

# UPoB

## Universal Power Bridge



The UPoB is a universal power bridge that protects the connected system, such as a data logger, against voltage fluctuations and power failures. The device is able to override the fluctuations for their duration of time. In case of a complete power failure, a minimal voltage level is maintained until the connected system is shut down safely.

Four standard options of the UPoB are available that vary in the total capacitance of the built-in capacitors (12.5 F, 25 F, 50 F or 75 F) and therefore in the maximum bridging time. Other configurations are also possible.

The UPoB optionally sends a trigger signal via communication interface when a certain configurable threshold of the charging percentage is reached. The communication interface consists of RS232 interface, CAN interface, digital switching output and relay output. Status messages are sent via CAN bus to be analysed by a data logger. The user can also set the desired charge current.

### Features

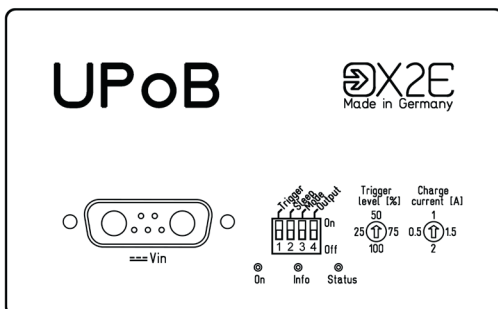
- Standard options: 12.5 F, 25 F, 50 F or 75 F capacitance
- Trigger signal when charging threshold is reached
- Configuration via DIP switches and rotary coding switches
- RS232 interface to communicate with the connected system
- Status messages via CAN bus
- 5 V digital switching output, drive current max. 100 mA
- 5 V to 48 V relay output with opener/closer (100 mA) and external switching voltage
- Firmware update via USB bootloader

### Specifications

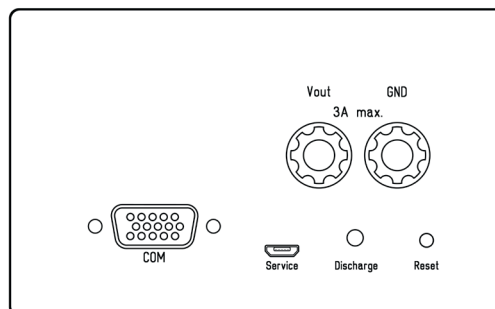
- Dimensions (H x W x D) 64.4 x 105 x 164 mm
- Temperature range -40 °C to +85 °C
- Supply voltage 7.5 V to 28 V
- Output current max. 3 A
- Idle current max. 200 mA
- Quiescent current max. 2 mA
- DC voltage protection max. 40 V

### Delivery Contents

- UPoB (Universal Power Bridge)
- Power supply cable
- COM breakout cable
- Manual



Front view



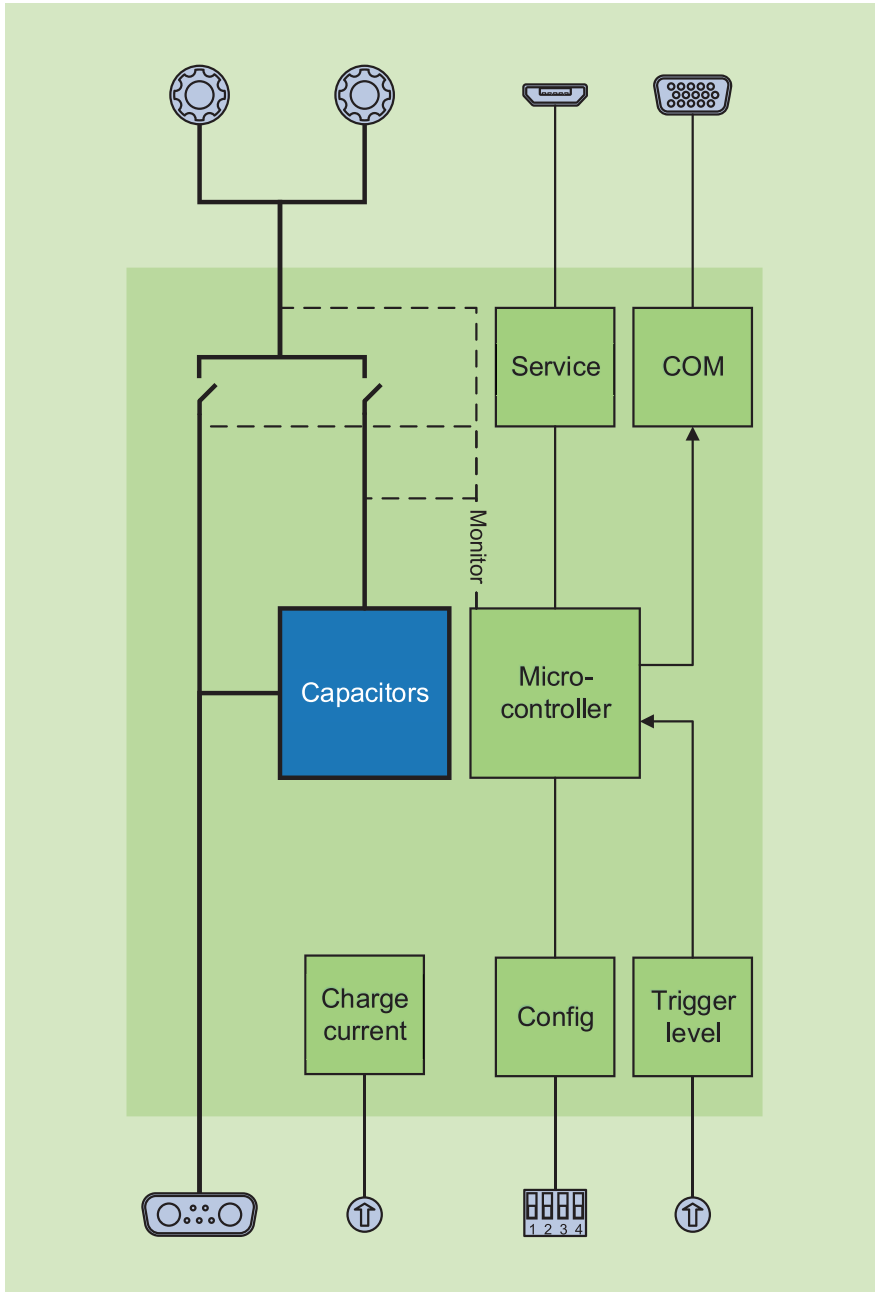
Back view

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Block diagram of UPoB

### Connectors

- D-sub coax for input voltage
- 4 mm connector (red) for output voltage
- 4 mm connector (black) for output ground
- D-sub (DE-15) as COM interface
- Micro USB as service interface

### DIP Switches

- Trigger  
sends trigger signal when trigger level is reached
- Sleep  
activates sleep mode when output current below a minimum level
- Mode  
matches voltage levels from input to output
- Output  
activates output

### Rotary Coding Switches

- Trigger level  
25 % to 100 %
- Charge current  
0.5 A to 2 A

### Buttons

- Discharge  
discharges capacitors
- Reset  
acknowledges overcurrent and reconnects output

Pictures may differ from actual device.



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