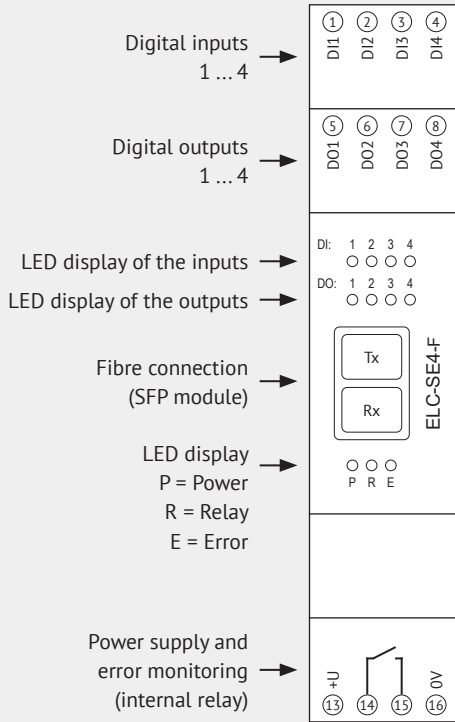




Connection Plan

ELC-4

Transceiver ELC-SE4-F



Safety Instructions



- Installation and commissioning may only be carried out by specialist companies or appropriately qualified personnel and in accordance with the guidelines and recognised rules of technology!
- Before making any adjustments to the unit, it must be disconnected from the power supply!
- Ensure suitable ESD protection measures (earthing, aids, etc.)! Use suitable tools!

Installation / Operation Notes

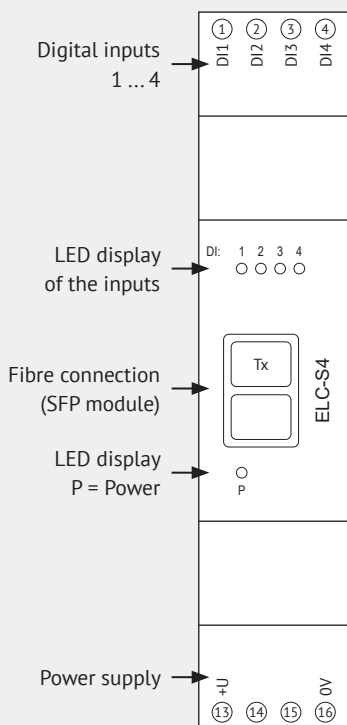


- The reference potential for the digital inputs and outputs is 0V.
- LED status
  - = Power supply
  - = Relay switching status (only ELC-SE4-F / ELC-E4 / ELC-E4D)
  - = Error (only ELC-SE4-F / ELC-E4 / ELC-E4D):  
No reception or invalid protocol from the transmitter

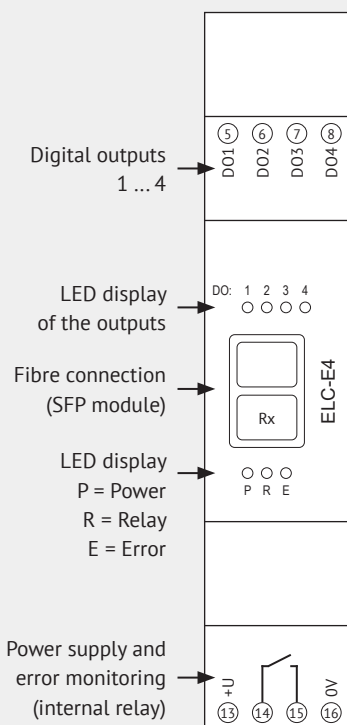
Matrix

Jumper position	N	Er
	Intrinsically safe (factory setting)	
No error	closed	open
Error	open	closed

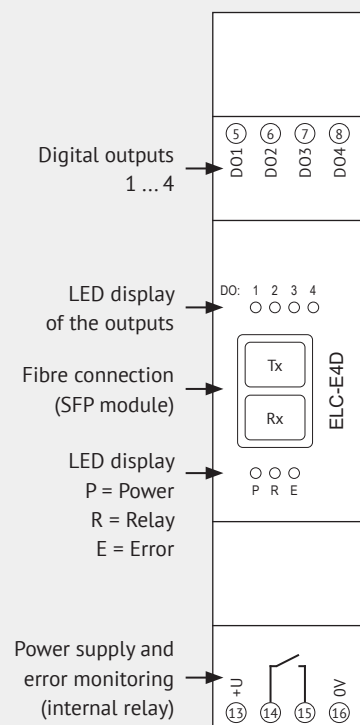
Transmitter ELC-S4



Receiver ELC-E4

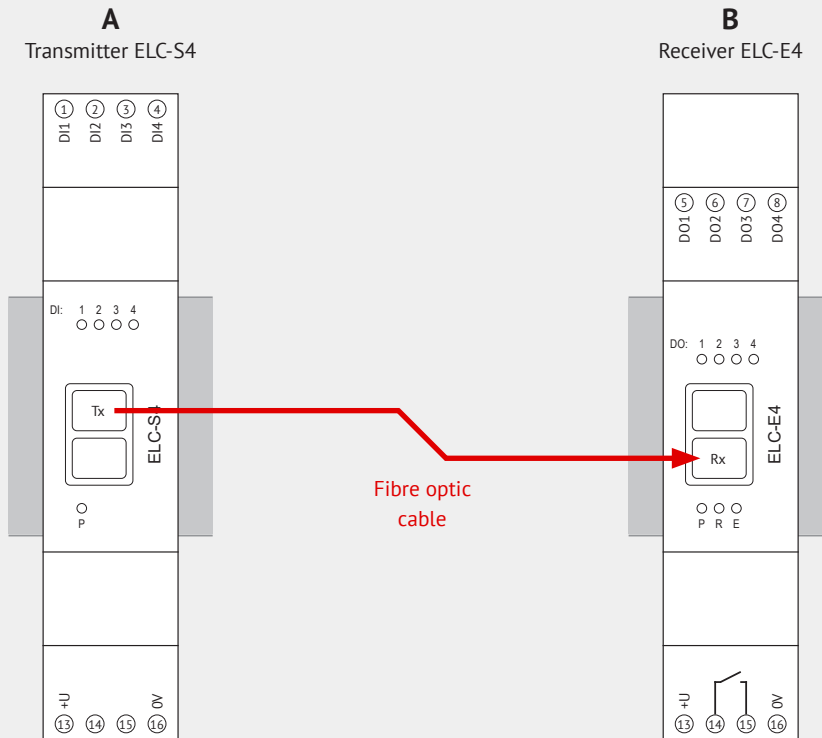


Receiver ELC-E4D with feed through

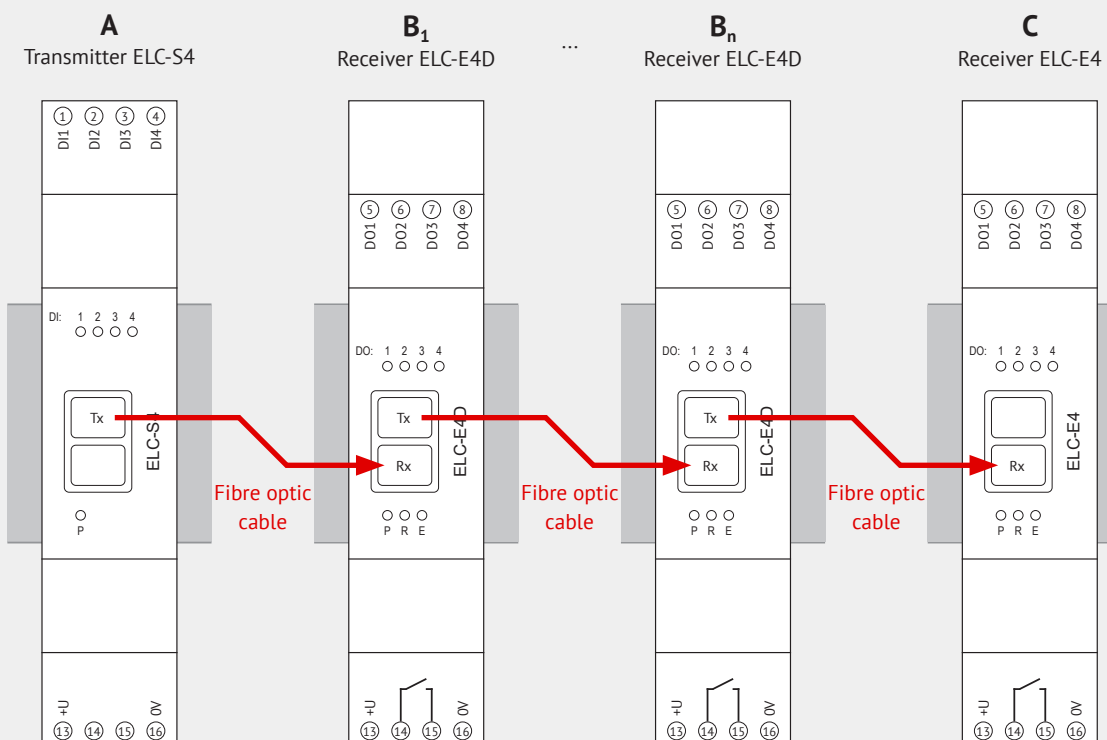


# Unidirectional transmission

## Unidirectional point-to-point transmission

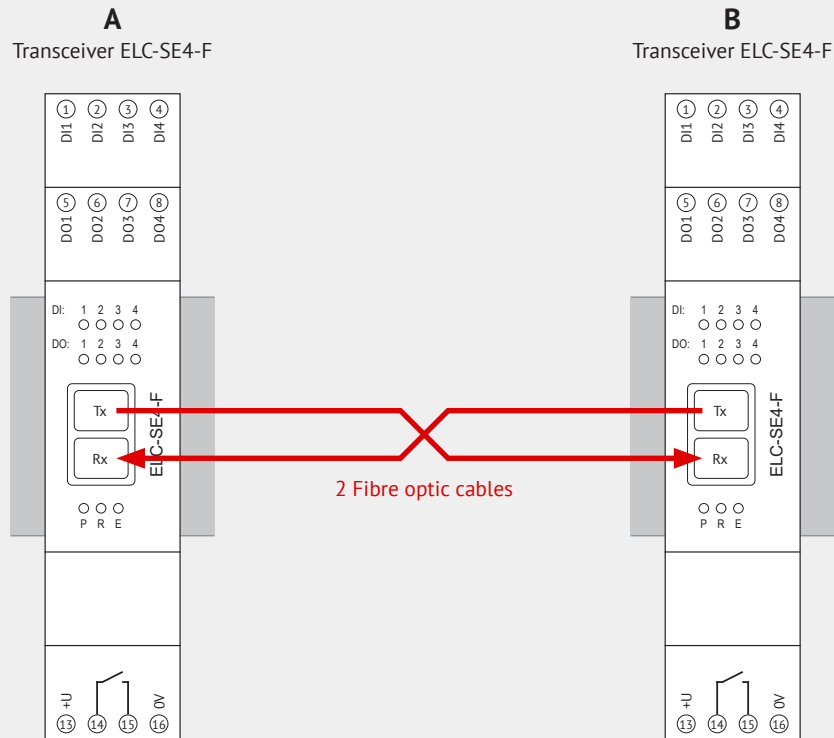


## Unidirectional line transmission

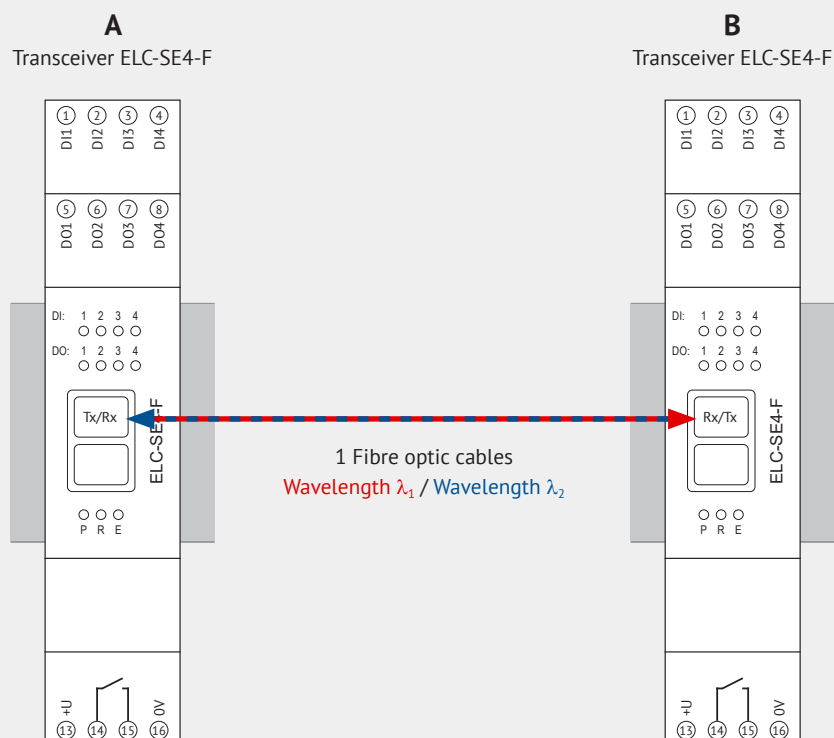


# Bidirectional transmission

## Bidirectional point-to-point transmission with 2 fibre optic cables

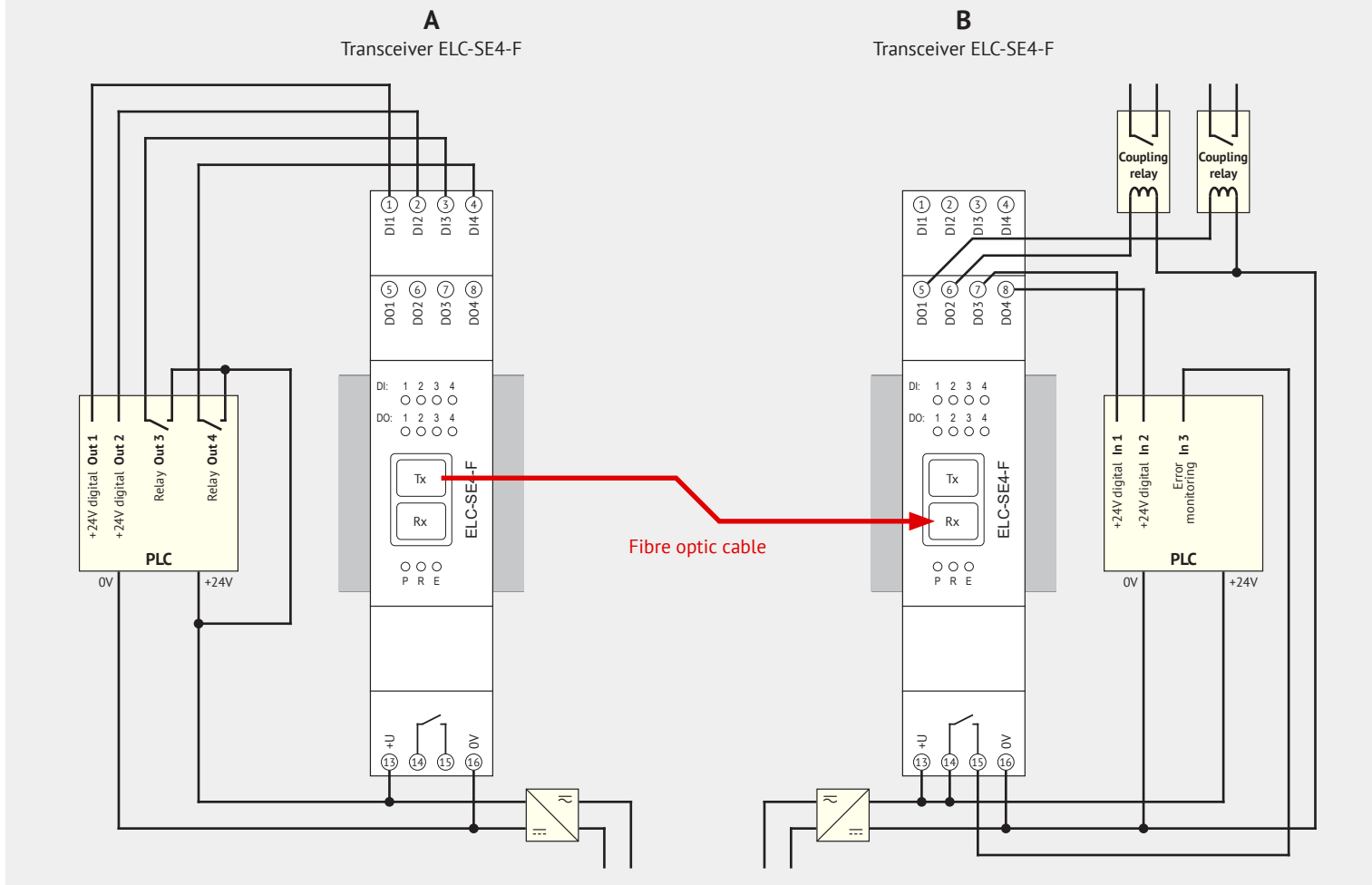


## Bidirectional point-to-point transmission with 1 fibre optic cable



## Example: Wiring for a point-to-point transmission

Diagram



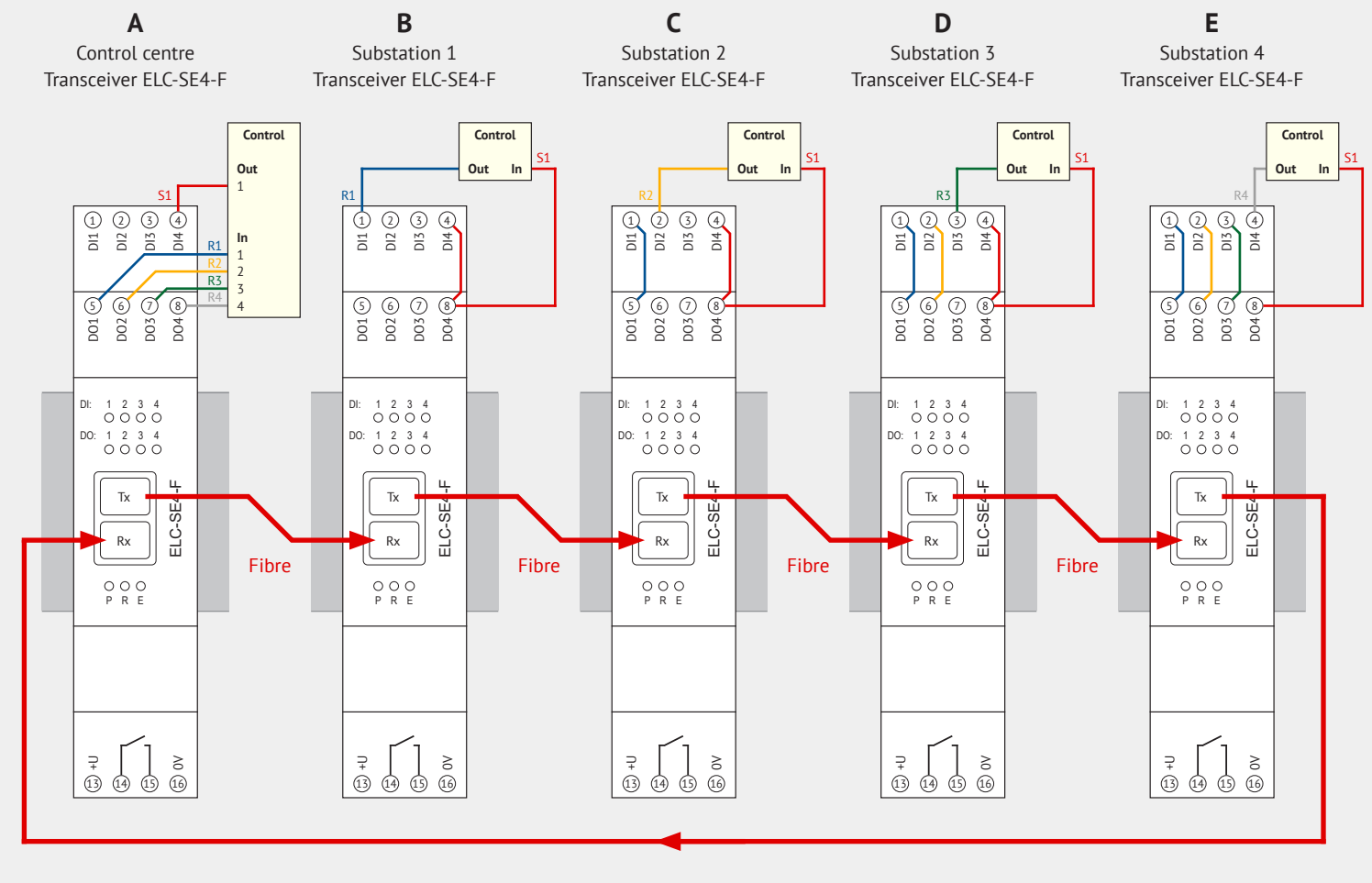
Installation Notes



Observe the general instructions for installation and operation of the illustrated devices.

## Example: NS protection with max. 4 substations and feedback to the control centre

**Diagram**



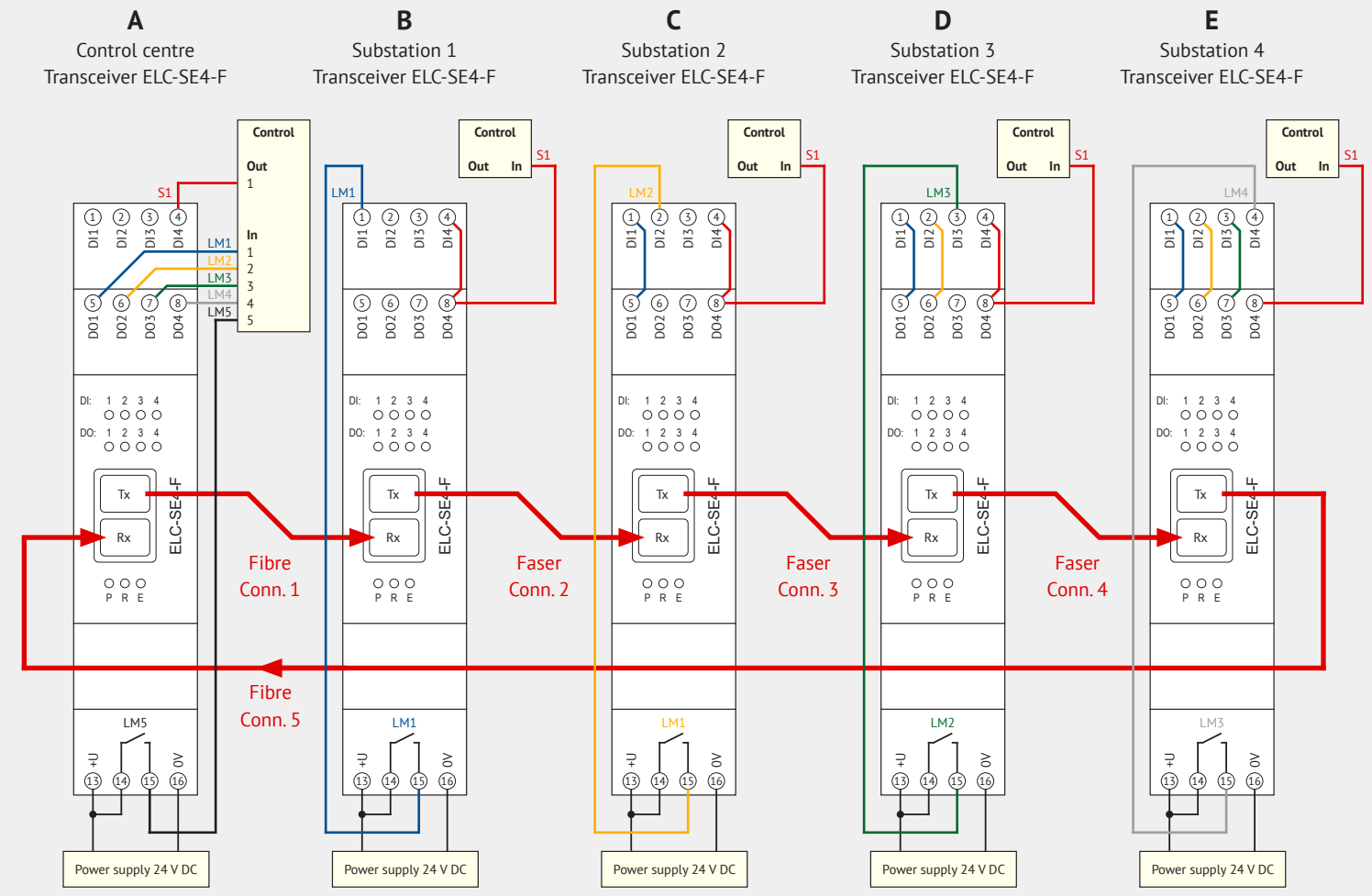
**Installation Notes**



- S1 = Switching signal of the control centre (A)
- R1...R4 = Feedback signals of the substations (B...E) to the control centre.
- The inputs that are not occupied in each case can be used until the next station.
- Usable signals Station A → B: DI1, DI2 and DI3
- Usable signals Station B → C: DI2 and DI3
- Usable signals Station C → D: DI3
- Furthermore observe the general instructions for installation and operation of the illustrated devices.

## Example: NS protection with max. 4 substations and fault localisation

**Diagram**



**Installation Notes**



- S1 = Switching signal of the control centre (A)
- LM1...LM4 = Link monitoring (Causes of faults: fibre break, equipment failure or incorrect patching)
- The inputs that are not occupied in each case can be used until the next station.
- Usable signals Station A → B: DI1, DI2 and DI3
- Usable signals Station B → C: DI2 and DI3
- Usable signals Station C → D: DI3
- If LM1...LM5 are missing, there is a connection fault between E and A
- If LM1...LM4 are missing, there is a connection fault between D + E
- If LM1...LM3 are missing, there is a connection fault between C + D
- If LM1...LM2 are missing, there is a connection fault between B + C
- If LM1 is missing, there is a connection fault between A + B
- Furthermore observe the general instructions for installation and operation of the illustrated devices.