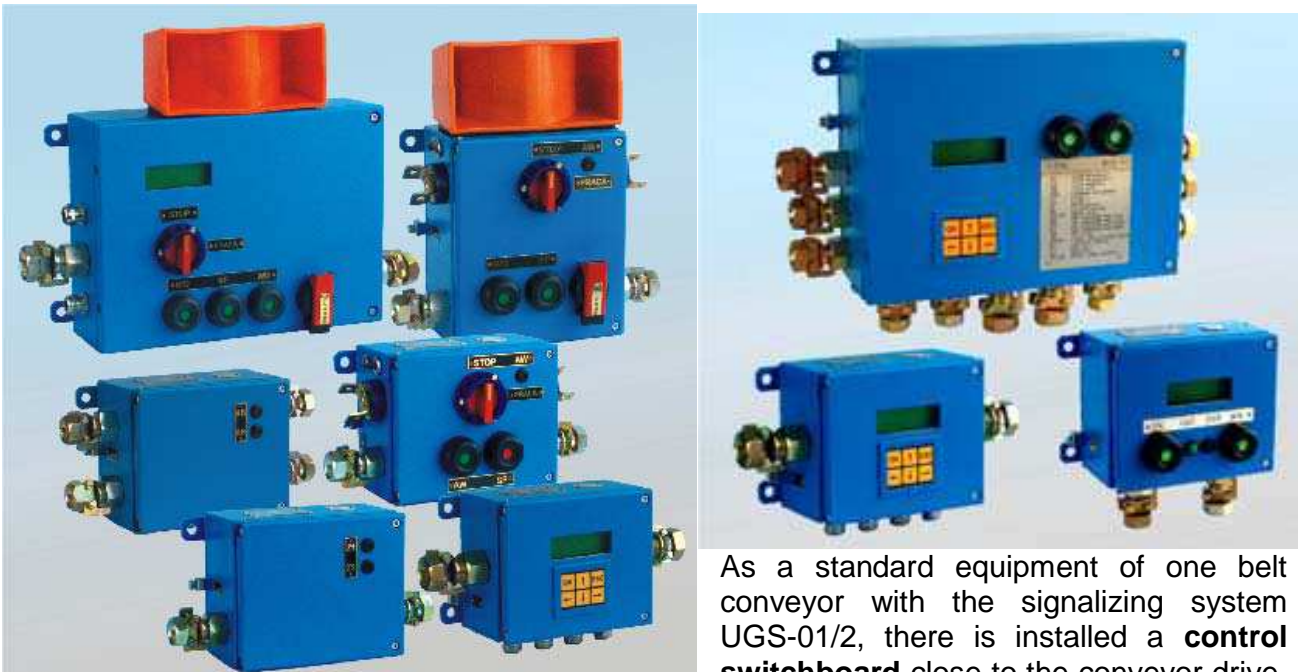


## Automation Control Systems for Belt Conveyors

### Speech and Signal Control System for Belt Conveyor Lines – Type UGS-1/2

UGS-1/2 is a modular system developed for belt and drag conveyors signaling and control. The system enables loud voice communication of operation staff, ensures warning signalization before run-up, intercommunication signalization and at the same time guarantees the possibility to stop and block the conveyors from any place along the conveyors. The system UGS-1/2 includes a microprocessor control system ELSAP, which controls the run logic of the conveyors and of the complete conveyor line, enables to implement any sensors in the system, provides information about the configuration of individual elements and about their actual status and enables successive supplies in the system and its spreading. In case of a request for the belt line run visualization, it is possible to use UMT module transmitting to the control center via telephone cable information about the line configuration, supply status, information from individual sensors, identification of the belt blocking by a sensor or blockades. The line and its status is displayed on a PC display using a „tailor-made“ program.



As a standard equipment of one belt conveyor with the signaling system UGS-01/2, there is installed a **control switchboard** close to the conveyor drive,

on the switchboard is placed a control microprocessor box UML-05, the first speak station SGK-01 and the sparking-resistant source ZSI for the speak and block stations supply and the sparking-resistant source ZIS for the microprocessor and the data-line supply. Into the control microprocessor box UML-05 there are connected all the used sensors, the data line and the input to all speak and block stations. This box also controls the feeding contactor of the conveyor.

In the conveyor route there are according to needs placed **blocking keys** SW-01/2 and speak **panels with blocking** SGW-01/2. The panels are interconnected with an ordinary seven-core cable with a wire profile of 1,5 mm<sup>2</sup>. The speak panels SGW-01/2 are furthermore equipped with accumulator sources 9ZZI, providing the signaling and blocking function even during supply voltage failure. These devices are continuously re-charged during an ordinary run.

The signal-block line of each conveyor must be ended with the **end-box SK-01/2**.

The individual control boxes UML-05 are independent autonomous systems which control the run of a concrete conveyor and their interconnection by the data arterial road enables to create the control system for the complete transport line.

Any information about the transport line run and status are brought to the box UMT-05, that transmit it then to the control center.

# CONVEYOR AUTOMATION SYSTEM ELSAP-05

## LAUDSPEAKING COMMUNICATION, SIGNALLING AND BLOCKING SYSTEM UGS-01/2



### - OVERALL STRUCTURE -

