

SSG 500

BAUR surge voltage generator



Reliable cable fault location

- Ideal for low voltage cable
- High surge energy in all voltage steps
- Robust construction - high reliability

The compact SSG 500 surge voltage generator is used to generate surge and DC voltage and can be used for the pre-location and pin-pointing of cable faults in buried power cables, in particular low voltage cables.

The SSG 500 surge voltage generator is arranged in a 19" housing. Maximum safety is achieved with the electrical safety control unit, the automatic discharge unit, the fully enclosed design and separate protective and operational earthing.

The device generates surge voltages of 4 / 8 / 16 kV or 3 / 6 / 12 kV. In surge mode, the charge of the HV capacitors can be discharged to the faulty cable manually or automatically, as required, at a rate of 10 or 20 surges/min. When the device is switched off, the HV output is automatically discharged.

Functions

- Generates surge and DC voltage
- Suitable for the following methods in combination with optional devices:
 - TDR Time Domain Reflectometry (with IRG* time domain reflectometer)
 - SIM/MIM secondary/multiple impulse method (with SA 32* SIM/MIM coupling unit and IRG* time domain reflectometer)
 - ICM impulse current method (with inductive coupler SK 1D*)
 - Acoustic pin-pointing (with BAUR UL 30* universal receiver and accessories set*)
 - DC voltage testing up to 16 kV

Features

- 6 selectable surge voltages up to 16 kV
- High output current up to DC 480 mA
- Automatic surge mode or manual triggering of voltage surges
- Rapid surge sequence up to 20 surges/min
- Surge energy up to 512 J (can be switched to 56 %)
- Electromagnetically actuated surge switch
- Voltmeter with 3 display ranges
- Safety control unit according to DIN EN 50191
- Integrated automatic discharge unit
- Overcurrent protection switch with thermal and magnetic triggering
- Connection option for external emergency off unit with signal lamps

*Option

Methods for cable fault pre-location and pin-pointing

- **TDR** » Time Domain Reflectometry is used to locate low resistive faults and cable interruptions, and to determine the cable length.
- **SIM/MIM** » The Secondary / Multiple Impulse Method SIM/MIM is the best and most precise cable fault pre-location method with the highest level of efficiency. High-resistive and intermittent faults are ignited by a single HV pulse, then the fault distance is measured accurately with the TDR technology and automatically analysed.
- **ICM** » The impulse current method is used to locate high resistive and intermittent cable faults. The fault distance is determined by analysing the impulse current diagrams.
- **Acoustic pin-pointing:** the most common method used to pin-point the location of high resistive and intermittent flashover faults. High voltage breakdowns at the fault generate audio and electromagnetic signals, which are used to pin-point the fault.
- Voltage test is used to test the electric strength of the cable insulation. In this test, a voltage is applied between phase and cable screen. The test is considered successful if no breakdown occurs.

Technical data

Output voltage	
Max. DC voltage	16 kV
Surge voltage	4 / 8 / 16 kV switchable to: 3 / 6 / 12 kV (56 % of the surge energy)
Surge energy	▪ 512 J @ 4 / 8 / 16 kV ▪ 288 J @ 3 / 6 / 12 kV
Max. output current (in DC mode)	Depending upon the position of the step selector switch: ▪ DC 480 mA @ 4 kV position ▪ DC 240 mA @ 8 kV position ▪ DC 120 mA @ 16 kV position
Surge sequence	10 or 20 pulses/min
Display range of the voltmeter	▪ 0 – 4 kV ▪ 0 – 8 kV ▪ 0 – 16 kV
Accuracy of the voltmeter	1.5 %

Standard delivery

- BAUR SSG 500 surge voltage generator, inc. 5 m HV connection cable
- Earth cable, 3 m, with earth terminal
- Mains supply cord, 2.5 m
- User manual

General	
Power supply	220 – 230 V, 50/60 Hz Options: ▪ 110 – 120 V, 50/60 Hz (with external auto transformer) ▪ 240 V, 50/60 Hz (with conversion kit for mains supply)
Max. power consumption	1,500 VA (in the event of short circuit)
Ambient temperature (operational)	-10°C to +50°C
Storage temperature	-20°C to +60°C
Dimensions (W x H x D)	Approx. 500 x 290 390 mm
Weight	Approx. 48 kg
Safety and EMC	CE-compliant in accordance with Low Voltage Directive (2014/35/EU), EMC Directive (2014/30/EU), EN 60068-2-ff Environmental testing

Options

- Hinged stand for 19" devices, height 5 RU (222 mm)
- Discharge and earth rod GDR 40-250
- Conversion kit for 240 V mains supply
- External auto transformer, 110/230 V; 1.5 kVA
- External emergency off unit with signal lamps, incl. connection cable, 25 m, on hand drum
- External emergency off unit with signal lamps, incl. connection cable, 50 m, on hand drum
- SA 32 SIM/MIM coupling unit
- SK 1D inductive coupling for ICM