

POLARIZATION-INDEPENDENT SCRAMBLER — PS-700



Fiber Control Industries' polarization-independent polarization state scrambler, PS-700, provides high speed scrambling of optical signals with low insertion loss and is independent of the input state-of-polarization. This robust all fiber design provides a wide optical bandwidth, and enables the use of high signal powers, thereby making it suitable for DWDM applications.

Our unique RF-modulated format provides near pseudo-random scrambling as indicated by the broad RF electrical spectral response, unlike other scramblers, whose spectral response reveals well-defined resonances. The high-speed scrambling provides coverage over a large portion of the Poincaré sphere. Patent pending.

FEATURES:

- Polarization independent
- Broad optical bandwidth
- High optical power throughput
- Low back-reflection
- Low insertion loss
- Connectorized or fiber input/output

APPLICATIONS:

- Component level PDL measurements
- Sub-system PDL testing
- Reduce polarization-dependent effects within EDFA optical transmission systems (PDG, PDL)
- Reduce PDL in test-bed measurements of third-party optical equipment



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Preliminary Specifications (Optical, Line Power, Physical):

Optical Input/Output	FC/UPC, FC/APC, or Bare Fiber
Poincaré Sphere Coverage	80% to 95% est. (near pseudo-random)
Degree-of-Polarization	< 5%
Insertion Loss	≤ 1 dB
Return Loss	> 50 dB, > 55 dB (FC/UPC, FC/APC, or fiber)
Operating Wavelength	1300 nm – 1610 nm
Maximum Optical Input‡	+30 dBm
Scrambling Rate†	4 MHz
PDL	< 0.05 dB
AM Modulation	< 3%
Fiber Type	Lucent Technologies, TrueWave™
Operating Temperature	-10°C – + 35°C
Electric Input Power	100/120/220/240 ± 10% VAC
Line Frequency	50/60 Hz
Power Receptacle	IEC 320
Physical Dimensions	8.9 x 30.5 x 42.5 cm (3 1/2" x 12" x 16 3/4")
Rack Mount	Standard 18 1/2"
Weight	6.58 Kg (14.5 lb.)

note:

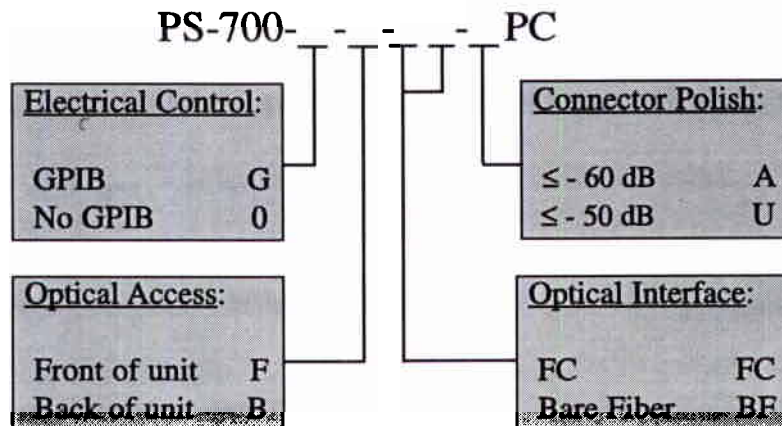
- all measurements @ 1550 nm.

‡ - SRS limit (SBS limit is determined by user's spectral broadening of sources)

† - at the -10dB point from near uniform electrical rf spectral distribution

Options:

- GPIB scrambler on/off control
- FC/UPC, FC/APC, or bare fiber
- Access from front or back of unit



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