

Micro-Ohmmeter VG-CS SLxx0-II

for loop resistance measurements

- ▶ Unlimited continuous mode
- ▶ Measures with both sides grounded
- ▶ Comfort push/pull connections
- ▶ Ext. Pt-100 temperature comp.
- ▶ Remote control
- ▶ Thermal printer
- ▶ USB PC-Interface
- ▶ USB stick (data logger)
- ▶ 4.3" LCD graphic display
- ▶ lightweight and compact



Technical description

The micro-ohmmeters VG-CS SLxx0 are used for high ohmic measurements of train loop resistances. The instruments can maintain the maximal measuring current up to 24V. All instruments are identical, except the maximal measuring current. The strengths of the instruments are the easy handling, rugged design, low weight and long measurement cables.

The 4.3" LCD graphic display, enables measurements in darkness, coldness and full sunlight.

Designed for continuous measurements, the instruments have no limitation for the numbers of measurement cycles.

An internal thermal printer is standard to enable logging of test results.

With the option "remote logging" all stored measuring values can be downloaded to a personal computer, laptop or Android device.

Measurement data is saved directly to a USB stick.

A cable remote control or a remote control dongle is available on request.

The VG-CS SL70, with a weight of 7.5kg only, is very handy and easy transportable. The rugged transport case contains all test cables and accessories.

Typical applications are ohmic tests of:

- Train loop resistances
- Lightning protection circuits
- High current busbar joints
- Cable splices
- Welding joints
- Ground connections
- Railway parts



Waterproof trolley

To protect the instrument and the accessories from water, dust, sand and mechanical impacts a waterproof IP67 trolley from «Pelican» is used. The trolley has also handles on all four sides to carry it.



Wireless remote control

The wireless remote control makes it possible to trigger the measurement. The measurement data can be read out with an Android mobile phone to be sent by e-mail or other message apps.



Remote control

The remote control makes it possible to manage measurements on tall circuit breakers while leaving the equipment on the ground. All important instrument functions are available on the remote control panel.



Transport carrying case type VG-CS-TRK
VG-CS 2-600: Order No: VG-CS-TRK2-600



Temperature sensor type VG-CS-Pt100/5
L= 5m cable with Velcro fastner
Order No: VG-CS-Pt100/5



Sense cable 2.5mm² type VG-CS-SNE2.5/6
L=6m with test probe & clips
Red: Order No: VG-CS-SNE2.5/6R
Black: Order No: VG-CS-SNE2.5/6B



Sense cable extension 2.5mm² type VG-CS-SNEV2.5/10
L=10m with one 4mm connector and one 4mm plug
Red: Order No: VG-CS-SNEV2.5/10R
Black: Order No: VG-CS-SNEV2.5/10B



Current cable 35mm² type VG-CS-STR35
single cable with one connector and one clamp
L=0.6m: Order No: VG-CS-STR35/0.6
L=5.0m: Order No: VG-CS-STR35/5
L=10.0m: Order No: VG-CS-STR35/10



Current cable extension 35mm² type VG-CS-STRV35
single cable with one connector and one cable plug
L=5.0m: Order No: VG-CS-STRV35/5
L=10.0m: Order No: VG-CS-STRV35/10



Current cable 4mm² with fuse type VG-CS-STR4 ***
current cable with one connector and one banana plug
Red: Order No: VG-CS-STR4/**R
Black: Order No: VG-CS-STR4/**B



Power cable type VG-CS-NK
L=3m
VG-CS 200&300: Order No: VG-CS-NK2/300
VG-CS 400&600: Order No: VG-CS-NK4/600



PE grounding cable 2.5mm² type VG-CS-EK2.5
single cable with one cable socket and one clamp
L=1.5m: Order No: VG-CS-EK2.5/1.5
L=6.0m: Order No: VG-CS-EK2.5/6
L=15.0m: Order No: VG-CS-EK2.5/15

*** Customer specific changes



Wireless Remote control type VG-CS-Fern-BT

Remote control with an Android device from Android 5.0 and up
Order No: VG-CS-Fern-BT

For dongle with fully feature set:
Order No: VG-CS-WIN+



Remote control type VG-CS-Fern
with display, keyboard and sense plugs
incl. 5m cable
Order No: VG-CS-Fern



Remote control type VG-CS-Fern-DK
Simple one button remote control
incl. 6m cable
Order No: VG-CS-Fern-DK



Remote control foot pedal type VG-CS-Fern-FP

To trigger the measurement with connector and foot pedal
incl. 6m cable
Order No: VG-CS-Fern-FP



PC-software type VG-CS-WIN

The Windows software makes it easy to manage and save all test results.
Order No: VG-CS-WIN

Measuring ranges:	0...20.00μΩ, 0...200.0μΩ, 0...2.000mΩ, 0...20.00mΩ, 0...200.0mΩ 0...999.9mΩ	
Display:	Sunlight readable LCD 4.3" graphic display with a resolution of 480x272 dots	
Display resolution:	0.01μΩ... 0.1mΩ	
Accuracy:	0 ... 1000μΩ, @ 140A / 25°C = ±0.05% FS 1 ... 150mΩ, @ 140A / 25°C = ±0.2% FS 150 ... 999mΩ, @ 5 - 140A / 25°C = ±0.5% FS	
Reproducibility:	<0.1%	
Measuring current:	VG-CS SL70	VG-CS SL140
	5 - 70A (230VAC)	5 - 140A (230VAC)
	5 - 65A (115VAC)	5 - 130A (115VAC)
Continuous current:	70A (65A @ 115VAC)	140A (130A @ 115VAC)
Maximum test voltage:	24V	
Current ramp:	The test current rises following a linear ramp, holds the preselected value and falls with a linear ramp.	
Measuring interval:	No limitation of the number of current cycles	
Result data logging:	The last 100 data sets are stored internally. Unlimited data sets for the external USB stick	
Data logger:	Accepts FAT32 formatted USB sticks	
Sense input:	Independent polarity with banana jacks.	
Input voltage:	Max. 24V	
Input impedance:	>200kΩ	
Shunt output:	100μV/A +/-1%, banana jack red = plus, banana jack black = negative	
Shunt voltage:	7mV @ 70A for VG-CS SL70, 14mV @ 140A for VG-CS SL140	
Data interface:	USB, various measuring protocols may be set (VG-CS Win, data output, data control)	
Pass/Fail:	Display signalization, 3 preset limits, optional alarm contacts	
Date/time:	The instrument has a battery buffered real time clock	
Buzzer:	An acoustic click for keyboard operation or an ongoing test	
Ambient temperature:	-40°C ... +60°C	
Humidity:	Max. 95% non condensing	
LVD:	RL2014-35-EU, EN 61010-1:2011	
EMC:	RL2014-30-EU, EN 61326:2008 + A1:2009, EN61000-6-1/2/3/4:2007	
Breaker standards:	ANSI C37.09-1979 (5.14), IEC 1208, IEC 694 (6.4)	
Printer:	24-characters, standart thermal paper (58x32mm diameter)	
Unit manipulations:	Keyboard, external PC or Android phone/tablet	
Manipulations:	Menu operated, easy to use	
Power supply:	100...240V, 16A, 50-60Hz	
Power consumption:	1530W @ 24V for VG-CS SL70, 3030W @ 24V for VG-CS SL140	
CE-conformity:	Fulfilled	
Dimensions:	L x W x D: 300 x 360 x 130 mm	
Weight:	7.5 kg (VG-CS SL70), 12 kg (VG-CS SL140)	
Warranty:	2 Years	
Software (optional):	PC-software to transfer and log stored data sets, Order No: VG-CS WIN	
Accessories:	<ul style="list-style-type: none"> - Customer specific changes - Without thermal printer - Other ramp times - Current clamp (for example 20mV/A), to measure grounded systems - USB stick 	

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