



TBUS remote I/O

Flexible bus extension

TBUS remote I/O collects remote data

The TBUS extension offers a low-cost method for coupling detached fields and remote measuring points to a telecontrol system. Instead of installing a complete FW-5, or needing elaborate cabling of signal and measurement lines to a central RTU, expansion modules of the FW-5 family are installed in a decentralised manner and connected to the TBUS extension with a simple patch cable.

Remote I/O allows manufacturers of switching equipment to fully pre-wire switch panels, and fully install and test measurement points and switching elements to the extension boards; the commissioner only needs to fit the patch cables to a central FW-5 or FW-5-GATE.

Typical application areas

- Switching stations
- Substations
- Water towers and pump controllers
- Waste water plants
- Applications with decentralised measuring or metering points

TBUS extension

brief characteristics

Extension of the TBUS for setting up Remote I/O using remote extension modules of the FW-5 and FW-5-GATE series. Integration of the indications, meters, measured values and switching elements in close proximity to the sensor/power unit; the pre-wiring of e.g. control panels by the system integrator is possible.

Remote I/O allows for a significantly more flexible integration of process data. Indications, measuring points and switching elements are wired in a decentralised way on extension boards of the FW-5 series.

Remote I/O establishes the link between the extension modules to the station via a patch cable.

Simple Integration

The bus signal is read on an FW-5 or FW-5-GATE with sender TBUS-T as the last expansion module of the block, and routed to the TBUS-R receiver over a CAT6e cable. This unit again powers the local expansion modules and connects up the modules to the bus. Up to ten islands can be installed decentrally.

No more current limiting

With an additional 2.8 A means power, the TBUS-R's integrated power supply is also provided to a larger number of current-hungry expansion modules (such as the DSO-1, DSO-2 and RES-1).

The system works transparently and with all expansion module types in all setIT versions. A special configuration is not necessary.



Product variants

TBUS-T

Transmitter bus extension
Transmitter remote I/O

TBUS-R

Receiver bus extension
Receiver remote I/O
Integrated power supply
24 - 60 V DC \pm 20%
Up to 10 expansion modules

TBUS set

Transmitter + receiver + patch cable
TBUS-T+TBUS-R+10 m CAT6e cable

Technical data: TBUS extension TBUS-T / TBUS-R

Design	Integration of decentralised process data - Remote I/O - an FW-5 /FW-5-GATE Remote extension modules (EWB) of the FW-5 series are connected using the patch cable for the extension of the TBUS signal
FW-5 modules	All extension modules of the FW-5 series Removal of the current limitation through re-feeding with TBUS-R for each block
Link	Transparent transmission of the TBUS signals via CAT6e patch cable
Connections	RJ-45 for TBUS link 2 screw terminals MSTB 2-pin 0.2 to 2.5 mm ² for interlocking signals of the command termination cmd and 1/n of the DSO-x TBUS-R has an additional MSTB 4-pin power supply 0.2 to 2.5 mm ²
Status indicators	LEDs in the front panel for data, status, control lines and interlock
TBUS-T	Transmitter module remote I/O as the last expansion module in the block, transparent transmission of the TBUS signals
TBUS-R	Receiver module remote I/O Power supply 24 - 60 V DC \pm 20 %, 20 VA, floating, isolation 1500 V AC Supply of the extension module with 2.8 A, load shedding when exceeded Enables powering up to 10 modules
Status indicators	additional indication: error, status, Uext
Controls	DIP switch for selecting behaviour during communication errors
Housing	Micro housing, Polyamide V0, IP 20 Dimensions 22.5×105×115 mm (W×H×D), Weight TBUS-T 90 g, TBUS-R 140 g
Installation	DIN top-hat rail, DIN-EN 60715 TH35
Ambient temperature	-20° ... +70° C, with a supply > 48 V DC max. +55°C
Relative humidity	< 80%, without condensation



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