

# ZFWS 100

## REMOTE CONTROL SYSTEM

**Safe data communication SIL4**  
Approval for railway operations

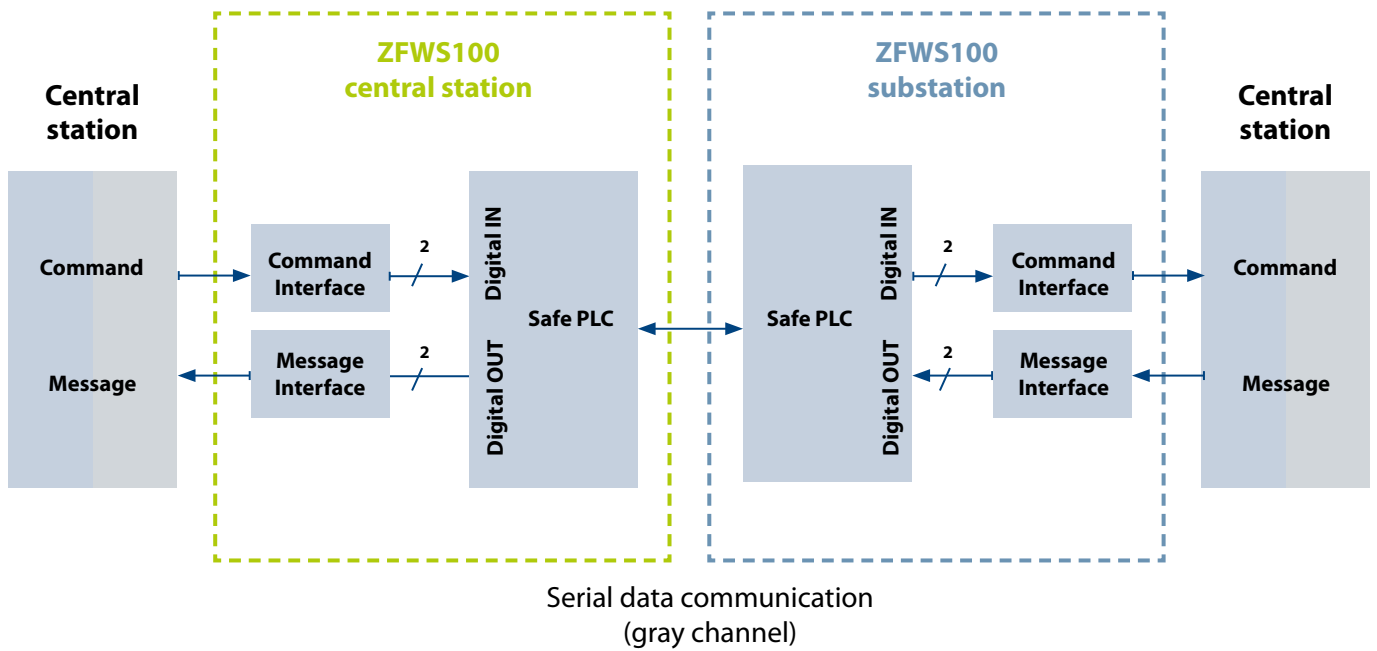
### SIL4: Features

- Safe data transmission according to CENELEC EN50129 - SIL4
- Any number of participants
- Transmission medium fiber optic cable or copper cable
- Approvals for ÖBB, Raaberbahn and Neusiedlerseebahn
- One common network
- Transmission of "normal state", "active state" and "valence state"

### ZFWS100 Central/Substation

- One control center is able to control 6 substations
- Based on safe PLC, certified according to CEN SIL4 50126/28/29
- Interface modules for all types of interlocking
- Constant monitoring of communication!

## Zelisko safe data communication SIL4 – authorization for railway operation

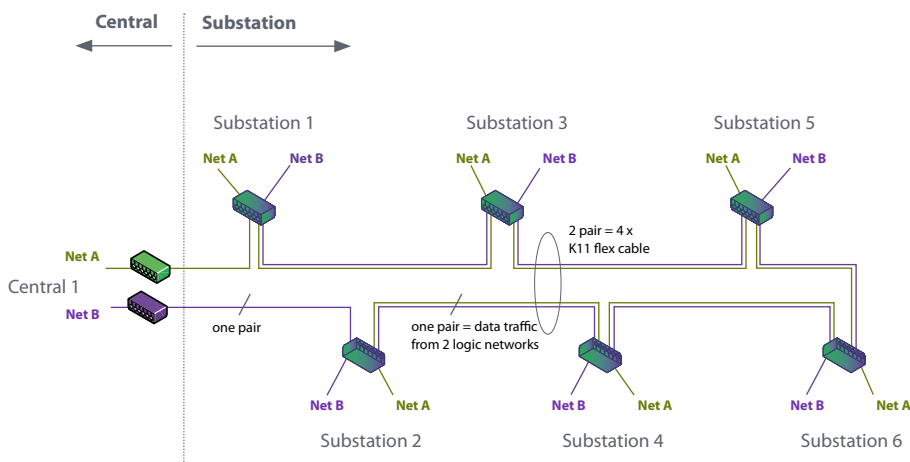


### ZFWS100 Variants

Currently two configuration variants are used – depending on the QoS (Quality of Service) of the connection:

- Fiber optic cable – safety time 0.2 s
- DSL – safety time 1.6 s

### ZFWS100 Network structure



- Safe ethernet is based on UDP, no special network structure or network requirements (gray channel).
- Possible redundancy by two logically separated connections, control panel with 2 repeaters (redundancy) – 4 wires are needed

**Dr. techn. Josef Zelisko, Fabrik für Elektrotechnik und Maschinenbau Gesellschaft m.b.H.**

Beethovengasse 43-45  
 2340 Mödling  
 Austria  
 Phone: +43 2236 409-2229  
 Fax: +43 2236 409-2279  
 www.zelisko.at  
 www.knorr-bremse.com

