



Features

Use with VT1413C/VT1415A/VT1419A/
VT1422A

120 Ω and 350 Ω Strain Completion
and Excitation

Connections for Quarter, Half, and Full
Bridges

Requires an Input SCP to Make Strain
Gage Measurements

120 Ω and 350 Ω Strain Completion and Excitation SCPs

Overview

The VT1506A and VT1507A 8-channel Strain Completion and Excitation SCPs provide strain completion and excitation voltages for 120 Ω and 350 Ω strain bridges. Connections can be made for quarter-bridge, half-bridge, and full-bridge strain gage measurements.

Two SCPs are required to make strain gage measurements. The VT1506A or VT1507A SCP provide the excitation signals and bridge connections. The other SCP, the "sense" SCP, makes the measurement connections (e.g., VT1501A, VT1502A, VT1503A, VT1508A, or VT1509A).

The VT1506A or VT1507A supply the bridge excitation voltage for all bridge configurations. In quarter-bridge and half-bridge configurations, the VT1506A or VT1507A supplies the strain completion circuitry.

Use the VT1506A or VT1507A with the following VXI modules:

Model	Description
VT1413C	64-channel Scanning A/D Converter
VT1415A	Algorithmic Closed Loop Controller
VT1419A	Multifunction Measurement and Control Module
VT1422A	Remote Channel Multifunction DAC

Refer to the VXI Technology Website for recent product updates, if applicable.

Specifications

Excitation Voltage

Accuracy: 3.9000 V nominal $\pm 512 \mu\text{V}$
(90 day) 23 $^{\circ}\text{C} \pm 1^{\circ}\text{C}$ with *CAL
done after 1 hr warm-up.
Measured with the VT1501A
Direct Input SCP.

Temp coefficient: 39 $\mu\text{V}/^{\circ}\text{C}$

Noise (3 σ)
A/D filter off: 450 μV
A/D filter on: 366 μV

120 Ω and 350 Ω Strain Completion and Excitation SCPs

Completion Resistors

Power:	0.125 W @ 125 °C
Tolerance:	0.05%
TCR:	± 5 ppm/°C

Offsets

Bridge offsets	
Quarter bridge:	± 1 °C of tare cal
Offset:	± 40 μ V

System Strain Accuracies

Gain + offset error:	40 $\mu\epsilon$
Noise error	
A/D filter off:	27 $\mu\epsilon$
A/D filter on:	20 $\mu\epsilon$

Current Requirements (Amps)

	5 V typ	5 V max	24 V typ	24 V max	-24 V typ	-24 V max
VT1506A:	0.28	0.28	0.026	0.032	0.023	0.027
VT1507A:	0.09	0.09	0.026	0.032	0.023	0.027

Detailed specifications can be obtained in the VT1506A and VT1507A manual - www.vxitech.com

Ordering Information

VT1506A/1507A

VT1506A	8-channel 120 Ω Strain Completion and Excitation SCP
VT1507A	8-channel 350 Ω Strain Completion and Excitation SCP