



## Description

A multi-purpose handheld test instrument that can be used as an adjustable current load, adjustable power supply, or precision current source. The 1077 is commonly used for the testing and simulation of milliamp transducer systems. Compact and rugged design make the 1077 ideal for use in both the lab and field.

With a protective rubber cover to increase durability, the instrument can withstand arduous use and is well suited to process control applications.

### Operating Modes:

As an **adjustable current load** (simulating the transducer) on the line, the 1077 will draw up to 100 mA. The required current is set by the front panel controls.

As an **adjustable power supply** (14 V to 40 V) with accurate measurement and display of the current drawn from the circuit.

As a **precision current source** with 14 V to 40 V maximum (adjustable) drive capacity. The 1077 will source the set current up to 100 mA to the loop.

**Safety terminals:** Fitted as standard and fully compatible with 4 mm shrouded plugs, as well as standard plugs, bare wires, and spade terminals.

**Portable operation:** Rechargeable batteries and mains charger are supplied with the unit as standard. Complete recharge time is 10 to 12 hours although sufficient charge for a few hours operation can be obtained with only 30 minutes charge. Full charge allows 10 hours typical use. The battery level is monitored by an LED indicator on the top of the unit.

**Added protection:** The 1077 comes fitted with an ergonomic rubber cover providing increased protection and durability. It has a textured grip for comfortable handling and openings at the top and bottom to allow access to the battery meter and a position to place labels. It is easy to remove if the user prefers a stand-alone unit or to house the 1077 in the optional 9027 carry case.

## Features

- 3 operating modes
- Accuracy 0.02 %
- 100 mA source and load
- 24 V line mode
- Variable drive source 14 to 40 V
- Safety terminals
- Removable protective cover
- Supplied with rechargeable batteries
- 10 hours typical use between charges
- Optional carry case





## Technical Specifications

### Current source and load

<b>Output</b> .....	0 to 100 mA in 3 ranges. 0 to 99.99 mA in 10 $\mu$ A steps. 0 to 9.999 mA in 1 $\mu$ A steps. 0 to 999.9 $\mu$ A in 0.1 $\mu$ A steps.
<b>Accuracy</b> .....	$\pm$ (0.02 % of setting + 0.02 % of range + 0.2 $\mu$ A).
<b>Output stability</b> .....	Less than 60 ppm/ $^{\circ}$ C. Less than 25 ppm per hour at constant temperature.
<b>Output noise</b> .....	Less than 15 ppm of full scale.
<b>Drive voltage</b> .....	Adjustable from 14 to 40 V (Source mode).
<b>Drive power</b> .....	2.4 W maximum.
<b>Applied voltage</b> .....	3 V minimum to 40 volts maximum (Load mode).
<b>Voltage limit indicator</b> .....	Provides indication of insufficient drive voltage.

### 24 Volt line simulation

<b>24 V Line simulation</b> .....	Adjustable 14 V to 40 V, 100 mA current limit, maximum output power 2.4 watts.
<b>Display</b> .....	A 3.5 digit (1999 max) LCD display indicating line current.
<b>Measure range</b> .....	0 to 20 mA.
<b>Resolution</b> .....	10 $\mu$ A.
<b>Accuracy</b> .....	0.2 % of reading + 1 count.

## General Specifications

<b>Dimensions</b> .....	200 x 75 x 110 mm (215 x 100 x 120 mm including protective cover).
<b>Weight</b> .....	1.1 kg (1.5 kg including protective cover).
<b>Power supply</b> .....	NiMH rechargeable batteries with external mains recharger (supplied).
<b>Optional extras</b> .....	Carry case. Calibration certificates: Traceable (Factory) and accredited (ISO 17025).
<b>Country of origin</b> .....	UK.

## Ordering Information

1077 .....	<b>TranSim: Milliamp Transducer Simulator</b>
9027 .....	Carry case
C158 .....	Traceable calibration certificate (Factory)
C108 .....	Accredited calibration certificate (ISO 17025)

Due to continuous development Time Electronics reserves the right to change specifications without prior notice.