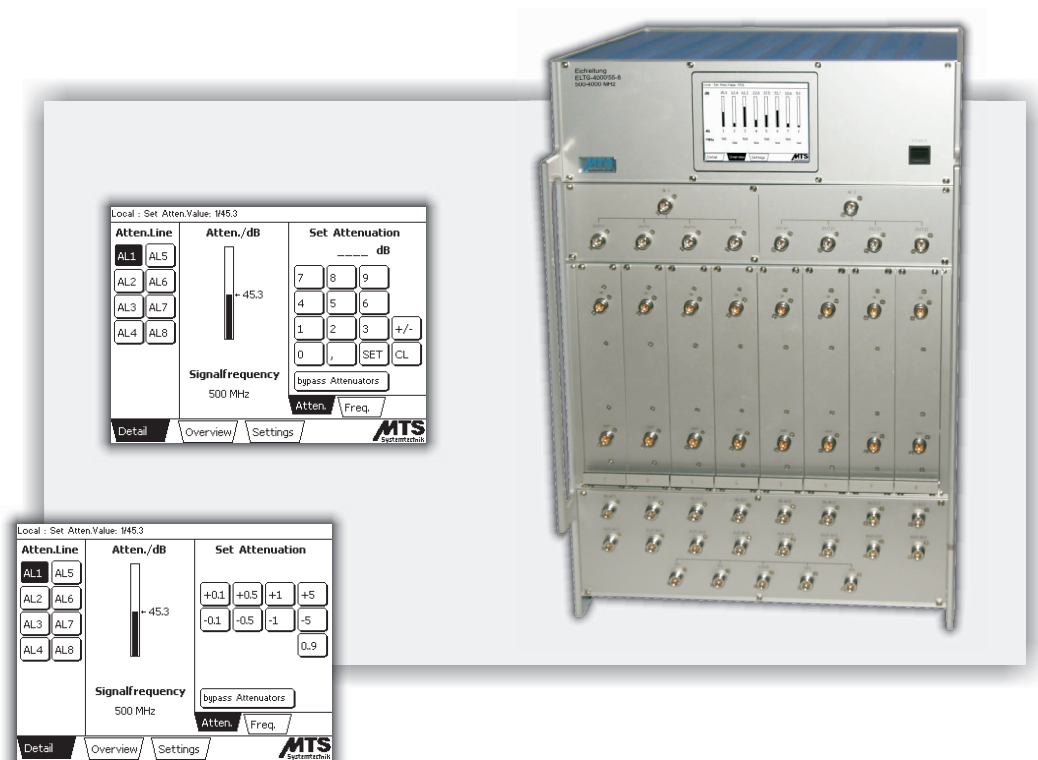


# Step Attenuator Unit Series ELTG



## MTS Step Attenuator Unit - Series ELTG:

### Application

If step attenuators are required to perform high precision measurements of gain, attenuation or linearity in a very wide RF frequency range and with steady impedance.

### Description

The MTS Step Attenuator Unit series ELTG offers a number of attenuators that can be used in the range from DC to 8 GHz. The attenuation can be changed in steps of 0,1 dB from 15 dB up to 100 dB by entry of relative or absolute values. A built-in touchpanel display facilitates easy adjustment.

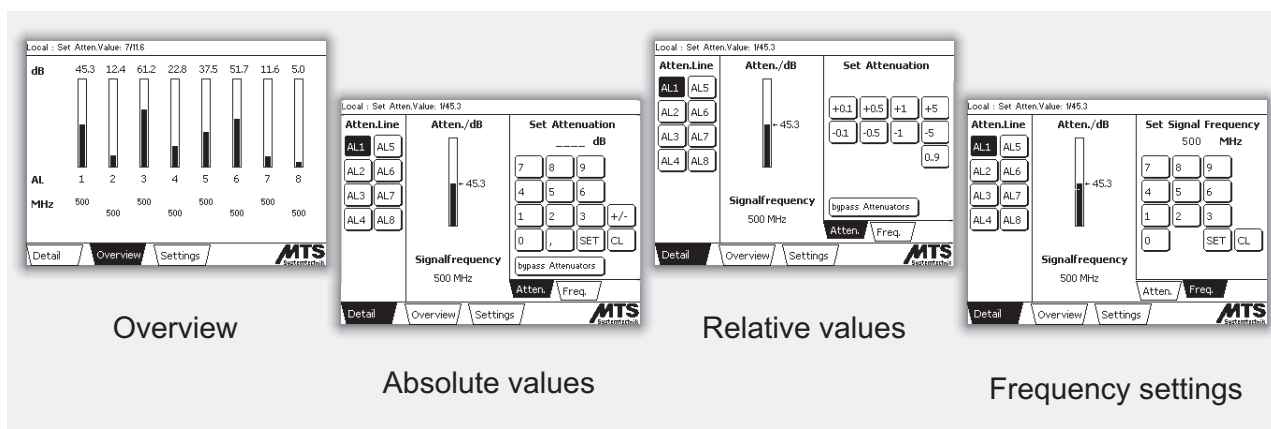
To achieve high accuracy, optimized settings of the internal attenuation cascades are stored in 25 MHz-steps for the whole frequency- and attenuation range.

As a special feature, the number of attenuation paths (8 are standard) can be adapted to the customers demand by the modular design for improved economy.

Another opportunity is the combination of the attenuators with other RF-components like power dividers, switches, delay lines or others.

The control by RS232- and LAN interface is possible as well (other interfaces on demand). The isolation between the attenuation paths is 100 dB at least.

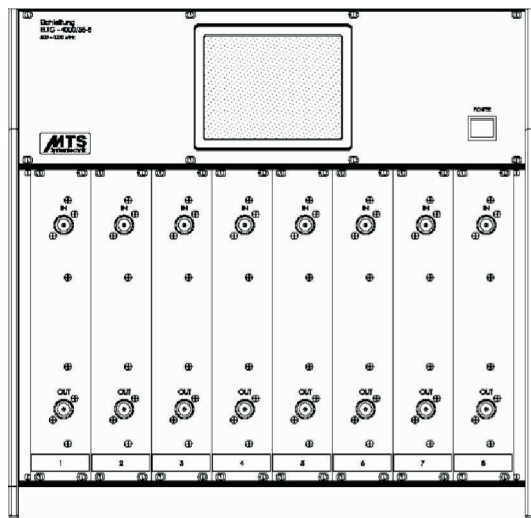
## Easy operating by touchpanel display:



## Characteristics:

- Attenuation in steps of 0,1 dB
- Easy manually operation with touchpanel display
- Large frequency range from DC up to 8 GHz
- High accuracy due to internal correction in 25 MHz steps
- Attenuation range from 15 dB to 100 dB
- High isolation > 100 dB
- Control by RS232 and LAN (other interfaces on demand)
- Input power up to 2W cw at 25°C
- High switching reliability
- Economic and modular design (8 attenuator paths as standard)
- High quality materials and components for extended durability

## Specification example:



### 1 RF-Specifications attenuation lines:

- 1.1 Frequency range 500 MHz - 4000 MHz
- 1.2 Number of atten. paths 8
- 1.3 Impedance 50 Ω
- 1.4 RF-connections N-female
- 1.5 VSWR In / Out 2:1 max.
- 1.6 Isolation (between the attenuation lines) 100 dB
- 1.7 Insertion loss 10 dB @ 10 dB setting
- 1.8 Attenuation incl. insertion loss 10 dB - 65 dB
- 1.9 Gradation 0,1 dB
- 1.10 Setting accuracy with correction ± 0,4 dB < 2 GHz
- 1.11 Correction each 75 MHz
- 1.12 Temperature dependency ± 0,02 dB/°C
- 1.13 Input power 2 W Avg. @ 25 °C  
derating 0,015 W/°C
- 1.14 Calibration time 12 months

### 2 Connections:

- 2.1 Front side Display with touch-panel, on/off switch, RF-connections
- 2.2 Rear side Appliance plug, fuses F1 and F2, ground connector, control-interfaces

### 3 General specifications:

- 3.1 Power supply 100 V - 240 V
- 3.2 Control displays Lighted display
- 3.3 Control interfaces LAN, RS-232
- 3.4 Power consumption primarily 300 mA max. @ 230 V  
(no relay switched)  
2A max. @ 230 V  
(all relays switched)

- 3.5 Voltage supply Standard rubber connector
- 3.6 Operating temperature +10 °C - +30 °C
- 3.7 Reference temperature for specifications +25 °C
- 3.8 Dimensions 84 TE main frame x 9 HU  
x depth 550 mm (dimensions without handles and connections)
- 3.9 Colour Front and rear side colorless anodized
- 3.10 Weight approx. 35 kg

### 4 Delivered parts:

- Step attenuator unit
- Power cable
- Operating manual (on CD)

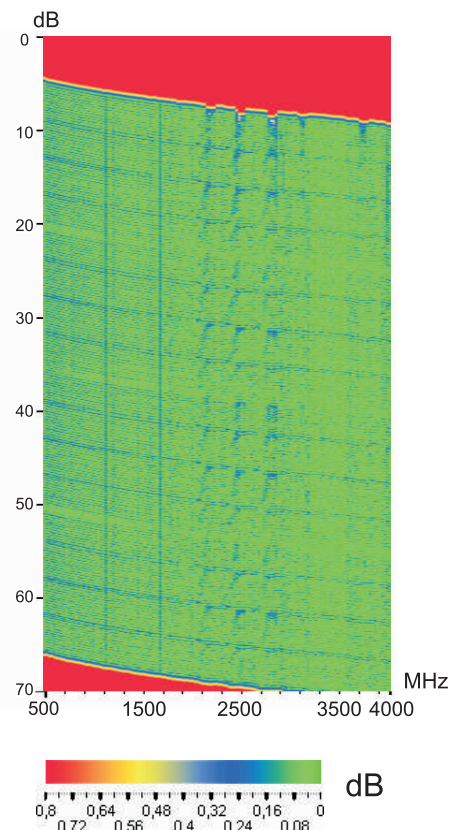
### 5 Comments:

- Warranty 12 months
- RoHS-compliant Yes

### 6 Recommended accessories:

- RF-Cables
- Hybrid couplers
- Splitters / combiners

### Deviation from target value:



RF-systems and -units

EMC / Antenna Technology

Mechanical products

Certified with DIN ISO 9001:2000

Gewerbepark Ost 8  
D-86690 Mertingen  
Germany  
Phone: +49 (0) 90 78 / 9 12 94-0  
Fax: +49 (0) 90 78 / 9 12 94-70  
info@mts-systemtechnik.de  
www.mts-systemtechnik.de

### Further information

Do not hesitate and order our free brochures and catalogues in German or English today. In our catalogue for mechanical parts you will find a large selection of standard enclosures mostly ex stock and deliverable at short notice. Please visit our website to get an overview about our product range.

Further  
information

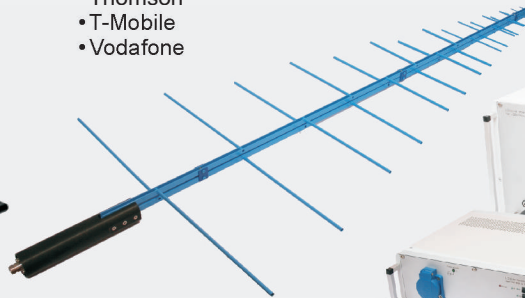


### References

Today notable companies of the electronic industry all over Europe belong to our customers:

- Apple
- Alcatel-Lucent
- Arpege Défence
- Audi
- Bosch Motorsport
- Bosch
- Cern
- Danet
- DB Telematik
- DESY
- Diehl Aerospace
- DLR
- EADS
- Ericsson
- ESA
- Eurocopter
- Huawei
- Infineon
- Jenaer Antriebstechnik
- Leica
- ND SatCom
- Nokia
- Nokia Siemens Network
- O<sub>2</sub>
- Omicron
- PTB
- RIM
- Rohde & Schwarz
- SBS
- Serco
- Siemens
- Tesat
- Thomson
- T-Mobile
- Vodafone

References



### The company MTS would like to introduce itself:

The MTS Systemtechnik GmbH is a flexible and middle-sized company, which was founded in 1980 as a development and production company. Since then the MTS's special field is the distribution and modification of RF-signals. Nowadays we manufacture products and systems for the mobile radio, laboratory, satellite communication and video respectively audio field.

Following you can find our product range in extracts:

#### Systems and Units

- Coupling units
- Air field emulations serie AIAD
- Shielding boxes serie MSB
- Antenna- / Signal distribution units
- Remote controlled switching units
- Filter units
- Ventilation units
- Matrices

#### Components

- Coaxial relays
- Multi channel switches
- Videorelays
- Feedthrough terminations
- DC-blocks
- Fixed attenuators
- Terminations
- Semiconductor -switches & - attenuators
- Coaxial short circuits, bias tees
- Power attenuators and power terminations

- Signal dividers, power splitters, combiners and directional couplers
- Programmable step attenuators
- Coaxial cable assemblies
- Impedance matching modules
- PC controlled components
- Amplifiers

#### Mechanical Modules

- RF shielded enclosures
- Structural enclosures
- Customer specified enclosures
- Milled components
- Milled cassettes
- Cassette enclosures
- 19"-racks

#### Data Technology

- Controller cards and accessories for operators in electronic
- Development of firm- and software according to customer's wishes

#### EMC / Antenna Technology

- LISN - Line Impedance Stabilisation Network
- EMC Components
- Antennas and accessories
- Wireless LAN Sets

#### Services

- CAD development and customer specified CNC milled modules
- Mounting of components to and testing of RF printed circuit boards
- Engineering service
- Programming service

#### Distribution for IMS Connector Systems GmbH

- Coaxial connectors
- Terminations
- Coaxial adapters
- Coaxial cable assemblies

Product  
overview