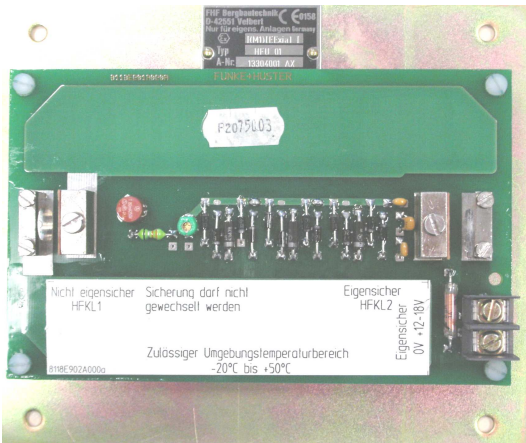


RF Isolator Type HFU01

Order information

Name	Type	Part No.
RF Isolator	HFU01	133 040 01 AX



- MR90 Isolator/Coupler Module i – n.i.
- Cubicle mounting
- Explosion protection category / mode: I (M1) [EEx ia] I

Usage

The RF Isolator HFU01 is an explosion proof component and is used to isolate an intrinsically safe RF Circuit from a not intrinsically safe RF circuit. For usage outside of hazardous areas the RF Isolator must be built into a protective housing with a minimum IP 20 ingress protection grade or, if used in hazardous areas, it must be built into a housing with an approved explosion protection mode e.g. "flameproof".

Description

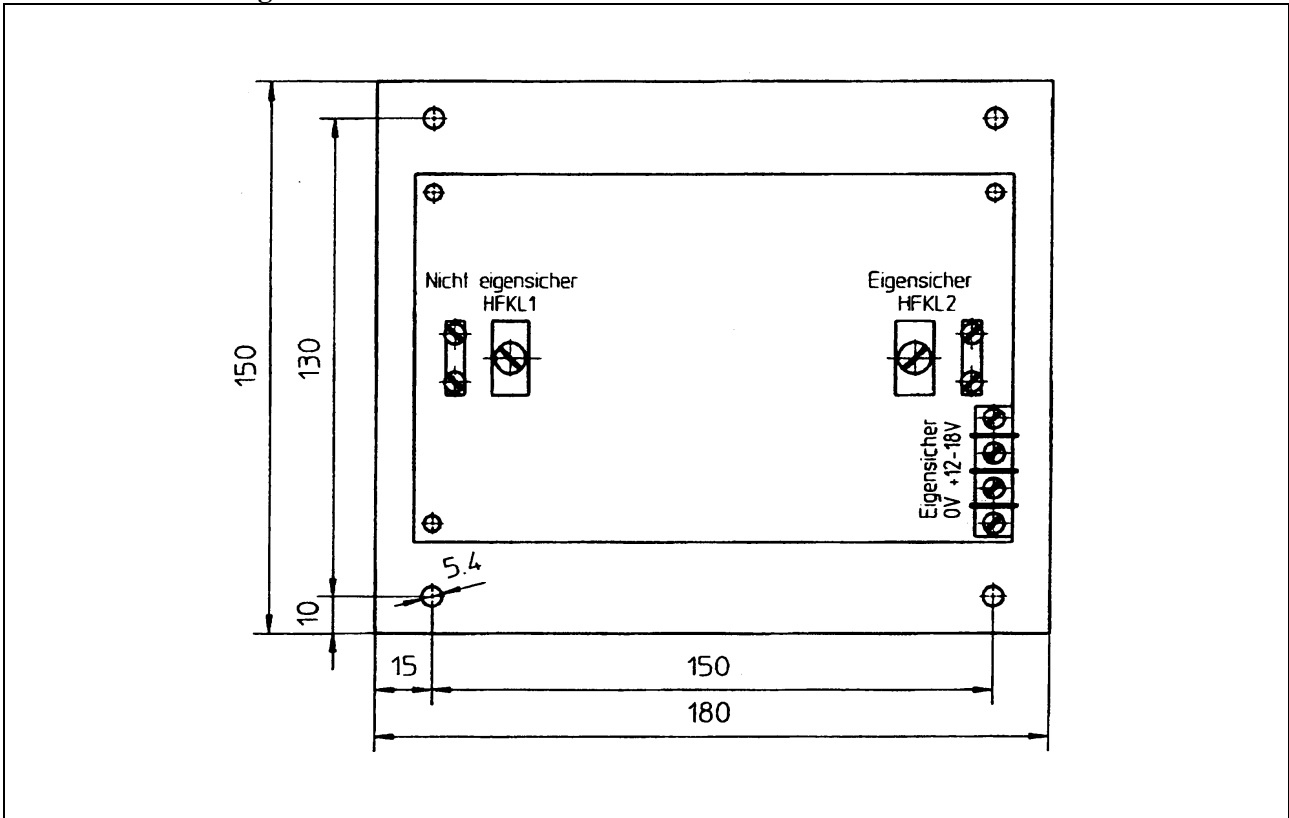
The basic concept of the RF Isolator HFU01 is to realize two pairs of coupling areas with guaranteed galvanic isolation between the not intrinsically safe RF circuit and the part of the intrinsically safe circuit terminals. The RF transmission is made via the low coupling-capacity of the coupling area pairs. The intrinsically safe part of the circuit contains a compensating transformation network for a minimal attenuated RF transmission in a 50 Ohm system for a frequency range from 25 to 40 MHz.

The transmitted RF power is limited by a 3-fold zener-diode barrier together with a fuse. Three capacitors in series isolate the HFU01's internal circuits from its additional remote DC power feeding on the intrinsically safe side. The remote power feeding is used for the remote powering of RF amplifiers in the MR90 radio system.

Construction

The RF Isolator HFU01 consists of a printed circuit board with dimensions of 100 x 160 mm, on which all electrical parts are placed, just as the sheath clamps for the coaxial cables and the DC remote power terminals. To protect the PCB against harmful environmental influences it is covered on both sides with a varnish coating. The mentioned fuse is not replaceable. For an easy mounting in corresponding protective housings, the printed circuit board is mounted on a sheet-steel plate (180 x 150 mm). The type label is fixed on the mounting plate.

Dimensional drawing



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