

PKiMSA CARBOAUTOMATYKA S.A.



GAS MONITORING SYSTEMS AND PERSONAL MEASURING
DEVICES MANUFACTURED BY
PKiMSA CARBOAUTOMATYKA S.A.

PKiMSA CARBOAUTOMATYKA S.A. is a company existing on the market for over 45 years, comprehensively covering topics from the design stage, through production, assembly, to service and training in various industry areas, i.e. .:



- Mining
- Energetics
- District Heating
- Metallurgy
- Coke
- Water and sewage management
- Road infrastructure

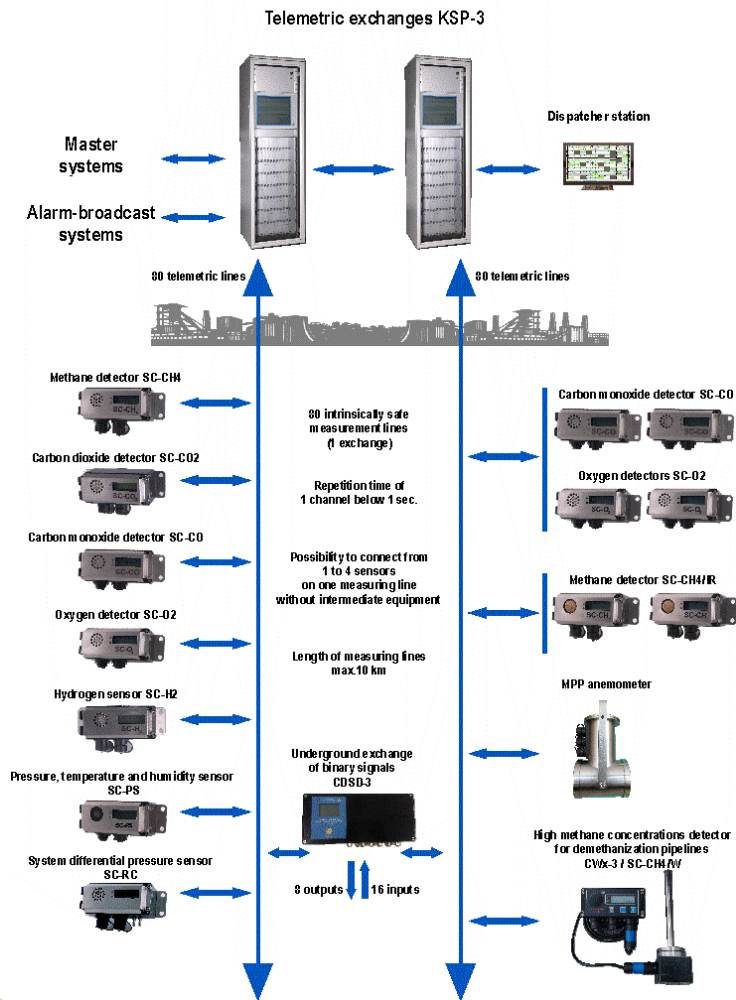
Our products are present in such countries as: Russia, Ukraine, Vietnam, China, Bosnia and Herzegovina, Turkey, Argentina, Romania, Bulgaria, Spain.

PKiMSA CARBOAUTOMATYKA S.A. is the leader in the CARBOAUTOMATYKA GROUP, which includes also following companies:

Dąbrowska Fabryka Maszyn Elektrycznych DAMEL S.A – manufacturer of a wide range of electric motors;

MIFAMA-OPA-CARBO Sp. z o.o. - manufacturer of steel constructions and machines and devices (eg belt conveyors) for the mining industry and contractors of maintenance services for various industrial facilities.

SAFETY SYSTEM KSP-BIS



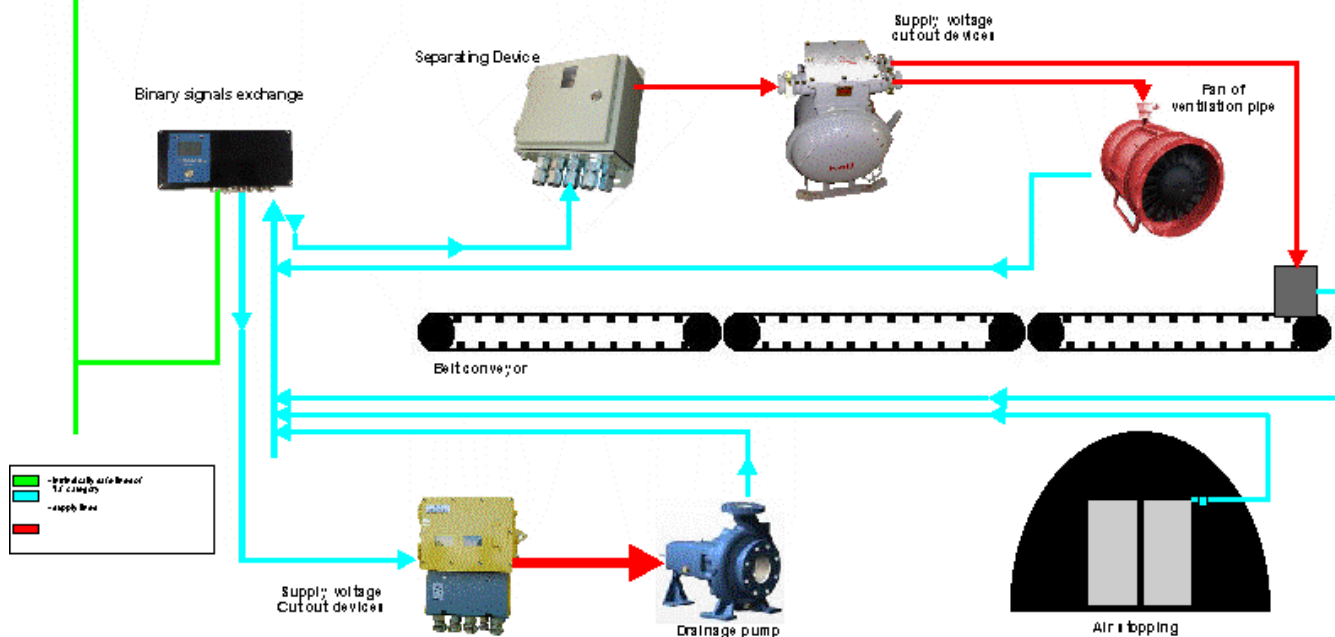
SAFETY SYSTEM KSP-BIS

The system's purpose is continuous monitoring and visualization of natural hazards and very quick response to threats, eg selective shutting down of electricity at endangered coal mines and alerting crews when hazards arise.

SAFETY SYSTEM KSP-bis consist of following elements:

- Surface part of the station - KSP-3 centers
 - Underground part - end devices such as sensors measuring methane, carbon dioxide, carbon monoxide, oxygen, hydrogen sulphide, carbon oxides, temperature, air speed and others (pressure, pressure difference, temperature), bistable signal centers and signal transmitting devices switching off to underground electric switchboards operating as stationary instruments;
- Mine data transmission network (power supply and transmission lines).

Visualisation system of conditions of operation
of extracting equipment using KSP-bis Safety System



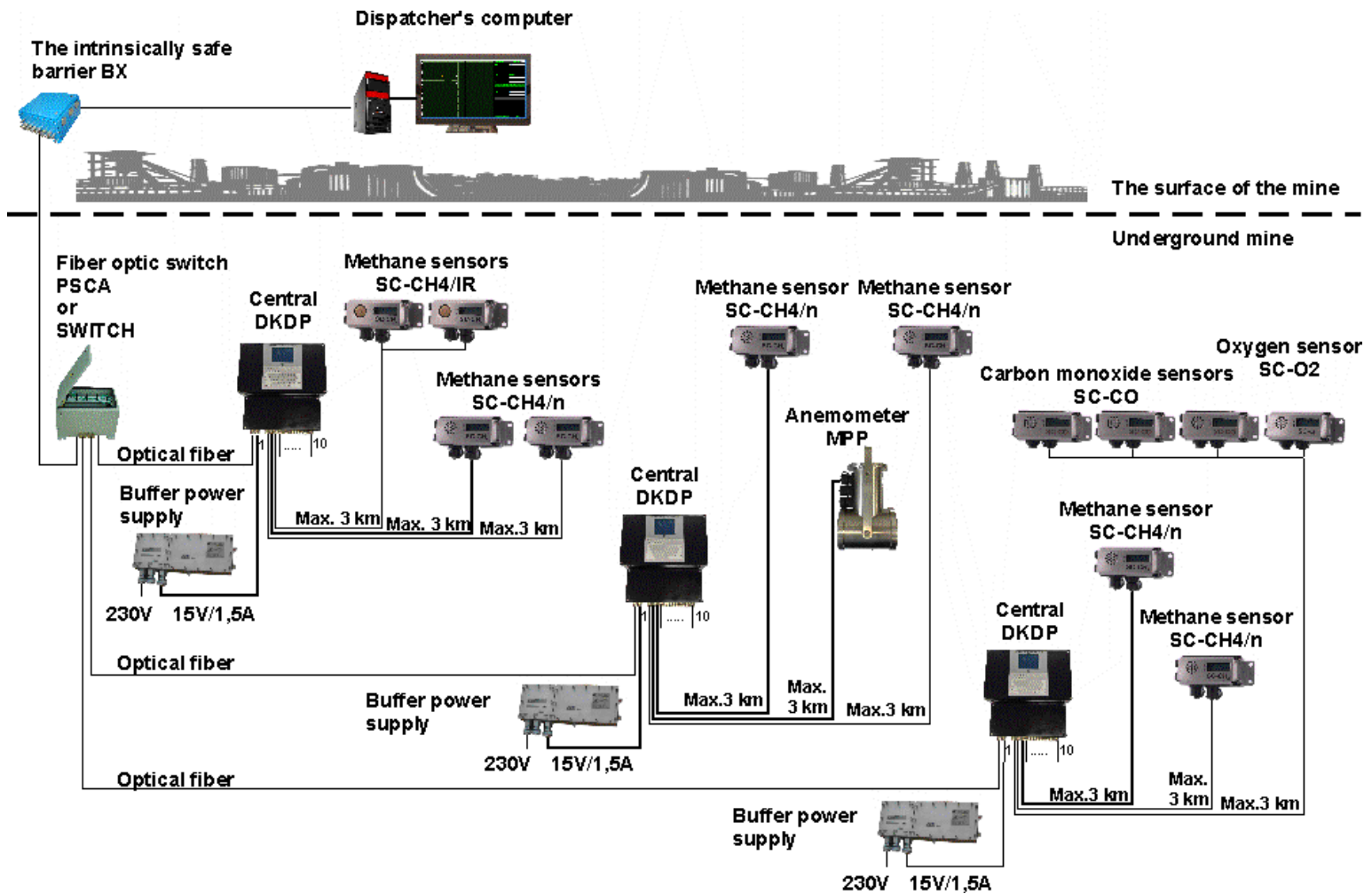
UNDERGROUND MEASUREMENT DATA HUB DKDP

DKDP is central device of local gas monitoring systems, intended for operation in underground mine excavations with methane and/or coal dust explosion hazard.

DKDP data hub is responsible for the continuous acquisition and processing of measurement data coming from sensors and also from binary inputs, built directly in the control panel. The data is saved in parallel in the concentrator and on the dispatcher's computer on the surface.



- Possibility of designing of local SAFETY SYSTEMS using DKDP data hubs
- Connecting the DKDP centers in topology of star or cascade
- Configuration and parameters of sensor can be changed from surface dispatcher computer or using DKDP hub keyboard and display
- Possibility of connecting from one to four sensors on one telemetric line without additional intermediate devices





PORTABLE ANALYZER OF GASES PAG/*

A personal device intended for measuring the concentration of: methane, oxygen, carbon monoxide, carbon dioxide and hydrogen sulfide in the atmosphere.

- Measurement up to 5 gases
- Measurement using optical IR sensors (methane, carbon dioxide) and electrochemical sensors (oxygen, carbon monoxide and hydrogen sulfide)
- A programmable alarm thresholds for each measurement channel, indicated by optical and audible alarm.
- Internal datalogger records all of the gas measurements for analyzing on PC
- Password protected configuration and calibration
- Power supply from the internal Li-Ion battery
- Operation time up to 120 hours



METHANE DETECTION UNIT MMI-2

Personal device for measuring the concentration of methane in the atmosphere.

- Measurement by means of a measuring head of explosive gases and flammable liquid vapors
- Measurement using optical IR sensors
- Two programmable alarm thresholds signaled by optical and audible alarm
- Internal datalogger records all of the gas measurements for analyzing on PC
- Password protected configuration and calibration
- Power from the internal Li-Ion battery
- Operation time up to 50 hours



THE PRESSURE AND DIFFERENTIAL PRESSURE

GAUGE MCRC-1

Gauge type MCRC-1 is a device intended for measurement of atmospheric pressure, differential pressure and temperature as well as humidity of the environment in places threatened with explosion both underground in mines as well as on the surface.

- Independent measurement of four parameters
- Possibility to choose units of pressure measurement
- Internal datalogger records all of the gas measurements for analyzing on PC
- Power from the internal Li-Ion battery
- Operation time up to 50 hours



WE INVITE YOU TO COOPERATE