# Process Calibrator + Simulator + Function Generator TEX-CAL 934

The TEX-CAL 934 multi-function calibrator meets all of your process test and benchtop calibration needs.

- SOURCE calibration voltages and currents in a variety of ranges, time varying signals including a user programmable waveform, pulse waveforms, DTMF tones for sound applications, and Auto-Step/Auto-Ramp for mA, V and temperature.
- **SIMULATE** 4-20mA transmitter, 11 different thermocouples, electronic loads (max. 30V, 20mA), and almost any real world signal with the programmable arbitrary waveform generator (0.3 20K Hz).
- MEASURE current (mA), voltage (mV, V) and temperature (oC, oF, with programmable cold junction compensation), specific process loop features include selectable 250Ω HART resistor, measure simultaneously with 24V loop supply.
- DOCUMENT using supplied software, map 4-20mA to Engineering Units, includes data logging for source and measurement.



#### **Other Features Include:**

- Protective Cover with Stand
- Battery Powered (rechargeable)
- · Dot Matrix LCD with Backlight
- Programming Software
- Carrying Case
- Universal AC adapter
- Standard Test and USB cables
- Software CD and Manual

#### **Available From:**

**Texmate Inc.**1934 Kellogg Ave.
Carlsbad, CA 92008 USA **1-760-598-9899** 

General Specifications:			
AC Power Adaptor	AC 110V or AC 220V, 50/60Hz input. DC 15V / 0.5A output		
Dimension	214.0 (L) x 98.7 (W) x 56.0 (H) mm 8.4" (L) x 3.9" (W) x 2.2" (H)		
Weight	650g / 22.9oz (Batteries included)		
Operation Environment	0 ° ~ 50° C, 85% RH		
Storage Environment	-20 ° ~ 60° C, 75% RH		

Shop

# **Electrical Specifications:** 23± 5° C, 10 minutes after turning on the power

# mA (source) Vopen > 24V

Range	Resolution	Reading Accuracy
0.005mA to 4mA	1µA	±0.03% ±5 digits
4mA to 20mA	1μΑ	±0.03% ±3 digits
20mA to 24mA	1μΑ	±0.03% ±5 digits

#### mA (measure)

Range	Resolution	Reading Accuracy
-4mA to -0.005mA		±0.03% ±10 digits
0.005mA to 4mA	1µA	±0.03% ±5 digits
4mA to 20mA		±0.03% ±3 digits
20mA to 24mA		±0.03% ±5 digits

# Temperature, Thermocouples: K,J,E,T,R,S,N,L,U,B,C and mV

Source and measure, 0.1°C and 0.1°F resolution Internal cold juntion compensation Detailed temerature range and accuracy, please refer to data sheet

# **Voltage Peak to Peak for Sine Wave**

Vpp, 0.3~20KHz, 50% duty cycle, sine wave, 0V offset

Range (V)	Resolution	Reading Accuracy
0.1V to 20V	0.001V	5% ± 0.3V

#### **Voltage Peak to Peak**

Vpp, 0.3~20KHz, 50% duty cycle, square wave, 0V offset

Range (V)	Resolution	Reading Accuracy	
0.1V to 20V	0.001V	6% ± 0.4V	

# V (source) Max. load 1mA, short circuit protection < 100mA

Range	Resolution	Reading Accuracy	
0.005V to 10V	0.0041/	±0.03% ±5 digits	
10V to 15V	0.001V		

#### V (measure)

Range	Resolution	Reading Accuracy
-3V to -0.005V		±0.03% ±10 digits
0.005V to 10V	0.001V	±0.03% ±5 digits
10V to 24V		±0.03% ±5 digits

# **Frequency**

source, 10Vpp, 0V offset, square wave, duty cycle = 50%

Range (HZ)	Input Resolution	Accuracy
0.3 to 99.999	0.1Hz	0.002Hz
10.00 to 999.99		0.02Hz
1000.0 to 9999.9		0.2Hz
10000 to 20000	1Hz	2Hz

#### **Voltage Peak to Peak for No-Sine Wave**

Vpp, 0.3~20KHz, 0V offset

Range (V)	Resolution	Reading Accuracy	
0.1V to 20V	0.001V	6% ± 0.4V	

# **Voltage Offset** Maximum Vpp < 20V

Range (V)	Resolution	Reading Accuracy	
0.1V to 20V	0.001V	6% ± 0.4V	

#### **Duty Cycle** Maximum Vpp < 20V

Range	Resolution	Vpp Raise Time	Vpp Fall Time
0 to 100% 1%		10μS max.	15μS max.
0 10 100 /6	1 /0	5µS typical	7.5µS typical

# **DTMF (Hz, %, Phase angle, Vpp and Offset)**

Range, resolution and accuracy, please refer to data sheet.

# Pulse square wave, 10 Vpp, offset -5V~+5V

Range	Resolution	Vpp Raise Time	Vpp Fall Time
3.0μS to 9999.9μS	0.1µS	10μS max. 5μS typical	15µS max. 7.5µS typical
10.000mS to 99.999mS	0.001mS		
100.00mS to 999.99mS	0.01mS		7.5µ3 typical