

# 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<sup>2</sup>



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
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 $\Omega$ Input voltage $> 1 \text{ V}$ : $> 2 \text{ M}\Omega$
158 320	7.2 M $\Omega$
158 338	14 M $\Omega$

### Output (switchable)

Ranges: 4 to 20 mA,  $\pm 20 \text{ mA}$ ,  $\pm 10 \text{ V}$

Load: Current output:  
600  $\Omega$  at 20 mA  
voltage output:  
1 k $\Omega$  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<sup>1)</sup>: 115 dB  
Input voltage  $> 1 \text{ V}$ :  
CMRR: 150 dB  
T-CMR<sup>1)</sup>: 150 dB (AC), 120 dB (DC)

### Regulations

Test voltage: 10 kV AC input against output and power supply  
4 kV output against power supply

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

<sup>1)</sup> Common Mode Rejection of transient voltages