

Control system and drives Door control unit





# DCU DPSU (BNTC.426471.100)

# DCU DPSU-RB (BIITC.426471.124)

## Application

Door positioning system units are used in automatic sliding plug outer doors.

## DCU DPSU (BNTC.426471.100):

Doors of multiple-unit cars, Ural Locomotives LLC

### DCU DPSU-RB (ВПТС.426471.124):

Doors type  $\Phi$ KF $\Pi$ 647.10.00.000 together with automatic adjustable foot rest  $\Phi$ KF $\Pi$ 605.30.00.000 on RA3 rail buses of Metrowagonmash JSC

## Function

### DCU DPSU (BПТС.426471.100)

Devices are intended for control:

- Swing doors operation
- Automatic foot rest operation
- Interaction with the transport lift
- Interaction via the CAN interface with the microprocessor control and diagnostic system (MPCDS) of the electric train according to the agreed data exchange protocol

### DCU DPSU-RB (BПTC.426471.124)

Devices are intended for control:

- Door operation when passenger boarding and deplaning on high platforms
- Coordinated operation of the door and the automatic adjustable foot rest for passenger boarding and deplaning on low platforms
- Coordinated operation of the door and lift for wheelchair disabled person boarding/disembarking
- Interaction of doors, steps and lift via CAN lines with the vehicle control unit (VCU) according to the agreed protocol



### Parameters

- Software and hardware overload protection in the motor control stage
- Discrete inputs and outputs with a rated voltage of 24 V and 110 V
- Digital outputs overload protection
- Protection of digital inputs against overvoltages and connections with polarity violation
- Passenger protection against tightening:
  - By motor current value
  - By motor current shape
  - By motor encoder indications
  - By safety edge (digital input) actuation
- It can be supplied with diagnostic software designed for:
  - Display of inputs / outputs status
  - Display of motors operation parameters
  - Manual control bypassing the main algorithm
  - Recording of doors opening/closing traces
  - Firmware updates
- The solution has been developed on the rolling stock

## Specifications

| DCU DPSU (BПТС.426471.100)              | DCU DPSU-RB (ВПТС.426471.124) |
|---|-------------------------------|
| DC supply voltage                       |                               |
| 77 to 144 V                             |                               |
| Maximum current (with DC motor control) |                               |
| 2                                       | 0 A                           |
| Operating temperature                   |                               |
| -50 °C to +45 °C                        | -50 °C to +50 °C              |
| Maximum demanded power in the idle mode |                               |
| 15 W                                    |                               |
| Unit weight                             |                               |
| 4 kg, max                               |                               |
| Overall dimensions (HxWxD)              |                               |
| 80 x 175 x 369                          |                               |
| Structural design category              |                               |
| M25                                     |                               |
|   |                               |