

Models 8420 & 8421
Programmable Phase Shifter Units
Local, Ethernet, USB & RS-232 Control

DC to 6.0 GHz
 



Model 8421



Model 8420

Features

- /// Provides a flexible, easy to program, low cost solution for your bench test/calibration setups and subsystem applications.
- /// Front panel local control and display make it ideal for lab and manual test environments.
- /// Multi-Channel phase adjustment paths (up to 2 channels for 8420 & up to 12 channels for 8421)
- /// Phase Shift Range from 0° to 630° in 10° steps @ 6 GHz (Nominally Linear with Frequency)
- /// LabVIEW based Control Software included.
- /// Supplied with standard communication interfaces:
 - Ethernet (10/100 BaseT)
 - USB 2.0
 - RS-232 (Serial)
 - GPIB/IEEE-488 (HS-488 ready) optional
- /// Rack Configurable: Rack ears are supplied with Model 8421 Series units only.

Description

API / Weinschel's Model 8420 and 8421 Series represent a new streamlined approach in signal phase shift & control for bench test and subsystem applications. This series is designed to house and control API / Weinschel's New Programmable Phase Shifter series via front panel controls, Ethernet, USB and Serial communications interfaces. A GPIB (IEEE-488) interface is also available as an option.

The 8420 series are single or dual channel configurations & housed in half rack enclosures. The 8421 series are multi-channel configurations housed in 19 inch enclosures and can be configured for up to 12 channels. Connector locations for both series can be configured for front or rear. Through (front to rear) is only available for 8421 Series.

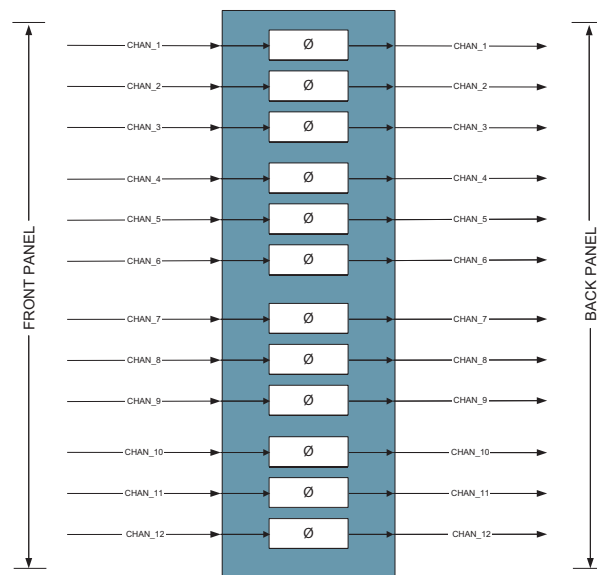
API / Weinschel also provides custom subsystems where a variety of test configurations can be incorporated within a single unit. Contact us with your specialized needs.

Applications

Applications for the 8420 and 8421 Series range from providing control of a single Programmable Phase Shifter in a bench test/lab environment, to complex system applications where the 8420/8421 Series are employed in conjunction with many devices to create custom subsystems & to reduce overall design cost. Multiple programmable phase shifters can be used in conjunction with other coaxial devices such as attenuators, switches, power combiners, directional couplers, and filters to create various multi-channel test configurations.

Control Software Included

API / Weinschel's LabVIEW based Control Center Software can be used in conjunction with the operation of this series of programmable phase shifter units and allows the user to setup, control and perform test and measurements over standard communication interfaces such as RS-232, USB, Ethernet or optional GPIB (IEEE-488).



Simplified 12 Channel Block Diagram

For additional information on the Model 8420 & 8421, visit our website @ www.□□□□□E□□□□E□□□W□E□□□

Programmable Phase Shifters

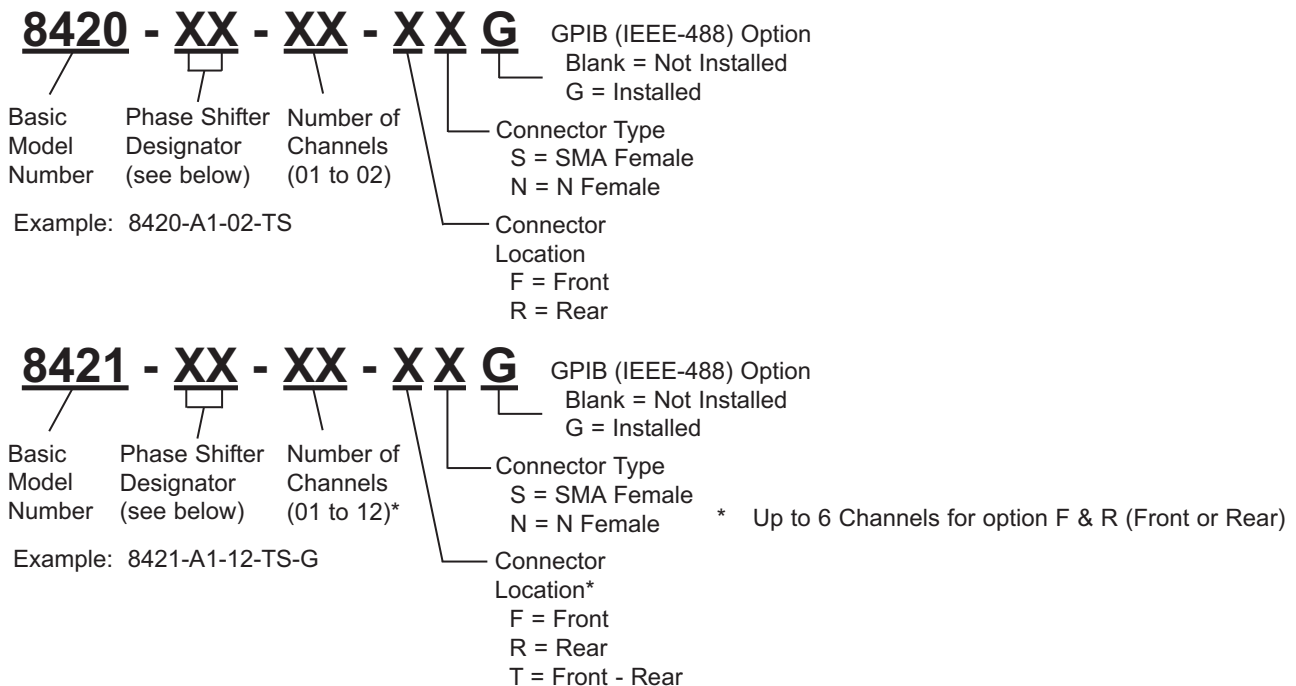


Specifications

SPECIFICATION	DESCRIPTION
Input Power Requirements	ac 100 to 240 Vac, 50/60 Hz, 100 Watts
Environmental	Operating Temperature: 0° to +50°C Storage Temperature: -40° to +75°C Humidity: 20-90% (non-condensing) Operating Altitude: 10,000ft (3,048M)
RS-232 Bus (1) Serial I/O	Connector: 9-pin male D Signals: TXD, RXD, RTS, CTS, GND Baud Rates: 9600 to 230400 Data Bits: 8 Handshaking: None, RTS/CTS Parity: None
USB 2.0	Connector: Mini B
Ethernet	10/100 Base T Connector: Standard RJ45
IEEE-488 Bus (2) (GPIB option)	Connector: 24-pin per IEEE-488.1 Protocols: per IEEE-488.2
RF Characteristics(3)	Refer to Configuration Matrix (below)
CE & UL Compliant	MET E113609 complies with UL61010-1 CSA C22.2 NO. 61010-1, CE CAN ICES-3 (B)/NMB-3(8)

1. RS-232 can be used with standard PC serial port for short and medium distances (up to approximately 50 ft).
2. GPIB/IEEE-488 model allows user-selectable addresses. (Not included on standard models, must be ordered as an option).
3. Refer to Individual data sheet for detailed specifications on internal devices.

Model Number Configuration Matrix



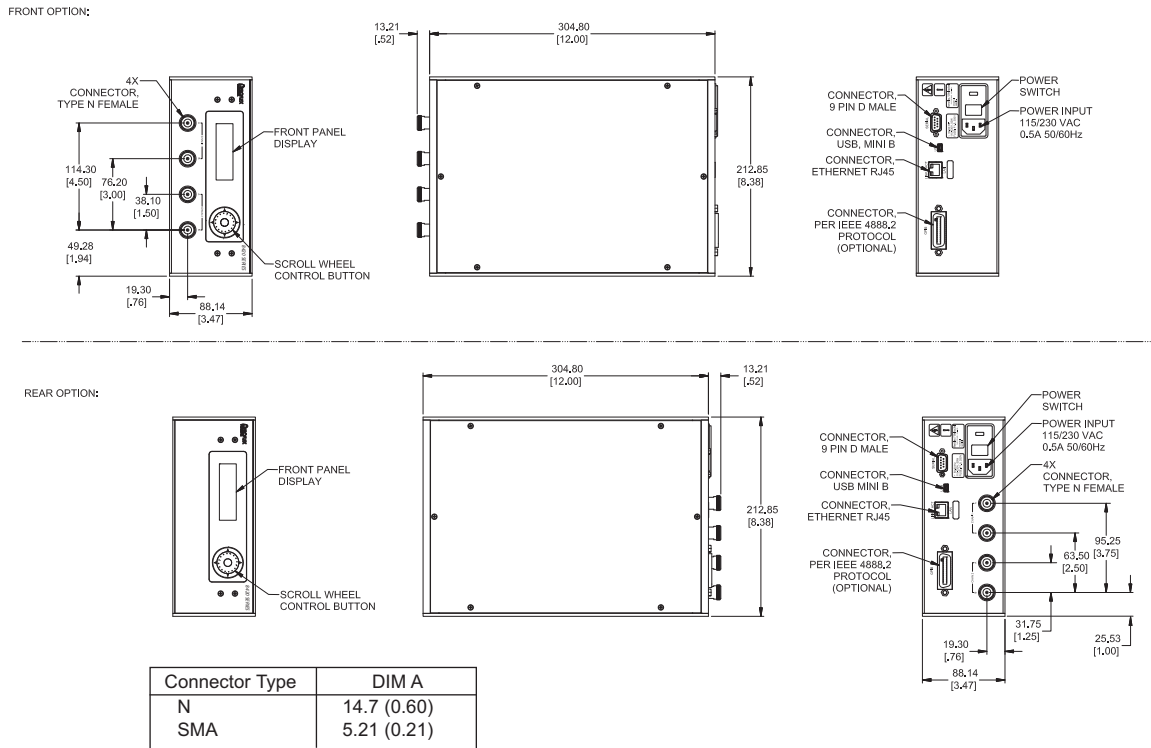
Electro-mechanical							
Frequency Range	Phase Shifter Designation	Phase Shifter Model	Range (@ 6 GHz)	Step Size (@ 6 GHz)	Insertion Loss (maximum)	VSWR (maximum)	<input checked="" type="checkbox"/> RoHs
DC to 6 GHz	A 1	984-1	0 - 630°	10°	6.0 dB	1.6	

RoHs compliance dependent on phase shifter installed. Some designs are NOT compliant.

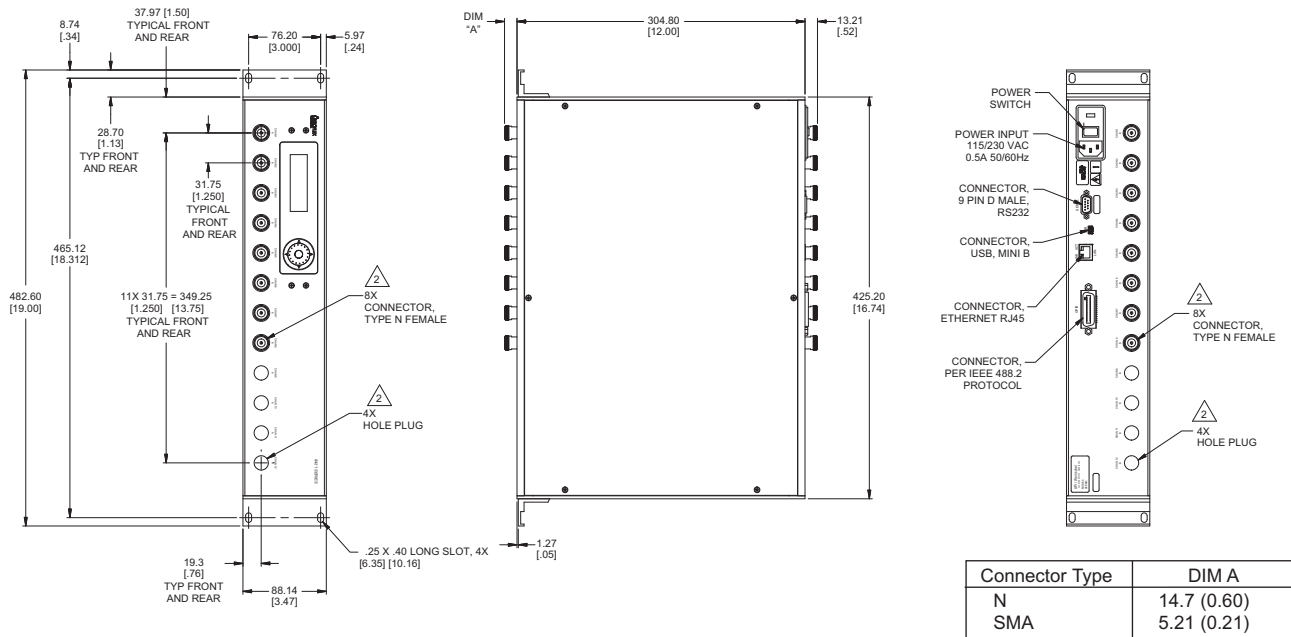
Programmable Phase Shifters

Physical Dimensions

Model 8420, Half Rack Unit, 1 or 2 channels:



Model 8421, Standard 19 in Rack Unit up to 12 channels:



NOTE:

1. All dimensions are given in mm (inches).
2. Connectors and hole plugs are installed as required and determined by number of channel in unit. 2 channel shown for Model 8420 and 8 channel unit shown for 8421.
3. Connector location (Front/Rear) may vary depending on Model ordered.