

TRUE BLUE™

125, 205, 290 & 420 Series

For the ultimate combination of low loss, durability and value

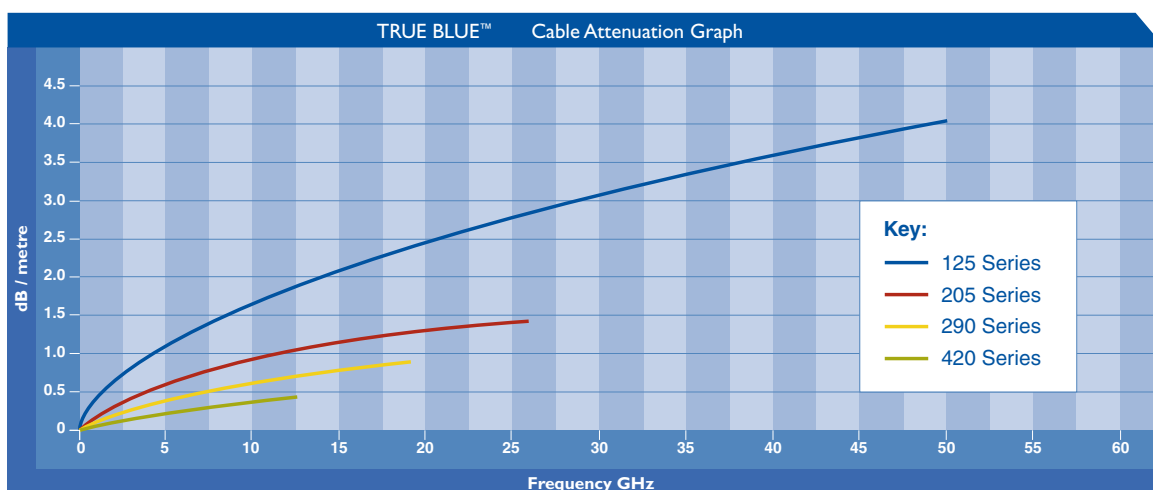
Low loss flexible cable assemblies

Design, test and production engineers will always require high quality, reliable, low loss cable assemblies, which will have a long service life. Teledyne Reynolds TRUE BLUE™ range of cable assemblies has a long track record of providing the solution to a wide range of system and test applications.

With cable options operating up to 50 GHz, a comprehensive range of armouring styles and a variety of standard assemblies held in stock, the TRUE BLUE™ range is the first choice for the ultimate combination of low loss, durability and value.



FEATURES	BENEFITS
<ul style="list-style-type: none"> ■ Compression resistant, low loss, low density dielectric material 	<ul style="list-style-type: none"> ■ Excellent insertion loss characteristics ■ Less prone to damage during handling and installation ■ Wide operating temperature range
<ul style="list-style-type: none"> ■ QuadraForm shielding construction 	<ul style="list-style-type: none"> ■ Low signal leakage ■ High connector retention and long cable assembly life
<ul style="list-style-type: none"> ■ Many standard configurations are available from stock 	<ul style="list-style-type: none"> ■ Reduced lead-time ■ Cost effective



Construction

Centre conductor material	Solid, silver plated (OFHC) copper
Dielectric material	Low loss, low density PTFE
Primary shield	High coverage, silver plated copper ribbon braid
Secondary shield	Overlapped aluminium laminate foil
Tertiary shield	High coverage, silver plated copper round braid
Jacket material	Extruded FEP

Electrical Specifications

	125 Series	205 Series	290 Series	420 Series
Maximum operating frequency	50 GHz	26.5 GHz	19.8 GHz	12 GHz
Impedance	50 ± 2 Ω	50 ± 2 Ω	50 ± 2 Ω	50 ± 2 Ω
Attenuation (nominal)				
at 5 GHz	1.21 dB / metre	0.59 dB / metre	0.43 dB / metre	0.29 dB / metre
at 10 GHz	1.70 dB / metre	0.85 dB / metre	0.62 dB / metre	0.42 dB / metre
at 18 GHz	2.33 dB / metre	1.16 dB / metre	0.85 dB / metre	-
at 26.5 GHz	2.91 dB / metre	1.44 dB / metre	-	-
at 40 GHz	3.65 dB / metre	-	-	-
at 50 GHz	4.06 dB / metre	-	-	-
VSWR (typical with 2 straight connectors)				
Up to 3 GHz	1.10 : 1	1.10 : 1	1.10 : 1	1.10 : 1
3 – 12 GHz	1.15 : 1	1.15 : 1	1.15 : 1	1.15 : 1
12 – 18 GHz	1.15 : 1	1.15 : 1	1.15 : 1	-
18 – 26.5 GHz	1.25 : 1	1.25 : 1	-	-
26.5 – 50 GHz	1.30 : 1	-	-	-
Shielding effectiveness at 1 GHz	≥ 90 dB	≥ 90 dB	≥ 90 dB	≥ 90 dB
Capacitance (nominal)	90.2 pF / metre	90.9 pF / metre	87.9 pF / metre	86.9 pF / metre
Propagation delay (nominal)	4.53 ns / metre	4.56 ns / metre	4.49 ns / metre	4.43 ns / metre
Phase matching	Available on request	Available on request	Available on request	Available on request

Specifications subject to change without notice.

Mechanical Specifications

	125 Series	205 Series	290 Series	420 Series
Cable diameter (nominal)	3.2mm	5.3mm	7.4mm	10.7mm
Centreline bend radius	32mm (dynamic) 13mm (static)	54mm (dynamic) 26mm (static)	75mm (dynamic) 40mm (static)	102mm (dynamic) 64mm (static)
Temperature range (unarmoured)	-54°C to +150°C	-54°C to +150°C	-54°C to +150°C	-54°C to +150°C
Connector retention	13.6 kg	18.2 kg	22.7 kg	22.7 kg
Weight	26.2 g / metre	65.6 g / metre	118.1 g / metre	278.9 g / metre

Armouring Options

Polyolefin ruggedised (Available for 125, 205 & 290 Series)	Wound helix of passivated stainless steel wire covered with a cross linked Polyolefin jacket. Operating temperature range -54°C to +135°C
Polyurethane ruggedised (Available for 205 & 290 Series)	Wound helix of passivated stainless steel wire covered with an extruded Polyurethane jacket. Operating temperature range -54°C to +100°C
Hard armour (Available for 205 & 290 Series)	Fully interlocked stainless steel armour, with an optional Polyolefin jacket. Operating temperature range -54°C to +135°C
Soft armour (Available for 205 & 290 Series)	Polyethylene anti-compression helix (205 series only) covered with a tough Neoprene™ jacket. Operating temperature range -54°C to +100°C



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