Syscompact 4000

BAUR cable fault location system

The figure is illustrative.

Functions

- Insulation resistance measurement up to 1,000 V*
- TDR: time domain reflectometry
- Envelope curve display for intermittent faults – even small changes in impedance are made visible and saved.
- SIM/MIM: secondary/multiple impulse method with surge voltage or in DC mode **NEW:** 20 reflection measurements per HV pulse
- ICM: impulse current method with surge voltage or in DC mode
- Surge mode for acoustic pin-pointing up
- DC voltage testing
- Cable sheath testing

Features

- Easy operation thanks to intuitive operational concept
- Integrated proven cable fault pre-location methods
- Automatic detection of cable end and fault position
- Dynamic input signal gain
- Automatic saving of all measurement data
- Storage for more than 100,000 measurements
- Interface to GIS databases*
- Precise fault location methods for every type of fault and various cables
- Modular system, easily expandable for cable testing and diagnostics

Compact and multifunctional

- Precise and dependable cable fault location
- High-performance surge voltage generator
- Precise fault location methods for every type of fault

The compact cable fault location system, Syscompact 4000, is used for the pre-location and pin-pointing of faults on low- and medium-voltage cables.

Thanks to the novel operational concept and the integrated location methods, cable faults can be located more rapidly and easily with Syscompact 4000. The high-performance industrial PC and improved measurement parameters allow for a precise cable fault location in all cable types.

The system can be equipped with different surge voltage generators SSG 1100, SSG 1500* or SSG 2100*. The surge voltage generators have an automatic surge mode, thereby also allowing the Syscompact 4000 to be used for acoustic pin-pointing.

Thanks to its compact design, the Syscompact 4000 is easy to transport and is also suitable for installation in any small van with a payload of 300 to 500 kg.

*** Option**

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Technical data

IRG 4000 time domain reflectometer	
Pulse voltage	TDR 20 – 200 V
Pulse width	20 ns – 1.3 ms
Voltage-proof up to	400 V, 50/60 Hz
Output impedance	8 – 2,000 Ohm
Input signal gain	Dynamic range 107 dB (-63 to +44 dB)
View range	10 m – 1,000 km (at v/2 = 80 m/µs)
Accuracy	0.1% relating to the measurement result
Data rate	400 MHz
Resolution	0.1 m (at v/2 = 80 m/µs)
Velocity of propagation (v/2)	20 – 150 m/µs, adjustable
Measurement modes	▪ Automatic measurement mode ▪ Differential measurement ▪ Mean value calculation ▪ Continuous measurement ▪ Stop after recording the change ▪ Envelope curve display for the location of intermittent faults
Storage capacity	> 100,000 measurements (hard disk limit)
Display	TFT monitor acc. to offer
User interface languages	user interface available in 22 languages
Data export format	PDF
GIS interface (option):	Export/import GIS data
Data synchronisation	USB
BAUR GeoBase Map	90 days test licence
Option	Full version

Insulation resistance measurement	
Voltage	up to 1,000 V
Measurement range	0 ohm – 5 Gohm
Surge voltage generator	
Surge voltage ranges	0 – 8 kV, 0 – 16 kV, 0 – 32 kV
Surge energy	1,100 J
Option SSG 1500	1,540 J
Option SSG 2100	2,050 J
Surge sequence	10 or 20 pulses/min, single surge
Option SSG 1500	20 or 30 pulses/min, single surge
DC voltage	0 – 32 kV
Max. output current (in DC mode)	560 mA (0 – 8 kV)
Option SSG 1500/SSG 2100	850 mA (0 – 8 kV)
System	
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)
Ambient temperature	0°C to +50°C
extended temperature range*	-20°C to +60°C
Storage temperature	-40°C to +60°C
Dimensions (W x H x D)	Approx. 935 x 1,145 mm x 775 mm (incl. KTG M3 cable drum rack)
Weight	From 195 kg (depending upon equipment)
Degree of protection	IP22
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

* Limitation of performance data possible

Standard delivery

BAUR Syscompact 4000 cable fault location system:

- IRG 4000 time domain reflectometer
- Uninterrupted power supply (UPS)
- PC keyboard
- Measuring cable, 3 m
- SA 32 SIM/MIM coupling unit
- SSG 1100 surge voltage generator
- SK 1D inductive coupler for ICM
- 19" rack, height 25 RU (1,111.25 mm), depth 700 mm
- KTG M3 Cable drum rack with HV connection cable, mains supply cord and earth cable (incl. earth terminal), each 25 m
- Jumper plug for external emergency off unit
- CS 2 HV coaxial connection sockets, 40 kV
- GR 40 earth rod
- User manual

Options

- Insulation resistance measurement
- BAUR GeoBase Map
- Interface for GIS data export/import
- BAUR system software 4 for installation on office PC (e.g. for data evaluation and compilation of reports)
- Surge voltage generator SSG 1500 instead of SSG 1100
- Surge voltage generator SSG 2100 instead of SSG 1100
- BAUR UL 30 universal receiver
- Accessories set for cable sheath fault location with UL 30
- BM 30 ground microphone
- GDR 40-250 discharge and earth rod
- KTG M3 cable drum rack with HV connection cable, mains supply cord and earth cable, each 50 m
- Trolley for Syscompact 4000
- Steel frame with wheels and guide rods
- Steel pallet for Syscompact 4000

Options for power supply

- Conversion kit for 240 V mains supply for SSG 1100
- Conversion kit for 240 V mains supply for SSG 1500/SSG 2100
- External auto transformer 110/230 V, 1.5 kVA, for SSG 1100
- External auto transformer 110/230 V, 3.0 kVA, for SSG 1500/SSG 2100

The new intuitive operational concept

- Intuitive modern user interface – no long introduction or familiarisation period is required
- BAUR GeoBase Map*:
  - Unique combination of road maps, including the cable route
  - Cable routes and cable faults displayed on the map
- Cable Mapping Technology CMT: Overview of cable accessories and faults in relation to the cable length
- All data on the cable route such as geographic position*, voltage level, joints, all measured values, etc. are automatically saved and can be accessed at any time.
- Quick and easy compilation of clear and precise measurement records – with freely selectable company logo, comments and figures of the traces.

*** Option**