



## SIGNALLING COMMUNICATION SYSTEM (KSZZ)

- Optical transmission system for maximum 32 of 2 Mbit/s channels
- Possibility of line networks to connect signalling systems up to 20 nodes
- Semi-closed architecture providing different types of standard interfaces to signalling systems
- Modular system, variety of mechanical design
- High reliability and availability, user friendly
- Low maintenance cost, small spatial requirement
- Possibility of remote configuration and diagnostics



*KSZZ panel in ESA 33 interlocking room in railway station Pribram*

### General Description

The signalling communication system (KSZZ) is an integrated modular system for multichannel data transmission between signalling or telecommunication systems of different types on backbone transmission optical routes with single-mode fibres in the chained topology (with more nodes).

### Basic Technical Description

The system integrates up to 32 (2 Mb/s) sub-channels into the main 139 Mb/s optical channel. Into the sub-channels the serial interfaces of different types (with optional transmission speed or data format) enter through the peripheral circuits in individual or multiple way.

Basic system feature is negligible signal delay in transmission routes, independence on user data protocol and remote diagnostics and configuration of sub-channel routing.

The system has been designed for generation of transmission routes and data collection among various nodes of station interlocking, level crossing, line signalling and diagnostic systems.

KSZZ also provides applications in the area of remote telecommunication and control.



*KSZZ modules embedded in EIP panels in railway station Bratkovice*



### Basic Technical Parameters

Temperature range		-5 °C to +55 °C
Cover rating	for KSZZ subracks and instrument cabinets	IP 20
	for KSZZ module	IP 00
Power supply	rated DC supply voltage	24 V
Range of supply voltage		19,2V to 34V
Power input from the power supply source with rated voltage 24 V		99,5 W ±10 %
Optical parameters	wavelength	1300 nm
	fibre optic cables with fibres	9/125 µm
	connectors type	SC
	transmission speed over the optical fibre	139,264 Mb/s
	transmission	synchronous
	spanned attenuation	16 / 23 dB
Insulation resistance:	in the standard environment	min. 50 MΩ
	after moisture test	min. 7 MΩ
Electric strength		500V



Block diagram of KSZZ route for ESA 33® data transmission