Syscompact 400
BAUR cable fault location system

The figure is illustrative.

Compact and multifunctional

↗ Easy to operate

↗ Maximum safety during application

↗ High-performance surge voltage generator

↗ Proven fault pre-location methods

The compact cable fault location system, Syscompact 400, is used for the pre-location and pin-pointing of faults on power cables.

The system can be equipped with a range of surge voltage generators, which feature an automatic surge mode. The new IRG 400 time domain reflectometer can be controlled via a tablet or laptop. With the simple menu navigation and integrated location methods, cable fault location with the Syscompact 400 is fast and precise.

The IRG 400 can be operated remotely, thanks to the wireless connection of the control unit via Wi-Fi. This makes for easy and convenient performance and evaluation of the TDR measurement.

Thanks to its compact design, the Syscompact 400 is easy to transport and is also suitable for installation in any small van with a payload of 300 – 500 kg.

Functions

- Pre-location
  - TDR: Time Domain Reflectometry
  - Step TDR
  - SIM/MIM: Secondary/multiple impulse method with surge voltage or in DC mode
  - ICM: Impulse current method
  - Decay method (option)
- Pin-pointing*
  - Acoustic pin-pointing
  - Step voltage method for pin-pointing cable sheath faults
- DC voltage testing up to 32 kV

Features

- Surge energy up to 1.100 J (optionally up to 2,050 J)
- Long service life of the electrodes thanks to optimised physical properties
- High reliability of the spark gap
- Easy maintenance by trained personnel on site
- High system availability due to reduced downtimes
- Intuitive user interface in multiple languages
- Control of measurement via
  - Tablet with BAUR BUI-F app or
  - Laptop with BAUR Software 4
- Length-dependent gain for better display of remote events with the BAUR BUI-F app
- Greater convenience, as the TDR measurement can be controlled via Wi-Fi
- Integrated CAT IV/600 V separation filter for TDR measurements on live cables
- Compact system, suitable for installation in a small van

*with the BAUR protrac® pin-pointing system

Technical data

IRG 400 time domain reflectometer		
Measurement methods		▪ TDR Time Domain Reflectometry
	Option	3-phase measurement
		▪ Step TDR
	Option	3-phase measurement
		▪ SIM/MIM secondary/multiple impulse method
		▪ ICM impulse current method
	Option	▪ Decay method
Pulse voltage		60 V
Pulse width		30 ns – 10 µs
Voltage-proof up to		400 V, 50/60 Hz
Measurement category		CAT IV/600 V (up to CAT IV/600 V in combination with the optional TDR connection cable)
Output impedance		30 ohm – 2 kOhm
Input signal gain		Dynamic range 101 dB (-63 to +38 dB)
Display range		10 m – 1000 km
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
Control system		▪ via tablet with BAUR BUI-F app ▪ via laptop with BAUR Software 4

Surge voltage generator		
Surge voltage ranges		0 – 8 kV, 0 – 16 kV, 0 – 32 kV
Surge energy	SSG 1100	1,100 J
	Option SSG 1500	1,580 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 (burn)		DC 560 mA (0 – 8 kV)
	Option SSG 1500/SSG 2100	DC 850 mA (0 – 8 kV)

Surge capacitor extension	SZ 1000	SZ 1600
Surge voltage range	0 – 4 kV	0 – 4 kV
Surge energy	SSG 1100	880 J	1,480 J
	Option SSG 1500	980 J	1,580 J
	Option SSG 2100	1,110 J	1,710 J

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 (operational)		-10 to +50°C
Storage temperature		-20 to +60°C
Dimensions (W x H x D)		Approx. 935 x 970 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

Control of the IRG 400 via tablet or laptop
(The figure is illustrative)

Standard delivery

- Syscompact 400 cable fault location system incl.
  - IRG 400 time domain reflectometer
  - SA 32 SIM/MIM coupling unit
  - SSG 1100 surge voltage generator
  - SK 1D inductive coupler for ICM
  - 19" rack, height 21 RU (933.45 mm), depth 700 mm, for Syscompact 400
  - 19" drawer for tablet or laptop
  - KTG M3 cable drum rack with HV connection cable, mains supply cord and earth cable, each 25 m
  - CS 2 HV coaxial connection socket, 40 kV
- Tablet with BAUR BUI-F app

  or

  Laptop with BAUR Software 4
- GR 40 earth rod
- User manual

Optional software functions for BAUR Software 4

- Mapping (available countries on request)
- GIS interface

Accessories and options

- 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
- Surge voltage generator SSG 1500 instead of SSG 1100
- Surge voltage generator SSG 2100 instead of SSG 1100
- SZ 1000 surge capacitor extension
- SZ 1600 surge capacitor extension
- KTG M3 cable drum rack with HV connection cable, mains supply cord and earth cable, each 50 m
- protrac® pin-pointing system, "Acoustics" set
- GDR 40-250 discharge and earth rod
- Trolley for Syscompact 400
- Steel frame with wheels and guide rods for Syscompact 400
- Steel pallet for Syscompact 400
- TDR connection cable, CAT IV/600 V, 3-phase, 25 m, on hand cable drum
- TDR connection cable, CAT IV/600 V, 3-phase, 50 m, on hand cable drum

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