

SINEAX TV 829

High Voltage DC Isolation Amplifier



Mechanical Characteristics

Dimensions:	Art.-no. 158 312: 22.5 x 118 x 90 mm
	Art.-no. 158 320 and 158 338: 67.5 x 118 x 90 mm
IP Protection:	Terminals IP 20, housing IP 40
Operating temperature:	- 10 to + 70 °C
Storage temperature:	- 40 to + 85 °C
Terminals:	Screw terminals, 4 mm ²



Fig. 1. SINEAX TV 829, article no 158 312.

Measuring input (switchable)

Input voltages:

Art.-no.	Measuring input switchable	Measuring output switchable
158312	$\pm 60 \text{ mV}$, $\pm 90 \text{ mV}$, $\pm 150 \text{ mV}$, $\pm 300 \text{ mV}$, $\pm 500 \text{ mV}$	$\pm 10 \text{ V}$, $\pm 20 \text{ mA}$ 4 – 20 mA
	$\pm 10 \text{ V}$	$\pm 10 \text{ V}$
158320	$\pm 400 \text{ V}$, $\pm 600 \text{ V}$, $\pm 800 \text{ V}$, $\pm 1000 \text{ V}$, $\pm 1200 \text{ V}$	$\pm 10 \text{ V}$, $\pm 20 \text{ mA}$ 4 – 20 mA
158338	$\pm 1400 \text{ V}$, $\pm 1600 \text{ V}$, $\pm 1800 \text{ V}$, $\pm 2000 \text{ V}$, $\pm 2200 \text{ V}$	$\pm 10 \text{ V}$, $\pm 20 \text{ mA}$ 4 – 20 mA
159302	0 ... 1000 V	4 – 20 mA
159807	0 ... 1500 V	4 – 20 mA
163981	$\pm 3600 \text{ V}$	$\pm 10 \text{ V}$
163999	$\pm 3600 \text{ V}$	$\pm 20 \text{ mA}$
164004	$\pm 3600 \text{ V}$	4 – 20 mA

Input resistance:

Art.-no.	Input resistance
158 312	Input voltage $\leq 1 \text{ V}$: 100 k Ω Input voltage $> 1 \text{ V}$: $> 2 \text{ M}\Omega$
158 320	7.2 M Ω
158 338	14 M Ω

Output (switchable)

Ranges:	4 to 20 mA, $\pm 20 \text{ mA}$, $\pm 10 \text{ V}$
Load:	Current output: 600 Ω at 20 mA voltage output: 1 k Ω at 10 V

Power supply

AC-, DC-power supply:	20 to 253 V AC/DC
Frequency:	48 to 62 Hz
Power consumption:	2 VA, 1 W



Fig. 2. SINEAX TV 829, article no 158 320 and 158 338.

Transmission behavior

Gain error:	$< 0.1\%$ meas. val.
Temperature influence:	$< 50 \text{ ppm/full scale}$.
Cutoff frequency (-3dB):	$> 5 \text{ kHz}$
Common mode rejection ratio:	Input voltage $\leq 1 \text{ V}$: CMRR: 150 dB T-CMR ¹⁾ : 115 dB Input voltage $> 1 \text{ V}$: CMRR: 150 dB T-CMR ¹⁾ : 150 dB (AC), 120 dB (DC)

Regulations

Test voltage:	10 kV AC input against output and power supply 4 kV output against power supply
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Working voltage acc. to
DIN EN 61010-1
(basic isolation) and
DIN EN 50124-1:
Up to 2.2 kV AC/DC, overvoltage category III, pollution degree 2 across input, output and power supply

¹⁾ Common Mode Rejection of transient voltages