eltel

The manufacturer of automation equipment for potentially explosive areas offers:

- ▶ controllers
- ▶ loud speaking communication devices
- ▶ signalling devices
- ▶ intrinsically safe power supplies
- ▶ control, communication and signalling systems
- ▶ visualization systems for industrial processes
- ▶ fibre-optic transmission systems
- ▶ personnel and machine identification systems

Presented products are designed to operate in workings of non-methane and methane mines, on the premises with the „a”, „b” or „c” methane explosion hazard and class A and B of coal dust explosion hazard. All devices have an EC certificates (ATEX).

ACCOUSTIC COMMUNICATIONS AND SIGNALS

ACCOUSTIC SIGNALLING LOUD SPEAKER OF **SAG-E…** TYPE

The SAG-E… loudspeakers are intended to maintain loudspeaker communication along conveyor haulage lines, long wall conveyors and all types of trains for transport of people and materials. The signallers enable also data transmission and can serve for communication with a dispatcher.

ACCOUSTIC SIGNALLING LOUD SPEAKER OF **SAG-EX** TYPE

The SAG-EX signallers also allow, among others, conducting 5 simultaneous conversations between selected signallers in the simplex mode with digital compression and transmission of voice. They are equipped with an alphanumeric display and an external keyboard.

ASO-3 WARNING SIGNALLER

The signaller is used to emit optical and acoustic warning signal that indicates the start of conveyors or other equipment being in start-up or operational state. The ASO-3A generates and emits an acoustic signal, whereas the ASO-3S – a light signal. The ASO-3 combines the functions of both versions.

VISUAL SIGNALLING EQUIPMENT

ŚWIETLIK-E DISPLAY

The SWIETLIK-E display is compatible with the NIB-E emergency switch identification transmitter. The display is designed to show alphanumeric messages to indicate which emergency switch transmitter is currently on.

SEM SEMAPHORE, **SEM/L** LAMP

The SEM semaphore is intended for display of "stop" and "go" optical signals in underground railway tracks. The SEM/L lamp is designed for lighting rooms or appliances in mine workings.

PROMYK OPTICAL SIGNAL EMITTER

The PROMYK emitter is designed for emitting optical signals in workings of methane and non-methane mines. It is possible to choose color of the optical signal. The PROMYK-BAT design is equipped with the ZZI-12E power source.

TEO-AS DISPLAY

The TEO-AS display is intended to display messages stored in its memory via activation of contact inputs or transmitted via digital broadcast. The display has an "ia" intrinsic safety feature and can operate in any concentration of methane. The TEO-AS/CA model is equipped with the ZZI-12E power source.

BIKIER DOUBLE-FACED TRACK SWITCH POSITION INDICATOR

The BIKIER indicator provides double-faced indication of the track switching device position. On both indicator sides signals are displayed respectively: travelling to the switch blade on one side and travelling from the switch blade on the other side.

TEO-EK, -EC, -SIM, -SIM/P, -KOL DISPLAYS

These displays are intended to present via matrix displays messages stored permanently in memory of the display, they are equipped with relays confirming the message change. The TEO-KOL model is equipped with a two-color matrix.

CONTROL DEVICES

DIAMENT-2200K INTRINSICALLY SAFE CONTROLLER

The DIAMENT controller is intended for control and monitoring of belt and drag conveyors in haulage lines. Operating states and emergency of monitored parameters are showed on an alphanumeric display. The controller features single-module construction and the ability of remote configuration and parameterization.

BIZON MODULAR DEVICE

BIZON is a versatile device designed to control mining machinery and equipment, can also be used in other industries. The modular design of the device allows to easily customize it to specific applications and customer requirements through appropriate selection of the type and number of electronics cards.

BIZON MODULAR DEVICE **CENTRAL CONTROL-LER, BIZON CENTRAL-LOCAL** CONTROLLER

The BIZON - Central Controller is a controller that allows surveillance of a string of conveyors equipped with DIAMENT controllers. The BIZON - Central-Local Controller combines the features of a central controller and a local controller for belt conveyors.

CONTROL PANELS

BAJTEL-STER/4 CONTROL PANEL

The BAJTEL-STER/4 control panel is designed for use in controlling and signalling circuits for devices operating in underground mines. It comes in versions with different housing sizes (A, B, C), allowing to configure the number of buttons, switches, lights and cable glands, depending on the customer needs.

BAJTEL-SEM CONTROL PANEL

The BAJTEL-SEM control panel provides control and monitoring of semaphores, cooperation with sensors, acoustic and optical signalling of entry of locomotives to and from a loading station.

PP ASSISTANT PANEL

The PP panel is designed to implement the remote start and stop, as well as emergency stop of mining machinery and equipment in accordance with the requirements of Directive 2006/42/EC.

SENSORS AND LOCKS

P-STOP, P-POZ, P-SYG SWITCH

The switch is designed for use in control and signalling circuits or as an emergency switch (P-STOP). The switch can also be used in other intrinsically safe circuits.

ECIK-1 ELECTRONIC MOTION SENSOR

The ECIK-1 sensor is designed to control movement of a belt in a belt conveyor. It is characterized by high resistance to external interference and reliable cooperation with the DIAMENT and BIZON controllers.

EWA-D, EWA-M EMERGENCY STOP

The EWA emergency stop performs emergency shutdowns of machine drives using an emergency button or by pulling a cord and provides signalling of the off state. The EWA emergency stops are also available with tension control of the cord.

EK-LOK AND EK MOBIL SYSTEMS

EK-LINK ACCESS POINT

A device that allows wireless communication via Wi-Fi network with wireless devices, such as EK-TEL.

EK-TRANSMITER TRANSMISSION DEVICE

The EK-TRANSMITER is a device that receives a signal from the EK-TAG tag, creating a network of access points that locate people and machines.

EK-TAG MARKER

Tags are an essential component of location system, enable the observation and recording of movement of objects (people, rail line, machines, etc.) in a mine. They are designed for installation on machines where they can operate continuously for a period of about 2 years or in mining lamps from which they are powered.

EZI-15AKU POWER SUPPLY WITH BATTERY BACKUP

The power supply is designed for use as an external source of 15V DC power supply for intrinsically safe mining equipment. It is equipped with batteries to enable the provision of power supply in case of power failure for min. 12 h.

EK-TEL WIRELESS PHONE

The intrinsically safe EK-TEL wireless phone enables connections via wireless Wi-Fi. The device is powered by a battery, which enables continuous talk for about 3 hours.

INTRINSICALLY SAFE POWER SUPPLIES

EZI-15X… INTRINSICALLY SAFE POWER SUPPLY

Intrinsically safe power supply with voltage of 15VDC. The EZI - 15X … can be equipped with an LCD display, showing information about the operating status and a transmission system that transmits operating parameters of the power supply to the control and visualization systems. The EZI-15X…/ARA unit includes a generator of warning and information signal.

INTRINSICALLY SAFE BOXES

ZL-1, ZL-2, ZL-3 INTRINSICALLY SAFE DISTRIBUTION BOX

The ZL box is designed to connect telecommunication or signalling cables and wires in intrinsically safe circuits. Connections can be made using a terminal strip, twisted pairs in the bushes or gel connectors.

ELTEL-P INTRINSICALLY SAFE DISTRIBUTION BOX

The ELTEL-P box is made of plastic and is designed to connect and perform branching of telecommunication or signalling cables and wires in intrinsically safe circuits. The box can be equipped with plastic or metal cable glands.

ELTEL-E, ELTEL-MIDI INTRINSICALLY SAFE DISTRIBUTION BOX

The ELTEL-E/ELTEL-MIDI box is designed to connect and perform branching of telecommunication or signalling cables and wires. Possible number of terminals is from 24 to 54, depending on their size and type of the box.

OTHER EQUIPMENT

UWE DISCONNECTION DEVICE

The UWE system is intended for immediate emergency shutdown of the mine starter controller or other feeder in the event of activation of the lock (WA), located in the lock circuit (OB). The device also prevents restart of the control system at lock (WA) run-time.

INTRINSICALLY SAFE ELTEL BUS

The ELTEL bus is used to connect device manufactured by ELTEL. In the bus there are laid power, signalling and control wires. The bus design uses a special cable containing individually shielded signal wires, as well as telecommunications twisted pairs.

YNHKGSLYHTKGX SIGNAL AND TELECOM BUS CABLE

This bus cable is designed for mines and comprises individually shielded signal wires and two or three telecom twisted pairs.

EK-GRAF INDUSTRIAL PROCESS VISUALIZATION SYSTEM

PS-1 FIBRE-OPTIC DISTRIBUTION BOX

The PS-1 distribution box enables connection and branching of single mode and multimode fibres in potentially explosive atmospheres. Size of the distribution box is selected depending on the number of commutation felds with a maximum

TRANSMISSION EQUIPMENT ET HUB, HELIOS RJ45/SC MEDIA CONVERTER

Transmission equipment implement the data exchange between systems operating in potentially explosive atmospheres and the EK-GRAF visualization system. They enable data transmission in fbre optic networks and networks that use telecom twisted pair.

EK-GRAF VISUALIZATION SYSTEM

The software allows visualization of production processes and confguration of devices operating in underground automation systems. It has a panel structure, e.g. HAULAGE PANEL, LOCATION PANEL. It features a function of viewing CCTV camera images.

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