STI Vibration Monitoring Inc.

Instructions for the CMCP-TKBC Bias Checker

Kit Includes: Voltage Test Unit (Bias Checker), Smart Charger, BNC to BNC Cable, BNC to Test Clip Adapter, plus Storage Pouch.

Bias Checker Overview

Selector Switch

"**B-Pow**" On:	Both BNC "A" and BNC "B" are powered by separate Constant Current Diodes (CCD's)
"Off" Middle Position:	BNC "A" powered, BNC "B" unpowered, read-out BNC "B" Vdc only
"**A+B**" On:	Connects BNC "A" and BNC "B"

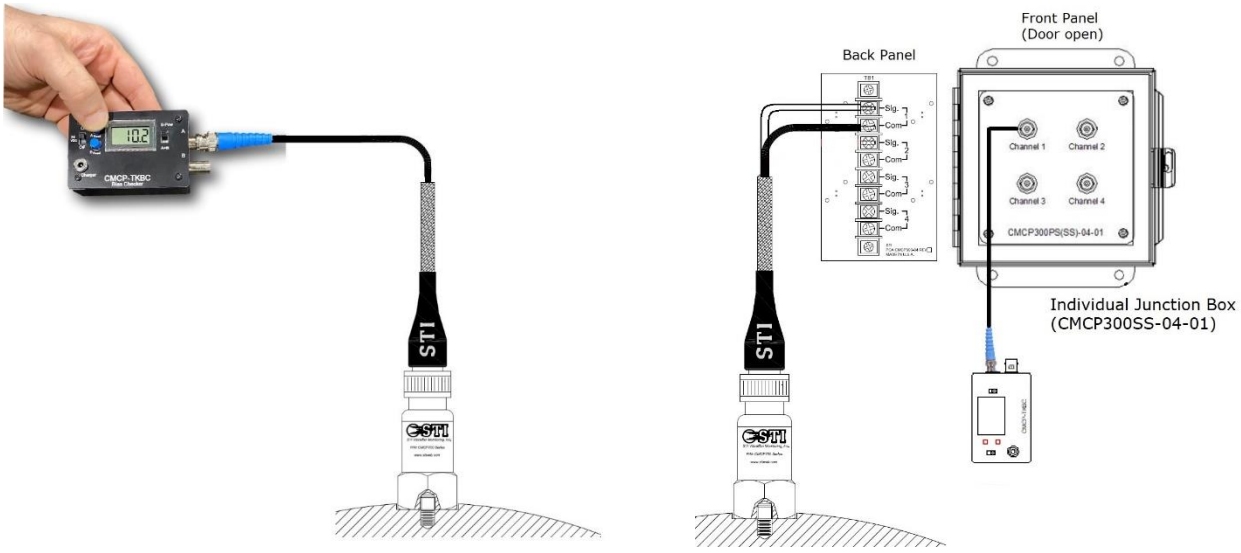
Quick Battery Check:

1.) Turn Power On (with nothing connected).
2.) Set Selector Switch to the middle Position (Off).
3.) Press Momentary Push-Button $A_{Read.}$
4.) Read out Battery Voltage on the CMCP-TKBC Display (+24 Vdc).

Accelerometer Test:

Setup for direct Bias Measurements

1.) Connect CMCP-TKBC Bias Checker BNC 'A' to standard Accelerometer.
2.) Turn Power On.
3.) Set Selector Switch to the middle Position (Off).
4.) Press Momentary Push-Button A_{Read} to power the accelerometer.
5.) Read out Bias Voltage on the CMCP-TKBC Display.

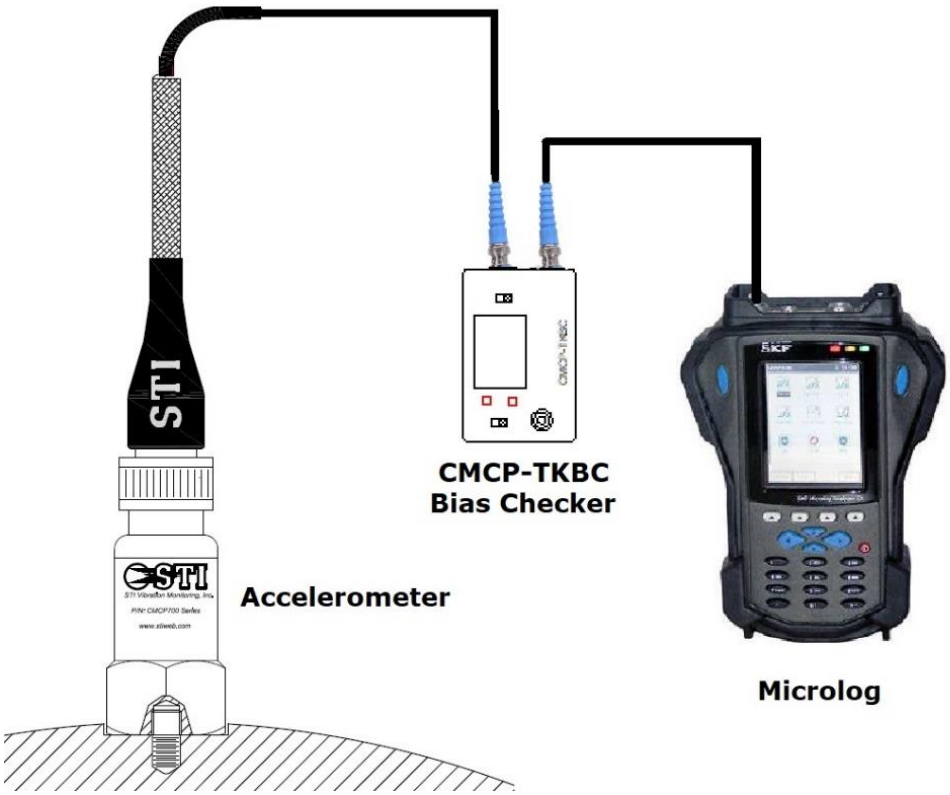


CMCP-TKBC Accelerometer Bias Voltage. Left direct, right via Junction Box

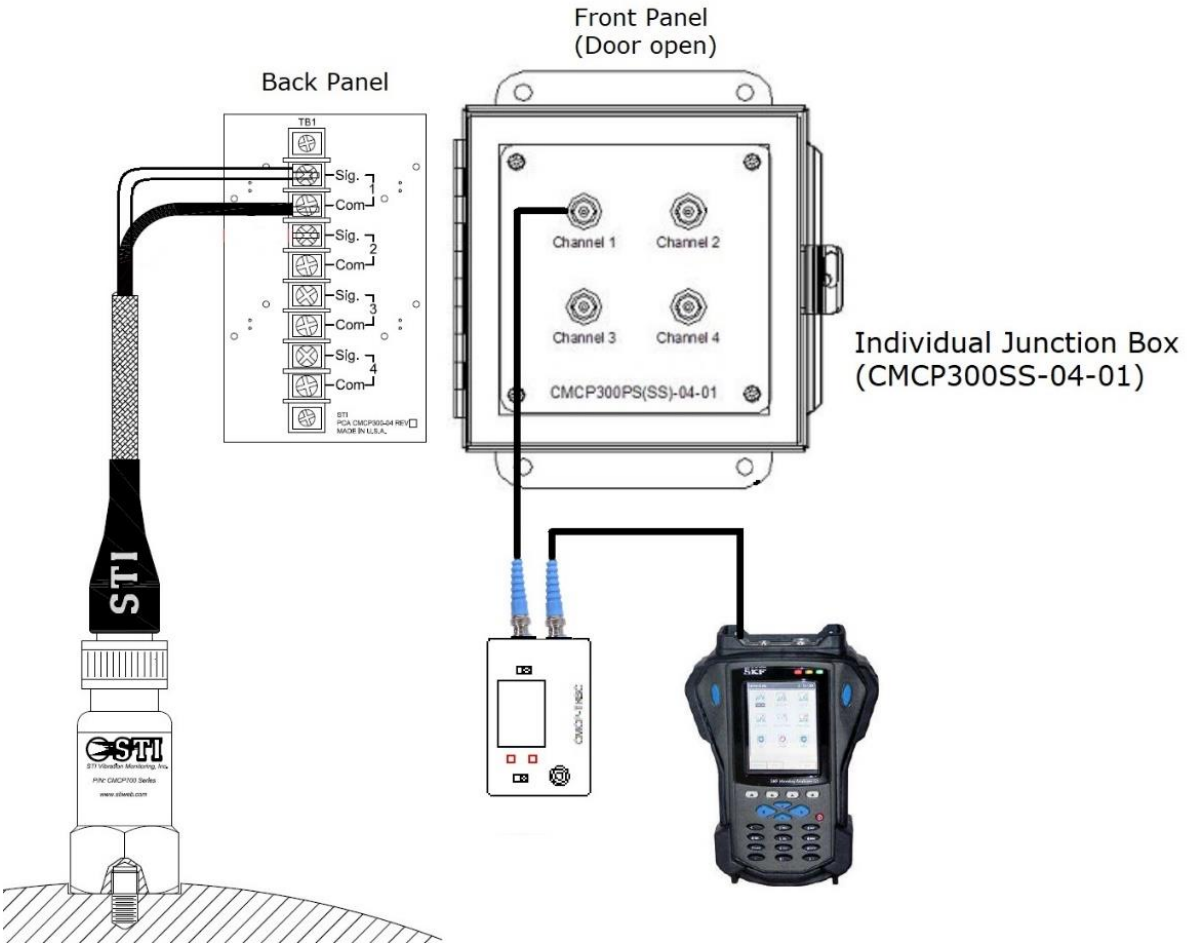
Passthrough Accelerometer Test:

Setup for Bias Measurements with Data Collector

1.) Connect CMCP-TKBC Bias Checker BNC 'A' to standard Accelerometer.
2.) Connect Data Collector to CMCP-TKBC Bias Checker BNC 'B'.
3.) Set Selector Switch to 'A+B' to connect BNC A and B.
4.) The Data Collector is powering the accelerometer.
5.) Press the Momentary Push-Button $A_{Read.}$
6.) Read out the Bias Voltage on the CMCP-TKBC Display.



CMCP-TKBC Accelerometer Bias Voltage with Data Analyzer/Collector



CMCP-TKBC Accelerometer Bias Voltage with Data Analyzer/Collector via Junction Box

Temperature Test:

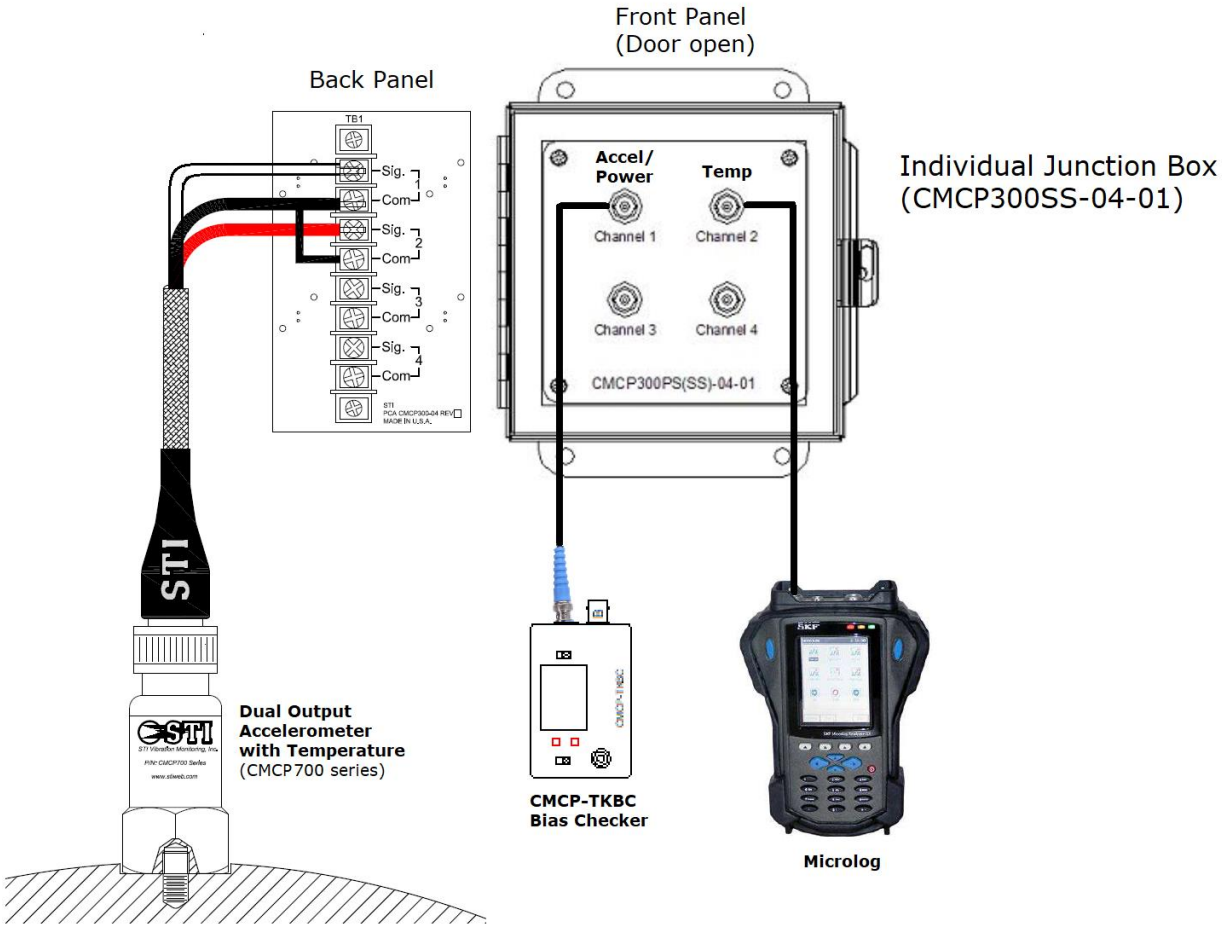
Setup for direct Temperature Measurements

1.) Connect CMCP-TKBC Bias Checker BNC 'A' to Accel/Power Signal of Dual Output Acceleration with Temperature Sensor (CMCP700 series).
2.) Connect CMCP-TKBC Bias Checker BNC 'B' to Temperature Sensor Signal.
3.) Turn Power On.
4.) Set Selector Switch to the middle Position (Off).
5.) Press the Momentary Push-Button $A_{Read.}$
6.) Read out the Bias Voltage on the CMCP-TKBC Display.
7.) Press the Momentary Push-Button $B_{Read.}$
8.) Read out the Voltage representing the Temperature (0-1V) on the CMCP-TKBC Display.

Application Examples

Measurements with Data Analyzers/ Collectors (Microlog)

Generally, Dual-Parameter Sensors (Acceleration and Temperature) are not recommended for use with the Microlog. When performing process measurements (like Temperature) the Microlog disables the power to the sensor, making it difficult to collect temperature data for example from a Junction Box (CMCP300). In case of the employment of dual parameter sensor, the acceleration can be put on channel 1 and the temperature on channel 2, -the common is shared (jumpered). For acceleration measurements the Microlog is simply connected to the first channel (BNC). For the temperature measurement the **CMCP-TKBC** is connected to channel 1 to power the dual-parameter sensor and the Microlog is connected to channel 2 to collect the temperature measurements.



Shown above: CMCP-TKBC Bias Checker and Microlog connected to Junction Box for Temperature measurements from a Dual Parameter Sensor.

Quick Test Set-up Table:

#	Test	Push-Buttons		Selector Switch
		A_{Read}	B_{Read}	
1	**Accelerometer Test**	Press	-	Off
2	**Passthrough (to Data Collector)**	Press	-	A+B
3	**Two Accelerometer Test** (X&Y or Vertical & Horizontal)	First Press	Then Press	B-Pow
4	**Dual Output Accelerometer with Temperature, Accel Power/ Signal** (STI CMCP700 series: CMCP785T, CMCP786T)	First Press	Then Press	Off
5	**Dual Output Accelerometer with Temperature, Accel & Temp Power/ Signal** (Wilcoxon: 797T-1, 793T-3)	First Press	Then Press	B-Pow