

## TECHNICAL DATASHEET

US - 12 Dual - Channel Gas Detection Monitor (4 – 20 mA)

Manufacturer: UAB Bitas

### 1. Purpose

The US - 12 gas alarm controller is designed to receive and process up to two 4 – 20 mA signals from DKJ - 02 gas detectors. The system monitors gas concentration, triggers alarms at preset levels, and controls external equipment accordingly.

### 2. Technical Specifications

Parameter	Value
Power supply	AC 100 – 260 V $\pm$ 10 % / DC 12 V (backup)
Number of channels	2 (4 – 20 mA)
Outputs	4 relay (NO/NC), audible and visual signal
Operating temperature	0 ... +40 ° C
Relative humidity	60 $\pm$ 20 % at +25 ° C
Enclosure	ABS plastic, surface - mounted
Dimensions	120 x 200 x 60 mm
Protection class	IP40
Warranty period	24 months

### 3. Operating Principle

Each measurement channel receives a 4 – 20 mA signal from a DKJ - 02 gas detector. The system processes these signals and activates alarms according to preset levels. Relay outputs control ventilation, valves, or alarm devices. In the event of a malfunction, the general AL relay contact is triggered.

### 4. DKJ - 02 Detector Connection

Each DKJ - 02 detector has three terminals: 1 – +24 V DC, 2 – 4 – 20 mA signal, 3 – GND. The US - 12 monitor provides power and includes a 4 – 20 mA current input.

### 5. Power System

The main power supply is AC 230 V. A 12 V DC backup power supply (battery or DC source) may be used. The system automatically operates in both modes.

### 6. Alarm and Relay Logic

Each channel has two alarm levels (AL1, AL2). Relay outputs RL1.1, RL1.2, RL2.1, RL2.2 correspond to each channel ' s alarm levels. The general AL relay is activated if the DKJ - 02 detector output current falls below 3 mA or exceeds 22 mA.

### 7. Typical Wiring Diagram

