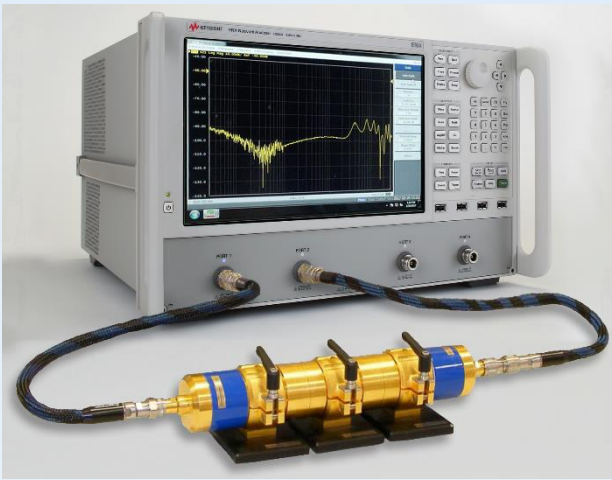


Standardized test procedure to measure Transfer impedance, Screening attenuation And Coupling attenuation according to :

- IEC 62153-4-1 , IEC 62153-4-3, IEC 62153-4-4, IEC 62153-4-7, IEC 62153-4-9, IEC 62153-4-10, IEC 62153-4-15, IEC 62153-4-16
- EN 50289-1-6

- Frequency range : DC to 18GHz
- Modular construction, Tube in tube, Triaxial cell
- Stretching device
- Quick test set-up, adapter and other accessories
- Software WinCoMeT to control Network Analyzer



- 1. CoMeT-40: Standard set-up, modular**
- Cable screen diameter 2.3 mm - 9.8 mm
 - Extension setup to 15 mm
 - Tube length 0.5 and 3 x 1.0 meter
 - Connection tubes with quick action mechanism

- Testhead 02**
- Frequency range up to 3 GHz
 - Test connector N-f

- Testhead 03**
- Enhanced Microwave design
 - Frequency range up to 12 GHz
 - Test connector N-f

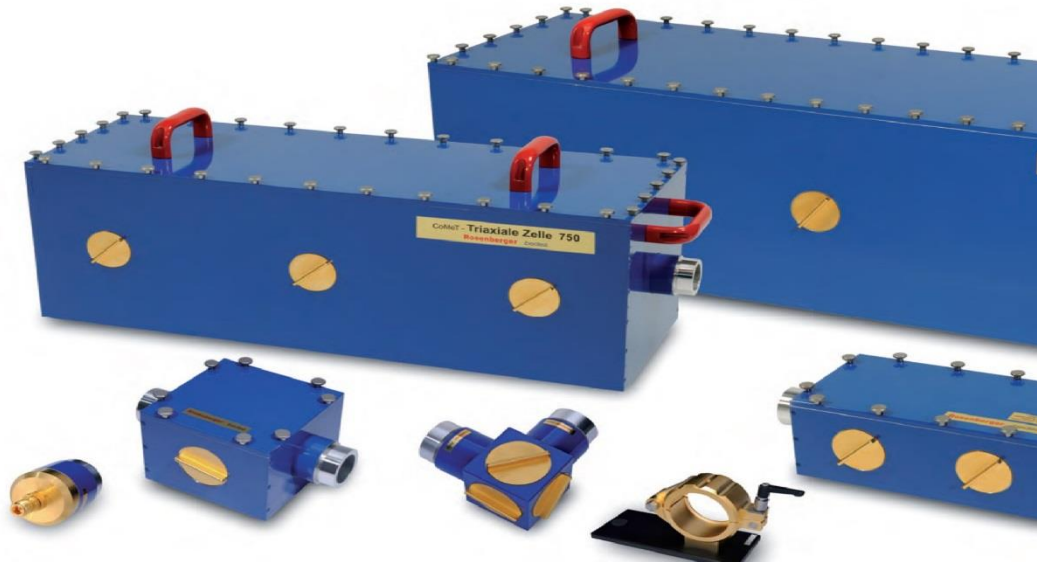
- 2. CoMeT-90:**
- Same basic construction as CoMeT 40/2
 - Cable screen diameter 6 mm - 22 mm
 - Frequency range up to 3 GHz
 - Extension set up to 42 mm
 - Test connector N-f

- 3. CoMeT-18: Microwave test tube up to 18 GHz**
- Enhanced Microwave design
 - Tube length 0.5 and 1.0 meter
 - Cable screen diameter 1.7 mm - 3.5 mm
 - Test connector RPC 3.5

- 4. CoMeT-K: Screening effectiveness of Feed-throughs and EMC-Gaskets**
- Basic parts from CoMeT 40
 - Testhead 03
 - Tailored Feed-through modules
 - Frequency range up to 4 GHz
 - Test connector N-f
 - IEC 62153-4-10

- 5. CoMeT-E: Test of Power cables**
- braided screens or shields
 - Frequency range up to 3 GHz
 - Test lead – N





CoMeT –

Measure of:

- Transfer impedance
- Screening attenuation
- Coupling attenuation

Advantages:

- insensitive against electromagnetic disturbances from outside
- no radiation of electromagnetic power
- high dynamic range > 125 dB
- high reproducibility
- simple measuring set-up
- fast preparing of the cable sample
- only one measurement required
- Frequency range, DC to 18 GHz

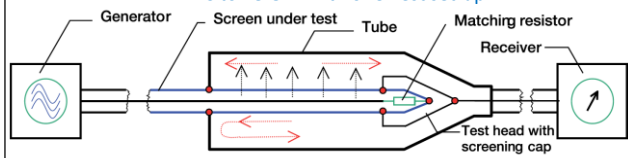
The test system CoMeT is a modular system for measuring EMC respectively Transfer impedance and Screening- or Coupling attenuation of screened cables, connectors or components with the triaxial test procedure according to IEC 62153-4-x

Table 1 – IEC 62153-4-x, Metallic communication cable test methods – Test procedures with triaxial test set-up

IEC 62153-4-X	Metallic Communication Cable test methods - Electromagnetic compatibility (EMC)
IEC/TR 62153-4-1Ed.2	Introduction to electromagnetic (EMC) screening measurements
IEC 62153-4-3Ed.2	Surface Transfer impedance - Triaxial method
IEC 62153-4-4Ed.2	Shielded screening attenuation, test method for measuring of the screening attenuation a_S up to and above 3 GHz
IEC 62153-4-7	Shielded screening attenuation test method for measuring the Transfer impedance Z_T and the screening attenuation a_S or the coupling attenuation a_C of RF-Connectors and assemblies up to and above 3 GHz, Tube in tube method
IEC 62153-4-9	Electromagnetic Compatibility (EMC) – Coupling attenuation, triaxial method
IEC 62153-4-10	Shielded screening attenuation test method for measuring the Screening Effectiveness of Feedtroughs and Electromagnetic Gaskets
IEC 62153-4-15	Test method for measuring transfer impedance and screening attenuation - or coupling attenuation with Triaxial Cell
IEC 62153-4-16	Technical report on the relationship between transfer impedance and screening attenuation (under consideration)
EN 50289-1-6	Surface transfer impedance - Triaxial method and screening attenuation - Triaxial method

Triaxial test set-up, Principle

Transfer impedance and Screening attenuation
DC to 18 GHz with one Test set-up



Control – and evaluation software WinCoMeT

Supported test procedures as part of the CoMeT-System:

Measuring, calculation and representation of:

- transfer impedance,
- screening attenuation,
- coupling attenuation,
- coupling transfer function

Additionally the general test procedures on communication cables optionally are supported:

- transmission,
- attenuation,
- attenuation, (open/short procedure),
- return loss including time domain and gating,
- characteristic wave impedance (open/short procedure),
- phase, velocity, electrical length.

Test Parameters

Test of: **Screening Attenuation (62153-4-4 Ed.2 draft)**

Information for test

Test Job: 12345 Operator: Mund Calibration: 17.02.2004 10:32:40

Test set-up: Triaxial set-up according IEC 62153-4-4 Measurement: 17.02.2004 10:39:54

Remark: RG 058

Device under test

Item Number: 61196-9 Type: coaxial

Cable type: RG 058 Impedance/Ohm: 50.00

Test parameter analyzer

Start frequency/MHz: 0.03 Number of points: 901 IF-BW/Hz: 10.00

Stop frequency/MHz: 3000.00 Distance of points: lin Gen.Power/dBm: 0.00

Sym. Test Method:

Test parameter result calculation

Test length: 3.00 Averaging: 0.00 Eps. r1: 2.28

Attenuation/dB: 0.00 C/p7/m: 0.00 v/c: 0.00

Marker frequencies:

Additional parameter: of Screening Attenuation (62153-4-4 Ed.2)

Short-Short (R1=0, R2=0, Rgen=0) Rgen/Ohm: 50.00

Short-Matched R1 (21)/Ohm: 50.00 R2/Ohm: 0.00

With imped. matching etc (R1 >= 50 Ohm) R2/Ohm: Bp/Ohm: BS/Ohm:

Diagram frequency/MHz

From: 0.03 to: 3000.00 lin

Diagram magnitude

From: -100.00 to: 0.00 lin

Buttons: Abort, Set limit lines, Achieve test parameter