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RF/Microwave cables

## NTEQ new series

Armoured, Serviceable, Optimized, Resistant

*TEST EQUIPMENT s.r.l., following the TEQ series cables success, markets the new improved NTEQ cables series, with or without armour.*

With new NTEQ series Test Equipment s.r.l. solves the most common problems of armoured RF cables:

- **RF cables are not serviceable.**

Use of connectors, deterioration of performances after some month of use or connectors brake involves the purchase of new cable since there is not possible to service the cable or to replacing connectors

- **Poor resistance to torsions.**

Due to mechanical reasons, in a common armoured cable, external jacket movements don't follows internal core movements during bending and torsion. This is due to different physical characteristics of materials and implies a torque force that often breaks the external shield of the inner cable with consequent deterioration of performances (return loss value) of the cable which can be unusable after few times.

- **Return Loss value cannot be optimized**

Usually is not possible to optimize Return Loss value during production or servicing of RF Cables.

This is not possible to do in all range of frequencies neither in the customer's specified bandwidth.

**With new NTEQ cable series, TEST EQUIPMENT s.r.l solves these problems on the following ways:**

1) Economical replacement of coaxial connectors can be done during the whole life of the cable recovering initial performances.

2) Armour is applied to the RF cable using a ball bearing systems in order to reduce to zero torque forces between armour and cable, thus improving the life duration of the cable and its electrical performances duration.

An innovative crimping procedure add strong resistance to traction and torsion forces of the inner cable.

3) Option "R" – High resistance

The higher NTEQ cables resistance to torsion and traction forces can be further increase using an innovative crimping solution.

4) Option "A" – Return Loss Optimization

Available only for N connector (availability will be extended soon for SMA and 7/16 connectors).

Option "A" makes possible to adjust cable Return Loss.

Adjustment can be operated upon entire cable bandwidth, obtaining an improvement between 3 and 5 dB or, alternatively, can be done in customer specified bandwidth with stronger improvements of RL value.

**Fig. 1 – NTEQ armoured cable, N connector**



**Fig. 2 – Detail of N connector**



**Fig. 3 – Detail of SMA connector**



**Fig. 4 – Detail of Aluminium armour head**



**NTEQ cable series is available without armour too.**

1) Economical replacement of coaxial connectors can be done during the whole life of the cable recovering initial performances..

2) Unsurpassed resistance to traction and torsion forces same as armoured cables.

3)Option “R” – High resistance

The higher NTEQ cables resistance to torsion and traction forces can be further increase using an innovative crimping solution.

4)Option “A” – Return Loss Optimization

Available only for N connector (availability will be extended soon for sma and 7/16 connectors).

Option “A” makes possible to adjust cable Return Loss.

Adjustment can be operated upon entire cable bandwidth, obtaining an improvement between 3 and 5 dB or, alternatively, can be done in customer specified bandwidth with stronger improvements of RL value.

Fig. 1 – NTEQ cable, detail of 7/16 connector



Fig. 2 – NTEQ cable, detail of N connector



## Configurations of NTEQ cable series

It is possible to make personalized cables on customer request with any length with N or SMA or 7/16 connectors, male and female gender.

Following options are available:

- “R” (High resistance) for all kind of connectors
- “A” (Return Loss Optimization), now available only for N-type connectors (will be applied soon to SMA and 7/16 connectors).

## Common Technical data for NTEQ cable series

Construction	
Centre conductor	CuAg $\varnothing$ 1,4 mm
Dielectric	SPE (Foamed Polyethylene) $\varnothing$ 3,82 mm
Outer conductor	Al $\varnothing$ 3,96 mm
Outer shield	CuSn $\varnothing$ 4,48 mm
Jacket	PE $\varnothing$ 5,50 mm
Weight	4,4 kg/100m
Min. bending radius	55 mm (static)/80mm (repeated)

Attenuation	
	0,56 dB/m @ 3,6 GHz
	1,07 dB/m @ 10 GHz
	1,5 dB/m @ 16 GHz
	1,62 dB/m @ 18 GHz

Electrical data	
Impedance	50 $\Omega$ +/- 2 $\Omega$
Max. operating frequency	From DC to 18 GHz
Capacitance	82 pF/m
Velocity of signal propagation	82 %
Signal delay	4.1 ns/m
Insulation resistance	$\geq 1 \times 10^8$ M $\Omega$ m
Max. operating voltage	0.5 kVrms (at sea level)

### Additional details

Out NTEQ cable series have good aesthetic look and they're "Operator Proof".

You can see some details clicking on the following link:

**INSERIRE LINK**

*If you want to see NTEQ cable series strength and understand what we mean when we say "operator proof cable", please take a look to the [following short video](#).*

*You could see a particularly extreme usage of NTEQ cables!.*

## How to make an order?

You're interested in buying new NTEQ cable series?

You want additional information?

Please go to the last page for our details

## Build your own cable!

I You want to order directly Your new NTEQ cable you need to specify only the following item code adding your details on the red fields:

### NTEQ-42-**XY**-50**Z**-L/**O**

**X**= Connector 1: N(m), N(f); 7/16(m), 7/16(f); SMA(m), SMA(f)

**Y**= Connector 2: N(m), N(f); 7/16(m), 7/16(f); SMA(m), SMA(f)

**L**= Cable length in meters

**Z**= Cable Type, specify "A" for armoured cable, "N" for simple (not armoured) cable

**O**(\*)=Option: specify "R" for high resistance, "A" for optimizable cable"

Example no.1: You want to order an armoured N(male)/N(male) cable, 3,5 meters length, Return loss optimized for UHF band.

You will need to specify the following code:

NTEQ-42-N(m)N(f)-50A-3,5/A UHF.

Example no.2: You want to order an armoured N(male)/7/16(female) cable, 1,5 meters length.

You will need to specify the following code:

NTEQ-42-N(m)7/16(f)-50A-1,5

Example no.3: You want to order a not armoured N(male)/N(male) cable, 4,5 meters length.

You will need to specify the following code:

NTEQ-42-N(m)N(m)-50N-4,5

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\* Options "R" and "A" cannot be applied both to NTEQ cables

If option "A" is ordered, it's necessary to specify if cable requires to be optimized wideband or in aspecified optimization bandwidth (expressed in MHz)

## Contact Us

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## How to reach us

Test Equipment s.r.l. is located 100 meters far from "Deruta sud" exit on SS3bis/E45 highway.

We're about 20 km far from Perugia e a circa 75 km from Orte (exit on A1/E35 highway)

