

## TRISSET PROFI

### Detailed specifications

#### TRISSET PROFI E1010

High quality coaxial cable used in individual terrestrial and satellite antenna installations, and MATV/SMATV/CATV systems, especially recommended for SMATV systems based on multiswitches and for cable TV (CATV) networks.

TRISSET PROFI E1010 cable has been designed for broadband networks. Due to its construction (double foil, tinned copper braid with a high degree of coverage), it ensures very high screening efficiency in the return channel band, defined in the 5-30 MHz range frequency range as transfer impedance,  $<0.9$  [m $\Omega$ /m]. This feature is especially important in HFC/CATV networks providing access to the Internet.

Very high screening efficiency, on average 120 dB in the whole 30-2400 MHz band, makes this cable ideal for large multiswitch systems with multiple cables arranged in parallel. The tinned copper braid provides resistance to oxidation and increases the life of the cable with respect to solutions based on aluminum braid.

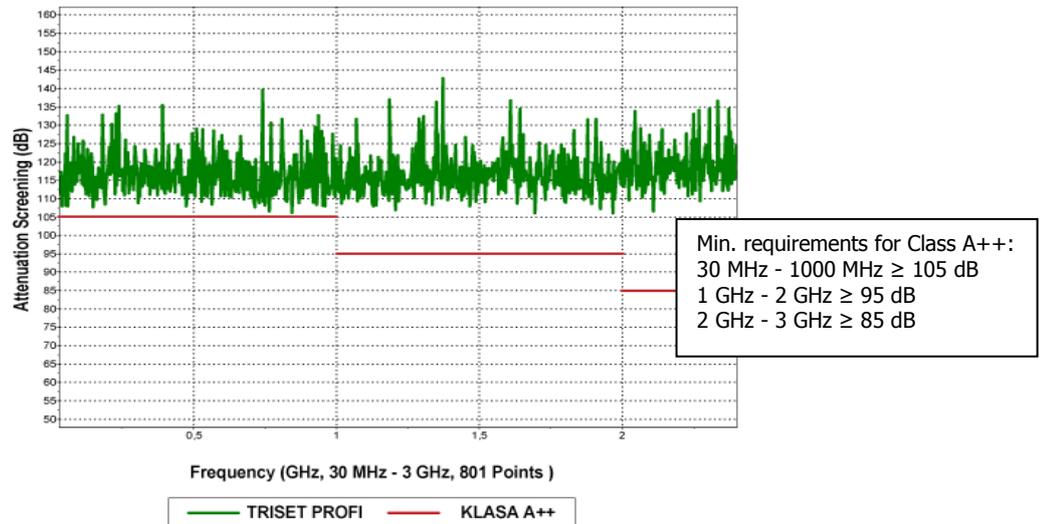
Distinguishing features:

- **class A++ cable**
- low loss
- excellent impedance matching,
- very high screening efficiency
- **tinned copper braid, resistant to oxidation**
- **two shielding foils, Al/PET/SY and Al/PET**
- physically foamed dielectric
- very low transfer impedance – ideal cable for HFC/CATV networks



## Parameters of TRISET PROFI cable

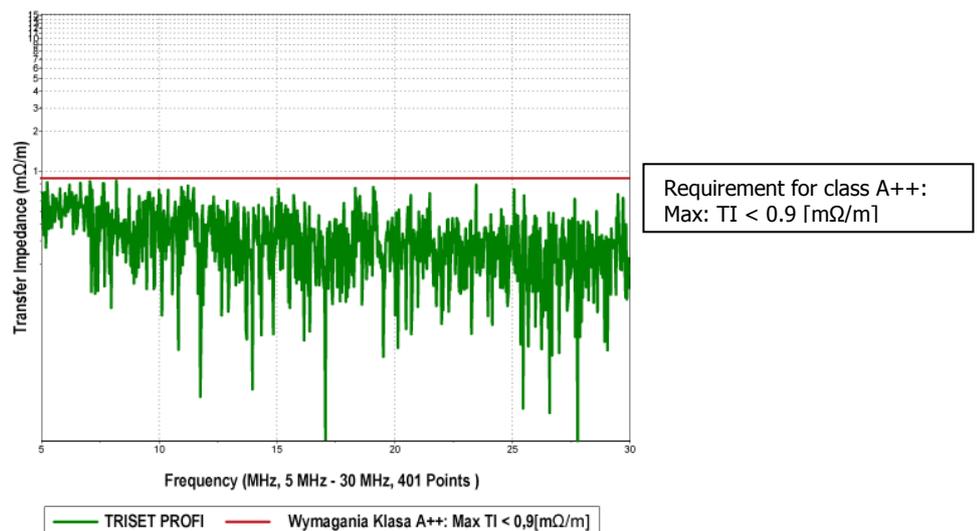
- A. Screening efficiency (Screening Attenuation) [dB] – is one of the most important parameters describing the properties of signal transmission cables. To classify a cable, the measured values are compared with requirements contained in the relevant standard. Screening efficiency shows how many times the signal coming out from the inside of the cable (penetrating the shielding layers and measured outside them) is attenuated compared to the transmitted signal, or vice versa (the attenuation ratio of an outer electromagnetic field).



Screening efficiency of TRISET PROFI cable in the 30-2400 MHz range and the requirements for A++ class.

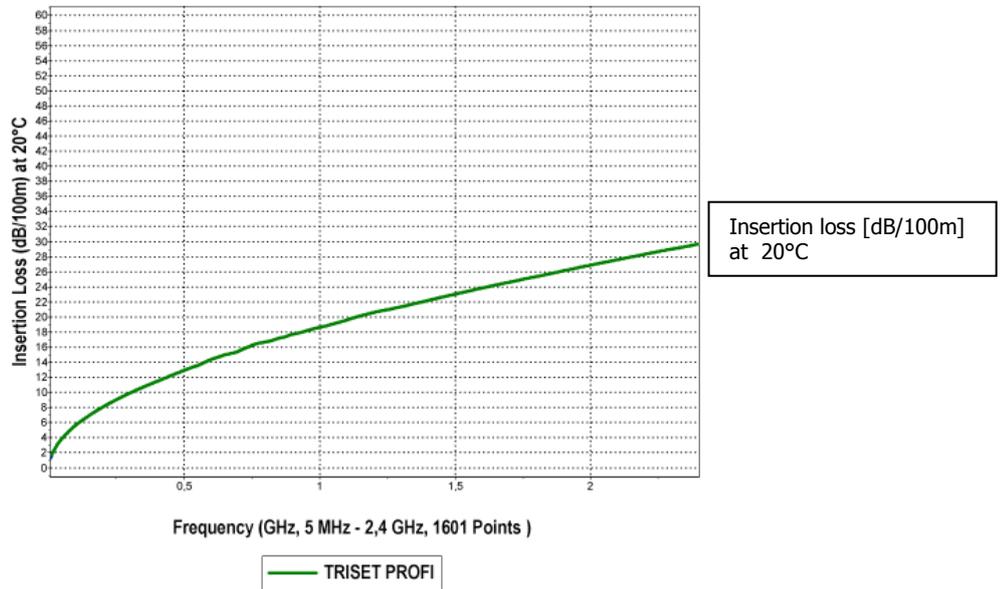
According to EN50117 norm, there are the next classes of coaxial cables, depending on screening efficiency: C, B, A, A+, A++. TRISET PROFI has the highest screening efficiency in the market (class A++) in the category of TV distribution cables.

- B. Transfer Impedance [mΩ/m] – is the measure of signal penetration in the 5-30 MHz range (the lower the better).



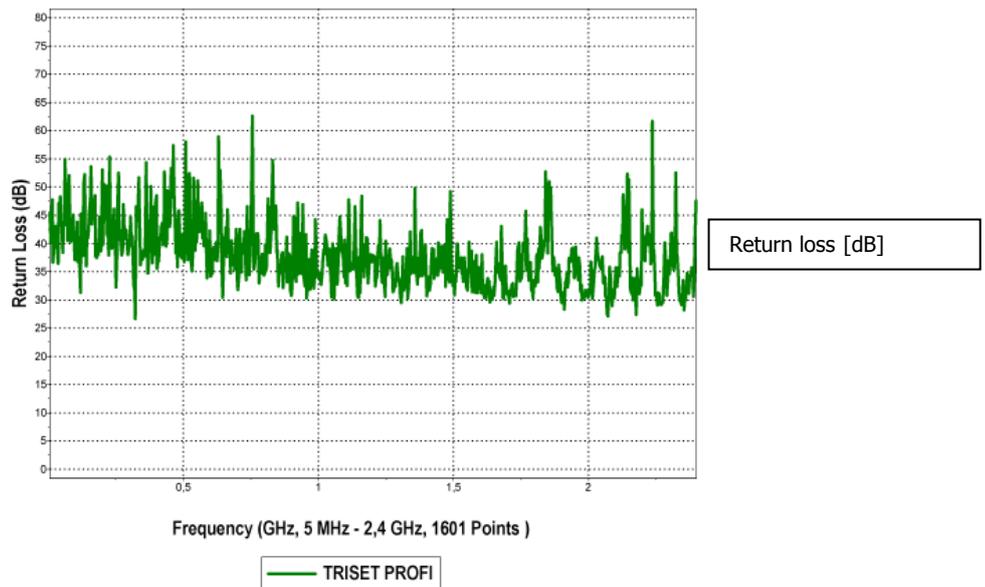
Transfer impedance of TRISET PROFI cable measured in the 5-30 MHz range, compared with the requirement for Class A++ (red line)

- C. Insertion Loss (IL) [dB/100m] – determines the quality of the cable in terms of attenuation of the signal along the transmission line, like in any transmission medium. The values of the attenuation of a coaxial cable (IL) are usually given for 100 meters, . Higher quality coaxial cables are characterized by lower attenuation, which translates into higher signal levels at the inputs of the receivers.



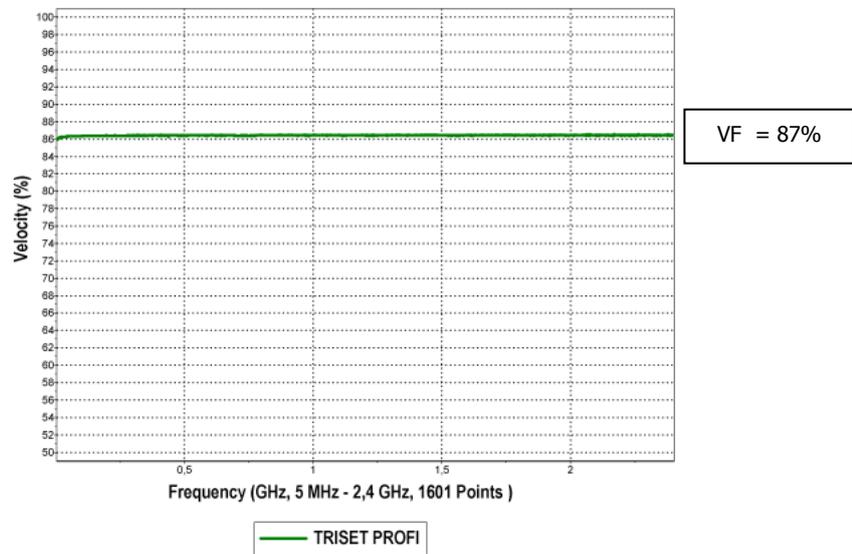
Insertion loss of TRISSET PROFI cable as a function of frequency (5-2400 MHz)

- D. Return Loss (RL) [dB] – is the ratio of the input signal level to the amount of the signal that is reflected back towards the transmitter. The reflection of the signal is caused by variations of impedance in the cable line.



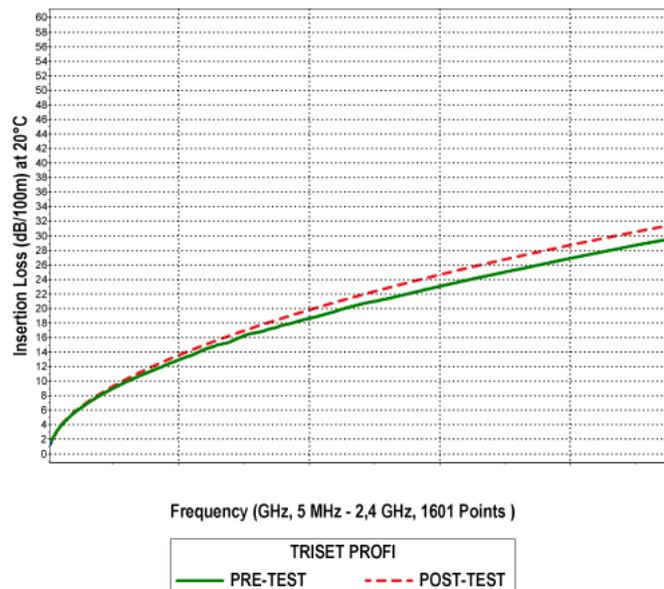
Return loss of TRISSET PROFI cable as a function of frequency (5-2400 MHz)

- E. Velocity Factor (VF) [%] – gives the speed an electromagnetic wave travels along a coaxial cable relative to the speed in a vacuum. The factor is provided as a decimal fraction or percentage.



The velocity factor of TRISET PROFI cable is 87% in the whole 5-2400 MHz range

- F. TRISET PROFI cable longevity – each coaxial cable is subject to the natural process of aging – the attenuation of the cable increases with its age. TRISET PROFI passed the test of accelerated aging of coaxial cables (IEC68-2-3 standard). The standard defines the maximum allowable increase of attenuation at high temperature and with increased humidity during a three-week test run.



In compliance with the IEC 68-2-3 standard, the increase of attenuation is below 5%

These measurements were carried out on March 6, 2015, with the use of the German network analyzer and equipment specified in the table below:

Item	Description	Serial number
R&S ZVB8	50 Ohm NA (300kHz-8 GHz)	1145.1010.08
Agilent	Imp. matching unit	61454
Agilent	75 Ohm calibration kit	MY97310597
CoMeT Tube	Triaxial test setup for screening test	-
Aesa Optitest	Professional test station software	3.0.2012-01-17 U


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- G. TRISET PROFI features 83% braid coverage, which is one of the foundations of the high shielding effectiveness (high Screening Attenuation and low Transfer Impedance, see the items A. and B.).

Braid			
Material	Tinned copper		
Wire diameter	mm	0.12	± 0.01
Number of wires	pcs.	24 x 6	
Winding angle	deg.	19.34	
Coverage	%	83	


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Kraków, May 6, 2015

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