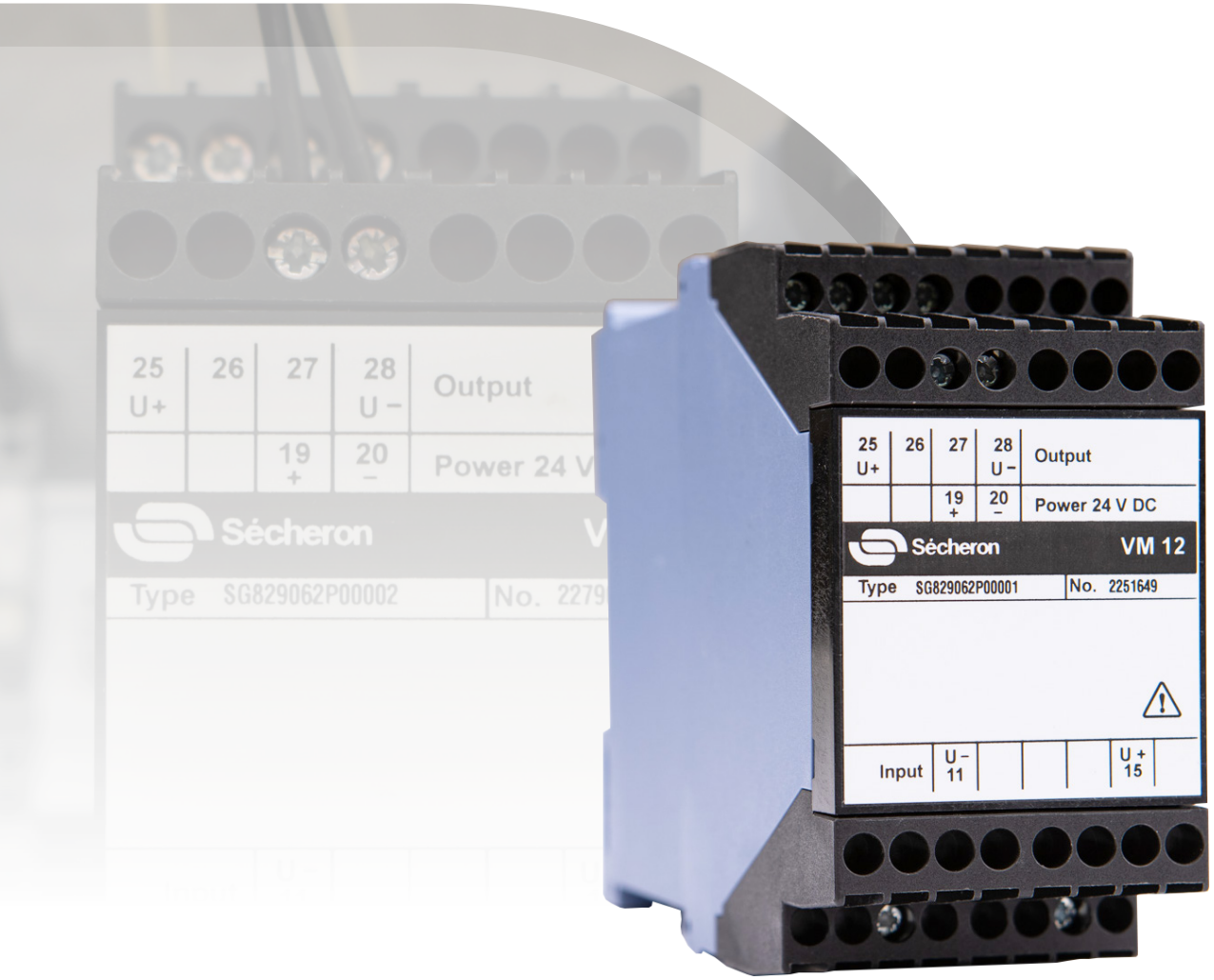
TRACTION
POWER
SYSTEMS

Sécheron

ISOLATED AMPLIFIERS FOR VOLTAGE MEASUREMENT

ESTRA-**VM12**



ESTRA

DC SWITCHGEAR & DISTRIBUTION BOARD

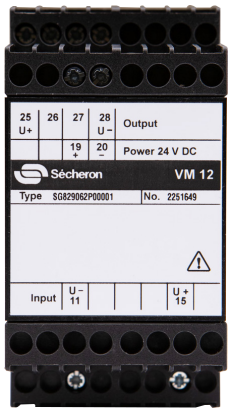
With a leading expertise in DC traction power substations, Sécheron is your major partner for electrification of DC traction networks, covering all activities from network design, calculation, engineering, to the production of the DC systems.

ESTRA product category covers all key equipment applied in DC distribution, integrating DC high-speed circuit breakers, disconnect switches, load break switches, control & protection relays, measuring amplifiers, etc. We can offer tailor made solutions based on modular concepts and standard products. Our equipment is developed on world leading technology and proven worldwide design and acceptance. Our customers and partners benefit through this offer of all our system skills and experience.

GENERAL INFORMATION

The VM12 amplifier is suitable for measuring DC voltages in power distribution systems for public transport networks.

The VM12 measuring equipment, with its high voltage isolation, ensures safety for the equipment and for the personnel.



Main features

The housing width is 45 mm.

The devices isolate and transmit input voltages ± 0.9 kV or ± 1.8 kV (2 models with fixed setting).

The individual measurement ranges are calibrated.

The power supply operates at 24 V_{DC}.

The working voltage for basic insulation (over-voltage category III, pollution degree 2) is 2.2 kV / 10 kV dielectric isolation.

MAIN BENEFITS

- Wide supply voltage range
- Low non-linearity error
- Very high immunity
- High galvanic isolation, up to 10 kV (50 Hz, 1 min)
- Compact solution
- No external protection necessary (fuseless solution)
- Safe and reliable

MAIN CHARACTERISTICS

	Unit	Values
Standard product range		
Supply voltage	[V_{DC}]	24 V_{DC} -20% / +10%
Input voltage	[kV]	0.9, 1.8 bipolar (with fixed setting)
Output voltage	[V]	Us nom ± 5
Error on gain and non-linearity	[%]	Less than ± 0.3 < 100 ppm/K full scale
Cut off frequency (-3 dB)	[kHz]	> 5
Voltage consumption	[VA]	< 5
Residual ripple	[mVeff]	< 10
Galvanic isolation	-	3-port isolation between input, output and power supply according to EN 50124-1
Operating temperature	[°C]	-25 to +85
Galvanic isolation, input against output	[kV]	10 kV_{AC} 50 Hz 1 min
Sealing	-	IP40 (housing)
Mounting	-	DIN rail
Width	[mm]	45
Depth	[mm]	118
Height	[mm]	90
Weight	[g]	500

STANDARDS

When mounted in a cubicle:

- **EN 50121-5** | Railway applications – Electromagnetic compatibility – Part 5: Emission and immunity of fixed power supply installations and apparatus

Standard for isolators:

- **EN 61326 Class B** | Electrical equipment for measurement, control and laboratory use – EMC requirements

TYPE DESIGNATION

Two standard versions:

- 0.9 kV: SG829062P00001
- 1.8 kV: SG829062P00002

For more technical information,
please refer to the instruction manual.

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