



ЗУ 110/40 (ВПТС.426471.118)

The device provides for:
SB (storage batteries) qualitative charge; SB controlled discharge
SB parameters monitoring
SB keeping in ultimate modes (deep discharge, overheating, etc.)

Application

- DC and AC electric trains
- Diesel locomotives
- Passenger cars
- Subway cars
- Public transport
- For SB STARK 9-АГНГ(В) 12 120М-В, VRLA 24В и 100В, KGL60P, 56KGL125P and their equivalents

Features

- Reliable, modular, redundant design scheme. Simple adaptation of the customer-specific design
- Microprocessor control system
- Quick setup using a software utility for specific batteries
- Battery parameters registration in non-volatile memory
- Registration of not only the battery charge current, but also the discharge current
- Low internal consumption at idle
- Full compatibility with the system of advanced diagnostics of the electric train
- A typical range of pre-set factory charge profiles adapted to specific batteries used on rolling stock
- Low charge voltage and current ripple factor
- Rolling stock mechanical and climatic design
- Battery protection against deep discharge
- Battery overheating protection
- Full-scale indicating system
- Modern and convenient combined sensor for measurement of battery current and temperature
- Function of emergency power on from the discharged battery to start the electric train
- Before being sent to the customer, the charger goes through a full cycle of factory tests
- The solution has been developed on the rolling stock of Russian Railways

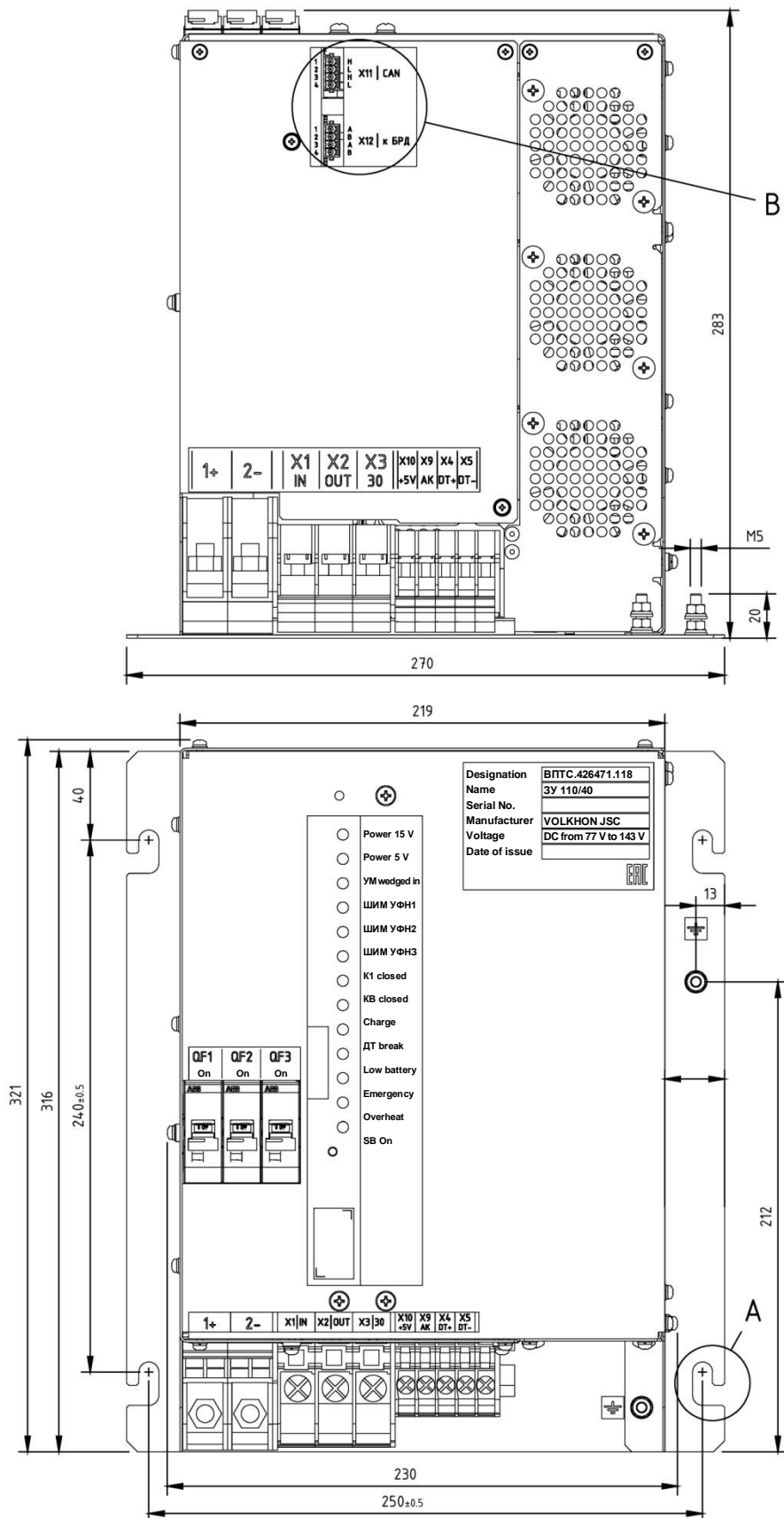
Specifications

- Storage charge method - IU as per DIN 41773
- Storage charge voltage temperature compensation
- Storage condition indication: "Low battery charge" ("АКБ разряжена")
- Battery protection contactor condition indication: "Battery is closed" ("КБ замкнут")

Specifications

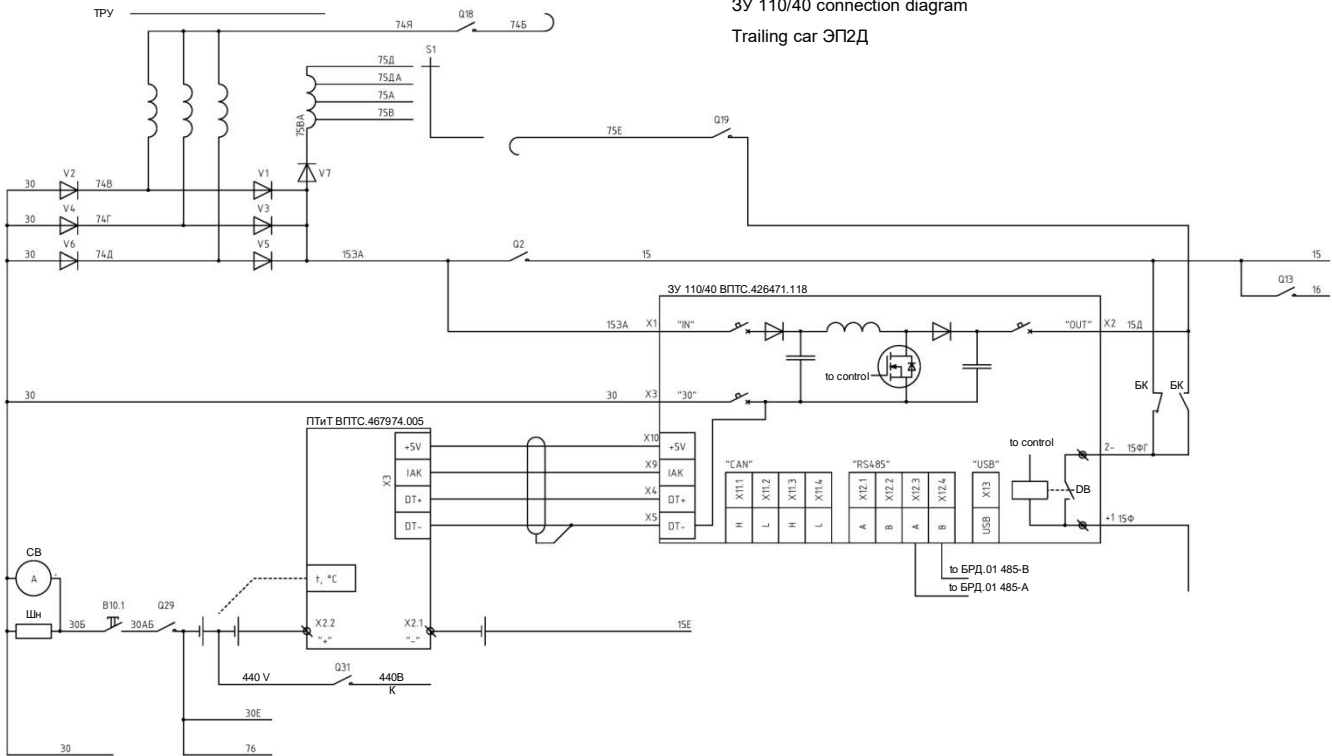
Name	Parameter
Supply voltage	110 ± 33 V
SB charger system	U _g ... 133 ± 2 V
Maximum output current (I _{out}), max 3Y 110/40 (5 design options)	40, 50, 166 ± 1 A
Setting for limitation of the storage maximum charge current, adjustable	0.40 ± 1 A
Current through temperature and current sensor	
Long-term	±50 A
Maximum, measurable	±60 A
Maximum surge current (1s, duty cycle 1%)	±600 A
Built-in limitation of the charger starting current, max	3 ± 1 A
Work readiness time, max	10 s
Battery protection setting when discharging, adjustable	0.145 ± 2 V
Setting for switching on the "Low battery charge" ("АКБ разряж.") indication, adjustable	0.145 ± 2 V
Voltage ripple factor on a resistive load, conversion frequency max	±0.8%
Time for single connection of the deeply discharged battery by pressing the "SB ON" ("ВКЛ. АКБ") button	10 min.
Temperature sensor break indication	Available
Charge mode indication	Available
Battery protection contactor status indication	Available
Alarm indication	Available
Internal power modules operation indication	Available
Real time clock parameters registration:	Available
Supply voltage U _g	
Battery voltage U _b	
I battery charge/discharge	
Battery temperature	
Inside article temperature	
Article contactors condition	
"SB ON" ("ВКЛ.АКБ") button condition	
Charger emergency protection against overheating	Available
Power input/output short circuit current protection	Available
Operating temperature	-50 °C to +50 °C
Service life	20 years
Protection level	IP20
Unit weight, max (5 versions)	14, 16, 18 ± 0.2 kg
Overall dimensions (HxWxD)	321 x 270 x 283
Structural design category	M25

Outline drawing



Connection Diagram

3У 110/40 connection diagram
Trailing car ЭП2Д



3У 110/40 connection diagram
Control car ЭП2Д

