ABB TU835V1 3BSE013236R1

01 Function and selected configuration

Product function

ABB TU835V1 3BSE013236R1 organizes analog field wiring into two isolated process-power groups while carrying ModuleBus communication through the station. Mechanical keying keeps the fitted I/O module aligned with the intended terminal arrangement.

Selected configuration

Each of the eight channels provides one signal connection and one fused transducer-power connection. The process supply can be divided into two independently isolated groups. A 2 A channel rating and an 8 A process-connection limit must both be respected; the channel limits do not make a common supply terminal suitable for the sum of all channel maxima.

Functional path

Field transducer	Fused power / signal terminals	AI810 / AI815 / AI845	ModuleBus / controller

Signal capacity	Eight I/O channels
Electrical limits	50 V rated voltage and 2 A per channel
Power grouping	Two individually isolated groups

The termination unit distributes ModuleBus to its fitted I/O module and onward to the next MTU. Position signals are shifted to establish the module address. AI810, AI815 and AI845 are supported in single-I/O arrangements. Two six-position mechanical keys provide 36 combinations to prevent an incorrect module from being inserted; they do not change the electronic function.

TU835V1 3BSE013236R1 / Technical operating envelope

02 Technical operating envelope

I/O channels	8
Maximum rated voltage	50 V
Maximum current per I/O channel	2 A
Maximum process-connection current	8 A
Signal and supply terminals	16 channel terminals; 4 process-power and 4 process-power 0 V terminals
Compatible I/O modules	AI810, AI815 and AI845; single I/O

Mechanical keying	2 keys, 6 positions each; 36 combinations
Solid conductor cross-section	0.2–4 mm²
Stranded conductor cross-section	0.2–2.5 mm²
Terminal tightening torque	0.5–0.6 N·m
Operating ambient	0 to +55 °C; approval range +5 to +55 °C
Protection and humidity	IP20; 5–95% RH, non-condensing

The 500 V a.c. dielectric-test value is a test specification, not an operating supply rating. Maintain the 50 V maximum rated voltage and the defined current limits.

Signal versus power

A channel has a signal connection and a fused transducer-power connection; identify each before disconnecting the field cable.

Ambient boundary

Storage is -40 to +70 °C. Approved operating installations use +5 to +55 °C and must remain non-condensing.

TU835V1 3BSE013236R1 / System integration and applications

03 System integration and applications

Fused transducer supply

Bring each sensor power connection through its fused terminal while keeping the associated signal connection identifiable.

Separated power groups

Organize two isolated process-supply groups without bridging their returns through unintended field wiring.

Single analog I/O stations

Connect compatible AI810, AI815 or AI845 modules through a mechanically keyed field-wiring base.

Station maintenance

Preserve field-terminal assignment while checking the fitted module, rail grounding and ModuleBus continuity.

System and supply context

The MTU interfaces field signals and process power to a compatible AI810, AI815 or AI845 module. The I/O module and neighboring station hardware are separate items unless included in the quotation.

Application boundary

Use the unit for single S800 I/O termination arrangements. Conversion accuracy, ranges and channel diagnostics belong to the selected I/O module and must be checked separately.

Can every channel on TU835V1 3BSE013236R1 draw 2 A through one process connection?

No. The 2 A limit applies per I/O channel, while the maximum current through a process connection is 8 A. Evaluate the shared connection loading as well as each channel.

TU835V1 3BSE013236R1 / Engineering selection decisions

04 Engineering selection decisions

How do the two supply groups in TU835V1 3BSE013236R1 help separate field circuits?

The process voltage can feed two individually isolated groups. Preserve that separation in the external power and return wiring; an unintended bridge defeats the intended grouping.

Does changing the keys on TU835V1 3BSE013236R1 change the input measurement function?

No. The two six-position keys provide mechanical coding only. They prevent an unsuitable module from being inserted and do not alter the MTU or I/O-module electronics.

What conductor preparation is required at the terminals of TU835V1 3BSE013236R1?

Use 0.2–4 mm² solid or 0.2–2.5 mm² stranded conductors. Strip 7 mm and tighten the connection to 0.5–0.6 N·m, keeping loose strands clear of adjacent terminals.

Can TU835V1 3BSE013236R1 operate in a condensing cabinet?

No. The humidity range is 5–95% RH without condensation, and protection is IP20. Use an enclosure and environmental controls appropriate to those limits.

Terminate correctly	Use the specified conductor range, 7 mm strip length and 0.5–0.6 N·m torque.
Secure the rail latch	Confirm mechanical engagement and the intended DIN-rail grounding path.

TU835V1 3BSE013236R1 / Configuration boundary and references

05 Configuration boundary and references

Lifecycle and support

The current manufacturing and manufacturer-support phase of TU835V1 3BSE013236R1 is unconfirmed. Confirm the exact hardware configuration and available service route before planning a replacement.

Replacement assessment

Retain the TU835V1 article identity, terminal allocation, key positions and process-power groups. A different MTU is not interchangeable merely because it also carries eight channels.

Document roles

Use the original manufacturer excerpt for its preserved technical tables and drawings. This product brief explains configuration and selection boundaries. The independent installation guide organizes preparation, connection, testing and handover. It does not replace the applicable manufacturer installation instructions.

Technical basis

ABB TU835V1 Data Sheet, article 3BSE013236R1.

Related product navigation

- ABB TU830V1 3BSE013234R1
- ABB TU831V1 3BSE013235R1
- ABB TU840 3BSE020846R1

These are related references, not confirmed substitutes or an automatically approved assembly.

Product enquiries