

TECHNICAL SPECIFICATION

AVSU/Control-Closing Valve Boxes (Integrated Area Alarm)

The purpose of **Control-Closing Valve Boxes** for medical gases is permanent status control of medical gases within the network system installed in a certain building. The boxes are installed in individual floors/area which allows for status control of medical gases throughout the building/floors/area, and shutting-off the supply to individual parts of the building. Also, in case of a central supply outage, they enable emergency supply to individual installation branches.

A detailed view of what is going on with an individual media is enabled by the LCD alarm system display of a rather trendy design. User-friendly menus show the decrease or increase of pressure and the flow rate of an individual medium. The temperature is monitored, as well. The REED switch detects, if the box was opened by force. The REED sensor may also be installed on the valve, giving the valve status OPEN/CLOSED. Any potential fault is accompanied by an acoustic warning and signaled by red LEDs. These errors can also be monitored remotely using the GSS system (CAN-BUS technology) or potential-free contacts. Each box has the capacity to house 1-5 different gases, and may be either surface-mounted or sunken-mounted.

The block of the control-closing box is a connection unit for copper pipes, shut-off valve, emergency supply, pressure transmitter, pressure gauge, flow meter (optional). The box casing should be made of stainless steel sheet metal for long durability for smooth functioning & operation, the entry of inlet & outlet connection of each services should be from top side of the box.

The inlet/outlet pipes are made of copper, with a max. diameter of Ø22 mm. The slotted nut enables visual inspection to determine, if the blocking or the run-through element is installed. The red coin is installed into the block of the control-closing box when performing the installation pressure test. The green coin is installed into the block of the control-closing box when the latter is in operation. Upstream from each individual block there is a shut-off valve which enables the operator to cut-off the supply to a specific section / floor of the building. The emergency supply connection port may be used in case the central supply fails. The port is installed at buyer's option. (NIST, DISS), The pressure transmitter translates the gas pressure into an electrical signal which is then relayed to the block connection module. The installed pressure gauge enables visual pressure monitoring. The flow meter measures the quantity of the gas flow within the gas installation system.

The valve box should have a lockable door (hinged on top) of valve box with a 4mm thick tempered glass installed on door should be opened upwards for easy maintenance access. In case of an emergency the door can be opened by force (**hit the lock**) without damaging the glass.

In the lower section of a control-closing box there is a power supply module which connects to: MAINS SUPPLY, CONNECTION OF PRESSURE TRANSMITTERS (4-20mA), CONNECTION OF FLOW METERS, CONNECTION OF REED CONTACTS, CONNECTION OF POTENTIAL-FREE CONTACTS, CAN – BUS.

Signalling: The light of the light emitting diodes can be seen from the distance of 4 m, if the illumination of the room is between 1000 and 1500 Lx. In case of an error the LEDs blink with the frequency of 1 Hz (0.5 s ON – 0.5s OFF). The parameter for blinking is adjustable. The LEDs give the following warnings:

- ALARM SYSTEM DISPLAY CONNECTION FAILURE/
- ON/ OFF ALARM DISPLAY FAULT
- PRESSURE TOO LOW
- PRESSURE TOO HIGH
- NORMAL PRESSURE

The alarm system incorporates a touch sensitive display which enables easy “Menu cycling”, and with the help of a flow meter (**optional**), enables or shows: Overview of the flow rate statistics, Current flow rate, Current consumption, Monthly consumption, and at the time of setting of the critical flow limit – THE ALARM GOES OFF and all the values remain stored, even in case of an electrical outage.

Unit must have UL Listing/CE notified number on it. System Comply HTM 02-01/NFPA 99C/ISO 7396. It must be come with serial number, warranty and test certificate from European / American manufacture only