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# Rail-compatible USB charging ports for the passenger area and driver's cab

The rail equipment specialist LÜTZE TRANSPORTATION supplies a variety of USB charging ports for rail vehicles in line with the specifications of the EN 50155, EN 50121-3-2, EN 61373 and EN 45545-2. In the near future, LÜTZE TRANSPORTATION will be expanding its portfolio to include additional solutions with USB-C connections and charging currents of up to 3 A.

Many passengers use mobile end devices, such as smartphones or tablets, for both their private entertainment and for business purposes every day. Accordingly, operators and manufacturers of long-distance and regional trains, as well as municipal trains and trams, are increasingly supplying USB charging stations. Tablets are also used in the driver's cab to update travel data such as route tables, timetables and slow zones easily and promptly. LÜTZE TRANSPORTATION supplies suitable USB charging port solutions for various applications:



Fig.: Depending on requirements and the application, LÜTZE TRANSPORTATION supplies suitable USB charging port solutions for the rail sector.

### 230 V socket plus two USB charging ports

Thanks to the VDE-tested socket by LÜTZE TRANSPORTATION, it is now possible to charge two end devices via USB, whilst also supplying 230 V power at the same time. The two USB

charger ports provide a charging current of 1.2 A each at a total of 12 W. If just one of the ports is used, a charging current of 2.4 A is available. By means of dynamic recognition of the charging protocol, the power needs of the connected mobile device are recognized and the charging current is adapted efficiently. The USB charging ports use less than 50 mW in standby mode so that the on-board supply of the rail vehicles is only loaded slightly. The socket has a mechanical shutter as standard to protect against accidental contact.

## USB charging port DC 24 V for two end devices with an optional protection cap

As an alternative to the USB charging port with a shockproof socket, LÜTZE TRANSPORTATION also supplies a standard charging port with two USB-A interfaces, and a charging current of 1.5 A respectively. Green LEDs indicate the correct charging per channel. Optionally, there is a variant with a protection cap available so that when closed, the protection class IP 65 is reached.

## USB charger for the driver's cab

The USB charging port for the driver's cab by LÜTZE TRANSPORTATION brings operators one step closer to paper-free operation. The DC/DC converter has a wide voltage input range of DC 24 V to 110 V, making them suitable for different rail onboard supplies in diesel and also electrical vehicles. Two output channels provide a charging current of DC 5 volt with 2.1 A each.

### A look into the future with USB-C

LÜTZE TRANSPORTATION is currently developing USB charging ports that are based on the 24-pin USB-C standard. USB-C is already used in most Android smartphones and by many Laptop manufacturers. A charging current of 3 A can be supplied via the USB-C interface. There is also the advantage that the USB-C connector does not have a top or bottom, and can be inserted on both sides.

Characters: 3,135 incl. spaces