

ESS

SINGLE CHANNEL 2 QUADRANT HV MODULE WITH FLOATING GROUND

- ▶ 1 channel, 10 / 20 / 30 kV and customized versions
- ▶ 2-quadrant capabilities, usable as unipolar current sink and source
- ▶ Perfect for electron optical systems and capacitive loads
- ▶ Low ripple and noise
- ▶ Floating ground principle
- ▶ Programmable parameters (delayed trip etc.)



UP TO
30 KV
VERSION

MMS
HV

FG

The ESS module is a single channel high voltage power supply in MMS system (Eurocard format) with 2-quadrant capabilities.

It can be used as unipolar current sink and source, which perfectly covers requirements of electron optical systems or capacitive loads.

The ESS series is built in floating ground principle to reduce voltage noise level. The configuration of output voltage and current can be customized on request. The module is made of high precision components such as 24 bit ADC and 16 bit DAC and provides comprehensive safety features.

SPECIFICATIONS

Polarity	factory fixed, positive or negative
Ripple and noise	< 0.6 - 2.5 V _{p-p}
Temperature coefficient	< 100 ppm / K
Resolution voltage setting	$2 \cdot 10^{-5} \cdot V_{nom}$
Resolution current setting	$2 \cdot 10^{-5} \cdot I_{nom}$
Resolution voltage measurement	< $1 \cdot 10^{-5} \cdot V_{nom}$
Resolution current measurement	< $1 \cdot 10^{-5} \cdot I_{nom}$
Accuracy voltage measurement *	$\pm (0.2 \% \cdot V_{out} + 0.1 \% \cdot V_{nom})$
Accuracy current measurement *	$\pm (0.2 \% \cdot I_{out} + 0.1 \% \cdot I_{nom})$
Voltage ramp up / down	up to $0.1 \cdot V_{nom} / s$ opt. up to $1 \cdot V_{nom} / s$
Protection	Safety loop
HV connector	SHV GES
Case	6U cassette, width 8 HP

*All specifications guaranteed from $1\% \cdot V_{nom} < V_{out} < V_{nom}$

CONFIGURATIONS

MODEL	CHANNELS	OUTPUT VOLTAGE	OUTPUT CURRENT	RIPPLE AND NOISE
ESS 10 100x	1	10 kV	± 4mA	< 2.5 V _{p-p}
ESS 10 200x	1	20 kV	± 2mA	< 0.6 V _{p-p}
ESS 10 300x	1	30 kV	± 1mA	< 1 V _{p-p}

OPTIONS & ORDER INFO

OPTION	ORDER INFO	EXAMPLE
POLARITY	positive: x = p , negative: x = n	ESS 10 100p
GES CONNECTOR	GES	