

## MGA LS 040 / 133, RL 120 / 120-80, RLS 133

### Sensor- and radiating loops

#### MIL-STD 461, EN 55103-1/2

- For tests according to MIL-STD 461 and EN 55103
- Available in different versions:

**MGA LS 040: Loop sensor**

**MGA RL 120: Radiating loop**

**MGA RL 120-80: Radiating loop**

**MGA LS 133: Loop sensor**

**MGA RLS 133: Radiating loop /loop sensor**



MGA RL 120

Suitable as an accessory for the magnetic field generator MGA 1033!



MGA LS 040



MGA LS 133



MGA RLS 133

#### Overview

The MIL-STD-461 standard defines three different loops for emission measurements and immunity tests for the frequency range from 30 Hz to 100 kHz.

Numerous standards refer to these loops (some with extended frequency range), such as the EMC factory standards of most automotive manufacturers or ISO 11452-8.

#### Key facts

- Available in diameters from 40 mm to 200 mm
- From 20 to 51 turns depending on the coil selection
- Recommended as accessory for the magnetic field generator / analyzer MGA 1033!



# MGA LS 040 / 133, RL 120 / 120-80, RLS 133

## Sensor- and radiating loops

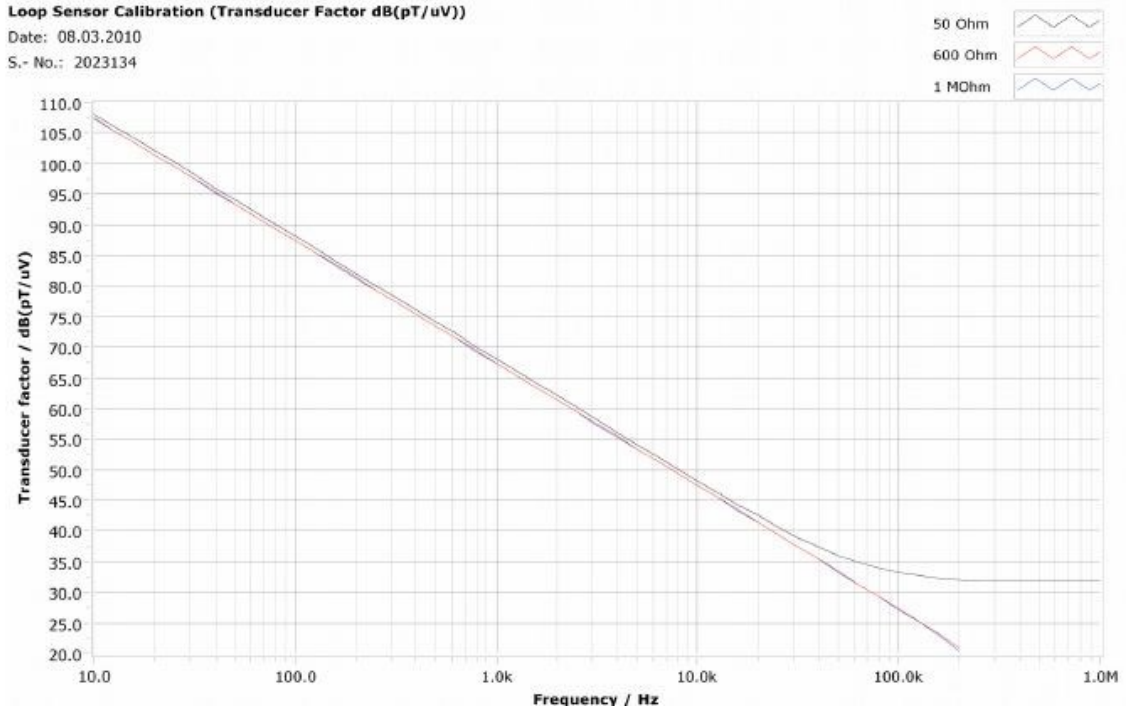
Technical data				
Article	Loop sensor LS 040	Radiating loop RL 120 (RL 120-80)	Loop sensor LS 133	Loop sensor/ radiating loop RLS 133
Standard	MIL-STD-461 RS101	MIL-STD-461 RS101	MIL-STD-461 RE101	EN 55103-1/2
Diameter	40 mm	120 mm (200 mm)	133 mm	133 mm
Material housing	PVC	MDF	MDF	MDF
Shielding	electrostatic	-	electrostatic	electrostatic
Winding wire	7-41 mm Litz wire	2,0 mm copper wire	7-41 mm Litz wire	0,25 mm <sup>2</sup> Litz wire
Number of windings	51	20	36	36
Number of layers	1	4	4	4
Distance to EUT	5 cm	5 cm	7 cm	10 cm / 5 cm
Connector on the coil	Speakon	4 mm MC socket	Speakon	Speakon
Cable connector	XLR	4 mm MC plug	XLR	XLR / 4 mm MC plug
Coil factor (50 mm)	-	76,3 1/m	-	138,5 1/m
Correction factor	see calibration certificate (50 Ω / 600 Ω / 1 MΩ)	-	see calibration certificate (50 Ω / 600 Ω / 1 MΩ)	see calibration certificate (50 Ω / 600 Ω / 1 MΩ)
DC resistor	~ 4,5 Ω	~ 0,04 Ω	~ 10 Ω	~ 1,2 Ω
Inductance	~ 130 μH	~ 86,5 μH	~ 375 μH	~ 345 μH
Rated current	-	16 A	-	5 A
Resonant frequency	-	> 1,8 MHz	-	> 0,9 MHz
Frequency range	10 Hz - 1 MHz	DC - 500 kHz	10 Hz - 1 MHz	DC / 10 Hz - 500 kHz
Connecting cable	microphone cable	Litz wire 2 x 1.5 mm <sup>2</sup>	microphone cable	microphone cable /Litz wire 2 x 1.5 mm <sup>2</sup>
Scope of delivery				
	coil LS 040 cable, 3 m calibr. certificate	coil RL 120(-80) cable, 3 m calibr. certificate	coil LS 133 cable, 3 m calibr. certificate	coil RLS 2 cable à 3 m calibr. certificate



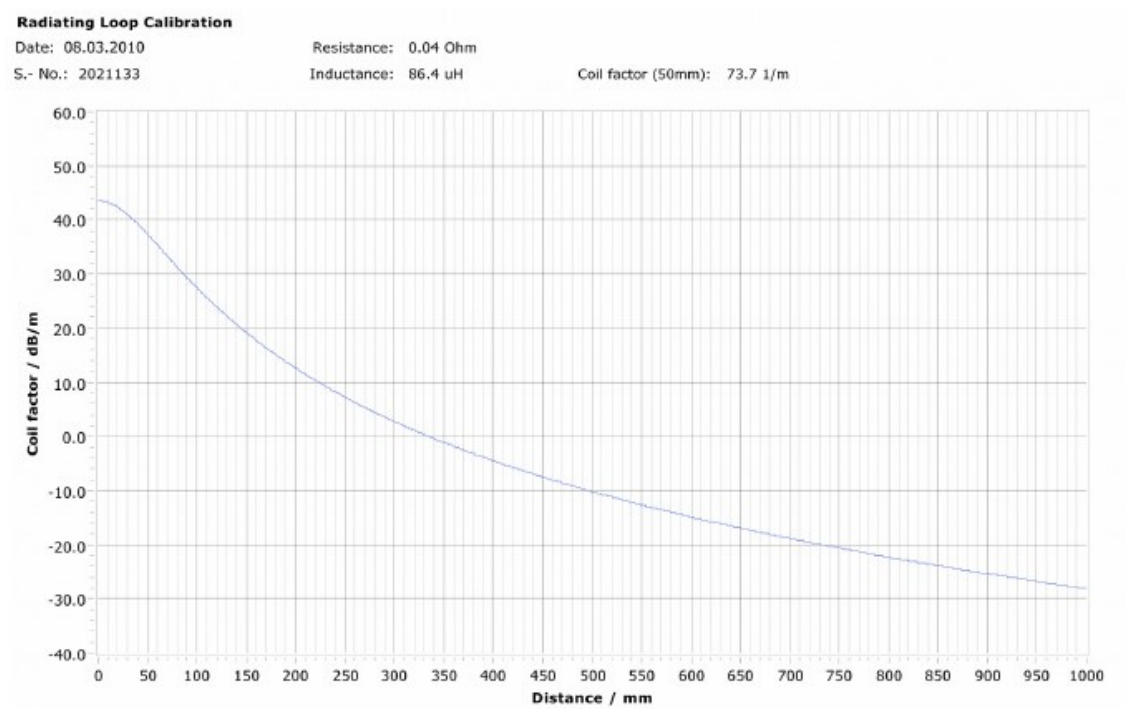
# MGA LS 040 / 133, RL 120 / 120-80, RLS 133

Sensor- and radiating loops

Technical data: LS 040 Typical course of the conversion measure



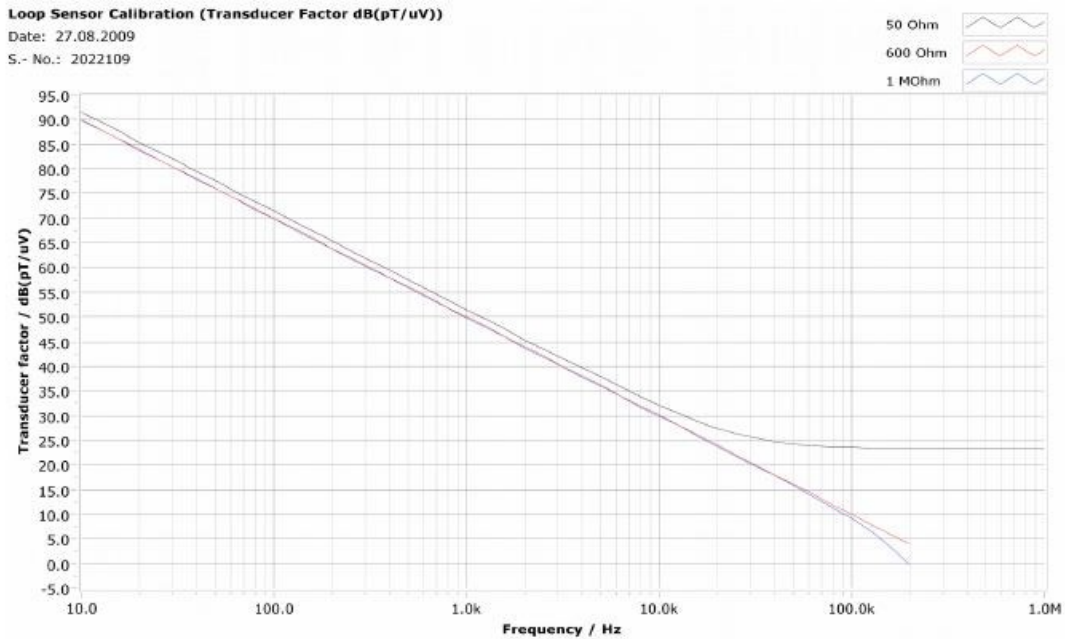
Technical data: RL 120 Typical course of the coil factor



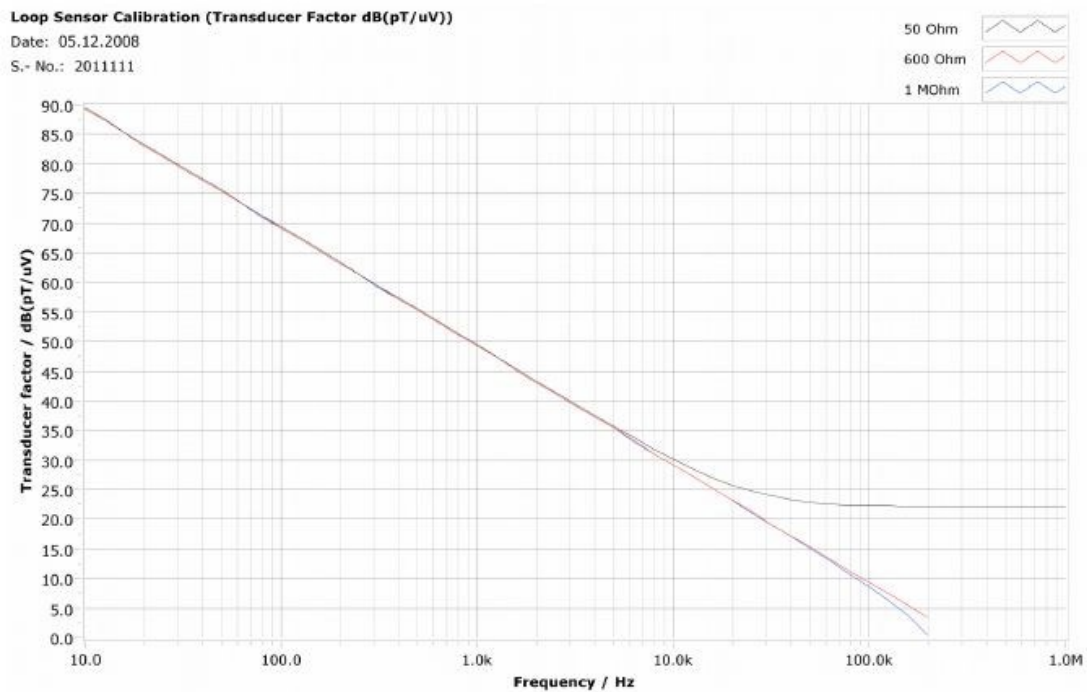
# MGA LS 040 / 133, RL 120 / 120-80, RLS 133

Sensor- and radiating loops

Technical data: LS 133 Typical course of the conversion measure



Technical data: RLS 133 Typical course of the conversion measure



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. 092108

