

# Laboratory shunts

*Five safe and accurate shunt units for teaching and practical work*



## Safety

- Conformity with IEC 1010-1 Cat. III 600 V
- Double insulation
- Connection to safety terminals
- Shockproof case
- Self-extinguishing materials

## Accuracy

- Class of accuracy 0.5
- Very low temperature coefficient
- High long term stability

Current probes, shunts are generally designed to produce ammeters of all ranges, in association with a voltmeter.

This range of five shunts, in insulated cases, combines Safety and Accuracy.

Safety first, as they are perfectly suited to the constraints of Teaching. The student can not possibly be in contact with a live conducting part, provided that the safety precautions are respected.

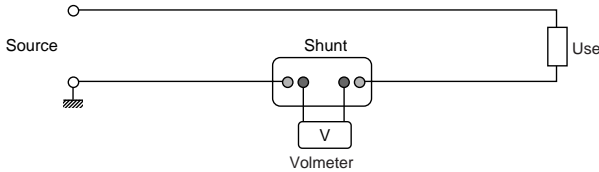
Accuracy next, since the materials used and the quality of manufacture make voltage errors due to temperature variation negligible.

Lastly, the sturdy case, of the same dimensions whatever the range, makes them easy to tidy away.



## LABORATORY SHUNTS

As far as possible, connect the shunt to the «ground» side of the installation. The red terminals are intended for the «current» circuit, and the black terminals for the voltage measurement at the terminals of the shunt.



The reading is done on a voltage measurement instrument - voltmeter, multimeter, or similar - of a range corresponding to the voltage drop of the shunt (100 or 200 mV). This value will be reached when the current flowing in the shunt is equivalent to its nominal range.

To benefit from the high level of safety offered by these shunts, it is essential to associate them with instruments of the same category. The measurement instrument must be in accordance with IEC 1010-1 and offer at least the same levels of safety. Similarly, the connection must be done with safety leads which conform to IEC 1010-2-031, and are compatible with the voltage and the current in question.

### Principal specifications

|  |   |              |                                      |               |               |
|--|---|--------------|--------------------------------------|---------------|---------------|
| Nominal range (I <sub>n</sub> ) and voltage drop at I <sub>n</sub> | 1 A / 100 mV<br>or<br>2 A / 200 mV  | 5 A / 100 mV | 10 A / 100 mV<br>or<br>20 A / 200 mV | 20 A / 100 mV | 30 A / 100 mV |
| Permitted overloads  | permanent: 1.0 I <sub>n</sub><br>2 minutes : 1.2 I <sub>n</sub><br>20 seconds: 2 I <sub>n</sub><br>5 seconds: 10 I <sub>n</sub> |              |                                      |               |               |
| Accuracy   | ± 0.5% of I <sub>n</sub>  |              |                                      |               |               |
| Temperature coefficient  | < 20 ppm/K  |              |                                      |               |               |
| Safety standard  | IEC 1010-1, overvoltage category III for 600 V, degree of pollution 2, double isolation <input type="checkbox"/>                |              |                                      |               |               |
| Case   | self-extinguishing polycarbonate V0 in accordance with UL 94  |              |                                      |               |               |
| Cover  | self-extinguishing resin V0 in accordance with UL 94  |              |                                      |               |               |
| Connection   | on red and black safety terminals Ø 4 mm, for safety terminals IEC 1010-2-031 Cat III   |              |                                      |               |               |
| Conditions of use  | + 5...+ 40°C, RH ≤ 80%, altitude ≤ 2000 m   |              |                                      |               |               |
| Dimensions   | 152 x 95 x 55 mm  |              |                                      |               |               |
| Weight   | approximately 420 g, whatever the range   |              |                                      |               |               |

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### TO ORDER

Use the references below.

|              |                                       |                  |
|--------------|---------------------------------------|------------------|
| <b>Shunt</b> | <b>1 A - 100 mV or 2 A - 200 mV</b>   | ref. P01.1652.21 |
| <b>Shunt</b> | <b>5 A - 100 mV</b>                   | ref. P01.1652.22 |
| <b>Shunt</b> | <b>10 A - 100 mV or 20 A - 200 mV</b> | ref. P01.1652.23 |
| <b>Shunt</b> | <b>20 A - 100 mV</b>                  | ref. P01.1652.24 |
| <b>Shunt</b> | <b>30 A - 100 mV</b>                  | ref. P01.1652.25 |

Accessories: sets of 10 safety leads 36 A, in accordance with IEC 1010-2-031 Cat. III 1000 V

| Connector                                     | Length 1 m        | Length 2 m        |
|---|-------------------|-------------------|
| Red male banana plugs, with rear connection   | ref. P01.2950.63A | ref. P01.2950.71A |
| Black male banana plugs, with rear connection | ref. P01.2950.64A | ref. P01.2950.72A |

These references are only a selection. Many other models available. Please ask for details.

Your distributor