



1309 Sofia, 205 Alexander Stamboliyski Blvd.
Tel/Fax +359 (2) 920 22 85, 822 36 90, e-mail: sales@electris.biz

9010 Varna, 128 Osmi Primorski Polk Blvd., Floor 3, office 77
Tel/Fax +359 (52) 301 456, e-mail: sales-varna@electris.biz

ELECTRIS Ltd
ISO 9001:2015 TÜV NORD

Относно: ПОКАНА ЗА ПАЗАРНА КОНСУЛТАЦИЯ № 51142

Уважаеми госпожи и господа,

Във връзка с горната покана, имаме удоволствието да Ви представим нашето

индикативно предложение 005/31.03.2023 за „Доставка на високоволтова система за

тестване състоянието на електрическа изолация”, както следва:

Code	Description	Единична цена, лв
S-36 VLF Index: WMGBS36VLF	<p>High Voltage Insulation Tester</p> <p>Power supply: 230 V ($\pm 10\%$), 10 A, 50/60 Hz</p> <p>Output voltage: 0...36 kV_{RMS} VLF 0.1 Hz (option: 0.05 Hz + 0.02 Hz) \pm 0...52 kV DC</p> <p>Max. testable cable length, max. capacitance (VLF): up to 60 km (15 μF at 18 kV_{RMS}, 0.02 Hz)*- at a cable capacitance of approx. 0.25 μF/km</p> <p>Max. load at max. output voltage (VLF) and 0.1 Hz: 2.4 μF at 36 kV_{RMS}</p> <p>Discharge - integrated automatic discharge device: max. 12500 J</p> <p>Voltage measuring range: -60...0...60 kV accuracy $\pm 1\%$</p> <p>Current measuring ranges: ± 0...100 μA / 1 mA / 10 Ma</p> <p>Operating/storage temperature: -20...+45°C/-25...+70°C</p> <p>Duty: continuous operation</p> <p>PC interface: USB stick</p> <p>Construction: in two parts: operation unit-weigh17kg and high voltage unit-weigh48kg</p> <p>Standard accessories supplied by the manufacturer:</p> <ul style="list-style-type: none"> • Operating unit • Protective bag • High-voltage unit • High-voltage connecting cable (shielded), standard 5 m • Connecting cable between operating unit and high-voltage unit (permanently connected to operating unit), standard 3 m • Mains cable (permanently connected to operating unit), standard 3 m • Connecting cable between operating unit and protective ground • Connecting cable between high-voltage unit and station ground • Service kit • Transport case – WAWALVLF • Calibration certificate • User manual 	48 000.00
	Общо, лв	48 000.00

1. Производител: SONEL SA -Полша
2. Посочените цени са в лева без ДДС, с включени всички разходи по доставката
3. Доставен срок: около 100 календарни дни след сключване на договор и съответната поръчка.
4. Място на доставка: DDP АЕЦ-Козлодуй
5. Гаранционен срок: 24 месеца
6. Валидност на офертата: 90 дни

При доставка стоката ще бъде съпроводена със следните документи:

- инструкции за експлоатация;
- гаранционна карта;
- декларации/сертификати за произход;
- декларации/сертификати за съответствие;

Приложения:

1. Писмо за оторизация
2. Технически данни за предлаганото оборудване.

Лице за контакт: инж. Кирил Маринов, бул. Александър Стамболийски 205, 1309 София;
тел. 029202285 ; Факс: 02 8203690

Заличено на основание ЗЗЛД

Управител:

Борис Задев



Date: 31/03/2023

MANUFACTURER'S AUTHORIZATION LETTER FOR TENDER PURPOSE

To whom it may concern,

We SONEL SA, located at Wokulskiego 11, 58-100 Świdnica, Poland, a renowned manufacturer of electrical and electronic measuring instruments

authorize

company ELECTRIS EOOD, located at 205"Alexander Stamboliiski" Blvd. 1309 Sofia, Bulgaria, to represent and sale our products on the territory of Bulgaria.

This includes the rights to submit offers for participation in public tenders of „NEK” EAD, „ESO” EAD, „NPP Kozloduy” EAD, „Elektrozpredelitelni mrezi Zapad” EAD, „Elektrozpredelenie Yug” EAD, „Elektrozpredelenie Sever „EAD and other state-owned companies and private bodies and in case of awarding of a certain tender to negotiate and subsequently to sign and execute the supply contract.

Paweł Żemojcin

Заличено на основание ЗЗЛД

Export regional Sales Manager , Region C&EE
SONEL S.A.

ul. Wokulskiego 11,

SONEL S.A. (33) 58-100 ŚWIDNICA,
58-100 Świdnica, ul. Wokulskiego 11
tel. (74) 8583800 fax (74) 8583800
NIP 884-10-33-448 REG 890236687



Evaluate the condition of cables using VLF or DC voltage

Features

- Extremely compact high-power VLF test device
- Easily portable from 1-2 people
- Simple operation
- Menu-assisted control with industrial grade OLED display
- Fully automatic test sequence
- Integrated timer 1-300 min with automatic tripping
- Integrated breakdown detection
- Integrated fault time detection
- Voltage measurement direct at HV output
- Protective ground circuit
- Zero start interlocking
- Protective circuit / indication in accord. with VDE 0104
- Leakage current measurement during VLF test

Overview

The compact, robust and portable cable test set S-36 VLF is used for testing of medium voltage cables in accordance to the standards IEEE400, IEC 60502-2, CENELEC HD 620 & 621 and DIN VDE 0276/620 & 621. The test is carried out with a low strain practice with VLF (very low frequency) test voltage of preferably 0.1Hz.

VLF Test enables detection of damages of the insulation within shortest test time. The S-36 VLF can test cables with extruded insulation (XLPE-, PE-, EPR-insulation) as well as cables with paper-oil insulation (PILC). Cable sheath testing with direct voltage is also possible.



Optional features

- Data logging (USB) for VLF test sets
- Frequency extension: 0.05 + 0.02 Hz
- Customized test cables
- Transport case

Technical specification

Power supply		230 V ($\pm 10\%$), 10 A, 50/60 Hz
Output voltage		0...36 kV _{RMS} / 0...51 kV _{peak} VLF 0.1 Hz (0.05 Hz + 0.02 Hz optional) $\pm 0...52$ kV DC
Voltage waveshapes	VLF	similar sine-wave, symmetrical, with true RMS measurement
	DC	direct voltage, negative and positive polarity
Max. load (VLF)		4.9 μ F at 18 kV _{RMS} 0.1 Hz (app. 20 km)* 15 μ F at 18 kV _{RMS} 0.02 Hz (app. 60 km)* 2.4 μ F at 36 kV _{RMS} 0.1 Hz (app. 9.6 km)* 8.3 μ F at 36 kV _{RMS} 0.02 Hz (app. 33 km)* *at a cable capacitance of 0.25 μ F/km
Overcurrent trip (DC)		10 mA
Discharge		integrated automatic discharge device, max. 12500 J
Voltage measuring range		-60...0...60 kV, accuracy $\pm 1\%$
Current measuring ranges		$\pm 0...100$ μ A / 1 mA / 10 mA
Operating temperature		-20...+45°C
Storage temperature		-25...+70°C
Duty		continuous operation
PC interface		USB flash drive
Construction		in two parts: operation unit and High Voltage unit
Dimensions & weight	Operation unit	37 x 34 x 20 cm 17 kg
	HV unit	40 x 44 x 24 cm 48 kg

Standard accessories

- Operation unit with protective bag and cable storage
- High Voltage unit
- HV-connecting cable (shielded), standard length 5m
- Connecting cable, HV unit to Operation unit, length 3m
- Ground cables
- User manual

Description:

Test the condition of the cables with VLF or DC slow voltage

The S-36VLF high voltage insulation tester is a compact, robust and portable kit for testing medium voltage cables according to IEEE400, IEC 60502-2, CENELEC HD 620 and 621 and DIN VDE 0276/620 and 621. The test is carried out using the low electrical stress method, with a VLF (Very Low Frequency) voltage of 0.1 Hz. The VLF test is the fastest way to detect insulation damage.

The S-36VLF instrument can test cables with plastic insulation (XLPE, PE-, EPR) as well as paper and oil insulation (PILC). Testing with DC voltage is also possible.

Sonel offers online training course on the use of this product (instructional video and consultation with a specialist).

Features

- Extremely compact high-power VLF test device
- Easily portable for 1-2 people
- Simple operation: menu-assisted control with industrial class OLED display
- Fully automatic test sequence
- Integrated timer 1-300 min with automatic tripping
- Integrated breakdown detection
- Integrated fault time detection
- Voltage measurement direct at HV output
- Protective ground connection
- High voltage start key interlock
- Protective circuit / indication in accord. with EN 50191
- Leakage current measurement during VLF test

Optional features

- Data logging (USB stick) for VLF test sets
- Frequency extension: 0.05 + 0.02 Hz
- Customized test cables
- Transport case

Technical specification

	S-24 VLF	S-36 VLF	S-44 VLF	S-44 VLF	S-57 VLF
Index	WMGBS24VLF	WMGBS36VLF	WMGBS44VLF	WMPAS44VLF	WMGBS57VLF
Power supply	230 V (±10%),10 A, 50/60 Hz	230 V (±10%),10 A, 50/60 Hz	230 V (±10%),10 A, 50/60 Hz	110 V (100 V...127 V),15 A, 50/60 Hz	230 V (±10%), 10 A, 50/60 Hz
Output voltage	0...24 kV _{RMS} VLF 0.1 Hz (option: 0.05 Hz + 0.02 Hz) ±	0...36 kV _{RMS} VLF 0.1 Hz (option: 0.05 Hz + 0.02 Hz) ±	0...44 kV _{RMS} VLF 0.1 Hz (option: 0.05 Hz + 0.02 Hz) ±	0...44 kV _{RMS} VLF 0.1 Hz (option: 0.05 Hz + 0.02 Hz) ±	0...57 kV _{RMS} VLF 0.1 Hz (option: 0.05 Hz + 0.02 Hz) ±
	0...34 kV DC	0...52 kV DC	0...62 kV DC	0...62 kV DC	0...62 kV DC

	S-24 VLF	S-36 VLF	S-44 VLF	S-44 VLF	S-57 VLF
Voltagewaveshape					
VLF	similar sine-wave, symmetrical, with True RMS measurement	similar sine-wave, symmetrical, with True RMS measurement	similar sine-wave, symmetrical, with True RMS measurement	similar sine-wave, symmetrical, with True RMS measurement	similar sine-wave, symmetrical, with True RMS measurement
DC	direct voltage, negative and positive polarity	direct voltage, negative and positive polarity	direct voltage, negative and positive polarity	direct voltage, negative and positive polarity	direct voltage, negative and positive polarity
Overcurrent trip (DC)	10 mA	10 mA	10 mA	10 mA	10 mA
Max. testable cable length, max. capacitance (VLF)	up to 60 km (15 μF at 24 kV_{RMS} , 0.02 Hz)*	up to 60 km (15 μF at 18 kV_{RMS} , 0.02 Hz)*	up to 60 km (15.0 μF at 18 kV_{RMS} , 0.02 Hz)*	up to 60 km (15.0 μF at 6 kV_{RMS} , 0.02 Hz)*	up to 60 km (15.0 μF at 18 kV_{RMS} , 0.02 Hz)**
Max. load at max. output voltage (VLF) and 0.1 Hz	5 μF at 24 kV_{RMS}	2.4 μF at 36 kV_{RMS}	1.5 μF at 44 kV_{RMS}	1.0 μF at 44 kV_{RMS}	0.9 μF at 57 kV_{RMS}
Discharge - integrated automatic discharge device	max. 9000 J	max. 12500 J	max. 12500 J	max. 12500 J	max. 12500 J
Voltage measuring range	-40...0...40 kV accuracy $\pm 1\%$	-60...0...60 kV accuracy $\pm 1\%$	-70...0...70 kV accuracy $\pm 1\%$	-65...0...65 kV accuracy $\pm 1\%$	-70...0...70 kV accuracy $\pm 1\%$
Current measuring ranges	$\pm 0...100 \mu\text{A} / 1 \text{ mA} / 10 \text{ mA}$	$\pm 0...100 \mu\text{A} / 1 \text{ mA} / 10 \text{ mA}$	$\pm 0...100 \mu\text{A} / 1 \text{ mA} / 10 \text{ mA}$	$\pm 0...100 \mu\text{A} / 1 \text{ mA} / 10 \text{ mA}$	$\pm 0...100 \mu\text{A} / 1 \text{ mA} / 10 \text{ mA}$
Operating temperature	-20...+45°C -4...+113°F	-20...+45°C -4...+113°F	-20...+45°C -4...+113°F	-20...+45°C -4...+113°F	-20...+45°C -4...+113°F
Storage temperature	-25...+70°C -13...+158°F	-25...+70°C -13...+158°F	-25...+70°C -13...+158°F	-25...+70°C -13...+158°F	-25...+70°C -13...+158°F
Duty	continuous operation	continuous operation	continuous operation	continuous operation	continuous operation
PC interface	USB stick	USB stick	USB stick	USB stick	USB stick
Construction	in two parts: operation unit and high voltage unit	in two parts: operation unit and high voltage unit	in two parts: operation unit and high voltage unit	in two parts: operation unit and high voltage unit	in two parts: operation unit and high voltage unit

*at a cable capacitance of approx. 0.25 $\mu\text{F}/\text{km}$

**at a cable capacitance of approx. 0.36 $\mu\text{F}/\text{km}$