KUB

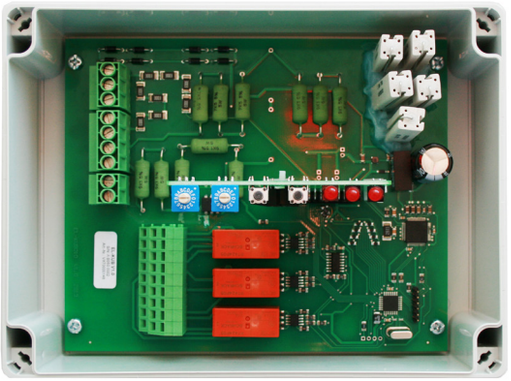
Cable monitoring

Technical specifications

Supply voltage (cable voltage/RL)	+430...+1000 VDC -430...-1000 VDC
Maximum power consumption	10 W
Adjustment range for internal insulation faults	200 kOhm ..... 1,6 MOhm
Adjustment range for external insulation faults	20 kOhm ..... 500 kOhm
Time lag for the detection of internal insulation faults	5s
Time lag for the detection of internal insulation faults (short-circuit)	max. 2s
Time lag for the detection of external insulation faults	20s
Relay output for UKABEL, <Rki, <Rka Umin: Umax: Imin: Imax: min. Schaltleistung: max. Schaltleistung (AC1):	2 changeovers each 24 V 400 VAC / 250 VDC 100 mA 10 A 2,4 W 2500 VA (10 A / 250 V)
External connection resistance	Separately available
Casing material	ABS, grey
Dimensions B/H/D	152/202/90 mm
Protection type	IP 31
Ambient temperature	-25°C to 40°C
Fastening	Can be snapped onto top-hat rail TS35

Task of the KUB

KUB is a snap-on compact assembly in an insulated casing for monitoring of the cable systems for direct current trains with nominal voltage of the 750V overhead contact line. KUB monitors the insulation resistance between conductor and shield, shield and earth and the shield for interruption. This takes place by means of an exact resistance calculation.
The limit value of insulation resistances is set using rotary switches, which are located directly on the device. If the calculated resistances fall below the set limit value for a certain period, a cable fault is reported. The cable faults as well as the operating voltage failure are reported internally through three potential-free relays. Three light-emitting diodes on the KUB indicate the operating status.
For functional testing, there are 2 buttons (Rka button and Rki button). If these buttons are pressed for 5/20s, a cable fault is simulated and the KUB switches the corresponding relay and indicates the fault for the duration of the actuation.

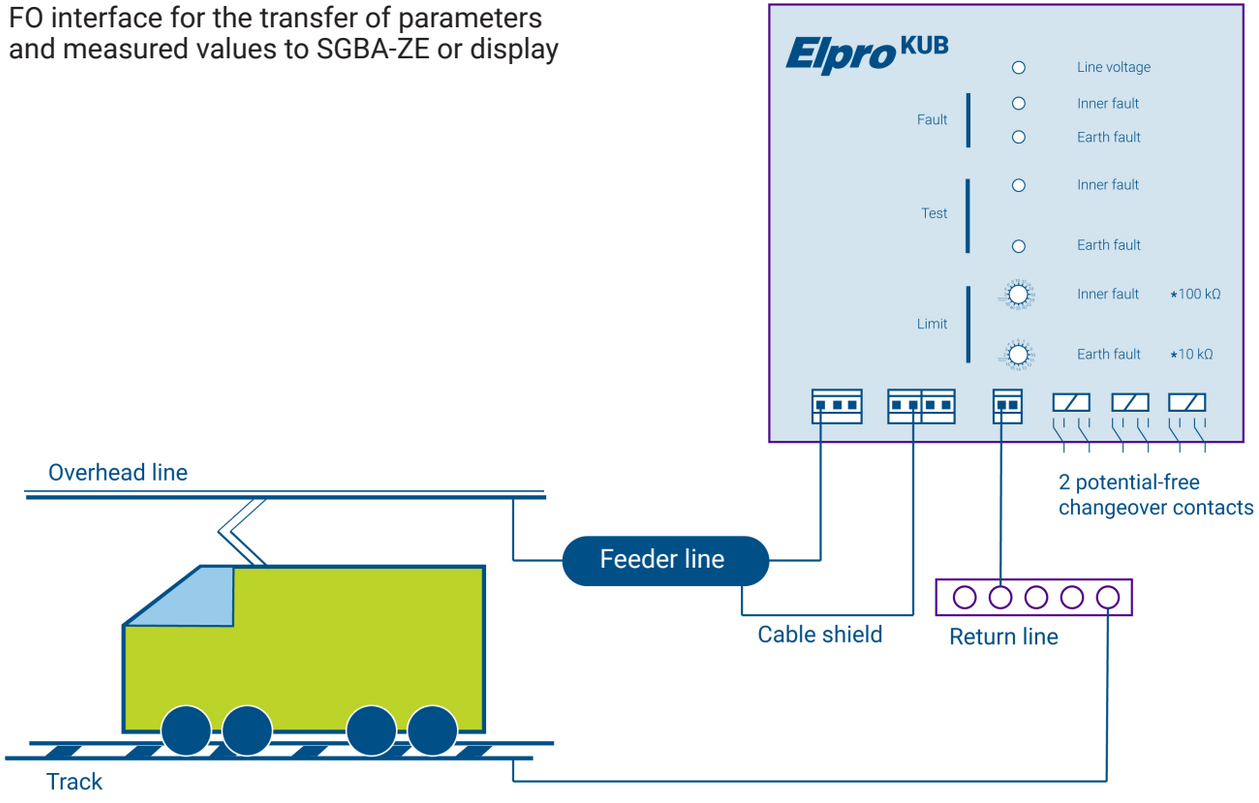


Advantages

- Can be used in networks with positive and negative busbar
- Power supply takes place directly from the line voltage
- Exact resistance calculation of internal and external insulation
- Signalling of a cable fault directly to the assembly
- Short-circuit detection (line shield) with quick tripping (max. 2s)
- Two test buttons for functional testing
- Detection of a cable shield interruption (external resistance required)
- FO interface for the transfer of parameters and measured values to SGBA-ZE or display

Concept

- Nominal voltage 750V according to DIN EN 50163 (VDE 0115-102)
- Resistance calculation from line and shield voltage (Rka and Rki)
- Comparison of the resistances with the threshold set by the user
- In case of a lower deviation, delayed relay actuation
- 2 potential-free changeover contacts each for Rka, Rki and operating voltage available
- Display of the operating status by means of LEDs directly on the assembly



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