



PHASE MASTER®

I90 Series

Developed for demanding, phase-sensitive applications

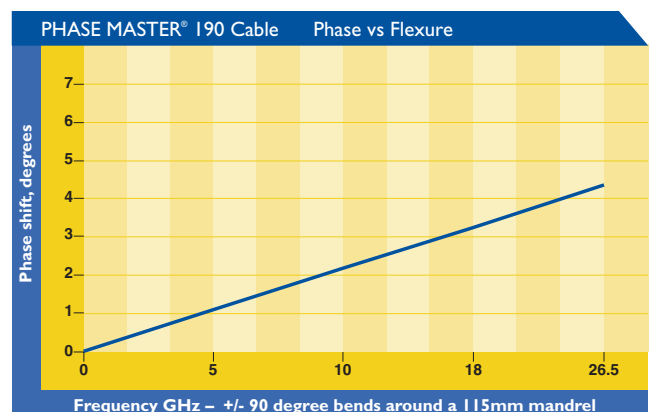
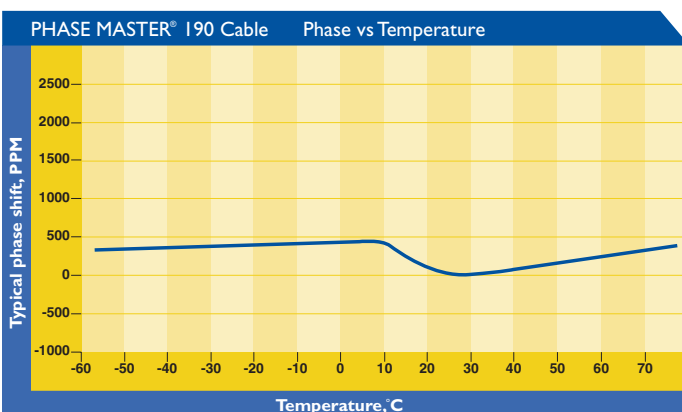
Phase stable cable assemblies

Applications such as Phase Critical Radar, Electronic Warfare and Wireless Systems demand operating performance which cannot be compromised. The electrical stability of Teledyne Reynolds PHASE MASTER® makes it the logical choice for such requirements.

The cable's high level of stability with temperature and flexure is a result of MicroForm™ Technology, which is a unique combination of materials and production techniques. With a 26.5 GHz operating range, a comprehensive selection of connectors and a wide range of armouring styles, PHASE MASTER® is perfect for demanding, phase-sensitive applications.



FEATURES	BENEFITS
<ul style="list-style-type: none"> MicroForm™ construction 	<ul style="list-style-type: none"> High level of phase stability with temperature and flexure Lower insertion loss at higher frequencies for size and weight Wide operating temperature range Increased shielding effectiveness
<ul style="list-style-type: none"> Fully captivated connectors 	<ul style="list-style-type: none"> Increased connector retention and assembly durability Increased reliability and electrical stability



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Construction

Centre conductor material	Solid, silver plated (OFHC) copper
Dielectric material	MicroForm™ PTFE
Primary shield	MicroForm™ helically wrapped silver plated copper foil
Secondary shield	High coverage silver plated copper round braid
Jacket material	Extruded FEP

Electrical Specifications

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Maximum operating frequency	26.5 GHz
Impedance	50 ± 2 Ω
Phase stability with flexure (typical)	± 4.3° at 26.5 GHz
Amplitude stability with flexure (typical)	0.009 dB at 18 GHz
Attenuation (nominal) at 10 GHz at 18 GHz at 26.5 GHz	0.85 dB / metre 1.18 dB / metre 1.44 dB / metre
VSWR (typical with 2 straight connectors) Up to 3 GHz 3 – 18 GHz 18 – 26.5 GHz	1.10 : 1 1.15 : 1 1.25 : 1
Shielding effectiveness	≥ 105 dB at 1 GHz
Capacitance (nominal)	78.7 pF / metre
Propagation delay (nominal)	4.10 ns / metre
Phase matching	Available on request

Specifications subject to change without notice.

Mechanical Specifications

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Cable diameter (nominal)	4.8mm
Minimum centreline bend radius	56mm (dynamic) 25mm (static)
Temperature range (unarmoured)	-54°C to +150°C
Connector retention	15.9 kg
Weight	55 g / metre

Armouring Options

Polyurethane ruggedised	Wound helix of passivated stainless steel wire covered with an extruded Polyurethane jacket. Operating temperature range -54°C to +100°C
Hard armour	Fully interlocked stainless steel armour, with an optional Polyolefin jacket. Operating temperature range -54°C to +135°C



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