



## **FREQUENCY DRIVE AVy (SIEI, Italy) FOR 250 – 630 kW CAGE INDUCTION MOTORS**

### **PURPOSE**

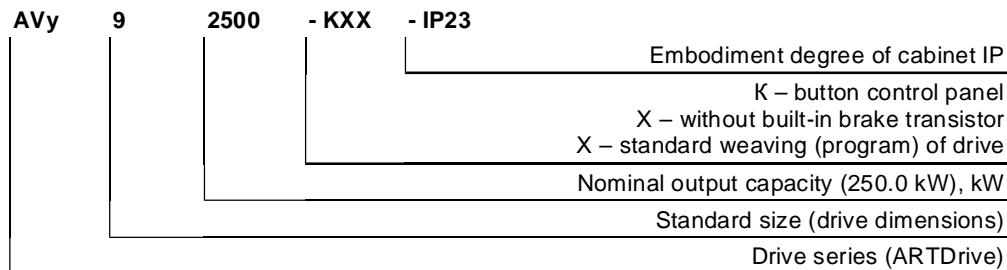
Frequency drive (cabinet AVy) is intended for regulation of rotation frequency in cage induction motors with a square-cage armature in the following modes:

- I Frequency control;
- I Vector control without sensor;
- I Vector control with sensor of angular movement with a sinusoidal or pulse output signal.

Cabinet AVy can be used in many industries including the paper, textile, printing industry, processing of plastic, manufacturing of rubber, metal working, etc.

Cabinet AVy can be used for regulation of rotation frequency for cage synchronous motors in complex with a static field control of EX-SR series produced by EnergoComplekt CJSC, and it could be used for synchronous brushless motor in complex with an automatic field control AVR-XX-BR-Q1D.

### **STRUCTURE OF LEGEND**



### **CONTENTS**

Cabinet AVy represents a structurally completed block; its equipment list includes: rectifier and inverter (two separate blocks), input current-limiting reactor, input disconnecting device, drive protection breakers, forced cooling fans. The following elements could be mounted additionally (optionally) in the cabinet: output reactor, breaking unit with breaking resistors, input filter, and recovery unit. Controls button panel and signal lamps are mounted at the cabinet door.

Appearance of the cabinet is given at fig. 1; location of elements inside the cabinet is given at fig. 2.



### **MAIN SPECIFICATIONS**

- I Power supply voltage (standard):  
380 V AC -15% ... 480 V AC +10%, 3-phased
  - I Power range of motors:  
250 – 630 kW (at power supply 380 V)
  - I Range of nominal output currents: 2.4 – 1120 A
  - I Maximal output voltage: 0.98 U<sub>sup</sub>
  - I Operation temperature (standard): from 0 °C up to 35 °C
- Protection from:**
- I motor overload;
  - I short circuit currents;
  - I inadmissible decrease and increase of input voltage;
  - I overheating of converter's radiator.

Fig. 1. Cabinets AVy

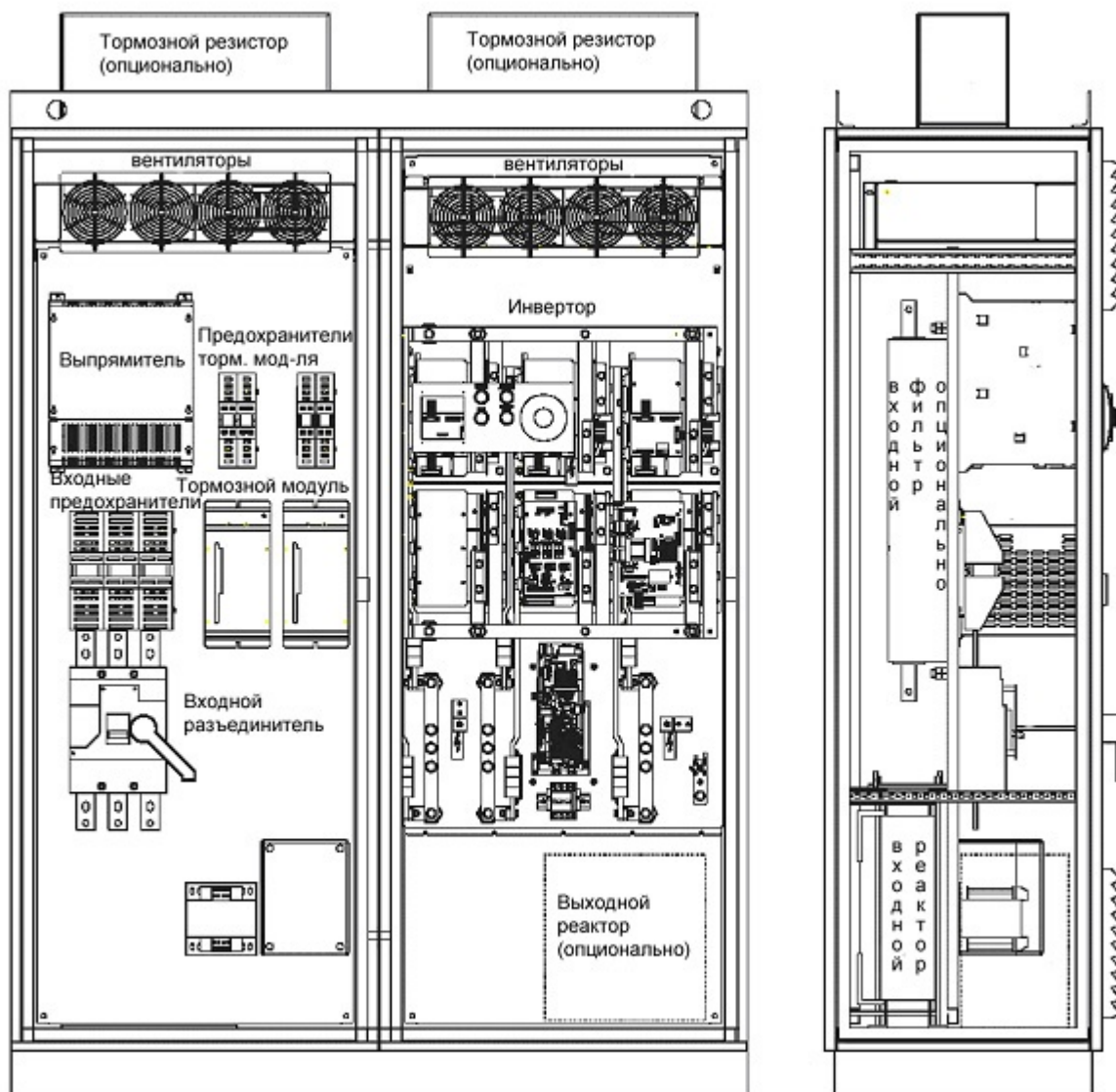


Fig. 2. Location of elements inside cabinet

#### CABINET AVy PROVIDES:

- I automatic control by frequency of rotation of the electric motor by feedback from the sensor practically of any technological parameter, by signal from the automatic control system, or by orders of the operator;
- I deenergizing of the electric motor in a cabinet: its long overload on time, short circuit, phase breakage, current outflow or overvoltage;
- I smooth start-up of the electric motor;
- I motor reversal;
- I automatic restart of the system after power supply failure (by order);
- I possibility to connect several cabinets on a uniform technological process (cabinets of special embodiment; installation of the industrial controller is required at presence of several feedback signals on technological parameter (in one of the cabinets or in a separate cabinet));
- I energy recovering back to the mains (special embodiment cabinet).

The company performs installation supervision, setting-up, and testing of cabinets AVy, guarantee and post-warranty service, modernization of the systems in operation, training of the service personnel, technical consultations at equipment choice. Delivery of the equipment is performed within 3 months from the moment of the contract signing and advance payment.