

OXYGEN CONCENTRATION SENSOR

CSO-2



Catalogue card



DESCRIPTION

Oxygen concentration sensor CSO-2 is a stationary device for measuring oxygen content in explosion hazard areas in underground coalmines. It cooperates with telemetric central stations CST-40(A), CST-40C through analogue station CSA-1 or CSA-2. It may also cooperate with other devices provided that the parameters of the terminal of the feeder-measurement line are compatible.

The CSO-2 sensor has a measuring range of 0 do 25% of oxygen. It is power-supplied from an intrinsically safe source with voltage of 12 V. The measured and processed value of O₂ concentration is sent to analogue output which generates a signal of 0.4 to 2V. Additionally, by modulating the analogue value, the output may also work in serial digital mode transmission. Operation in digital mode enables sending to the central system CST-40(A) (via CSA-1 or CSA-2 station) measurement values of greater precision, sending diagnostic information and the serial number of the sensor.

The CSO-2 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

Oxygen concentration sensor CSO-2

Power supply	from 8 to 14,5 VDC (nominal 12 VDC) max 4 mA
Output operation modes	One analogue or digital. As analogue output 0.4-2 V for digital with unidirectional serial transmission.
Measurement range	0 - 25% O ₂
Precision	± 0.5 % O ₂
Resolution	0,1% O ₂
Gas penetration method	Continuous through diffusion
Response time t ₉₀	≤ 20s
Working position	Sensor inlet from the side or the bottom (recommended)
Scaling method	Calibrator KR-2
Working temperature range	from -10 °C to + 40°C
Relative humidity range	from 15% to 95%
Dimensions	110 x 75 x 80 mm
Weight	0,65 kg
Casing internal protection	IP-54

EXPLOSION-PROOF MARK



EC-TYPE EXAMINATION CERTIFICATE: KDB 07 ATEX 260