



General Information

The FEC-01/FEC-02 Frequency Extension Controller is part of the FTL mm-wave measurement extension solution. It ensures that FTL mm-wave extender products FEV-XX are fully compatible with Agilent PNA/PNA-X and Anritsu 37XXXD/Vector Star Vector Network Analyzers and offers the best S-parameters accuracy available on the market.

The purpose of FEC-01/FEC-02 frequency extension controller is routing, switching and amplification of RF and IF signals. It also provides communication to and from the VNA ensuring full 2 port S-parameter measurements with FEV-XX mm-wave extenders.

As a basic set up the FTL frequency extension solution comes with the following:

- 1 off FEV-XX-TR-ATT
- 1 off FEV-XX-TR
- 1 off FEC-01 (for Anritsu VNA) or FEC-02 for (Agilent VNA)
- 1 set of RF and IF coaxial cables for interfacing FEVs with FEC
- 1 set of RF and IF coaxial cables for interfacing FEC with the VNA
- 1 off calibration kit including dowel pins, hex ball torque driver and two precision waveguide sections with anti-cocking flanges

Electrical Specification

RF input frequency range	8 – 20 GHz	
RF input damage level	+10 dBm	
RF input connector	3.5 mm, female	
RF output connector	3.5 mm, female	
LO input frequency range	8 – 20 GHz	
LO input damage level	+10 dBm	
LO input connector	3.5 mm, female	
LO output connector	3.5 mm, female	
Switching speed	< 1 μ s	
IF frequency range	5 – 500 MHz	
IF input damage level	0 dBm	
IF input connector	3.5 mm, female	
IF output connector	3.5 mm, female (FEC-01)	BNC, female (FEC-02)
Test set control connector	Fisher 7 pin socket (FEC-01)	25 pin D-sub socket (FEC-02)
DC power supply connector	LEMO 4 pin socket	

Power supply

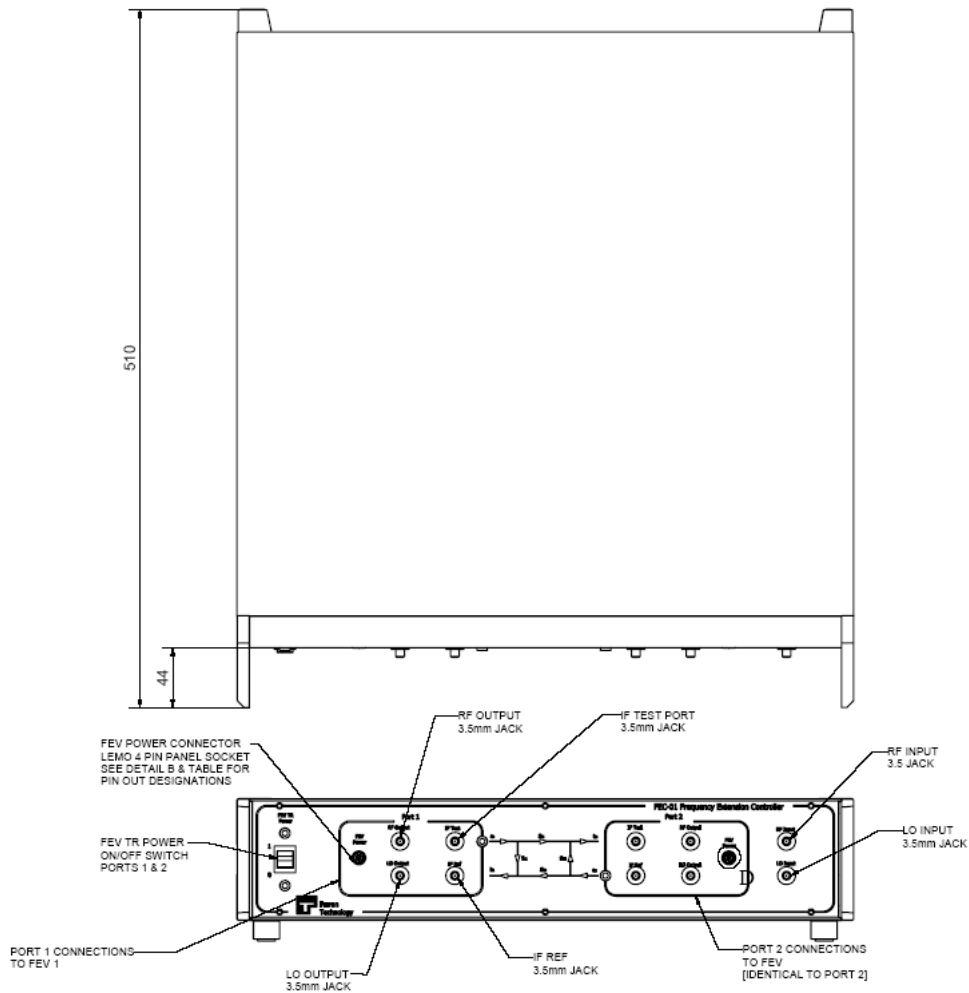
Connector type	IEC 950
Voltage	110 – 220 V
Current	0.35 – 0.65 A

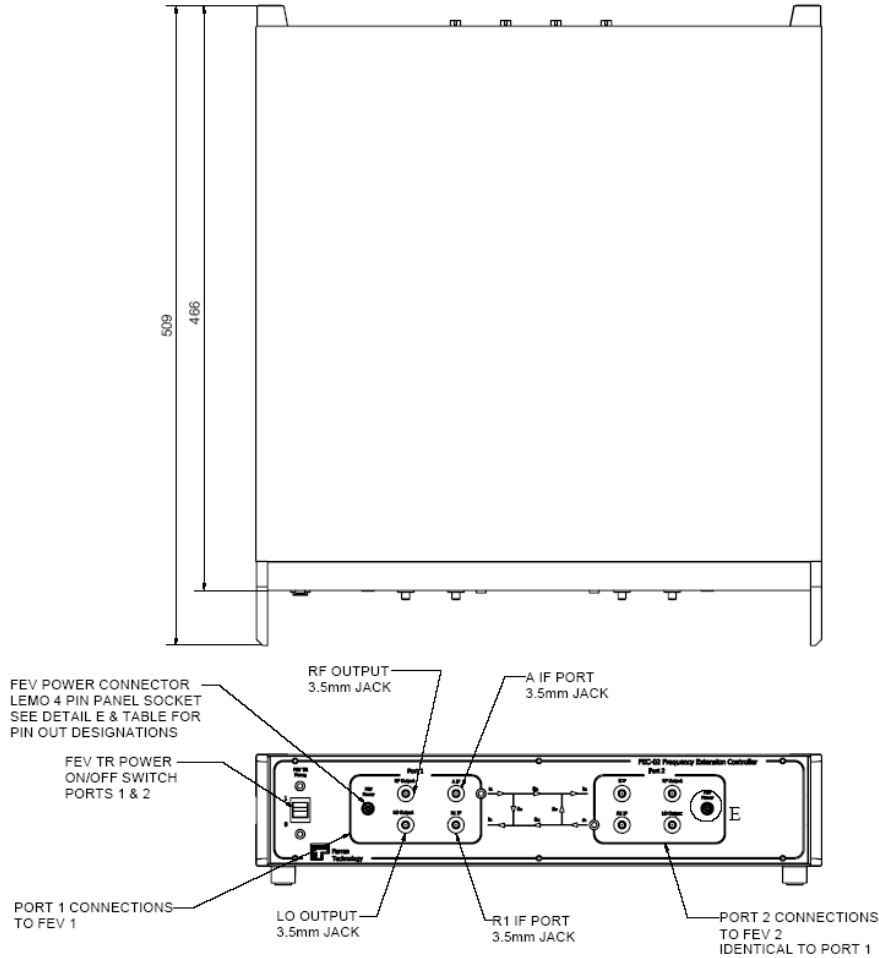
General specifications

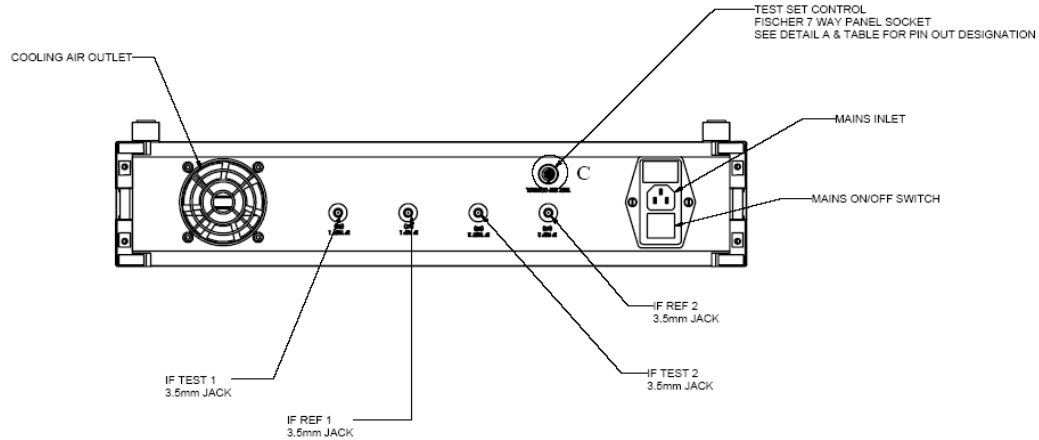
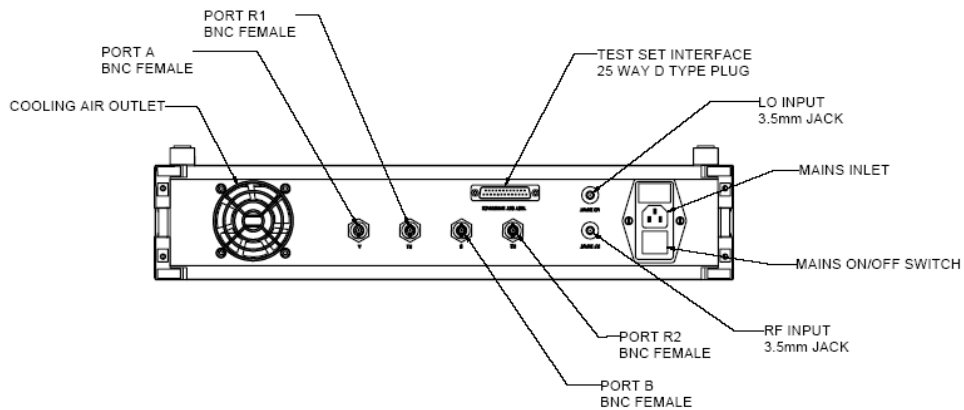
Operating temperature range	0 °C to +30°C
Storage temperature range	-20 °C to +50 °C
Dimensions (W x H x D)	450 mm x 510 mm x 90 mm
Number of feet	4
Weight	4 kg

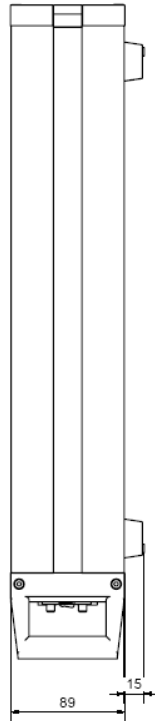
Specifications apply under the following conditions:

- 2h warm-up time under ambient temperature for FEC-01/FEC-02

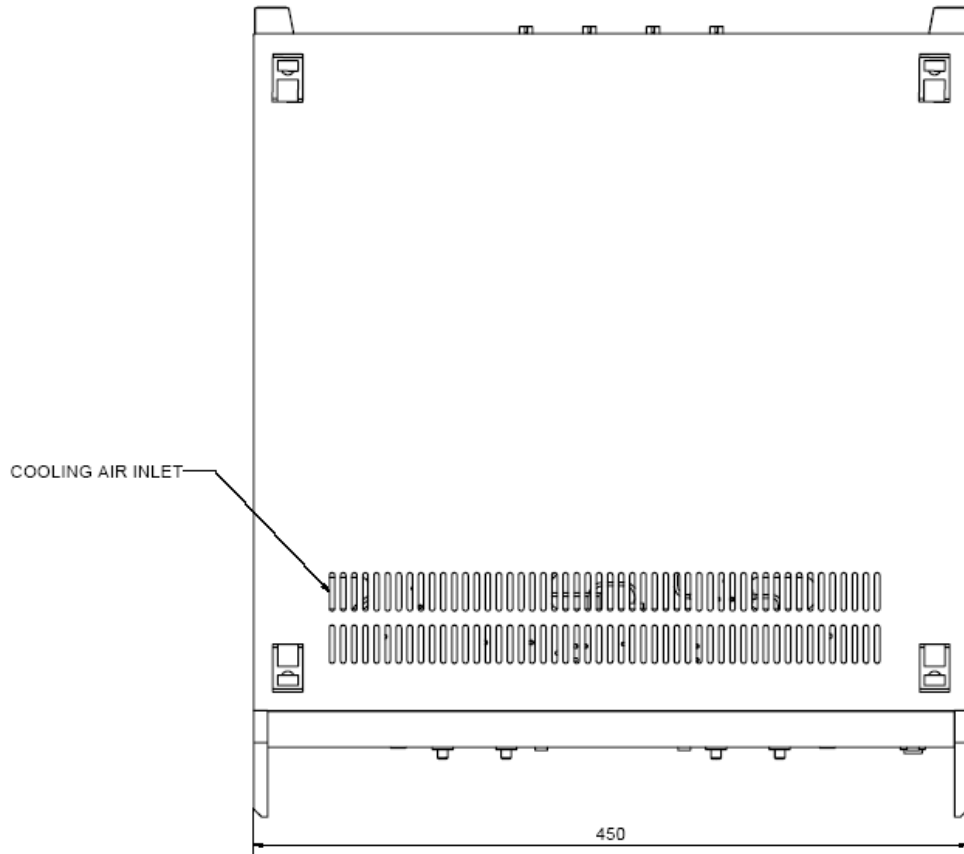

FEC-01 top and front panel view


FEC-02 top and front panel view


FEC-01 rear panel view

FEC-02 rear panel view



FEC-01 / FEC-02 side panel view



FEC-01 / FEC-02 bottom view