



# Time Electronics

## 1077 Milliamp Transducer Simulator



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

### 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.

### Three Operating Modes:

- 1) As an adjustable current load (simulating the transducer) on the line, the 1077 will draw up to 100mA from the line. The required current is set by the front panel controls.
- 2) As an adjustable power supply (14V to 40V) with accurate measurement and display of the current drawn from the circuit.
- 3) As a precision current source with 14V to 40V maximum (adjustable) drive capacity. The 1077 will source the set current up to 100mA to the loop.

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

**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 if required. It is easy to remove if the user prefers a stand-alone unit or to house the 1077 in the optional 9027 carry case.

### 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 condition monitored by a meter on the top of the 1077.



# 1077 Specifications

## TECHNICAL SPECIFICATION

### Current Source and Load

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

### 24 Volt Line Simulation

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

## GENERAL SPECIFICATION

Dimensions .....	200 x 75 x 110mm (215 x 100 x 120mm including protective cover).
Weight .....	1.1kg (1.5kg including protective cover).
Power Supply .....	NiMH rechargeable batteries with external mains recharger (supplied). Standard mains voltage is 220–250V, 50/60Hz. 100–125V, 50/60Hz is available but must be specified on ordering.
Optional Extras .....	Carry Case Calibration Certificates – traceable to NPL and UKAS.
Country of Origin .....	UK

## ORDERING INFORMATION

1077 .....	<b>TranSim: Milliamp Transducer Simulator</b>
9027 .....	Leatherette Carry Case
C158 .....	Factory (NPL Traceable) Calibration Certificate
C108 .....	UKAS Calibration Certificate (ISO 17025)

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

Time Electronics Ltd, Unit 11 Sovereign Way, Botany Industrial Estate, Tonbridge, Kent, TN9 1RH. United Kingdom.

T: +44 (0) 1732 355993 F: +44 (0) 1732 770312 E: [mail@timeelectronics.co.uk](mailto:mail@timeelectronics.co.uk)

[www.timeelectronics.com](http://www.timeelectronics.com)

v1d 22/3/11