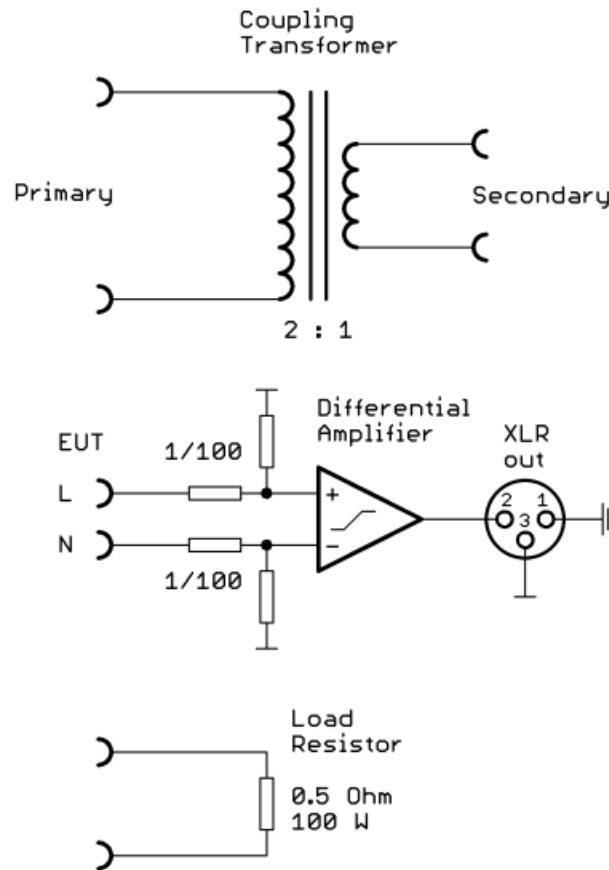
Gain differential amplifier



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Block diagram



Scope of delivery (included): Additional cable

- Cable transformer secondary → EUT and LISN
 - 2 x flexible connection cable 6 mm², length: 50 cm
 - 6 mm safety plug (Stäubli SLK606), second end open
- Cable transformer secondary → 0.5 Ω
 - 2 x flexible connection cable 2.5 mm², length: 25 cm
 - 2 x 4 mm safety sockets black, 2x4 mm safety sockets red
- Cable differential amplifier EUT L+N → EUT
 - flexible loudspeaker cable 2.5 mm², length: 200 cm
 - 2 x 4 mm safety sockets white, 2x4 mm safety sockets brown
- Cable differential amplifier from → MGA 1033 XLR in
 - 2-core shielded microphone cable, length: 200 cm
 - female 3 pole XLR, male 3 pole XLR
- Cable transformer primary → MGA 1033 output X1
 - 2 x flexible connection cable 2.5 mm², length: 200 cm
 - 2 x 4 mm safety sockets black, 2x4 mm safety sockets blue
- Wide range power supply
 - Output: 24 V / 1A with MGA CT 50A-CS101 cable (Speakon connector)
 - Input 100 – 240 V, 1,5 m power cable

All information regarding appearance and technical data correspond to the current state of development at the time of release of this data sheet. We reserve the right to make technical changes. 012203