

PHASE MASTER[®]

190 SERIES



PHASE STABLE CABLE ASSEMBLIES



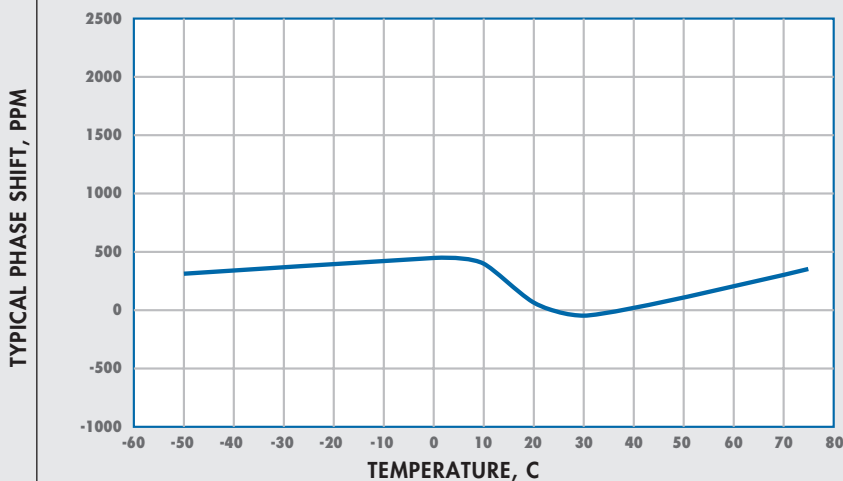
Are you a design or test engineer looking for cable assemblies that offer an unmatched combination of phase stability, low loss, and value?

Take a look at our **Phase Master[®] 190 series**.

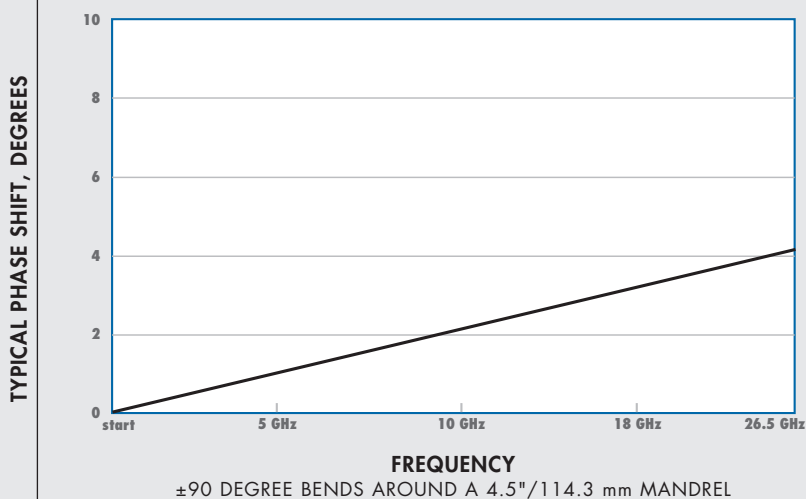
Superior phase stability vs. temperature and flexure makes this cable the ideal choice for phase-sensitive applications—particularly those with **wide operating temperature ranges**.

From environmental stress screening to electronically scanned radar systems, count on Phase Master[®] assemblies to provide **unparalleled value and performance**.

PHASE vs. TEMPERATURE - PHASE MASTER[®] 190 CABLE



PHASE vs. FLEXURE - PHASE MASTER[®] 190 CABLE



**TELEDYNE
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High value microwave and
electronic interconnect solutions

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PHASE MASTER®

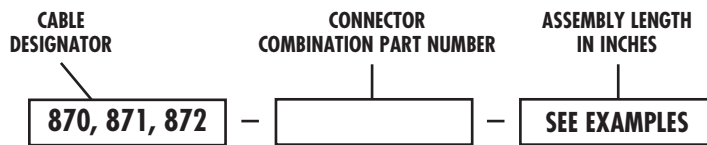
190 SERIES

PHASE STABLE CABLE ASSEMBLIES

FEATURES	BENEFITS
MicroForm™ construction	<ul style="list-style-type: none"> ~ Less frequent calibration required due to flatter phase versus temperature profile ~ More precise measurements due to reduced phase shift versus flexure ~ Reduced insertion loss and increased amplitude stability versus flexure ~ Problem hook-ups made easier because of increased cable flexibility
Robust connector attachment/captivation	<ul style="list-style-type: none"> ~ Maintains electrical stability over time and handling ~ Increased assembly life due to improved connector retention and assembly durability
Crush & kink resistant armoring options	<ul style="list-style-type: none"> ~ Increased assembly life in applications where cable assemblies will be handled frequently

SPECIFICATIONS	PHASE MASTER® 190		
Cable Designator	870	871	872
Diameter (in/mm)	0.190/ 4.83	0.420/ 10.67	0.360/ 9.14
Operating Frequency (Max, GHz)	26.5		
Attenuation–Nom @ 2 GHz (dB/ft)	0.110		
Attenuation–Nom @ 10 GHz (dB/ft)	0.260		
Attenuation–Nom @ 18 GHz (dB/ft)	0.360		
Power Handling Avg. Power in Watts @ 1 GHz	700		
Phase Stability vs. Temp (ppm, nom)	500		
Phase Stability vs. Flex † (degrees @ 18 GHz, nom)	3.0		
Amplitude Stability vs. Flex † (dB @ 18 GHz, nom)	0.01		
Shielding Effectiveness, Minimum (dB @ 1 GHz)	– 105		
Weight (grams/ft/m)	16.65/54.63		
Temperature Range (°C)	–50 to +125‡		

ORDERING INFORMATION: Part Number Designation



870 - PM 190 (Unarmored)

871 - PM 190A (Hard Armored; polyolefin jacket)

872 - PM 190R (Ruggedized; polyurethane jacket)

EXAMPLES:

870-0036-048 = Unarmored Phase Master® 190, 3.5 mm SP to 3.5 mm SP (assembly operates to 26.5 GHz), 48 inches

872-0019-120 = Ruggedized Phase Master® 190, 7 mm to N SP (assembly operates to 18 GHz), 120 inches

Specifications subject to change without notice.

† ± 90 degree bends around a 4.5"/114.3 mm mandrel

‡ Subject to connector choice

CONNECTOR COMBINATION PART NUMBERS*

		CONNECTOR OPERATING FREQUENCY							
		26.5 GHz				18 GHz			
		3.5 mm NMD SJ	3.5 mm SP	3.5 mm SJ	SMA SP	SMA SJ	7 mm	N SP	TNC SP
26.5 GHz	3.5 mm NMD SJ	0010	0034	0035	0004	0044	0023	0018	0014
	3.5 mm SP	0034	0036	0037	0028	0045	0038	0032	0030
	3.5 mm SJ	0035	0037	0039	0029	0046	0040	0033	0031
18 GHz	SMA SP	0004	0028	0029	0001	0041	0012	0003	0002
	SMA SJ	0044	0045	0046	0041	0048	0047	0043	0042
	7 mm	0023	0038	0040	0012	0047	0011	0019	0015
	N SP	0018	0032	0033	0003	0043	0019	0008	0006
	TNC SP	0014	0030	0031	0002	0042	0015	0006	0005

* Other connector styles available, including #8 Pin and Socket 38999; consult Storm

CONNECTOR CODES	
SP	Straight Plug
SJ	Straight Jack
NMD	Ruggedized Test Port Connector



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