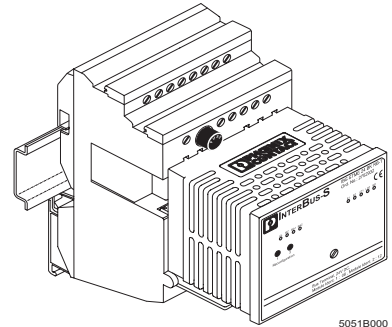


# IBS ST (ZF) 24 BK RB-T

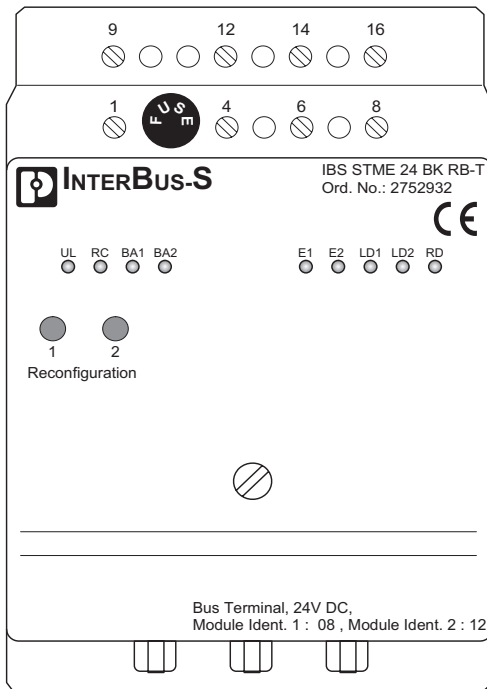
## Bus Terminal Module With Remote Bus Branch



Data Sheet 5051B

02/1999

5051B000



5051B001

Figure 1 IBS ST 24 BK RB-T module



General information pertaining to ST modules can be found in the IBS SYS PRO UM E Manual.



Ground the mounting rail. The module is grounded by snapping it onto the mounting rail.

### Terminal Assignment

Terminals	Assignment
1	Supply voltage of the module
4	Supply voltage of the reconfiguration input 2 (optional)
6	Supply voltage of the alarm contact (optional)
8	Supply voltage of the reconfiguration input 1 (optional)
9	Ground contact of the module
12	Ground contact of the reconfiguration input 2
14	Ground contact of the alarm contact
16	Ground contact of the reconfiguration input 1

### Local Diagnostic and Status Indicators

Des.	Color	Meaning
UL	Green	Supply voltage for the module electronics
RC	Green	Remote bus cable check
BA1/2	Green	Remote bus active
E1	Red	Error in the compact station (local bus group)
E2	Red	Error in the remote bus branch
LD1	Red	Compact station disconnected
LD2	Red	Remote bus branch disconnected
RD	Red	Remote bus disconnected

## Connection Example

### Connection of the Supply Voltage and Remote Bus Cables

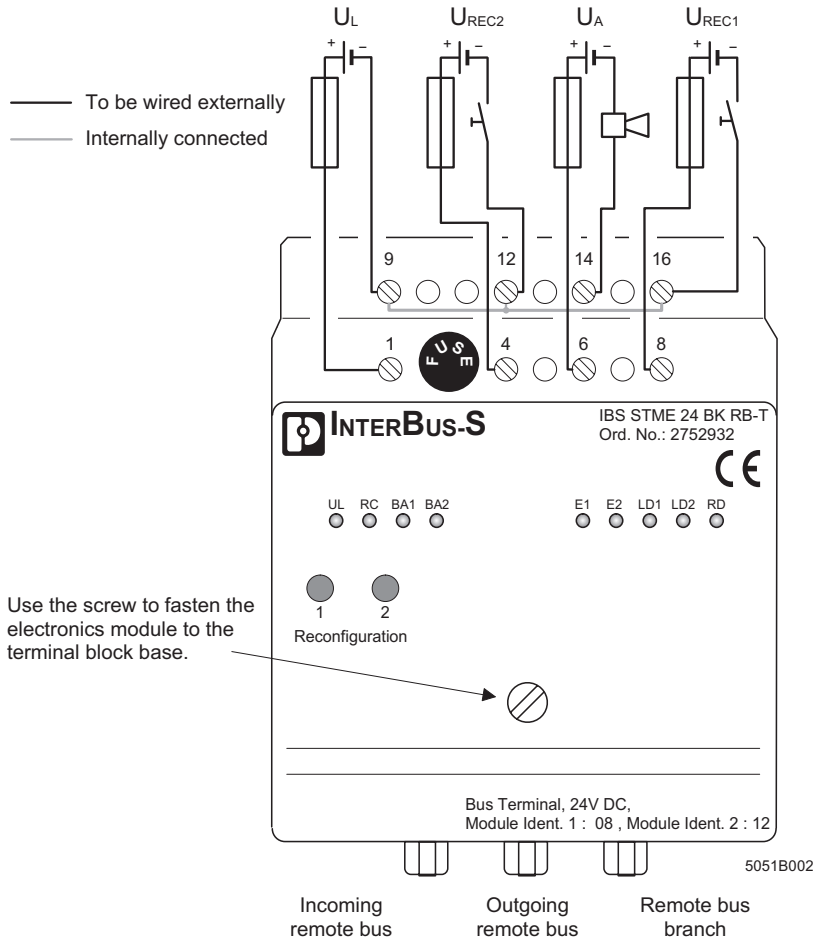


Figure 2 Connection of the supply voltage and remote bus cables

$U_{REC1/2}$ : Power supply for the reconfiguration inputs (optional). These inputs can only be used together with group definitions. As the terminals 9, 12, and 16 are connected with each other, the reconfiguration inputs and the power supply are assigned to the same potential.

$U_L$ : Power supply for the bus logic

$U_A$ : Power supply for the alarm contact

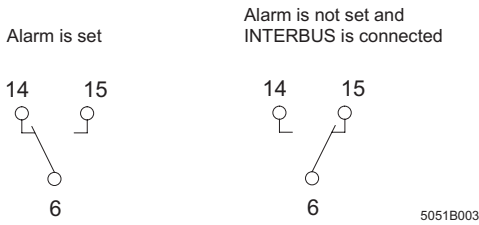


Figure 3 Functioning of the alarm contact

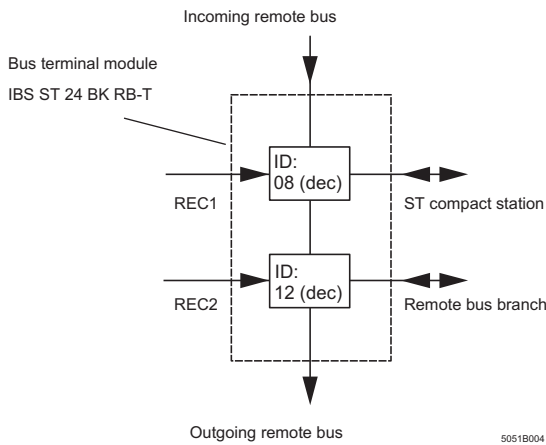


Figure 4 Assignment of the reconfiguration inputs



When programming the control system the IBS ST 24 BK RB-T bus terminal module (BK module) is treated like two individual BK modules. Therefore both ID codes must be entered in the address lists.

### Programming Data

ID code	
ST compact station	8 <sub>hex</sub> (8 <sub>dec</sub> )
Remote bus branch	0C <sub>hex</sub> (12 <sub>dec</sub> )
Length code	0 <sub>hex</sub>
Input address area	0 bytes
Output address area	0 bytes
Parameter channel (PCP)	0 bytes
Register length (bus)	0 bytes
Programmable functions	
Disconnection of the ST compact station	Yes
Reset of the ST compact station	Yes
Disconnection of the outgoing remote bus	Yes
Reset of the outgoing remote bus	Yes
Monitoring the incoming remote bus cable	Yes
Disconnection of the remote bus branch	Yes

## Technical Data

General	
Housing dimensions (width x height x depth)	81 mm (3.19 in.) x 117 mm (4.61 in.) x 116 mm (4.57 in.)
Permissible operating temperature	From 0°C (32°F) to 55°C (131°F)
Permissible storage temperature	From -20°C (-4°F) to 70°C (158°F)
Degree of protection	IP 20, DIN 40050, IEC 60529
Class of protection	Class 3 VDE 0106, IEC 60536
Humidity (operation)	30% to 75%, no condensation
Humidity (storage)	30% to 95%, no condensation
Air pressure (operation)	From 86 kPa to 108 kPa, 1500 m (4921 ft.) above sea level
Air pressure (storage)	From 66 kPa to 108 kPa, 3500 m (11483 ft.) above sea level
Electrical isolation	Test voltage
Incoming/outgoing remote bus	500 V AC, 1 min., 50 Hz
Incoming remote bus/ST local bus	500 V AC, 1 min., 50 Hz
Incoming remote bus/remote bus branch	500 V AC, 1 min., 50 Hz
Supply voltage/ST local bus	500 V AC, 1 min., 50 Hz
Preferred installation position	Panel mounting
Protective ground connection	Via DIN rails
Weight	470 g, typical

Interface	
INTERBUS	
Incoming remote bus	9-pos. D-SUB male connector
Outgoing remote bus	9-pos. D-SUB female connector
ST interface	ST cable
Remote bus branch	9-pos. D-SUB female connector (supply voltage is not carried in the remote bus branch)
Number of ST modules that can be connected	8 (note the current load)
Supply current for the local bus	800 mA

<b>Interface (continued)</b>	
Alarm contact	
Terminal points	6, 14, and 15 (see Figure page 3)
Maximum voltage	30 V DC
Maximum current	0.5 A
Reconfiguration inputs	
ST compact station	Pushbutton 1 (manual operation)
Remote bus branch	Pushbutton 2 (manual operation)
Terminal points of the ST compact station	8 (+) and 16 (-)
Terminal points of the remote bus branch	4 (+) and 12 (-)
Nominal voltage $U_{REC1/2}$	24 V DC
Permissible voltage range	-30 V to 30 V (DC)
	Set: 13 V to 30 V (DC)
	Not set: -30 V to 2 V
Current consumption (set)	2 mA, typical

<b>Power Consumption</b>	
Communications power	9 V DC
I/O supply voltage $U_S$	24 V DC
Current consumption of $U_S$	
Without ST modules	150 mA at 24 V, typical
Maximum	650 mA at 24 V, typical
Total current consumption of all I/O modules at the ST local bus	800 mA at 9 V, maximum

<b>I/O Supply Voltage (<math>U_S</math>)</b>	
Nominal value	24 V DC
Permissible ripple	3.6 V <sub>pp</sub> within the permissible voltage range
Permissible voltage range (including ripple)	Operation: 20 V DC to 30 V DC
Current consumption of $U_S$	
Without ST modules	150 mA at 24 V, typical
Maximum	650 mA at 24 V, typical
Permissible total current consumption of all I/O modules from the ST local bus	800 mA at 9 V, maximum
Surge voltage protection	Fuses in the base element IBS TR5 1 AT

**Ordering Data**

<b>Description</b>	<b>Order Designation</b>	<b>Order No.</b>
BK module (screw-clamp terminals)	IBS ST 24 BK RB-T	27 53 50 4
BK module (spring-clamp terminals)	IBS ST ZF 24 BK RB-T	27 50 76 9
Electronics module	IBS STME 24 BK RB-T	27 52 93 2
Replacement terminal block (screw-clamp terminals)	IBS STTB 24 BK LB-T	27 52 69 9
Replacement terminal block (spring-clamp terminals)	IBS STTB ZF 24 BK LB-T	27 50 88 2







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[>>Phoenix Contact\(菲尼克斯\)](#)