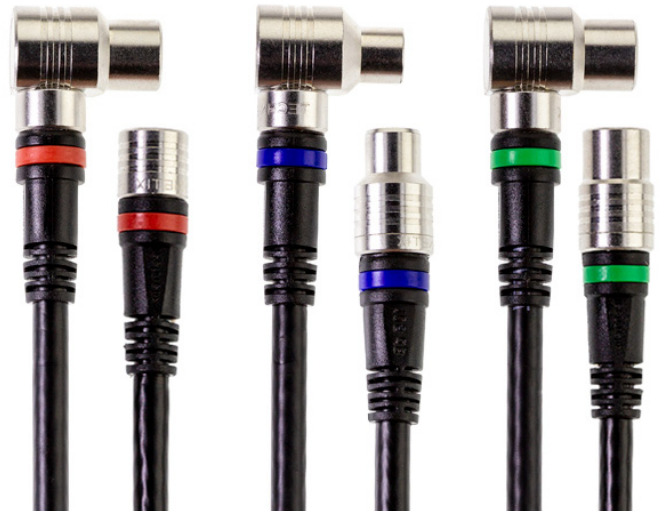


- Quad shield RF flylead
- F-Safe connectors to eliminate LTE or 4G interference
- Push-on for secure self-installations, no spanner required
- Excellent pull and push resilience, even after 1,000 cycles
- Incorporating F-Safe™<sup>1</sup> white bronze plating for low CPD<sup>2</sup>
- Moulded strain relief
- DOCSIS 4.0 ready (frequency range 5 to 2400 MHz)



## Overview

The quality of service a user experiences is only as strong as the weakest link. Therefore, the quality and reliability of flyleads is as important as the other components of a cable system. Attention to detail in the specification of the materials, in addition to construction and performance characteristics, ensures that the customer experience is optimised from installation and throughout a long service life.

Precise dimensioning and the outstanding resilience of the connectors and inner pins delivers a very reliable connection. The connectors are tightly secured and moulded to the cables to ensure good pull and strain relief. Transmission performance is guaranteed 5 to 2400 MHz making RLA++ flyleads DOCSIS 4.0 ready.

The cables' inner conductors are soldered to their inner pins (rather than crimped) to maintain excellent electrical and mechanical performance.

There are many external sources of electromagnetic radiation interference present in the in-home environment, particularly LTE and 5G mobile phones which transmit in the 663 to 915 MHz frequency range. The screening effectiveness of a cable therefore needs to mitigate the effects of both the egress and ingress of unwanted signals. To meet these requirements, the RF specification of the Technetix flylead exceeds Class A++ screening effectiveness over the whole frequency range, using quad shield braid and foil cable.

Push-on 'F' connectors do not rely on the customer using a torque wrench to achieve guaranteed low noise ingress and mobile interference.

<sup>1</sup> F-Safe Technetix Registered Trademark  
<sup>2</sup> Common path distortion

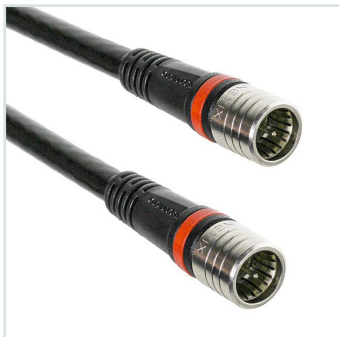
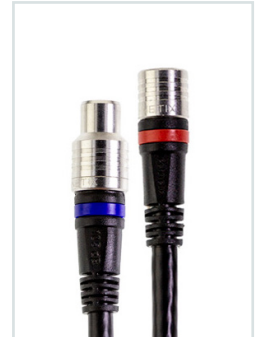
All connector combinations are available in black and white options.



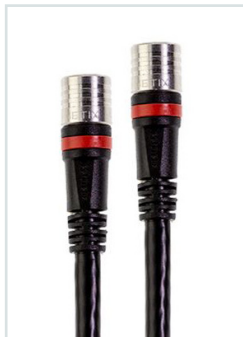
IEC male straight - IEC female straight



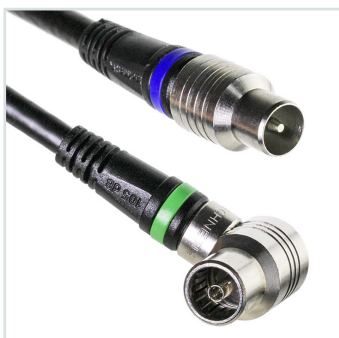
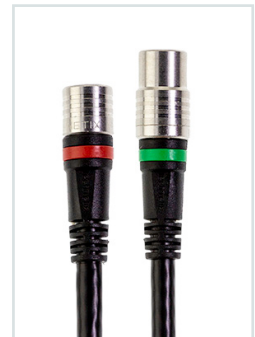
IEC male straight - F male straight



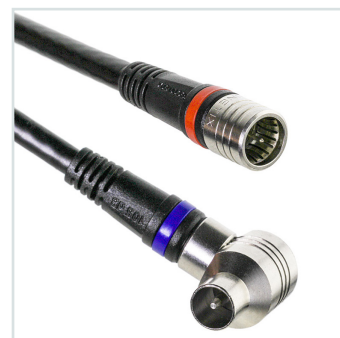
F male straight - F male straight



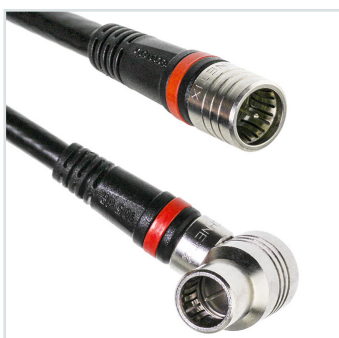
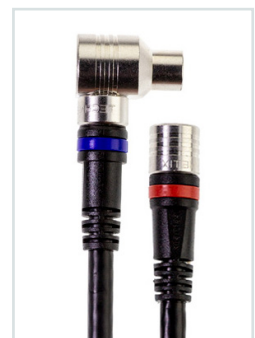
F male straight - IEC female straight



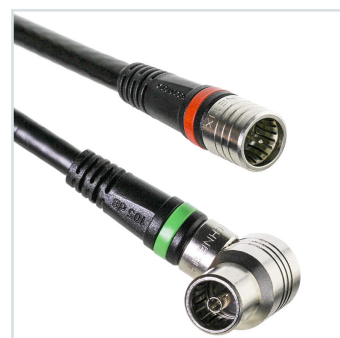
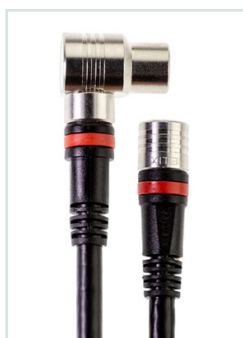
IEC male straight - IEC female right angle



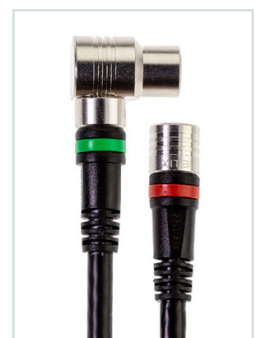
F male straight - IEC male right angle



F male straight - F male right angle



F male straight - IEC female right angle



## Mechanical specifications

### Connector construction IEC male and IEC female

Body	White bronze plated brass
IEC male pin	White bronze plated brass; Ø2.35 mm
Spring	Nickel plated beryllium copper
Dielectric	HDPE
Strain relief	PVC
ID ring	Polyoxymethylene (POM)
Connector to cable pull force withstand	Straight 300 N Right Angle 200 N

### Connector construction Push F

Body	White bronze plated brass
Pin	White bronze plated brass; Ø0.8 mm
Spring	Nickel plated beryllium copper
Dielectric	HDPE
Strain relief	PVC
ID ring	Polyoxymethylene (POM)
Connector to cable pull force withstand	Straight 300 N Right Angle 200 N

### Cable construction – RG59 quad shield

Inner conductor	Copper clad steel (CCS) 0.81 mm diameter	
Dielectric	Foamed PE 3.55 mm diameter	
Outer conductor/shielding	1st shield	Laminate Al tape
	2nd shield	CCS wire braid 94%
	3rd shield	Double Al tape
	4th shield	Al-Mg wire braid 70%
Outer jacket	Non-migratory PVC 6.00 mm diameter	
Bending radius	Non-load	30 mm
	Loaded	60 mm

## RF performance specifications

Basic requirements	MHz	Straight - Straight	Straight - RA	RA - RA	Units	Note
Frequency range		5-2400			MHz	
Impedance		75			Ω	
Insertion (loss per metre)	5 - 1006	< 0.5 + 0.3	< 0.5 + 0.3	< 0.5 + 0.3	dB	
	1006 - 2400	< 0.6 + 0.5	< 0.8 + 0.5	< 1.0 + 0.5	dB	
Return loss (EN 60728-4)	5 - 470	> 22	> 22	> 22	dB	
	470 - 2400	> 22	> 20	> 20	dB	1
Screening Class A++ (EN 62153-4-7)	5 - 12	≤ 2.5			mΩ/m	
	12 - 30	≤ 0.9			mΩ/m	
	30 - 1006	> 105			dB	
	1006 - 2000	> 95			dB	
	2000 - 2400	> 85			dB	

## Notes

1 | F > 47 MHz - 1.5 dB/Oct 12 dB min

### Order information

All combinations of connector type, length and cable colour are possible.  
 Please refer to this matrix to help you select the RLA++ type that suits your needs.

### RLA++ fly- lead selection matrix

							
		F-male straight	IEC-male straight	IEC-female straight	F-male right angled	IEC-male right angled	IEC-female right angled
	F-male straight	RLA++ 30	RLA++ 12	RLA++ 40	RLA++ 50	RLA++ 22	RLA++ 31
	IEC-male straight	RLA++ 12	RLA++ 13	RLA++ 10	RLA++ 57	RLA++ 23	RLA++ 11
	IEC-female straight	RLA++ 40	RLA++ 10	RLA++ 14	RLA++ 56	RLA++ 20	RLA++ 25
	F-male right angled	RLA++ 50	RLA++ 57	RLA++ 56	RLA++ 55	RLA++ 51	RLA++ 52
	IEC-male right angled	RLA++ 22	RLA++ 23	RLA++ 20	RLA++ 51	RLA++ 24	RLA++ 21
	IEC-female right angled	RLA++ 31	RLA++ 11	RLA++ 25	RLA++ 52	RLA++ 21	RLA++ 25

RLA++XX-LC XX= Connector combination / L= Length in metres / C= Cable jacket colour\*

\* All cables are available in black (B) and white (W).

### Connector colour code

F-male	Red
IEC-male	Blue
IEC-female	Green

### Standard combinations for straight to straight

Item number	Item code	Description
19005208	RLA++30-1.5B	RLA++ FLYLEAD F-M - F-M 1.5M BLACK
19005209	RLA++30-3B	RLA++ FLYLEAD F-M - F-M 3M BLACK
19005210	RLA++30-5B	RLA++ FLYLEAD F-M - F-M 5M BLACK
19005935	RLA++30-1.5W	RLA++ FLYLEAD F-M - F-M 1.5M WHITE
19005202	RLA++10-1.5B	RLA++ FLYLEAD IEC-M - IEC-F 1.5M BLACK
19005203	RLA++10-3B	RLA++ FLYLEAD IEC-M - IEC-F 3M BLACK
19005204	RLA++10-5B	RLA++ FLYLEAD IEC-M - IEC-F 5M BLACK
19006922	RLA++10-7.5B	RLA++ FLYLEAD IEC-M - IEC-F 7.5M BLACK
19011230	RLA++10-1.5W	RLA++FLYLEAD IEC-M - IEC-F 1.5M WHITE
19011231	RLA++10-3.0W	RLA++FLYLEAD IEC-M - IEC-F 3.0M WHITE
19011232	RLA++10-5.0W	RLA++FLYLEAD IEC-M - IEC-F 5.0M WHITE
19005205	RLA++12-1.5B	RLA++FLYLEAD IEC-M - F-M 1.5M BLACK
19005206	RLA++12-3B	RLA++FLYLEAD IEC-M - F-M 3M BLACK
19005207	RLA++12-5B	RLA++FLYLEAD IEC-M - F-M 5M BLACK
19012400	RLA++12-10B	RLA++FLYLEAD IEC-M - F-M 10M BLACK
19005932	RLA++12-1.5W	RLA++FLYLEAD IEC-M - F-M 1.5M WHITE
19005933	RLA++12-3W	RLA++FLYLEAD IEC-M - F-M 3M WHITE
19005211	RLA++40-1.5B	RLA++FLYLEAD IEC-F - F-M 1.5M BLACK
19005212	RLA++40-3B	RLA++FLYLEAD IEC-F - F-M 3M BLACK
19005938	RLA++40-1.5W	RLA++FLYLEAD IEC-F - F-M 1.5M WHITE

### Standard combinations for right angle to right angle

Item number	Item code	Description
19008554	RLA++21-1.5B	RLA++FLYLEAD IEC-M RA – IEC-F RA 1.5M BLACK
19008555	RLA++21-3B	RLA++FLYLEAD IEC-M RA – IEC-F RA 3M BLACK
19011236	RLA++21-1.5W	RLA++FLYLEAD IEC-M RA – IEC-F RA 1.5M WHITE
19011237	RLA++21-3.0W	RLA++FLYLEAD IEC-M RA – IEC-F RA 3M WHITE
19011238	RLA++21-5.0W	RLA++FLYLEAD IEC-M RA – IEC-F RA 5M WHITE
19011239	RLA++21-10W	RLA++FLYLEAD IEC-M-RA – IEC-F RA 10M WHITE
19008566	RLA++55-1.5B	RLA++FLYLEAD F-M RA – F-M RA 1.5M BLACK
19008567	RLA++55-3B	RLA++FLYLEAD F-M RA – F-M RA 3M BLACK

### Standard combinations for straight to right angle

Item number	Item code	Description
19011235	RLA++11-1.5W	RLA++FLYLEAD IEC-M – IEC-F RA 1.5M WHITE
19008548	RLA++11-1.5B	FLYLEAD IEC-M – IEC-F RA 1.5M BLACK
19008563	RLA++50-1.5B	FLYLEAD F-M RA – F-M 1.5M BLACK
19008564	RLA++50-3B	FLYLEAD F-M RA – F-M 3M BLACK
19008565	RLA++50-5B	FLYLEAD F-M RA – F-M 5M BLACK
19008726	RLA++57-1.5B	FLYLEAD IEC-M – F-M RA 1.5M BLACK
19008727	RLA++57-3B	FLYLEAD IEC-M - F-M RA 3M BLACK
19008728	RLA++57.5B	FLYLEAD IEC-M - F-M RA 5M BLACK