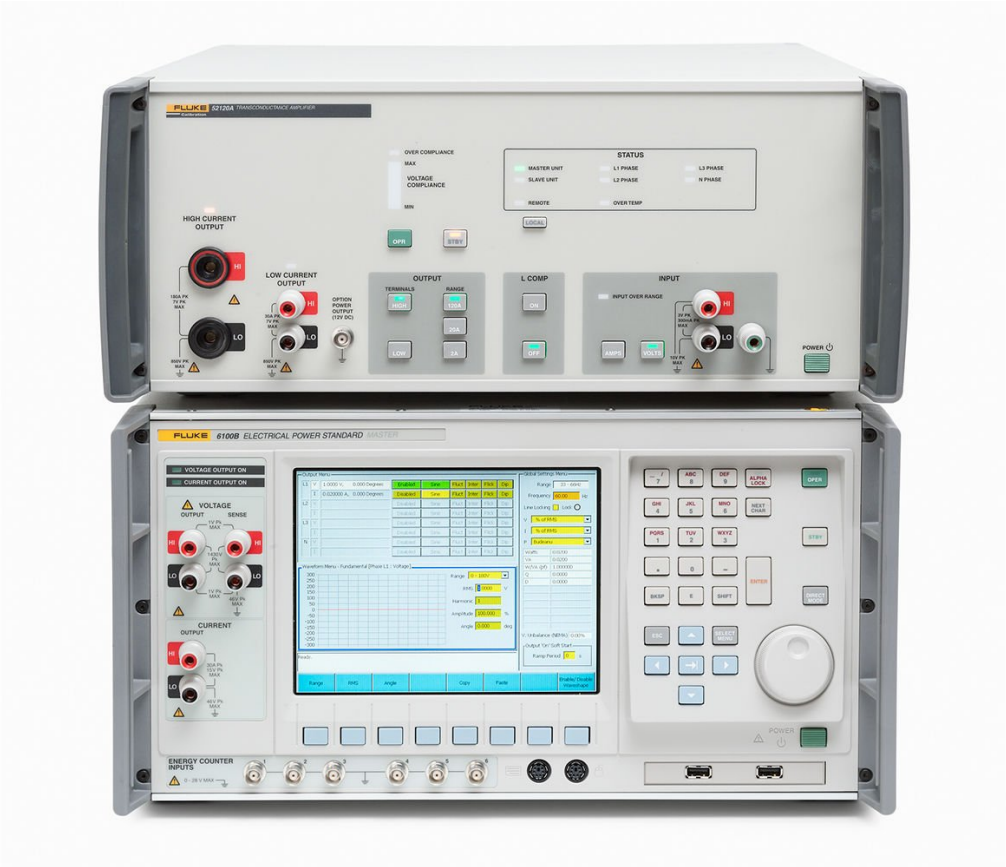
TECHNICAL DATA

# 52120A Transconductance Amplifier




## Key features

- Supply DC current up to 100 amps and AC current up to 120 amps, with accuracies to 140 ppm.
- Generate 3,000 or 6,000 amps using accessory coils, up to 360 amps with three 52120As are connected in parallel.
- Frequency: DC to 10 kHz, a burden voltage (compliance): 4.5 V @ 120 A, inductive drive capability: 1 mH load.
- Allows for parallel operation with 2 or 3 amplifiers up to 360 A in a single phase, or up to 10 amplifiers and 1200 A in standalone mode.
- GPIB remote operation

## Product overview: 52120A Transconductance Amplifier

The 52120A is designed for users whose ability to address their calibration workload may be limited by the output current, accuracy and drive capability of their present test equipment, including:

- Calibration professionals in a calibration/standards lab or an electrical utility
- Manufacturers of power/energy instrumentation and meters, power quality analyzers or power converters
- Users of electrical test and measurement equipment

The 52120A operates as a transconductance amplifier with:

- 5522A/5502A/5520A/5500A Multi-Product Calibrators

- 5730A*/5700A/5720A Multifunction Calibrator
- 6105A*/6100B* Electrical Power Standard
- 5080A Multi-Product Calibrator
- 9100 Universal Calibration System
- Any calibrator, signal generator or power supply capable of sourcing 2 V or 200 mA, dc or ac

*Special closed-loop operating mode

You may also operate your 52120A in closed-loop mode, seamlessly communicating with your Fluke Calibration 6105A or 6100B Electrical Power Standard to deliver enhanced 52120A accuracy.

## Specifications: 52120A Transconductance Amplifier

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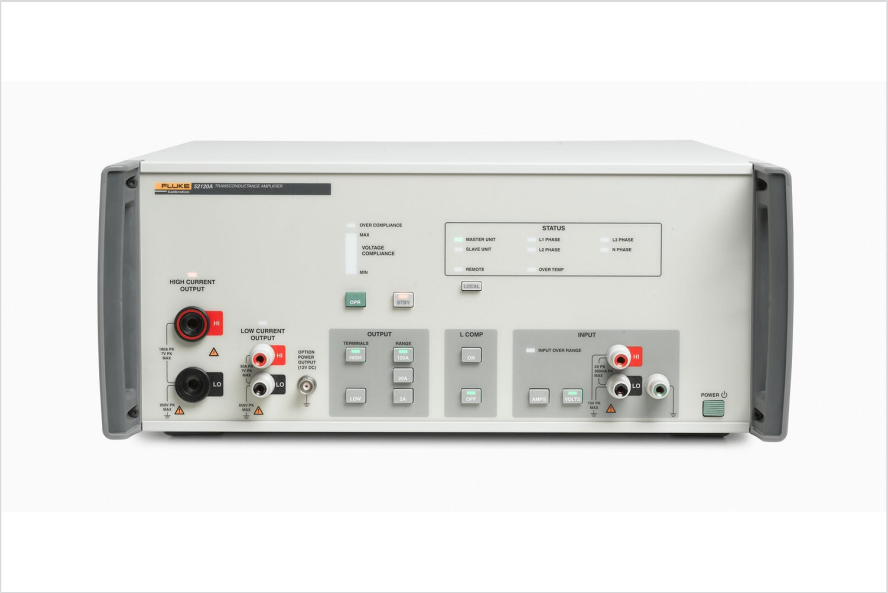
|---|---|
| **Operating limits** | |
| **Output ranges** | 2 A, 20 A, 120 A (100 A dc) |
| **Input current range** | 200 mA, 200 mA, 120 mA (100 mA dc) |
| **Current gain** | 10, 100, 1000 |
| **Input voltage range** | 2 V, 2 V, 1.2 V (1.0 V dc) |
| **Transconductance** | 1,10,100 Siemens |
| **Frequency** | To 10 kHz |
| **Maximum output compliance voltage** | 4.5 Vrms (6.4 Vpeak) |
| **Inductive drive capability:** | 1 mH load |
| **Output isolation, current terminal to earth** | 600 Vrms, 850 Vpeak, dc to 850 Hz |
| **Performance specifications** | |
| **AC accuracy, closed loop with 6105A** | To 140 ppm |
| **DC accuracy, standalone** | To 160 ppm |
| **AC accuracy, standalone** | To 350 ppm |
| **Phase angle accuracy** | 0.006° |
| **Load dependent phase angle shift** | <0.001° @ 60 Hz |
| **General specifications** | |
| **Input line voltage range** | 100 V to 240 V with up to ±10 % fluctuations |
| **Transient overvoltage** | Impulse withstand (overvoltage); Category II of IEC 60364-4-443 |
| **Frequency** | 47 Hz to 63 Hz |
| **Maximum consumption** | < 1500 VA |
| **Calibration Documentation** | Report of calibration with data included; 17025 accredited report optional |
| **Dimensions with feet (H x W x L)** | 192 mm x 432 mm x 645 mm (7.6 inches x 17 inches x 25.5 inches) |

| | |
|---|---|
| **Dimensions without feet (H x W x L)** | 178 mm x 432 mm x 645 mm (7 inches x 17 inches x 25.5 inches) |
| **Weight** | 25 kg (54 lb.) |
| **Design standards and compliance** | Designed to EN 61010-1: 2010, CAN/CSA 22.2 No 61010.1-04, ANSI/UL 61010-1:2004, EN 61326-1:2006 CE marked, CSA listed |
| **Operating temperature** | 5 °C to 35 °C |
| **Calibration temperature range** | 16 °C to 30 °C |
| **Warm up time** | 1 hour |
| **Safe operating max. relative humidity (non-condensing)** | <80 % 5 °C to 31 °C ramping linearly down to 50 % at 35 °C |
| **Operating altitude** | 0 m to 2,500 m |
| **Shock and vibration** | MIL-PRF-28800F class 3 |
| **Specification confidence level** | 99% |

# Ordering information




**52120A**

Transconductance Amplifier

**Fluke**. *Keeping your world up and running.®*

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