



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 ±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 ± 20 % at +25 ° C
Enclosure	ABS plastic, surface - mounted
Dimensions	120 × 200 × 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.

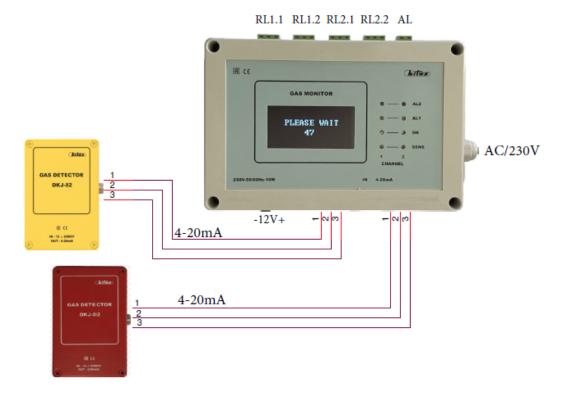
6. Alarm and Relay Logic

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







8. Operating Conditions

Install in dry indoor areas. Comply with CE and standards LST EN 61010 and EN 61326.