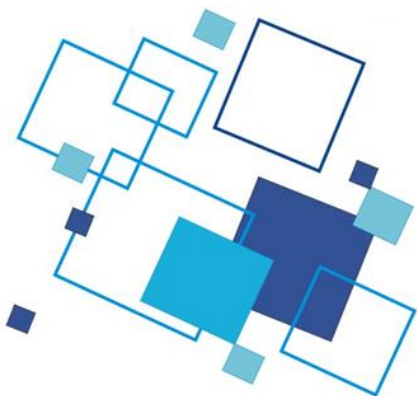
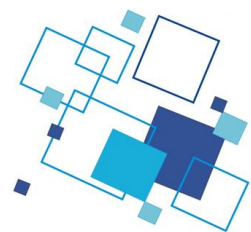
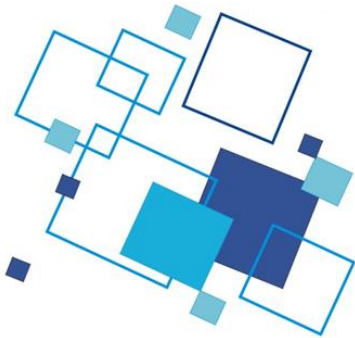


METHANE DETECTOR CSM-1



Catalogue card



DESCRIPTION

Methane Detector CSM-1 is a stationary device designed for measurement of methane content in explosion hazard areas in underground coalmines. It cooperates mainly with telemetric central station type CST-40(A), CST-40C in data sending and transmitting. It may also cooperate with other telemetric stations provided that the parameters of the feeder-measurement line are compatible.

Methane Detector CSM-1 has two automatically switched measurement ranges to provide measurement in the range of 0-100%CH₄ and one or two outputs (UW) to control equipment switching off power supply when the preset alarm thresholds have been exceeded. Optionally, it may also be equipped with ambient temperature sensor. Its autonomous supply system (battery) supplies the methane detector when the feeder line is switched off. The communication with the methane detector is carried out by means of digital transmission through the feeder-measurement line of the central station and through the type KR-2 calibrator. The calibrator communicates with the methane detector through a radio link.

Methane Detector CSM-1 is a microprocessor device and it independently performs measurement, control and transmission functions. Its main tasks include continuous measurement of methane content, checking the measured value against the preset alarm thresholds, control of the contacts of the switching-off device (electronic relays). The switching-off contacts operate under positive logic, that is, supply failure, wrong measurement or overrun of alarm threshold causes the contact to open.

BASIC TECHNICAL DATA

Methane detector CSM-1

Supply (line current) - (current source of the supply-transmission line)	from 27 mA to 40 mA
Measurement range (type of measurement)	0-5% CH ₄ (catalytic) 5-100% CH ₄ (conductometric)
Accuracy	± 0.1 % CH ₄ in the range 0-2.5% CH ₄ ± 0.3 % CH ₄ or 10% indications in the range 2.5%-5% CH ₄ ± 3 % CH ₄ in the range 10-100% CH ₄
Resolution	0.01% CH ₄ in the range 0-5% CH ₄ 1 % CH ₄ in the range 5-100% CH ₄
Measurement method	continuous
Response time t ₉₀	≤ 5s
Working position of the methane detector	measuring sensor pointing downwards
Gas penetration method	through diffusion
Accuracy of temperature measurement	± 1 °C
Working time of autonomous power supply source	> 4 min
Type of transmission	digital, two-way
Scaling method	by calibrator
Transmission time (of control cycle)	≤ 2 s
Working temperature range	from -10 °C to + 40 °C
Relative humidity range	from 0% to 95% without condensation
External dimensions	110 x 75 x 80 mm
Weight	0,6 kg
Casing internal protection	IP-54

EXPLOSION-PROOF MARK



I M1 Ex ia I

EC type examination certificate: KDB 06 ATEX 428