

# CARBON MONOXIDE CONCENTRATION SENSOR **CSCO-1**



Catalogue card



## DESCRIPTION

Carbon monoxide concentration sensor CSCO-1 is a stationary device for measuring carbon monoxide content in explosion hazard areas in underground coal mines. Mainly it cooperates with telemetric central station CST-40A, CST-40C in transmission data area. It may also cooperate with other centrals provided that the terminal of the feeder-measurement line is compatible.

The CSCO-1 sensor has one measuring range of 0-1000ppm CO. Its autonomous power supply (battery) supplies the carbon monoxide sensor system when the supply line is disconnected.

The communication with the CSCO-1 sensor is carried out by means of digital or frequency transmission through the feeder-measurement line of the central station and through the type KR-2 calibrator. The calibrator communicates with the carbon monoxide concentration sensor through a radio link.

The CSCO-1 sensor is a device of M1 category and may thus be used in all underground mines with possible methane or coal dust explosion hazard.

## BASIC TECHNICAL DATA

### Carbon monoxide concentration sensor CSCO-1

Supply (line current) - (current source of the supply-transmission line)	from 27 mA to 40 mA
Measurement range	0-1000 ppm for digital transmission 0-200 ppm for transmission frequency
Accuracy	± 3 ppm in the range 0-100 ppm ± 5 ppm in the range 100-200 ppm ± 25 ppm in the range 200-1000 ppm
Resolution	1 ppm CO
Measurement method	continuous
Response time $t_{90}$	≤ 40s
Working position	any, recommended for sensor inlet downwards
Gas penetration method	through diffusion
Working time of autonomous power supply source	> 4 min
Transmission method	Digital two-way or frequency
Frequency range for measuring range 0-200ppm	0ppm - 10kHz 200ppm – 6kHz
Frequency range for measuring range 0-1000ppm	0ppm - 10kHz 1000ppm – 6kHz
Scaling method	Radio-transmitted by calibrator
Transmission time (of control cycle)	≤ 2s
Working temperature range	from -10 °C to + 40°C
Relative humidity range	from 15% to 95%
Dimensions	110 x 75 x 80 mm
Weight	0,6 kg
Casing internal protection	IP-54

## EXPLOSION-PROOF MARK



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EC type examination certificate: KDB 08 ATEX 131