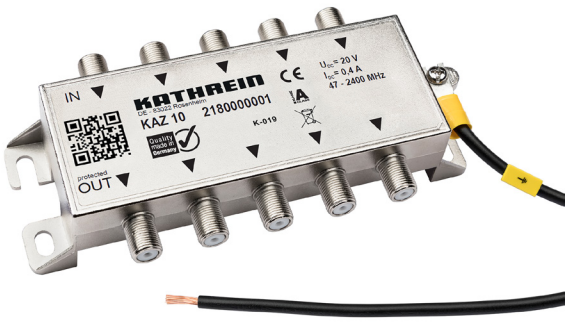
KATHREIN

KAZ 10 2180000001

Surge Protection Device, 5-way



About This Guide

This document is part of the product.

- ► Do not install or use the device until you have read and understood this document.
- ► Keep this document for reference throughout the service life of the device. Pass this document on to any new owner or user.

For the most up-to-date version of this document, go to www.kathrein-ds.com.

Storage and Transport

- ► Transport and store the device in its original packaging.
- ► Make sure there is no water condensation build-up.

Scope of Delivery

- KAZ 10
- Pre-assembled equipotential bonding wire
- Mounting screws and rawlplugs
- Instructions for use

Features

- Protection of system components in DVB-S/C/T reception and distribution systems
- Deployment of KAZ 10 increases the surge discharge capability of KAZ 11 and KAZ 12
- Fulfils categories C2/C3/B2/D1 according to EN 61643-21
- Remote feeding for DC voltages from 0...+20 V / max. 0.4 A
- Passage for 22 kHz and DiSEqC™ signals
- Impedance: 75 Ω
- For indoor installation only
- CE KLASSE A CLASS

Installation and Safety Instructions

Danger to life from electric shock and fire hazard due to electric current!

- ► Connection and installation of the device may only be carried out by a qualified electrician. National regulations and safety regulations must be complied with (see also EN 60728-11).
- ► Before installation, the equipment must be checked for external damage. Should there be damage or another defect, the equipment must not be installed.
- ► The use of the device is permissible only under the conditions listed and shown in these installation instructions. In case of loads which exceed the indicated values, the equipment and any electrical equipment connected to it can be destroyed.
- ► Make sure that the maximum operating voltage of the system does not exceed the highest continuous voltage U_{DC} and the maximum remote supply current I_{DC}.
- ► The device is designed for a clean and dry environment. Do not expose the device to any mechanical and/or thermal stress that exceeds the limits of the specified technical data.
- ► The device must be installed so that it is inaccessible to children.
- ► The equipment must be provided with an equipotential bonding wire (Cu, at least 4 mm²).

To increase the protective effect, it is recommended to use KAZ 11 as a fine protection directly before the device to be protected as well as KAZ 12 as a coarse protection at the house entry point (see Fig. 4).

Intended Use

- ► This device is intended solely for installation in DVB-S/C/T reception and distribution systems. It may only be installed by trained specialists.
- ► Any use other than that specified or failure to observe these application notes will invalidate the warranty or guarantee.
- ► The manufacturer accepts no liability for accidents caused by the user opening the unit.
- ► Opening the unit and attempting to repair it yourself voids all warranty claims.

Other Measures

- ► With remotely-fed antenna amplifiers, no additional protective circuit is necessary. With mains-fed devices, an additional protective device for the mains feed is required (e.g. S-Protector, NSM-Protector or DEHNsafe). The PE connection of the mains feed must be connected with the grounding connection of the KAZ 10 surge protector at low resistance.
- ► If cable systems require the use of a gas discharge arrester at the building transfer point (BTP), a decoupling distance of at least 1 m between the BTP and the KAZ 10 is required to ensure coordination of the two protective measures. The use of an upstream gas discharge arrester (e.g. KAZ 12) increases the surge current capability of the KAZ 10 surge protector.
- ► Equipotential bonding is performed according to Fig. 3. Additionally, the ground terminals must be connected with short cables (Cu, 4 mm²).

Connecting the KAZ 10

1. Connect the OUT side of the KAZ 10 to the inputs of the devices to be protected (multi-switch, amplifier, ...). Use short coaxial cables with F connectors. Make sure that each system component is always connected to the equipotential bonding and, if necessary, insert additional grounding blocks (e.g. EMU 21).
2. The lateral mounting brackets (see 1 Fig. 1) allow you to mount the surge protector on a flat surface.
3. Connect the cables coming from the satellite antenna (see 2 Fig. 1), and any existing terrestrial antennas to the IN side of the surge protector.
4. Connect the housing via the lateral earthing screw (see 3 Fig. 1) to the local equipotential bonding by the shortest possible route.

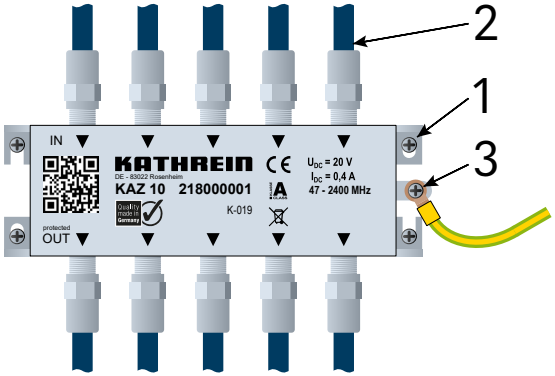


Fig. 1: Connecting the KAZ 10

Wire Routing

> **!** Do not lay protected and unprotected lines directly next to each other over long distances. Unprotected lines also include equipotential bonding lines (see Fig. 2).

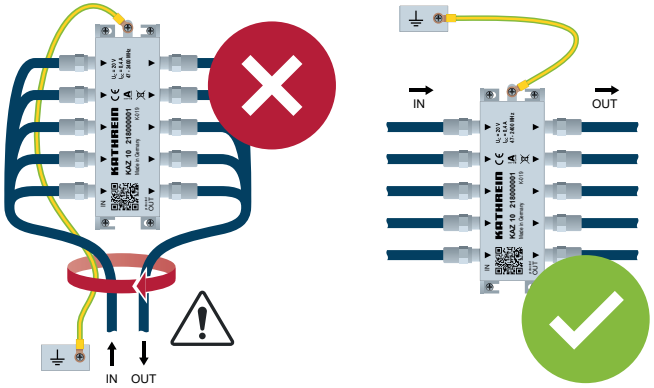
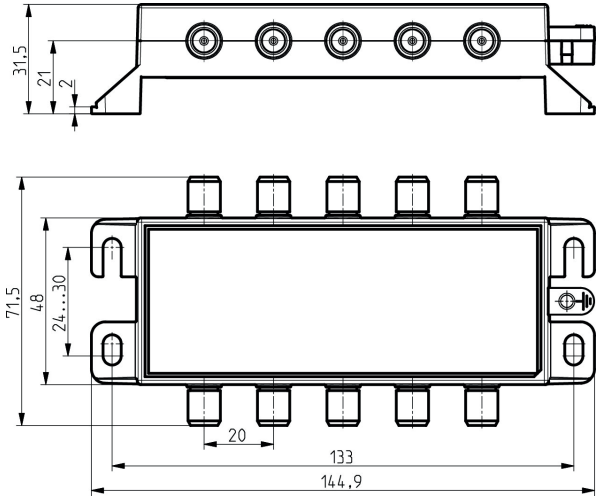


Fig. 2: Wire routing

Dimensions (mm)



Connection Example

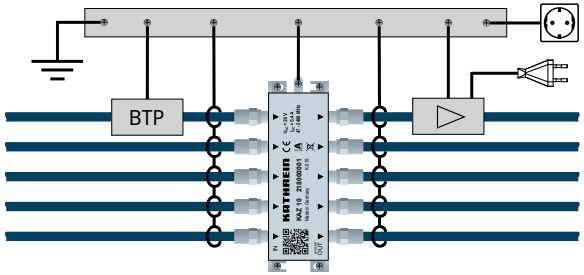


Fig. 3: Example of equipotential bonding

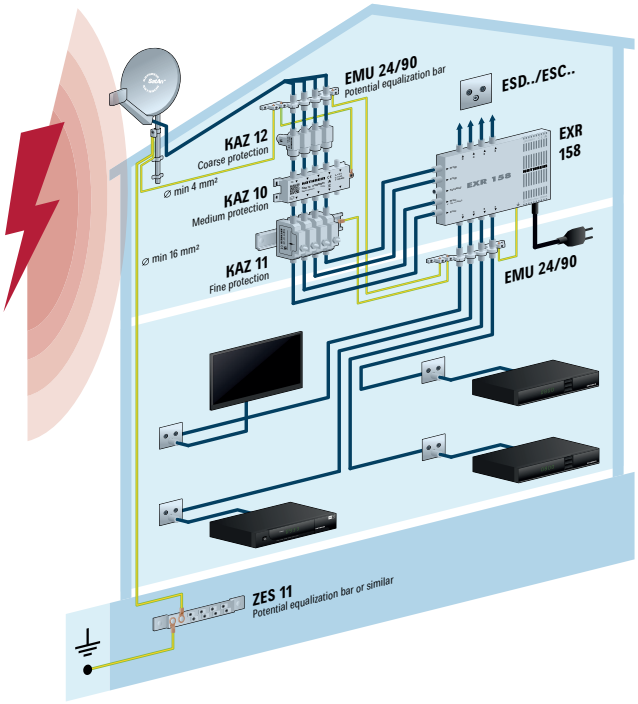


Fig. 4: Complete house distribution

Technical Data

Type		KAZ 10
Order number		2180000001
Transmission range	MHz	47–2400
Through loss	dB	1.2
Nominal impedance	Ω	75
Screening factor	dB	5–300 MHz ≥ 85 300–470 MHz ≥ 80 470–950 MHz ≥ 75 950–3000 MHz ≥ 55
Remote feed voltage (max.)	U_{DC}	+20 V =
Remote feed current [1] (max.)	I_{DC}	0.4 A
Temperature range	°C	-20 to +55
Connection		F socket acc. to EN 61169-24
Lightning surge category D1 (10/350 µs)	kA	Inner/outer conductor: 0.5 Outer cond./grounding connection: 5
Nominal discharge surge current (8/20 µs)	kA	Inner/outer conductor: 2.5 Outer cond./grounding connection: 10
Protection level at 2 kA / 4 kV (8/20 µs) Category C2	V	≤ 500
Protection level at 100 A Category C3	V	≤ 120
Response time	ns	≤ 1
DC resistance (Input / output per path)	Ω	3.3
Housing protection class		IP 40
Tested categories acc. to EN 61643-21		C2/C3/B2/D1
Packing unit/weight	pc./kg	1 (35) / 0.22

[1] It must be ensured that both in normal and in faulty operation the remote supply current does not exceed 400 mA.

Disposal

Electronic equipment
Electronic equipment is not domestic waste – in accordance with directive 2012/19/EC OF THE EUROPEAN PARLIAMENT AND THE COUNCIL dated 04th July 2012 concerning used electrical and electronic appliances, it must be disposed of properly. At the end of its service life, take this unit for disposal at a designated public collection point.

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