



## PSBI-01 - Transmission system of binary information

### Use

The transmitter of digital information transmission system PSBI-01 is a device for transmitting digital information to the control system.

Device PSBI-01 is designed for use in hazardous areas of gassy mines and it is made in flameproof enclosure IM2 (M1) Ex d e [ia] I.

### Description

The transmitter of digital information transmission system PSBI-01 (transmitter PSBI) is a device for transmitting digital information to the control system.

For power and transmission of information, transmitter PSBI uses telephone twisted pair with a superimposed sine wave. Positive part of the sine wave is used for power and negative part of the sine wave is used for transmission of binary information. PSBI-01 is fully compatible with DAP 128 device.

Transmitter PSBI is enclosed in steel cabinet, to which a busbar metal part is bolted. In this part of the cabinet there are terminals for connection of sensors and power lines.

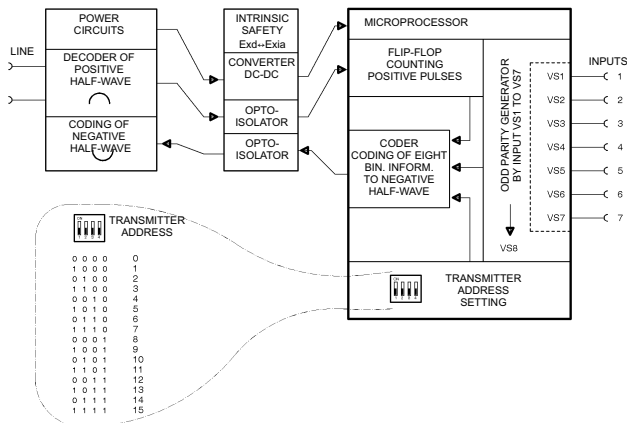
In a single transmission system of binary information, there can be connected up to 16 transmitters. All these PSBI transmitters have the same circuits, they differ from each other with transmitter address, which is optional on the switch.

Each of these 16 PSBI transmitters is connected to a single telephone pair. On the surface, the pair is associated with the control system.

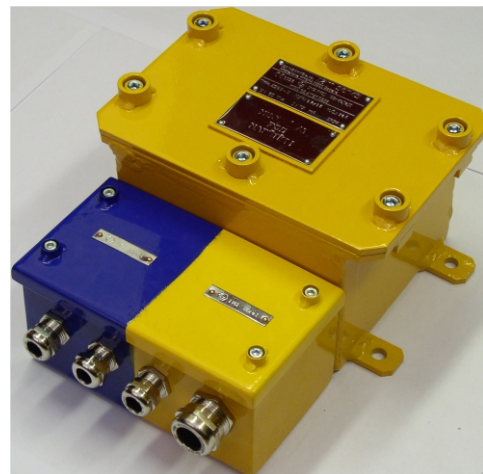
Control system on the surface generates sinus signal with 128 periods. Positive half-wave serves for the power and also as control clock for PSBI transmitters internal counters. Negative half-wave serves as the medium for transmission of binary information.

### Technical parameters of PSBI-01:

Design	IM2 (M1) Ex d e [ia] I
Supply voltage	Max. 30VDC
Current	Max. 10mA
Operating frequency	200Hz to 300Hz
Resistance after input switching	Max. 2000Ω
Number of transmitters	Max. 16
Number of binary informations	Max. 8
Connect. cables cross-section	Max. 2,50mm <sup>2</sup>
Ambient temperature	0°C to +40°C
Relative humidity	95% max. without condensation
Protection	IP 54
Sizes	290 x 240 x 140mm
Weight	10kg
Intrinsically safe parameters	
U <sub>o</sub>	5,36VDC
I <sub>o</sub>	56mA
P <sub>o</sub>	75,5mW
C <sub>o</sub>	1000uF
L <sub>o</sub>	100mH



Block diagram of the transmitter

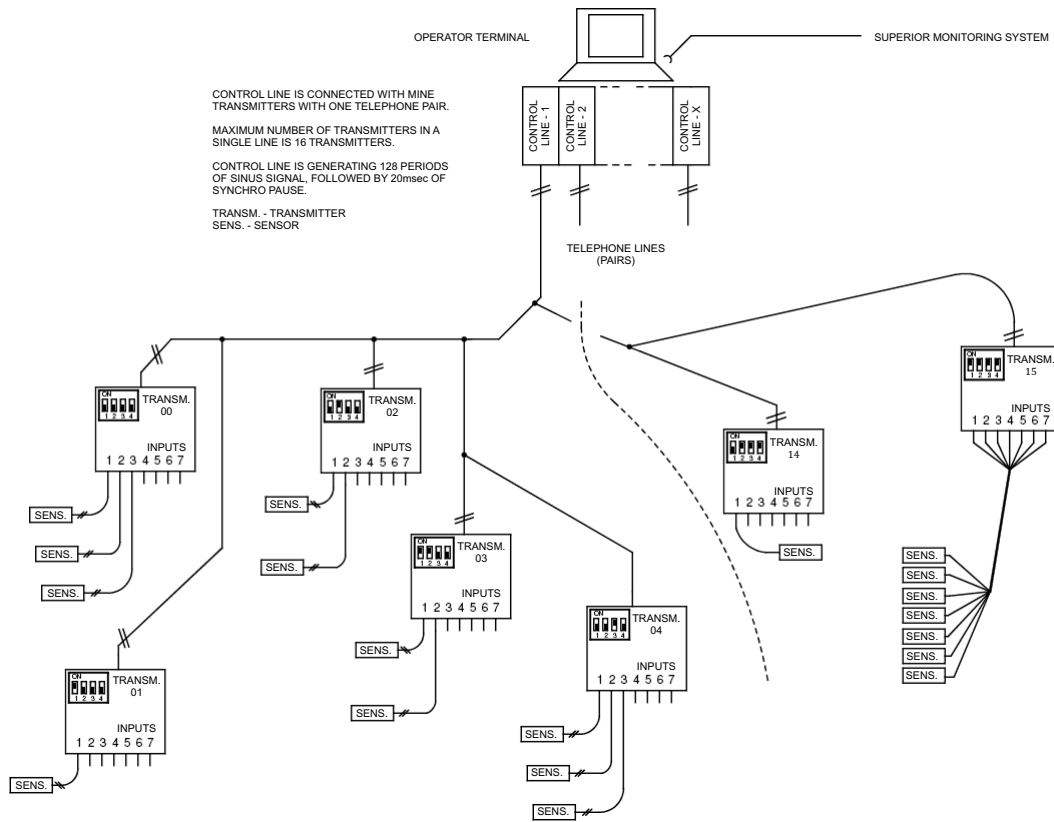


Enclosure cabinet of PSBI-01

The catalogue has only those selected important parameters for your final decision. For project designs always ask for the user's guide for this product and any engineering consultation about possible uses.



## PSBI-01 - Transmission system of binary information



Block diagram of the system

The catalogue has only those selected important parameters for your final decision. For project designs always ask for the user's guide for this product and any engineering consultation about possible uses.