



7054: 0 to 120V / 0.01mA to 750mA (90W max.) 7055: 0 to 250V / 0.01mA to 375mA (94W max.)

Standard Features:

- Linear regulation for the best performance
- True Analog controls for ease of use
- S-Lock function instantly lock settings
- V-Span function customise the voltage range
- Low current range and current meter averaging
- DC output switches and "view limits" button
- Selectable remote sense terminals

7054P and 7055P Programmable Versions

Remote Control Features:

- Full digital remote control and readback
- RS-232 or USB (from rear of bench console)
- Interfaces are opto-isolated from outputs
- Analog remote control of voltage and current

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TECHNICAL SPECIFICATION (applies to 7054, 7054P, 7055, 7055P)

OUTPUT

Voltage/Current Ranges

7054 - 0 to 120V / 0.01mA to 750mA (90W max.) 7055 - 0 to 250V / 0.01mA to 375mA (94W max.)

Note: Actual maxima for voltage and current are typically 1% greater than the figures given above except for the voltage control on the 7055 which is limited to 250.0V

Output Setting & Control

Voltage Setting: By coarse and fine controls.

Current Setting: By single logarithmic control.

Low Current Range: Reduces max. current to 75mA and increases resolution to 0.01mA.

Output Mode: Constant voltage or constant current with automatic cross-over. CC indicator lit in constant current mode.

Output Switch: Electronic, non isolating. Preset voltage & current limit displayed when Output is off. Output rise time no load <20ms.

View Settings: With the output On, the meters show actual voltage and current. The preset levels can be viewed and adjusted at any time by pressing the View Settings button.

V-Span (Voltage Span Control)

The voltage adjustment range can be controlled by digital setting of the end-stop values of the coarse voltage control to any desired values. The range for Vmax is 1V to 120V or 250V depending on model. The range for Vmin is 0 to (Vmax – 1V).

S-Lock (Settings Lock)

Voltage and current settings can be locked by a single button press. Lock accuracy is equal to the meter accuracy (see Meter Specification).

Output Performance

Ripple & Noise: Normal mode voltage: <2mV rms and 10mV p-p. Normal mode current: <10uA rms ; <1uA rms on 75mA range. Common mode current: <20uA rms

Load Regulation: Voltage <0.01% + 10mV. Current - typically $0.01\% + 50\mu$ A.

Line Regulation: Voltage <0.01% + 10mV for 10% line change. Current $<0.01\% + 50\mu$ A. for 10% line change.

Transient Response: <250µs to within 50mV of setting for a 90% load change.

Temp. Coefficient: Voltage: typically <(50ppm + 2mV)/°C

Current: typically <(100ppm + 0.1mA)/°C; <(100ppm + 0.01mA)/°C on 75mA range.

Output Protection

Output Protection: Output will withstand forward voltages of up to rated output voltage. Reverse protection by diode clamp for currents to 3A.

OVP and OCP Trips: Voltage or current measured to be in excess of 105% of the rated maximum will cause the output to trip off.

Over-temperature: Output trips off for over-temperature.

Safety Interlocks: Operations that could cause an unexpected change in voltage or current settings are interlocked with the output switch.

Output Connections

Output Terminals: Universal 4mm safety binding posts on 19mm (0.75") spacing.

Terminals can accept fixed shroud 4mm plugs, standard 4mm plugs, fork terminals and bare wires.

Remote Sense

Sense Selection: Voltage sensing can be selected as Local or Remote by front panel switch. Sense Terminals: Sprung loaded screw-less terminals.

METER SPECIFICATIONS

Display Type: Dual 4-digit meters, 10mm (0.39") LED.

Voltage Meter Resolution: 100mV Accuracy: ± (0.1% of reading + 100mV)

Current Meter

Resolution: 0.1mA (0.01mA on 75mA range) Accuracy: \pm (0.3% + 0.3mA); \pm (0.3% + 0.03mA) on 75mA range Meter Damping: Normally 20ms, switchable to 2 sec for averaging rapidly varying loads.

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7054P & 7055P Remote Control Specifications

TECHNICAL SPECIFICATION - REMOTE CONTROL (7054P and 7055P) 7054P - 0 to 120V at 0 to 750mA, programmable. 7055P - 0 to 250V at 0 to 360mA, programmable. Digital Bus Interfaces - RS-232 or USB Full remote control and read-back using RS-232 or USB. All interfaces are at ground potential and opto-isolated from the outputs. **RS-232** Standard 9-pin D connector. Baud rate 9,600 max. USB Standard USB hardware connection. Operates as a virtual COM port. **Digital Programming Performance** Voltage Setting Setting Resolution: 10mV Setting Accuracy: ± (0.05% +50mV) Current Settina Setting Resolution: 0.1mA (0.01mA on 75mA range) Setting Accuracy: ± (0.3% +0.1mA); ± (0.3% +0.01mA) on 75mA range Programming Speed Command Delay: Typically <25ms (this must be added to any of the figures below) Voltage Up Time: Typically <45ms to 1% Voltage Down Time: Typically <200ms to 1% (full load); typically <500ms to 1% (no load) Voltage Readback Resolution: 10mV Accuracy: ± (0.1% +50mV) Current Readback Resolution: 0.1mA (0.01mA on 75mA range) Accuracy: ± (0.3% +0.1mA); ± (0.3% +0.01mA) on 75mA range Variable OVP and OCP Protection Measure-and-compare over-voltage and over-current protection are implemented in firmware and can be set via the remote interfaces only. Output trips Off for OVP and OCP conditions. Setting resolution: 100mV and 0.1mA. Response time: typically 500ms **Analog Remote Control** Isolated analog voltage control of voltage and current. Non-isolated analog control outputs are also provided to enable easy parallel connection of multiple units in a master-slave configuration. Control Inputs (Isolated) Reference Point: Control input voltages are referenced to their own return points. Set Voltage Input: OV to 10V sets 0 to 100% of rated output (e.g. 0 to 120V for 7054P). Alternative scaling of 0V to 5V (using internal link). Set Current Input: 0V to 10V sets 0 to 100% of rated output (0 to 750mA for 7054P). Alternative scaling of 0V to 5V (using internal link). Set Voltage Accuracy: ± (0.3% +100mV); Input Impedance = 10kW Set Current Accuracy: ± (0.5% +0.5mA); Input Impedance = 10kW Control Outputs (Non-isolated) Reference Point: Control output voltages are referenced to the positive output terminal. Voltage Output: 0 to 100% of rated output voltage generates 0V to 5V. Current Output: 0 to 100% of rated output current generates 0V to 5V. Voltage Out Accuracy: ± (0.3% +100mV); Output Impedance = 125W Current Out Accuracy: ± (0.5% +0.5mA); Output Impedance = 125W Note that Analog control of current can not be used with the low current range selected. GENERAL SPECIFICATION and ORDERING INFORMATION **Module Widths** 7054, 7054P, 7055 and 7055P: 150mm (Both modules can only be fitted in the CalBench primary console) **Ordering Information** 7054: 120V DC 750mA Adjustable Power Supply 7054P: 120V DC 750mA Programmable Power Supply - RS-232 or USB

7055: 250V DC 375mA Adjustable Power Supply 7055P: 250V DC 375mA Programmable Power Supply - RS-232 or USB

Due to continuous development Time Electronics reserve the right to change specifications without prior notic

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