SIEMENS

Product Information for the ET 200B Distributed I/O System

Applicability

This Product Information refers to the *ET 200B Distributed I/O Device* manual, edition 04 (order no.: 6ES5 998-4ET.1).

General Information on the ET 200B

Section 3.6, Pg. 3-28: Wiring the Bus Connection

The supply voltage on the PROFIBUS-DP port is intended for connecting a bus connector, an ET 200 hand-held device (only in the case of digital modules) or an OLP.

Section 5.2, Pg. 5-4: Error Display Analog ET 200B

The display of the “DIA” diagnostic LED has the following additional significance for the analog modules of the ET 200B:

If you set ”disable” for the ”Diagnostics Alarm” parameter and ”enable” for the ”Diagnostics Enable CH0” parameter (for channel/channel group) during parameterization, when there is an error on the corresponding channel the “DIA” LED comes on, although disabling the diagnostics alarm prevents a diagnosis from being reported to the CPU.

Section 8.4.1, Table 8-3: Compensation Units

The type U compensation unit described on page 8-9 in table 8-3 together with its accessories is no longer supplied.

Section 8.4.5, Pg. 8-39: Resolution

Note on table 8-25 on page 8-39:

Hinweis

The possible resolutions in table 8-25 do not apply to temperature values. The converted temperature values are the result of a conversion in the analog module.

Section 8.6.1, Pg. 8-78: Rules

Third rule (third point):

- The terminals of unused outputs are left open when voltage output (V measurement) is configured.
- The terminals of unused outputs must be shorted whencurrent output (I measurement) is configured.

Section 5.3.8, Pg. 5-21: Measurement Range Underflow

In the event of a wire break, the ET 200B-4AI analog module up to and including release 2 may report a measurement range underflow instead of a wire break. As of release 3, the following values apply in tables 8-50 and 8-54 in the *ET 200B Distributed I/O Device* manual:

Table 8-50, Pg. 8-69

Tabelle 8-50 Representation of Digitized Measured Values of the ET 200B-4AI (6ES7 134-0HF01-0XB0; Measurement Range: 4 to 20 mA)

Units	Measured value in mA	Digitized Measured Value[1]													X	X	O	Range
	4 ... 20 mA	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0	
2559	19.992	0	1	0	0	1	1	1	1	1	1	1	1	1	0	0	1	Rated range
2048	16.000	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
512	4.000	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	
511	3.992	0	0	0	0	1	1	1	1	1	1	1	1	1	0	0	0	
384	3.000	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	
383	2.992	0	0	0	0	1	0	1	1	1	1	1	1	1	0	0	0	
151	1.185	0	0	0	0	0	1	0	0	1	0	1	1	1	0	0	0	
4095	< 1.185	0	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	Wire break

[1] Same representation in data format twos complement, value and sign and binary representation

Table 8-54, Pg. 8-71

Tabelle 8-54 Representation of Digitized Measured Values of the ET 200B-4AI (Measurement Range: 0 to 20 mA and 4 to 20 mA)

Measurement Range from 0 to 20 mA	Measurement Range from 4 to 20 mA	Units		Range
		Decimal	Hexadecimal	
≥ 23.5185	≥ 22.815	32767	$7FFF_H$	Overflow
23.518 : 20.0007	22.814 : 20.0006	32511 : 27649	$7EFF_H$: $6C01_H$	Overrange
20.000 15.000 : 0.000	20.000 16.000 : 4.000	27648 20736 : 0	$6C00_H$ 5100_H : 0_H	Rated range
-0.0007 : –3.5185	3.9995 : 1.1852	–1 : –4864	$FFFF_H$: $ED00_H$	Underrange
≤ –3.5192		–32768	8000_H	Underflow
	≤ 1.1846	–32768	8000_H	Wire break

Section 8.6.3, Pg. 8-84: Parameters

In table 8-58 on page 8-84 it is also possible to specify that the channel is not activated for output value and range.

Section A.1, Pg. A-3: Analog Modules

Note on table A-2 on page A-3:

Hinweis

The SIxxxAD.200 and SIxxxTD.200 type files contain the normal identifier format for configuration (see table D-7). The SIxxxBD.200 type files contain the special identifier format (see table B-4).

If, while running an analog ET 200B module, reconfiguration is carried out with another type file version (e.g. previously with SIxxxAD.200 and subsequently with SIxxxBD.200, or vice versa), you must carry out a STOP-RUN transition on the analog module.

Section B, Pg. B-1: Normal ID format

The following applies to ET 200B analog modules as of release 3:

To permit analog ET 200B modules to be connected to DP masters of other manufacturers, all analog ET 200B modules as of release 3 also support the normal identifier format.

The prerequisite for this is that your non-Siemens master must send a control command (”UNCLEAR”) cyclically and be able to process diagnostic frames up to 29 bytes in length. If your non-Siemens master does not fulfill these requirements, you can only run the ET 200B modules by means of a device master file created using COM PROFIBUS on the basis of the SIxxxAD.200 type files.

For non-Siemens masters, COM PROFIBUS allows you as of version V3.1 to create a device master file for every analog ET 200B module with address identifiers in the normal identifier format.

The type files for COM PROFIBUS and STEP 7 still contain the preset address identifiers in the special identifier format for these analog modules.

As of release 3, a DP master can read the normal identifier format from the analog ET 200B modules after each power on as in table D-7 (*ET 200B Distributed I/O Device* manual). If the special identifier format is used in configuration, the module makes the special identifier format available.

Updating of the Slave Diagnostics

As long as the DP master is in CLEAR mode, the diagnostic information of the ET 200B modules is **not** updated.

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Product Information for the

TB3-4/DC, 6ES7 193-0CA40-0XA0, as of version

X 4
5 6

Fig. I

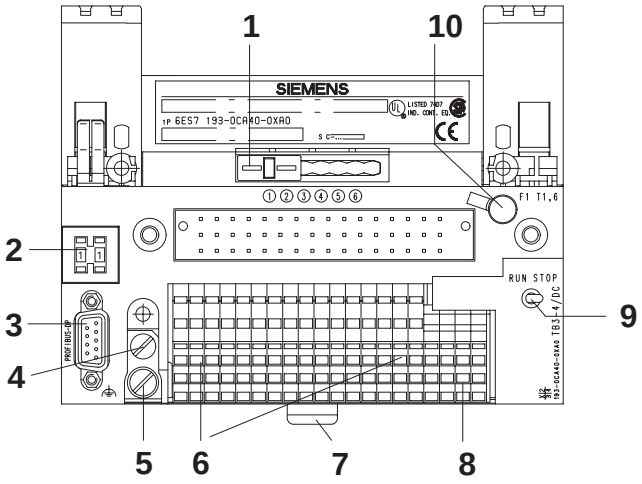


Fig. II

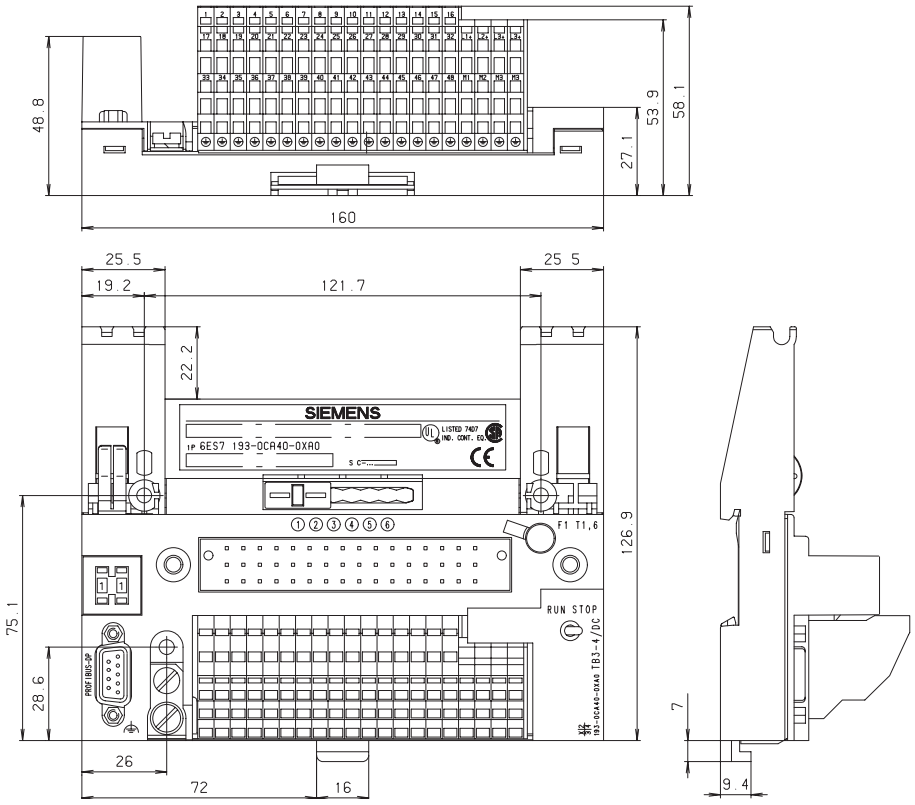


Fig. III

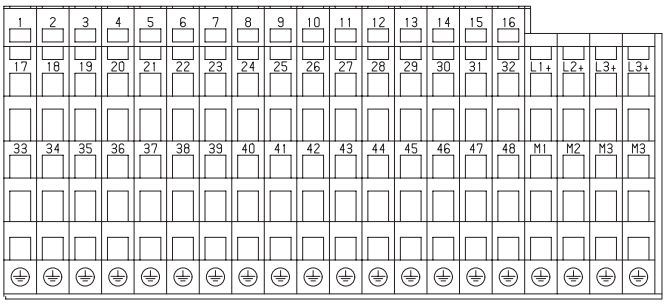
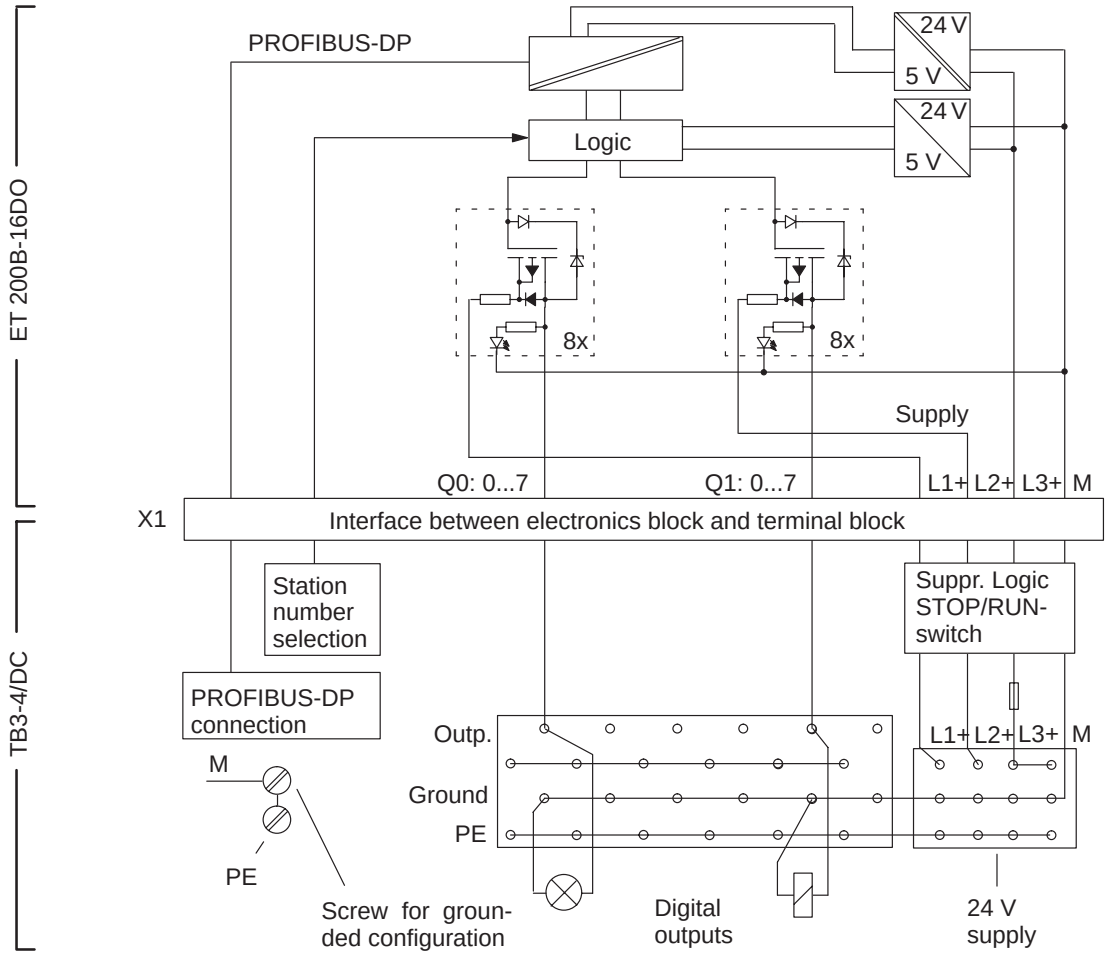


Fig. IV



Description

The TB3-4/DC terminal block belongs to the family of the ET 200B distributed I/O station modules.

Fig. I: Basic construction: TB3-4/DC terminal block (spring-release terminal)

1 Polarization slide
2 Switch for setting the station number (this number is not accepted by the system until you actuate the STOP/RUN switch (STOP → RUN))
3 PROFIBUS-DP interface
4 Screw for connecting frame to PE
5 M5 screw for connecting PE
6 Terminal block for inputs/outputs
7 Slide for removing the terminal block from the standard mounting rail
8 Terminals for the logic supply and the load power supply
9 STOP/RUN switch for switching the power supply to the logic components in the electronics block on and off. The STOP/RUN switch also switches the ET 200B distributed I/O station on and off.
10 Fuse

Fig. II: Dimension drawing: TB3-4/DC terminal block

Fig. III: Terminal designations: TB3-4/DC terminal block

Fig. IV: Block diagram: TB3-4/DC terminal block and ET 200B-16DO

Characteristics

The TB3-4/DC terminal block (spring-release terminal, 4-tier) offers the same functionality as the TB1-4/DC terminal block (screw terminal, 4-tier). The only difference is that the TB3-4/DC is fitted with a 4-tier **spring-release** terminal.

The ET 200B-16DI, -16DO, -8DI/8DO, -8DI/8DO HWA and -8RO electronics blocks can all be connected to the TB3-4/DC terminal block.

Installation and settings

You can find details of how to install and set the terminal blocks of the ET 200B in the *ET 200B Distributed I/O Station* manual.

Input/output connections

The assignment of the inputs and outputs on the terminal blocks of the TB3-4/DC depends on the type of electronics block mounted on them.

The pin-out of all the plug-in electronics blocks for the TB1-4/DC is described in the *ET 200B Distributed I/O Station* manual. This pin-out is the same as for the TB3-4/DC.

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Product Information for the

TB4-4/DC, 6ES7 193-0CB40-0XA0, as of version

X 4
5 6

Fig. I

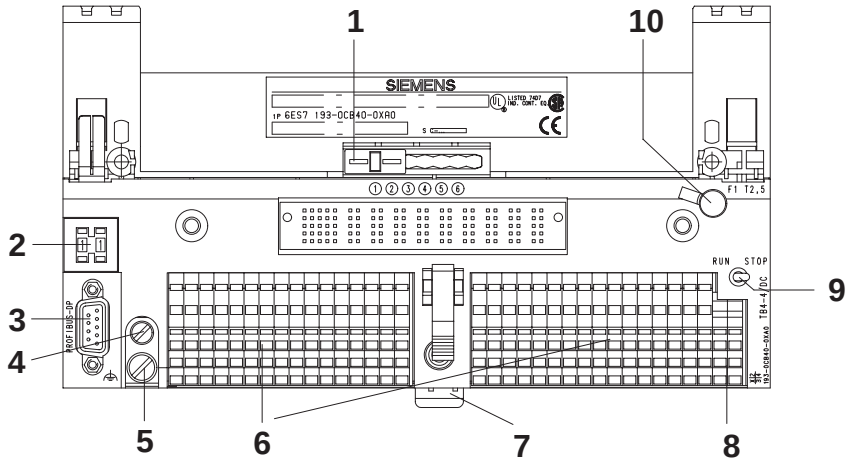


Fig. II

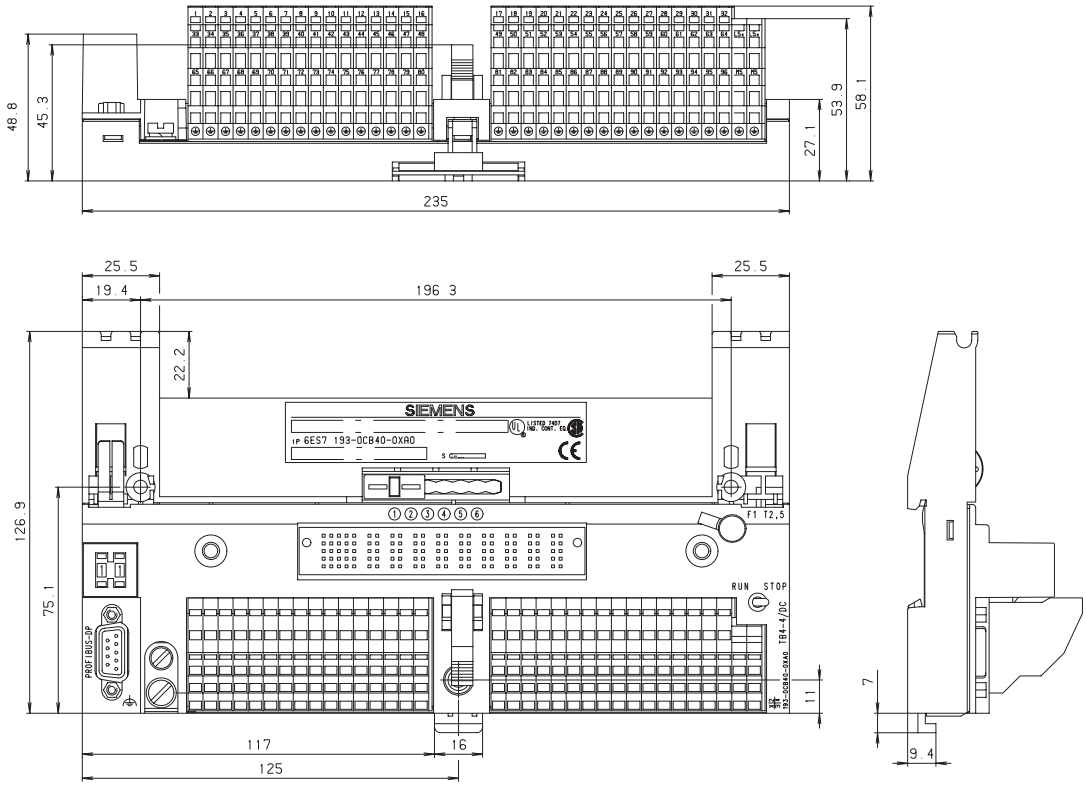


Fig. III

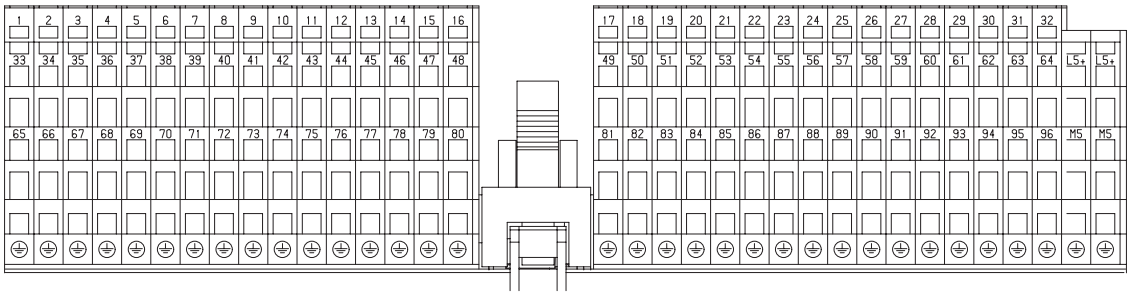
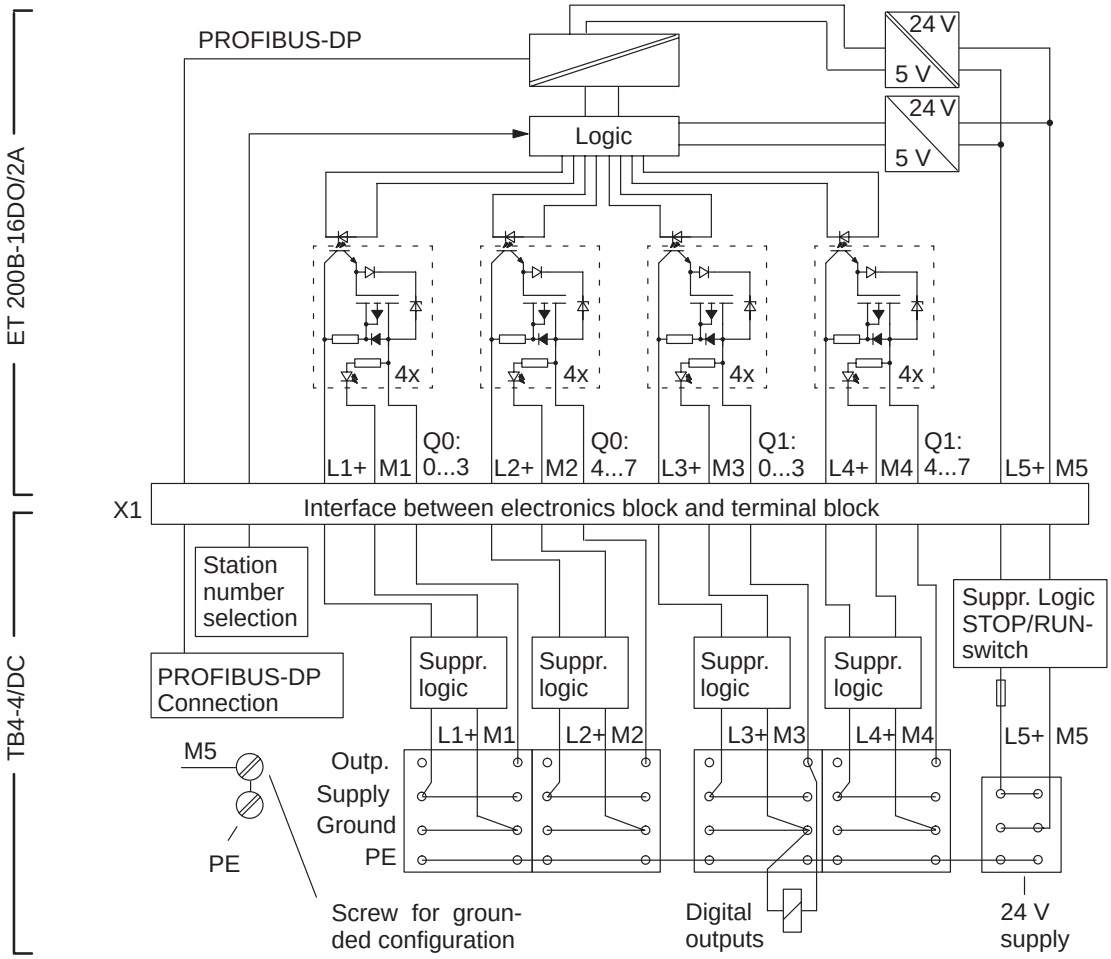


Fig. IV



Description

The TB4-4/DC terminal block belongs to the family of the ET 200B distributed I/O station modules.

Fig. I: Basic construction: TB4-4/DC terminal block (spring-release terminal)

1 Polarization slide
2 Switch for setting the station number (this number is not accepted by the system until you actuate the STOP/RUN switch (STOP → RUN))
3 PROFIBUS-DP interface
4 Screw for connecting frame to PE
5 M5 screw for connecting PE
6 Terminal block for inputs/outputs and the load power supply
7 Slide for removing the terminal block from the standard mounting rail
8 Terminals for the logic supply
9 STOP/RUN switch for switching the power supply to the logic components in the electronics block on and off. The STOP/RUN switch also switches the ET 200B distributed I/O station on and off.
10 Fuse

Fig. II: Dimension drawing: TB4-4/DC terminal block

Fig. III: Terminal designations: TB4-4/DC terminal block

Fig. IV: Block diagram: TB4-4/DC terminal block and ET 200B-16DO/2A

Characteristics

The TB4-4/DC terminal block (spring-release terminal, 4-tier) offers the same functionality as the TB2-4/DC terminal block (screw terminal, 4-tier). The only difference is that the TB4-4/DC is fitted with a 4-tier **spring-release** terminal.

The ET 200B-16DO/2A, -32DI, -32DI 0.2ms, -32DO, -16DI/16DO, -24DI/8DO and -24DI/8DO 0.2ms electronics blocks can all be connected to the TB4-4/DC terminal block.

Installation and settings

You can find details of how to install and set the terminal blocks of the ET 200B in the *ET 200B Distributed I/O Station* manual.

Input/output connections

The assignment of the inputs and outputs on the terminal blocks of the TB4-4/DC depends on the type of electronics block mounted on them.

The pin-out of all the plug-in electronics blocks for the TB2-4/DC is described in the *ET 200B Distributed I/O Station* manual. This pin-out is the same as for the TB4-4/DC.