

1 The device

Under a lot of circumstances, it is required, to have the highest possible availability of all installed electric and electronic devices guaranteed. Most faults are caused through faulty power supply units (p.s.u.) Now it is obvious to make the p.s.u. fail-safe..

For 19"-housings Type 433-1U and 433-2U we can realize the redundant p.s.u., which is described below.

1.) Breakdown of the p.s.u.

A daughter board is installed inside of the 19" housing, where 2 p.s.u.'s can be connected to. From this daughter board, up to 6 devices can be powered.

The daughter board supervises the connected p.s.u.'s concerning breakdown and low voltage. If the primary p.s.u. fails, the electronics switches without any time lag to the secondary p.s.u. LEDs monitor the operating state (Voltage ok, Voltage low) and malfunction. An electrically isolated contact for each p.s.u. at the monitoring connector will monitor the operating state in addition. If the faulty, primary p.s.u. resurges, after a delay time, the electronics switches back to the primary p.s.u.

2.) Breakdown of the supply voltage

The 2U housing is also available with a secondary power inlet. In this version, it is possible, to energise the two internal p.s.u. from two discrete power circuits. If one power circuit fails, the system keeps still alive. The built in daughter board electronics can NOT recognise, whether the supply voltage fails or the p.s.u. In this case, the monitoring signals mean either 'supply voltage fault' or 'p.s.u. fault'.

2 Quick Setup

This section briefly describes how to install your 19" housing with redundant p.s.u.

Install System

1. Install the device in your rack/cabinet
2. Connect (optionally) the monitoring connector (DB9) with your supervising electronics.
3. Connect the (primary) power inlet to your wall outlet.
4. Connect the (secondary) power inlet to your wall outlet of the secondary power circuit (433-DR only)
5. Power on the electricity supply

3 Installation

For first-time users, we recommend that you carry out a test placement, confined to a single room, before commencing full installation. This will allow you to experiment with the 19" housing with redundant p.s.u. more conveniently.



1U housing Type 433-1R



2U housing with a single supply voltage Type 433-2R



2U housing with dual supply voltage Type 433-DR

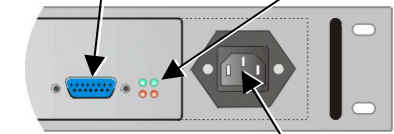
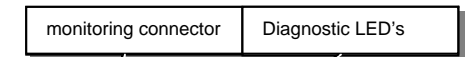
3.1 Package Contents

You should receive the following items when you buy a 19" housing with redundant p.s.u.:

- Housing 19"/1U or 19"/2U, depending on device type
- Daughter board
- 2x internal p.s.u., already mounted into 19" housing
- Quick Setup Guide (this brochure).
- 1x or 2x German Type power cord (depending on device type).

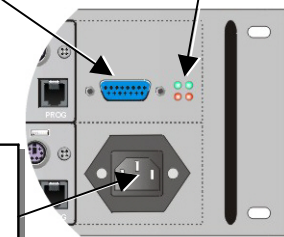
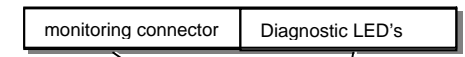
If anything is missing, please contact Technical Support.

3.2 Device View



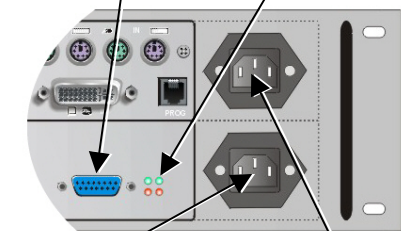
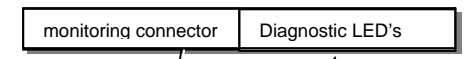
Connect to 90..240VAC supply voltage

1U housing Type 433-1R



Connect to 90..240VAC supply voltage

2U housing Type 433-2R



Connect to primary 90... 240VAC supply voltage

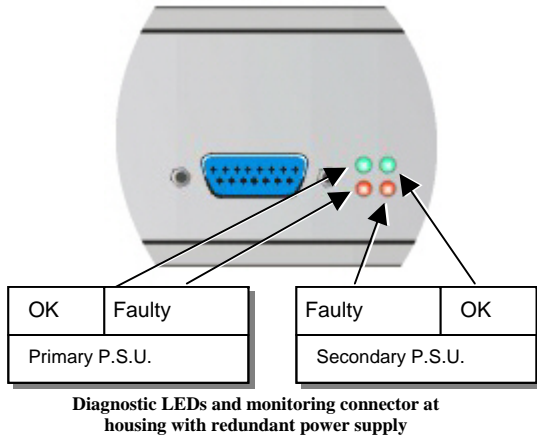
Connect to secondary 90... 240VAC supply voltage

2U housing Type 433-DR

3.3 Diagnostic LEDs

Each 19" housing with redundant power supply is fitted with four indicator LEDs (if they are wired to the outside, depending on type of construction): For both, the primary and secondary p.s.u. there is displayed – *P.S.U. is OK* and *P.S.U. faulty*. The LED's are next to the Power socket.

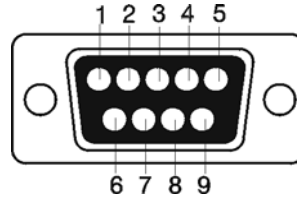
The location of the LED's / monitoring connector is shown below:



LED	Appearance	Diagnostics
OK (Primary/ secondary p.s.u.)	ON	p.s.u. working, voltage OK
	blinking	p.s.u. working, voltage low!
	OFF	p.s.u. faulty
Faulty (Primary/ secondary p.s.u.)	OFF	if <i>p.s.u. OK</i> ON : device operational if <i>p.s.u. OK</i> OFF : main power faulty
	ON	p.s.u. faulty

3.4 Monitoring Connector

Each 19" housing with redundant power supply is fitted with a Monitoring Connector (if it is wired to the outside, depending on type of construction): For both, the primary and secondary p.s.u. there is displayed – *P.S.U. is OK*. The Monitoring Connector is next to the Power socket. An electrically isolated contact for each p.s.u. monitors the working state of each p.s.u. The contacts are closed, as long as the p.s.u.'s are working.



9 pin DSUB female connector

Pin	Signal
1	Not connected
2	RxD
3	TxD
4	Secondary p.s.u. OK
5	GND
6	Secondary p.s.u. OK
7	Primary p.s.u. OK
8	Primary p.s.u. OK
9	Not connected

19"-housing with redundant power supply

Type 433-1R Type 433-2R Type 433-DR

(Quick Setup)

