



Voltage, current and over-voltage protection (OVP) continuously adjustable from 0 to full output via

- Front panel controls (ten turn)
- Remote programming
- Resistance programming (not OVP)
- IEEE-488/RS232-Interface (optional)

### M5C

### M7C

Voltage (V <sub>DC</sub> )	0-15	0-40	0-60	0-160
Current (A <sub>DC</sub> )	0-50	0-30	0-20	0-8

Voltage (V <sub>DC</sub> )	0-5	0-8	0-15	0-30	0-40	0-60	0-160
Current (A <sub>DC</sub> )	0-130	0-100	0-80	0-70	0-50	0-30	0-15

## Features

- **Precision series-pass regulation with Thyristor preregulation**
- For normal laboratory use as well as complex system applications
- Constant Voltage Mode / Constant Current Mode with automatic crossover and mode indicator
- Fast regulation, low ripple, high precision
- Short circuit protection, output floating
- Remote sensing
- No turn-on/turn-off transients
- Softstart (optional)
- Series or parallel operation, Master-Slave operation
- Compact 19" rack, 3 U

**Call for a customer requested solution like other current/voltage-combinations**

## Specifications

- **Constant Voltage Mode (CV)**  
**Voltage output range:** ≤100mV to full output voltage, 10 turn potentiometer  
**Line regulation:** 0,001% or 0,5mV\* (±10% line change)  
**Load regulation:** 0,001% or 0,5mV\* (100% load change)  
**Regulation time:** 50µs (load change from 50% to 100%) within 15mV (30µs within 50mV)  
**Ripple:** ≤ 1mV<sub>rms</sub>, spikes 0,5% typ.  
**Stability:** 0,005% or 1mV\* within 8 hours at const. line, const. temperature, const. load  
**Temperature coefficient:** 0,005% V<sub>max</sub> / °C (0..40°C)  
**Short circuit protection:** Automatic current limitation, adjustable from ≤ 100mA up to C<sub>max</sub>  
**Remote sensing :** Max. line drop 0,5V / output line

- **Constant Current Mode (CC)**  
**Current output range:** ≤ 100mA to full output current, 10 turn potentiometer  
**Line regulation:** 0,05% or 1mA (± 10% line change)  
**Load regulation:** 0,1% or 1mA (100% load change)  
**Ripple:** 0,2% C<sub>max</sub> or 50mA\*  
**Stability:** 0,05% C<sub>max</sub> within 8 hours at const. line, const. temperature and const. load  
**Temperature coefficient:** 0,03% C<sub>max</sub> / °C (0-40°C)

**Input voltage:** 230V<sub>AC</sub> ± 10%, 47..65Hz  
**Input current:** approx. 13A (M5C), 20A (M7C) at 230V

**Output:** floating, insulated up to 300V<sub>DC</sub>  
(+S reference point for external V/C-controls)  
(\* the higher value is valid)

## Other details

**Storage temperature:** -20 ..+70°C  
**Operating temperature:** 0 ..40°C  
(up to 60°C at max. 80% C<sub>max</sub>).  
**Cooling:** Forced ventilation, intake area frontthird, air escapes through the rear wall  
**Metering:** Analog meters for voltage and current, meters accuracy ±1,5%

**Dimensions-frontpanel:** H x W for M5C 133x483 mm.  
for M7C 178x483 mm.  
**Casing:** D x W 450x443 mm, with connectors 510x443 mm.  
**Wight:** approx. 38kg (M5C), approx. 50kg (M7C).

## Options

- Opt. 02** External voltage programming (V<sub>Out</sub> : V<sub>Prog</sub> = 1 : 1)
- Opt. 03** External current programming with voltage (V<sub>Prog</sub> = 0-5V or 0-10V, C<sub>Out</sub> = 0 - C<sub>Max</sub>)
- Opt. 08** Delayed current limitation (150% C<sub>Max</sub>, max.0,5s)
- Opt. 9x** Transient-absorber (recommended when supplying inductive loads)
- Opt. 24** External voltage and current programming with voltage (V<sub>Prog</sub> = 0-5V or 0-10V for V<sub>Out</sub> = 0-V<sub>Max</sub> and C<sub>Out</sub>= 0-C<sub>Max</sub>)
- Opt. 37** IEEE488/RS232-Interface with 1U casing