

DATASHEET **1311-U-1V10C20**

Output:

- Voltage: -1 V ... 10 V
- Current: -20 A ... 20 A
- Power: 200 W



The specified accuracies refer to an ambient temperature of 25°C ±5°C.

The specified accuracies are valid when the unit is connected to undisturbed voltages (Ripple and Noise <0.1%). At voltages with higher disturbance values the accuracy can change for the worse.

Accuracy of Setting

	of setting	of corresponding range
Voltage	±0.1%	±0.05%
Current	±0.2%	±0.05%
Voltage Limitation	±0.1%	±0.05%
Current Limitation	±0.2%	±0.05%
Resolution Setting		16 Bit
Ripple		±0.05% RMS of range
Load Effect 0-100%		0.1%
Line Effect AC ±10%		0.02%

Accuracy of Display:

	of measured value (real value)	of corresponding range
Voltage	$\pm 0.1\%$	$\pm 0.05\%$
Current	$\pm 0.2\%$	$\pm 0.05\%$
Resistance	Quotient of voltage and current	
Power	Product of voltage and current	

Accuracy of Analog Programming:

-5V ... 0 ... 5V / -10V ... 0 ... 10V for Current, Voltage

	of setting	of corresponding range
Voltage	$\pm 0.2\%$	$\pm 0.15\%$
Current	$\pm 0.4\%$	$\pm 0.15\%$
Voltage Limitation * (upper and lower)	$\pm 0.2\%$	$\pm 0.15\%$
Current Limitation * (upper and lower)	$\pm 0.4\%$	$\pm 0.15\%$

* only -10V ... 0 ... +10V

Input impedance of the analog inputs: > 10k Ω
GND max. $\pm 2V$ against negative output terminal¹⁾

Accuracy of Analog Monitor Outputs:

-10V ... 0 ... 10V for Current, Voltage

	of analog signal of the real value	offset voltage
Voltage	$\pm 0.1\%$	$\pm 15mV$
Current	$\pm 0.2\%$	$\pm 15mV$

GND max. $\pm 2V$ against negative output terminal¹⁾
Minimum loading capacity 2k Ω

Accuracy of Measurement, Reading via Data Interface:

	of measured value (real value)	of corresponding range
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Voltage	±0.1%	±0.05%
Current	±0.2%	±0.05%
Resolution Measurement	18 Bit	
Reading Rate (free running)	330ms not triggerable	

Accuracy of Measurement, Reading via Data Interface: NL13 Option

	of measured value (real value)	of corresponding range
Voltage	±0.15%	±0.07%
Current	±0.3%	±0.07%
Resolution Measurement	13 Bit	
Reading Rate	min. 200µs (in memory) triggerable	

Power

Nominal Power	up to $T_A = 21\text{ °C}$
Derating	-1.2% / °C for $T_A > 21\text{ °C}$

Input Impedance > 50 kΩ in standby

Operating Temperature 5°C ... 40°C

External Control Functions

- Stand-by
- Trigger input and output
- Mode switching
- Emergency shutdown

Protection Equipment

- Current and voltage limitation
- Over-temperature deactivation

Rise and Fall Time ²⁾ **200 µs**

Parallel Operation up to 3 devices in master-slave operation
(hardware-controlled in current mode only)

Cooling Current and temperature-controlled fans

Dimension³⁾, Weight	19" / 2 HU, 12.5 kg
Mains Supply	115/230 VAC ± 10% 50 ... 60Hz
Power Consumption	400 VA
Electric Safety	DIN EN 61010-1
EMC, CE-Mark	DIN EN 61326-1 DIN EN 61000-3-2 DIN EN 61000-3-3

Measuring Device Category CAT I

Permissible Operating Voltages: Negative Output Terminal- Case

±125V DC

**Permissible Operating Voltages:
Analog Interface - Negative Output Terminal**

Standard	±2V DC
with NL06 Option	±125V DC

Colour

Front Panel	RAL7032 (pebble grey)
Sides, Lid	RAL7037 (stone grey)

1) ±125V with NL06 Option

2) Rise and fall times are defined as 10%...90% and 90%...10% of the maximum current (measured in constant current mode - FAST)

3) 1HU = 44.45mm