

AC Current Source v1 ACS043

DESCRIPTION

The A.P.C.S. AC CURRENT SOURCE ACS043 provides a very useful, precision AC current source with ample power for rapid testing of AC indicating and measuring instruments, transducers and trip relays. Its compact size and light weight make this calibrator ideal for use in the field or moving about the plant workplace.

The ACS043 has been designed for maximum accuracy and ease of handling. It features a 3 1/2 digit, 14mm high, LED indicator which provides direct read-out of the AC current. A flick of a switch provides either 1A, 5A or 10A load independent output and the instrument under test can be quickly checked for linearity with another switch which provides 10%, 50% and 100% of range.

There is also a continuously variable setting for easily adjusting 0 - 100% of range. The 0.2% accuracy is more than adequate in most applications.

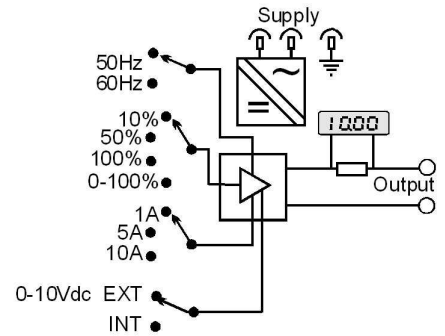
Where greater accuracy may be required on a standards laboratory bench, a reference ammeter could be connected in series with the instrument under test.

The ACS043 has a switch selectable output frequency of 50 or 60Hz. For remote control or automated tests a 0-10V signal is applied to the terminals on the back and the front INT/EXT switch is set to EXT.



General Specifications

Output:	0 to 10Aac. 10A/1.5V output is limited to 5 minutes. 5A/1.5V continuous output.
Output drive:	1.5V rms
Current ranges:	0 – 1A, 0 – 5A, 0 – 10A.
Output control:	3 fixed: 10%, 50% and 100% of range. 1 variable: 0 to 100% of range.
Output monitor:	DPM, 3 1/2 digit LED, 10mA resolution.
Output accuracy:	±0.2% of 10A (±20mA).
Frequency:	50Hz/60Hz (sine).
Frequency stability:	Better than 0.01%.
Amplitude instability:	Short term - less than 0.1% per hour. Long term - less than 1% per six months.
Temp. Coefficient:	Less than 0.02% per °C.
Line regulation:	Less than ± 50ppm for a 10% line voltage variation.
Load regulation:	-0.2% / V.
Distortion:	Less than 0.1%.
Operating temperature:	0 to 40°C.
Storage temperature:	-20 to 70°C.
Relative humidity:	0 to 95% RH.
Input Power:	80-260V, 50/60Hz, 50VA.
Size:	170 x 170 x 250 mm.
Weight:	2.2 kg.
Option:	External 0-10V input for output control.
Power Input:	Fused AC inlet IEC320-1
Fuse rating:	1A M205, slow blow.



Front Controls

1. **Digital Indicator** displays the output current. Load must be connected to output terminals.
2. **Three position toggle 1A / 5A / 10A** selects the output current range. (1A / 5A / 10A).
3. **4-position rotary selector** is for for pre-set calibration points. Positions 1 to 3 can be trimmed by using front accessible trim adjustments. Position 4 selects a potentiometer for 0-100% of range.
4. **3-points calibration trim adjustments** (15 turn) selected using 4-position rotary selector.
5. **Continuous adjustment** or 10-turn potentiometer for 0-100% of range.
6. **Output frequency selection** 50Hz or 60Hz .
7. **Output terminals** – 4mm diameter socket or wire clamp
8. **Phase lock switch.** Phase lock is used where AC-powered devices are tested/calibrated. The “ LOCK “ position will provide better stability.
9. **INT/EXT toggle** for front controls or external rear signal.

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