

# **TRIAX Cable Guide**

Cables, connectors and tools for installation of quality network the rational way







# selection of the best

Simplification is an efficient method for installing more value at lesser costs in TV distribution systems. Triax has selected the best in cables, connectors and tools from leading manufacturers, and the result is a relatively small number of different products covering practically every need in cable for SMATV distribution networks.

An exclusive selection of the best ensures high and uniform quality in all installations. Furthermore the selection reduces the number of items, installers have to keep in stock and available in the service vans.

### Quality is important

The choice of cables affects network performance. Almost any cable can transmit the signals, but a quality cable

- ensures long lasting stability of attenuation
- efficiently shields the signal from distortion of external electromagnetic signals
- resists the mechanical stress, for example bending, cables are exposed to especially during installation

Cables selected by Triax comply with all the acknowledged and relevant standards, and they are all approved according to CENELEC 50117. Inner conductor: Transports the signals. Made of copper with a purity level

exceeding 99.9%.

#### Screen (outer conductor):

A screening effectiveness of 75 dB or more is achieved with a double screen combining the copper braid with a screen in aluminium foil. With an extra layer of aluminium (aluminium+polyethylene+aluminium) screening effectiveness is increased to more than 90 dB up to 1 GHz.

#### Outer sheath:

Protects the cable from the external environment and is in PVC for indoor use and black PE (polyethylene) for outdoor use, as PE compared to PVC has higher UV-resistance and impermeability.

# Gas injected dielectric:

Protects the conductor and keeps it concentric to the screen. Compared to chemical expansion, the modern gas injection and skinfoam-skin technology adds durability and resistance to bending and other types of mechanical stress.

#### Braid:

Both braid and screen serve to protect the signal from external interference. The braid is in tin-plated copper (CuSn) and provides the screening.



# Connectors with high shielding factors

The shielding and reliability of connectors affects system performance as much as the cable itself. Triax has selected a range of IEC and F-connectors representing the best in respect to shielding, minimum installation time and ensuring reliable and durable connections.

All the F-connectors have a higher shielding factor than the used drop cable. The range of F-connectors includes water-resistant compression types for outdoor use and one-piece crimp types with no loose parts for fast installation. All manufactured in brass and with a unique coating to ensure the best possible protection against corrosion.

F-connectors including compression crimp types for outdoor use, one-piece crimp types for faster installation and twist-on types





### **Time-saving tools**

Working with the right tools facilitates any job. For working with cables and connectors Triax supplies a small set of practical and economic tools that saves time and also ensures the quality and stability of connections.

Tools include crimp and compression tools, stripping tools and mounting tools such as support tools, cable cutters and torque wrenches. Our Fconnector tools can reduce stripping, crimping and mounting to a few, quick and precise operations.

Legend	
AL	Aluminium
AL/PET	Aluminium/Polyester
AL/PET/ AL	Aluminium/Polyester/ Aluminium
CU	Plain copper
CU/SN	Tin plated copper
LSZH	Low smoke zero halogen
PE	Polyethylene
PVC	Polyvinylcloride
SRL	Structural return loss

### One-stopshopping











**Crimp and compression tools:** Save time and ensure correct, uniform crimping in one, swift operation

Stripping tools: Rotary cable strippers for RG6 and RG11 cables. Ensure precise and correct stripping in seconds.



# Cables for indoor use

Effectively shielded drop cables for indoor distribution. With meter marking and in a high, uniform quality. All cables meet European standard EN 500117, including standards for effective RF-shielding

ТҮРЕ			RG			RG 6		QX		
			Double s			Triple shielded		Double s		
Color			White	LSZH		White		White	Grey	Black
Part No. Cardboard roll Cardboard roll Plastic roll Plastic roll Plastic roll	100 m 200 m 100 m 250 m 500 m		150060 150068 150061 150064	150090 150091 150092		150080 150081		150022 150053	150021 150052	150054
Inner conductor	mm	1.0			1.0		0.8			1.1
Isolation	mm	4.6			4.6		3.7			1
Dielectric		PEE Foamed			PEE Foamed		PEE Foamed	1		
Screen		AI / PET / AI			AI / PET / AI	1	AI / PE <sup>-</sup> / AI			
Braid		CuSn	13	13	CuSn		CuSn			23
Braid coverage	%	40			40		56			
Outer sheath		PVC			PVC		PVC			
Minimum bending radius	mm	35/70			35/70		35/70			
Diameter	mm	6.7			6.7		5.3			
Application		Indoor			Indoor		Indoor	-		
ELECTRICAL DATA										
Impedance	Ohm	75			75		75			
Velocity ratio	%	85			84		84			
Capacitance	pF/m	52			52		55			
Attenuation (at 20°C)										
@ 5 MHz	dB/100m	1.5			1.5		2.1			
@ 50 MHz	dB/100m	4.6			4.6		6.0			
@ 200 MHz	dB/100m	9.0			9.0		11.0			
@ 470 MHz	dB/100m	12.0			12.0		17.5			
@ 600 MHz	dB/100m	16.6			16.6		20.5			
@ 800 MHz	dB/100m	18.8			18.8		23.1			
@ 1000 MHz	dB/100m	21.1			21.1		26.2			
@ 1350 MHz	dB/100m	24.6			24.6		31.9			
@ 1750 MHz	dB/100m	28.0			28.0		35.8			
@ 2050 MHz	dB/100m	31.0			31.0		38.7			
@ 2400 MHz Structural Return Loss (SRL)	dB/100m	32.9			32.9		41.9			
@ 5-470 MHz	dB	> 30.0			> 30.0		> 30.0			
@ 470-862 MHz	dB	> 25.0			> 25.0		> 25.0			
@ 862-2400 MHz	dB	> 20.0			> 20.0		> 18.0			
Screening effectiveness 30-1000 MHz	dB	> 75			> 90		> 75			
Inner conductor dc resistance	Ohm/km	22			22		38			
Outer conductor dc resistance	Ohm/km	26			26		40			
Approval										
EN 50117 (CATV network)		Yes			Yes		Yes			
CEI 46-1 (cable construction)		Yes			Yes		Yes			
CEI 12-15 (MATV system)		Yes			Yes		Yes			

Packing	Types	Part No.	Stripping tool	Crimp/Comp	Part No.	Stripping tool	Crimp/Comp	Part No.	Stripping tool	Crimp/Comp
100 pcs. box without logo 100 pcs. box 100 pcs. box [EPA]	Crimp Crimp Crimp	153200 153201 153202	K (153602)	<b>A</b> (153607)	153203	K (153602)	<b>A</b> (153607)	153204		<b>A</b> (153607)
1 pcs. 5 pcs. box 100 pcs. box	Compress. Compress. Compress.	153220	K (153602)	E (153603)	153221	<b>K</b> (153602)	E (153603)			
1 pcs. 5 pcs. box 100 pcs. box	Twist on Twist on Twist on	153053 153073	K (153602)		153063 153073	K (153602)		153048 153072		

ТҮРЕ			QX Double s		Mini c Double sl		18 multi 5 cable Triple shielded
Color	1		White	Grey	White		White
Part No. Cardboard roll Cardboard roll Plastic roll Plastic roll Plastic roll Plastic roll	100 m 200 m 100 m 250 m 500 m		150008 150056	150007 150055	150000		150075 (wood reel)
Inner conductor	mm	1.1		1	0.41	1.02	0.0.0
Isolation	mm	4.0			1.9	4.6	
Dielectric		PEE Foamed	0		PEE Foamed	PEE Foame	
Screen		AI / PET		M	AI / PET	AI / PET AI	
Braid		CuSn	10	10	CuSn	CuSn	
Braid coverage	%	45			58	40	
Outer sheath		PVC			PVC	PVC	
Minimum bending radius	mm	50			20	100	
Diameter	mm	6.7			3.6	20.5	
Application		Indoor		-	Indoor	Indoor	
ELECTRICAL DATA							
Impedance	Ohm	75			75	75	
Velocity ratio	%	80			82	84	
Capacitance	pF/m	55			56	52	
Attenuation (at 20°C)							
@ 5 MHz	dB/100m	1.3			1.5	1.5	
@ 50 MHz	dB/100m	4.2			11.0	4.6	
@ 200 MHz	dB/100m	8.4			21.0	9.0	
@ 470 MHz	dB/100m	12.8			33.9	14.4	
@ 600 MHz	dB/100m	14.5			37.1	16.3	
@ 800 MHz	dB/100m	17.5			44.0	18.8	
@ 1000 MHz	dB/100m	20.3			49.9	21.1	
@ 1350 MHz	dB/100m	23.6			58.0	24.6	
@ 1750 MHz	dB/100m	27.3			66.0	28.0	
@ 2050 MHz	dB/100m	29.5			80.5	30.3	
@ 2400 MHz	dB/100m	32.0			87.1	32.9	
Structural Return Loss (SRL)							
@ 5-470 MHz	dB	> 30.0			> 20.0	> 30.0	
@ 470-862 MHz	dB	> 25.0			> 18.0	> 25.0	
@ 862-2400 MHz	dB	> 20.0			> 16.0	> 20.0	
Screening effectiveness 30-1000 MHz	dB	> 75			> 80	> 90	
Inner conductor dc resistance	Ohm/km	22			32	22	
Outer conductor dc resistance	Ohm/km	28			32	26	
Approval							
EN 50117 (CATV network)		Yes			Yes	Yes	
CEI 46-1 (cable construction)		Yes			Yes	Yes	
CEI 12-15 (MATV system)		Yes			Yes	Yes	

Packing	Types	Part No.	Stripping tool	Crimp/Comp	Part No.	Stripping tool	Crimp/Comp	Part No.	Stripping tool	Crimp/Comp
100 pcs. box without logo 100 pcs. box 100 pcs. box [EPA]	Crimp Crimp Crimp	153240	K (153602)	<b>A</b> (153607)				153203	K (153602)	<b>A</b> (153607)
1 pcs. 5 pcs. box 100 pcs. box	Compress. Compress. Compress.		<b>K</b> (153602)					153221	K (153602)	E (153603)
1 pcs. 5 pcs. box 100 pcs. box	Twist on Twist on Twist on	153053 153073	K (153602)		153049			153063 153073	K (153602)	

# ables for outdoor use

Durable and effectively shielded, quality cables offering high stability in many years to come. With meter marking and physical foam dielectric. All cables meet European standard EN 500117, including standards for effective RF-shielding. Outdoor cables must be unbroken, and cables under ground must be a least 45 cm below the surface and in soil or sand without stones.

ТҮРЕ		[	RG 6 Double shield	led		RG 6 Triple shielded		RG <sup>·</sup> Double sh	
Color			Black			Black		Black	White LZW
Part No. Cardboard roll Plastic roll Plastic roll Plastic roll	100 m 100 m 250 m 500 m		150065 150066 150067			150085 180086		(wood drum) 150062	150098 150099
Inner conductor	mm	1.0			1.0		1.7		<b>N</b>
Isolation	mm	4.6			4.6		7.2		
Dielectric		PEE Foamed			PEE Foamed		PEE Foamed	(	
Screen		AI / PET / AI			AI / PET / AI		AI / PET / AI	周	
Braid		CuSn			CuSn		CuSn	13	67
Braid coverage	%	40	10		40	13	56	199	10
Outer sheath		PE			PE	14	PE		
Minimum bending radius	mm	35/70			35/70		100/120		
Diameter	mm	6.7			6.7		10.25		
Application		Outdoor	_		Outdoor		Outdoor		
ELECTRICAL DATA									
Impedance	Ohm	75			75		75		
Velocity ratio	%	85			85		84		
Capacitance	pF/m	52			52		53		
Attenuation (at 20°C)									
@ 5 MHz	dB/100m	1.5			1.5		0.8		
@ 50 MHz	dB/100m	4.6			4.6		2.6		
@ 200 MHz	dB/100m	9.0			9.0		5.5		
@ 470 MHz	dB/100m	14.4			14.4		8.9		
@ 600 MHz	dB/100m	16.3			16.3		10.0		
@ 800 MHz	dB/100m	18.8			18.8		11.4		
@ 1000 MHz	dB/100m	21.1			21.1		13.5		
@ 1350 MHz	dB/100m	24.6			24.6		15.6		
@ 1750 MHz	dB/100m	28.0			28.0		18.6		
@ 2050 MHz	dB/100m	30.3			30.3		20.5		
@ 2400 MHz	dB/100m	32.9			32.9		22.7		
Structural Return Loss (SRL)									
@ 5-470 MHz	dB	> 30.0			> 30.0		> 30.0		
@ 470-862 MHz	dB	> 25.0			> 25.0		> 25.0		
@ 862-2400 MHz	dB	> 20.0			> 20.0		> 20.0		
Screening effectiveness 30-1000 MHz	dB	> 75			> 90		> 80		
Inner conductor dc resistance	Ohm/km	22			22		7.8		
Outer conductor dc resistance	Ohm/km	26			26		9.7		
Approval									
EN 50117 (CATV network)		Yes			Yes		Yes		
CEI 46-1 (cable construction)		Yes			Yes		Yes		
CEI 12-15 (MATV system)		Yes			Yes		Yes		

Packing	Types	Part No.	Stripping tool	Crimp/Comp	Part No.	Stripping tool	Crimp/Comp	Part No.	Stripping tool	Crimp/Comp
100 pcs. box without logo 100 pcs. box 100 pcs. box [EPA] 25 pcs. box [EPA] 50 pcs. box	Crimp Crimp Crimp Crimp Crimp	153200 153201 153202	K (153602)	<b>A</b> (153607)	153203	K (153602)	<b>A</b> (153607)	153230 153231	L (153601)	<b>B</b> (153609)
1 pcs. 5 pcs. box 50 pcs. box 100 pcs. box	Compress. Compress. Compress. Compress.	153220	K (153602)	E (153603)	153221	K (153602)	E (153603)	153222	L (153601)	E (153603)
1 pcs. 5 pcs. box 100 pcs. box	Twist on Twist on Twist on		K (153602)			K (153602)			L (153601)	

## Multi cables for networks

Triple shielded RG6 multi cables where individual cable colours can be used through the whole system to facilitate proper connection.

ТҮРЕ			a 110 k Double s	<b>(U (1.1/7.3)</b> hielded	18	8 multi 4 cable Triple shielded		3 multi 9 cable Triple shielded
Color			Black			Black		Black
Part No. Cardboard roll Plastic roll Roll Drum	100 m 100 m 250 m 500 m		150030 150031			150074 (100m wood drum)		150078 (50m wood drum) 150079 (100m wood drum)
Inner conductor	mm	1.1			1.02	<b>* *</b>	1.02	
Isolation	mm	4.9			4.6	l l l l l	4.6	
Dielectric		PEE Foamed	Π.		PEE Foamed		PEE Foamed	
Screen		Cu foil			AI / PET / AI		AI / PET / AI	
Braid		Cu	83		CuSn		CuSn	
Braid coverage	%		192		40		40	
Outer sheath		PE			PE		PE	
Minimum bending radius	mm	70			100		100	
Diameter	mm	7.3			19.0		25.0	
Application		Outdoor			Outdoor		Outdoor	
ELECTRICAL DATA								
Impedance	Ohm	75			75		75	
Velocity ratio	%	81			84		84	
Capacitance	pF/m	55			52		52	
Attenuation (at 20°C)								
@ 5 MHz	dB/100m	1.3			1.5		1.5	
@ 50 MHz	dB/100m	4.1			4.6		4.6	
@ 200 MHz	dB/100m	8.2			9.0		9.0	
@ 470 MHz	dB/100m	13.9			14.4		14.4	
@ 600 MHz	dB/100m	15.7			16.3		16.3	
@ 800 MHz	dB/100m	18.1			18.8		18.8	
@ 1000 MHz	dB/100m	20.2			21.1		21.1	
@ 1350 MHz	dB/100m	24.9			24.6		24.6	
@ 1750 MHz	dB/100m	28.4			28.0		28.0	
@ 2050 MHz	dB/100m	30.7			30.3		30.3	
@ 2400 MHz	dB/100m	33.2			32.9		32.9	
Structural Return Loss (SRL)								
@ 5-470 MHz	dB	> 23.0			> 30.0		> 30.0	
@ 470-862 MHz	dB	> 20.0			> 25.0		> 25.0	
@ 862-2400 MHz	dB	> 18.0			> 20.0		> 20.0	
Screening effectiveness 30-1000 MHz	dB	> 80			> 90		> 90	
Inner conductor dc resistance	Ohm/km	18			22		22	
Outer conductor dc resistance	Ohm/km	11			26		26	
Approval								
EN 50117 (CATV network)		Yes			Yes		Yes	
CEI 46-1 (cable construction)		Yes			Yes		Yes	
CEI 12-15 (MATV system)		Yes			Yes		Yes	

Packing	Types	Part No.	Stripping tool	Crimp/Comp	Part No.	Stripping tool	Crimp/Comp	Part No.	Stripping tool	Crimp/Comp
100 pcs. box without logo 100 pcs. box 100 pcs. box [EPA]	Crimp Crimp Crimp	153211	<b>K</b> (153602)	<b>A</b> (153607)	153203	K (153602)	<b>A</b> (153607)	153203	K (153602)	<b>A</b> (153607)
1 pcs. 5 pcs. box 100 pcs. box	Compress. Compress. Compress.	153221	<b>K</b> (153602)	E (153603)	153221	K (153602)	E (153603)	153221	K (153602)	E (153603)
1 pcs. 5 pcs. box 100 pcs. box	Twist on Twist on Twist on	153053 153074	<b>K</b> (153602)		153053 153073	K (153602)		153053 153073	K (153602)	

# Iy leads for TV & Radio

75 Ohm white double-screened cable with coax IEC male and female connectors. The connectors are crimped to ensure screening better than 70 dB.





ТҮРЕ		<b>RF 1.5</b> IEC male/female	<b>RF 2.5</b> IEC male/female	<b>RF 5.0</b> IEC male/female	<b>RF 7.5</b> IEC male/female	<b>RF 10.0</b> IEC male/female
Part No.		153400	153401	153402	153403	153404
Inner conductor	mm	0.8	0.8	0.8	0.8	0.8
Dielectric		PE	PE	PE	PE	PE
Outer sheath	mm	5.8	5.8	5.8	5.8	5.8
Min. bending radius	mm	60	60	60	60	60
Colour sheath		White	White	White	White	White
Attenuation at 100 mtr. 50 MHz 2150 MHz	dB dB	5.5 42.0	5.5 42.0	5.5 42.0	5.5 42.0	5.5 42.0
Standards		CE	CE	CE	CE	CE
Impedance	Ohm	75	75	75	75	75
Weight	kg					
Length	cm	150	250	500	750	1000
Remarks		Single pieces in plastic bag				



















# ools for stripping, crimping and mounting

The most efficient and stable connection between cable and connector is obtained, when crimping is done in one, swift operation (no re-crimping) and with a tool in the exact, right size. Triax's new range of F-connector tools is easy to use and reduces stripping, crimping and mounting to a few, quick and precise operations.



Part No. 153607 CRP 106H crimp tool is for .324" (8.2 mm) and .360" (9.2 mm) one-piece F-connectors and EPA typically used with RG6 and QX5 cables



CRP 106F crimp tool is for .324" (8.2 mm) and .475" (11.9 mm) one-piece F-connectors typically used with RG11 cables



Crimp tool universal is for two-piece F-connectors



Compression tool universal RG6/RG11 is used for compression type F-connectors for outdoor use and ensures water-resistant connections.



Part No. 153602

Part No. 153601 Stripping tools: With rotary cable strippers, preparation of cable is reduced to a single operation resulting in precise stripping in the dimensions matching exactly with the connector. The non-expensive stripping tools are pre-adjusted for RG6 and RG11 cables respectively.



Part No. 153633 Mounting tool for F-connectors:

The plastic handle gives you a good grip of the connector and is more convenient to work with than the metal types of mounting tools. Especially for onepiece and compression type of F-connectors



Cable support tool:

While mounting the connector this unique rubber tool gives you a good grip of the cable, and with no risk of damaging the cable. Support cables with dimensions 3-12 mm



RG11 cables

Mounting T-tool: With female thread. Efficient for two-piece and twist-on types of F-connectors.



Torque wrench spanner: The spanner ensures a proper installation in accordance with SCTE standards, minimizing the risk of heavy screening leakage. When using Fconnectors outdoors SCTE recommends a torque of 3.4 - 5.6 Nm.



Part No. 153636 Quality cable cutter







## -connectors for drop cables

All connectors have a higher shielding factor than the used drop cables, and the unique NITIN coating ensures the best possible protection against corrosion.

#### **One-piece crimp connectors**

Reduces installation time as the connectors have no loose parts. Designed for a very high degree of pull strength

F-crimp 4.9/8.4 F-crimp 4.9/8.4 TYPE F-crimp 4.9/8.1 (EPA F-crimp 5.1/8.4 Part No. 100 pcs 153200 153201 153202 153203 Without logo Rubber sealing For triple shielded Remarks for RG6 for RG6 for RG6 F-crimp 5.1/8.8 F-crimp 5.3/8.4 F-crimp 3.7/6.4 TYPE Part No. 100 pcs 153211 153240 153204 Remarks for 110 KU for QX5 for QX4 (1.1/7.3) TYPE RG11 7.6/11.7 RG11 EPA 7.6/11.5 Part No. 153230 25 pcs 50 pcs 153231 Remarks for RG11 Rubber sealing for RG11

### Water resistant compression types for outdoor use:

The tight interface effectively seals the cable and prevents corrosion from damaging the RF shielding abilities. O-rings inside prevent moisture ingress through the interface part of the connector.

ТҮРЕ		F-compression CX3 - 4.9	F-compression CX3 - 5.1	F-compression CX3 - 7.5	
Part No.	100 pcs	153220	153221	153222	
Remarks		RG6 cables - use together with tooling no. 153603	RG6 triple shielded - use together with tooling no. 153603	RG11 cables - use together with tooling no. 153603	



### **Twist-on connectors**

ТҮРЕ		F-con mini cable	F-con 5 mm	F-con 6.8 mm	F-con 7.2 mm
Part No.	5 pcs 100 pcs	153049	153048 153072	153053 153073	153052 153074
Outer cable diametre	mm	3.6	5.2	6.8	7.2
Remarks		for Mini cables	for QX4	for QX5	for 110 KU (1 1/7 3)

### F- grounding block



grounding	DICOR			-
ТҮРЕ		F female - female block		20
Part No.	1 pcs	153597	153599	



daptors

F- and IEC adaptors and snap-adaptors, including angle adaptor and terminator. High quality ensures reliable connections and quick installation.

### **IEC** adaptors

ТҮРЕ			IEC female to F-type male		F male to IEC female
Part No.	1 pcs	153610	153611	153613	153614





### F adaptors

ТҮРЕ		F female snap adaptor	F angle adaptor	F male - male	F female - female
Part No.	5 pcs	153612	153592	153596	153593





ТҮРЕ		F - R75 terminator	RTF 75-DC terminator
Part No.	10 pcs	153054	364025
		<b>A</b> 30	

### **IEC crimp connectors**

ТҮРЕ		IEC-crimp Male	IEC-crimp Female	
Part No.	100 pcs	153030	153031	
Remarks		for RG6 cables Crimp tooling no. 153607	for RG6 cables Crimp tooling no. 153607	



### One-stopshopping



### **IEC coax connectors**

ТҮРЕ		RZ 20 Male White	RZ 20 Female White		Coax Female Angle (grey)		
Part No.	1 pcs 10 pcs	153033	153038	153032	153035	153042	153043
		- TA	E I EN				



ТҮРЕ		Coax Male Angle	Coax Female Angle	Plastic cover White
Part No.	1 pcs 10 pcs	153021	153022	153017
			0	

Please note ! Remember to order plastic cover seperatly



# Thinking one step ahead...

Triax's philosophy is customerorientation: In both our markets, TV-systems and enclosures, our objective is to save time and trouble for the installers, operators and distributors building their business on our products.

Simplicity and support are key words, expressed both in products and in service. Our products offer more in performance and simplifying logic, and in our support customers have easy access to understandable, useful and competent answers.

Innovative thinking, serviceoriented people and advanced technology has made Triax one of the leading European suppliers of both TV-systems and enclosures.

We offer everything that can be expected from a professional supplier within these fields.

Triax is of course ISO 9001 certified and delivers products according to all acknowledged local and international quality standards.

#### TRIAX A/S

Bjørnkærvej 3 DK - 8783 Hornsyld Tel.: +45 76 82 22 00 Fax: +45 75 68 79 66 mail: triax@triax.dk www.triax.com

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