

ISOLATED AMPLIFIERS FOR CURRENT MEASUREMENT

ESTRA-**MIU10**



ESTRA

DC SWITCHGEAR & DISTRIBUTION BOARD



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

The 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 MIU10 amplifier is suitable for measuring high DC currents in power distribution systems for public transport networks.

The MIU10 measuring equipment, with its high voltage isolation, ensures safety for the equipment and for the personnel.

/// Main features

The housing width is 22.5 mm.

The devices isolate and transmit input voltages in the range of $\pm 60 \text{ mV} \dots \pm 5 \text{ V}$.

The individual measurement ranges are calibrated.

The broad-range power supply operates from 24 to $230 \text{ V}_{AC/DC}$.

/// Adjustable version

The working voltage for basic insulation (overvoltage category III, pollution degree 2) is 2.2 kV / 10 kV dielectric isolation. The 16 measurement ranges are selected using an insulated rotary coding switch and/or by reconnecting the output lines. Preselection is done at factory, according to the substation specifications.

/// Fixed version (3kV)

The working voltage for basic insulation (overvoltage category III, pollution degree 2) is 3.6 kV / 15 kV dielectric isolation. Available outputs signals: $\pm 5 \text{ V}$, $\pm 20 \text{ mA}$ or 4 ... 20 mA. The configuration is made only in the factory.

MAIN BENEFITS

- ✓ Wide supply voltage range
- ✓ Low non-linearity error
- ✓ Very high immunity
- ✓ High galvanic isolation, up to 15 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 _{AC/DC}]	24...230 V _{AC/DC} -20% / +10%
Input sensitivity	[mV]	± 60, 90, 150, 300, 500, 5000
Output voltage	[V]	Us nom ± 5 V
Output current	[mA]	Is nom ± 20 mA or Is 4...20 mA (if Input = 0, Is = 12 mA) RLmax = 600 ohms
Error on gain and non-linearity	[%]	Less than ± 0.1 < 50 ppm/K full scale
Cut off frequency (-3 dB)	[kHz]	> 5
Voltage consumption	[VA]	< 5
Residual ripple	[mV _{eff}]	< 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 (with 16 settings) 15 kV _{AC} 50 Hz 1 min (with fixed setting)
Sealing	-	IP40 (housing)
Mounting	-	DIN rail
Width	[mm]	22.5
Depth	[mm]	118
Height	[mm]	90
Weight	[g]	180

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

- Standard version with setting selection: SG811410P00001
- Fixed setting version: upon request
- Adaptive gain version: upon request

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



Sécheron SA

Rue du Pré-Bouvier 25
1242 Satigny - Geneva
CH-Switzerland

www.secheron.com

Tel: +41 22 739 41 11
Fax: +41 22 739 48 11
tps@secheron.com

Copyright © • 2021 • Sécheron SA

This document is not contractual and contains information corresponding to the level of technology at the date of printing. Sécheron reserves the right to modify and/or improve the product, whose characteristics are described in these documents, as required by new technology at any time. It is the purchaser's responsibility to inform himself, no matter what the circumstances, of the product's maintenance conditions and requirements. Sécheron reserves all rights, especially those arising from our "General Delivery Conditions".