

Range of the Z101 products



■ Boards

- Board of the RDD communication – BA0011E1

■ Blocks

- Position evaluating block – UA0001A1
- Measuring and indication block – ZH1008P1
- Chopper converter block – ZS1001R1
- Fan block – ZV0003R1
- Fan block – ZV0004R1

■ Racks

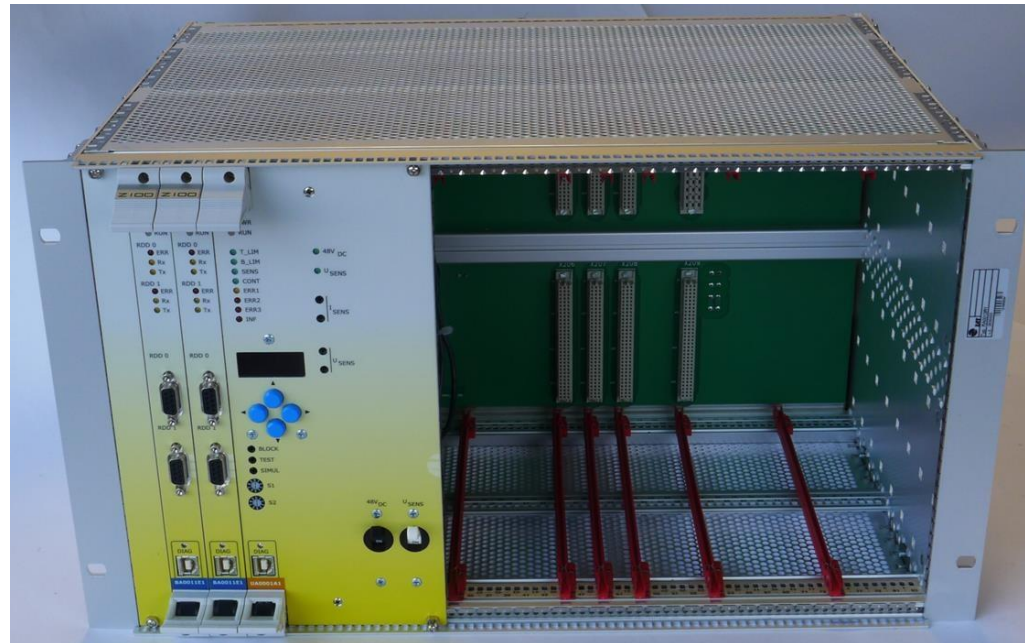
- Rack of the motor control – RA0012R1
- Rack of the position evaluation – RA0013R1

Rack of the position evaluation



- Rack **RA0013R1** is used as an interconnecting DPS for the boards using bus SSIO2 for mutual communication. This rack is used for position evaluation.

The rack is designed in such a way that it is possible to be mounted with two identical channels of position evaluation. Each channel is mounted with 2pcs of communication boards BA0011E1 and 1pc of block UA0001A1. Each half ensures separate distribution of power supply 2 x 24VDC or 2 x 48VDC. These two supply branches have connected grounds within the channel.



RDD communication board BA0011E1



The board BA0011E1 realizes continuity between RDD global communication network and SSIO2 serial bus of the Z101 system.

Construction and circuit design enable inserting and removing board out of rack in the course of operation of system (HotSwap).

RDD communication is a proprietary (company) protocol that uses HDLC frame.

- RAM memory containing data of all nodes of the RDD connected line
- 8 binary inputs (HW key of the RDD node address)



Position evaluating block UA0001A1



Block UA0001A1 is intended for power supply of the LD-1 position sensor and evaluating of (rough) position of HRK regulation rod of VVER 440 nuclear reactor.

- position evaluation of regulation rod of VVER 440 reactor
- cooperation with LD-1 position sensor
- 4-digit alpha numeric display with four control buttons
- signalling of LED PWR, LED RUN, LED 48VDC
- 8x LED for signalling of operation states
- 2x BCD switch
- 3x socket for selection of operation modes
- 2x measuring sockets
- 1x tuning channel USB (DIAG)



Rack of the motor control RA0012R1



- Rack **RA0012R1** is used as an interconnecting DPS for the boards using the SSIO2 bus for mutual communication. This rack is used for control of motor.

The rack is mounted with 2pcs of communication boards BA0011E1, 1pc of block ZH1008P1 and 2pcs of converter ZS1001R1. The rack ensures power supply distribution 2 x 24VDC or 2 x 48VDC. These two power supply branches have interconnected grounds.



Chopper converter block ZS1001R1



Chopper converter block ZS1001R1 is intended for power supply of one three-phase synchronous reactive motor RD42 of the regulation and emergency assembly (HRK) of VVER 440 nuclear reactor

- Function of main and reserve source of one three-phase synchronous reactive motor RD42
- All operation modes of RD42:
 - holding of assembly
 - motion of assembly
 - catching of assembly
 - emergency holding of assembly
- Possibility of removing the chopper converter block in the course of operation of system (Live Insertion)



Measuring and indication block ZH1008P1



Measuring and indication block ZH1008P1 is intended for independent measuring of supply currents and voltage of synchronous reactive motor RD42 intended for position control of regulation and emergency assembly (HRK) of the VVER 440 nuclear reactor.

- Setting precise position of regulation assembly with accuracy of one reserved position of motor
- 4-digit alpha numeric display with four control buttons
- Signalling of LED PWR, LED RUN, LED 48VDC
- 8 x LED for signalling of operation states
- 2 x BCD switch
- 3 x socket for selection of operation modes
- 2 x measuring sockets
- 1 x tuning channel USB (DIAG)

