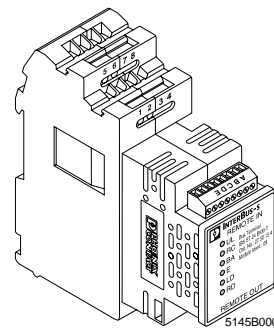


IBS ST (ZF) 24 BKM-T

Bus Terminal Module



Data Sheet 5145B

01/2000

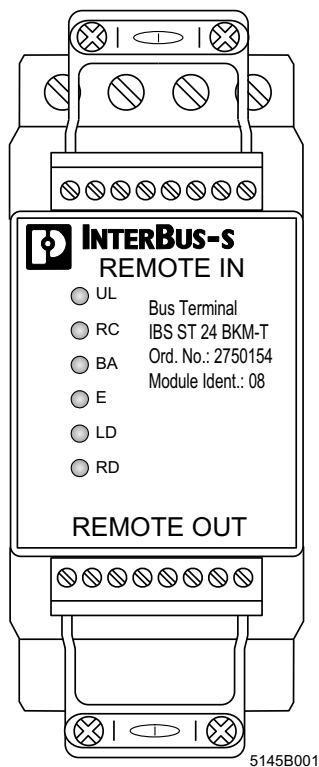


Figure 1 IBS ST 24 BKM-T module



This data sheet is intended to be used in conjunction with the IBS SYS PRO UM E User Manual.



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

Terminal Assignment

| Terminal | Assignment |
|----------|-------------------------------|
| 1 | Supply voltage for the module |
| 5 | Ground contact of the module |

Local Diagnostic and Status Indicators

| Des. | Color | Meaning |
|------|-------|---|
| UL | Green | Supply voltage for the electronics module |
| RC | Green | Incoming remote bus cable check |
| BA | Green | Remote bus active |
| E | Red | Error in the ST compact station (local bus group) |
| LD | Red | ST compact station (local bus group) disconnected |
| RD | Red | Remote bus out disconnected |



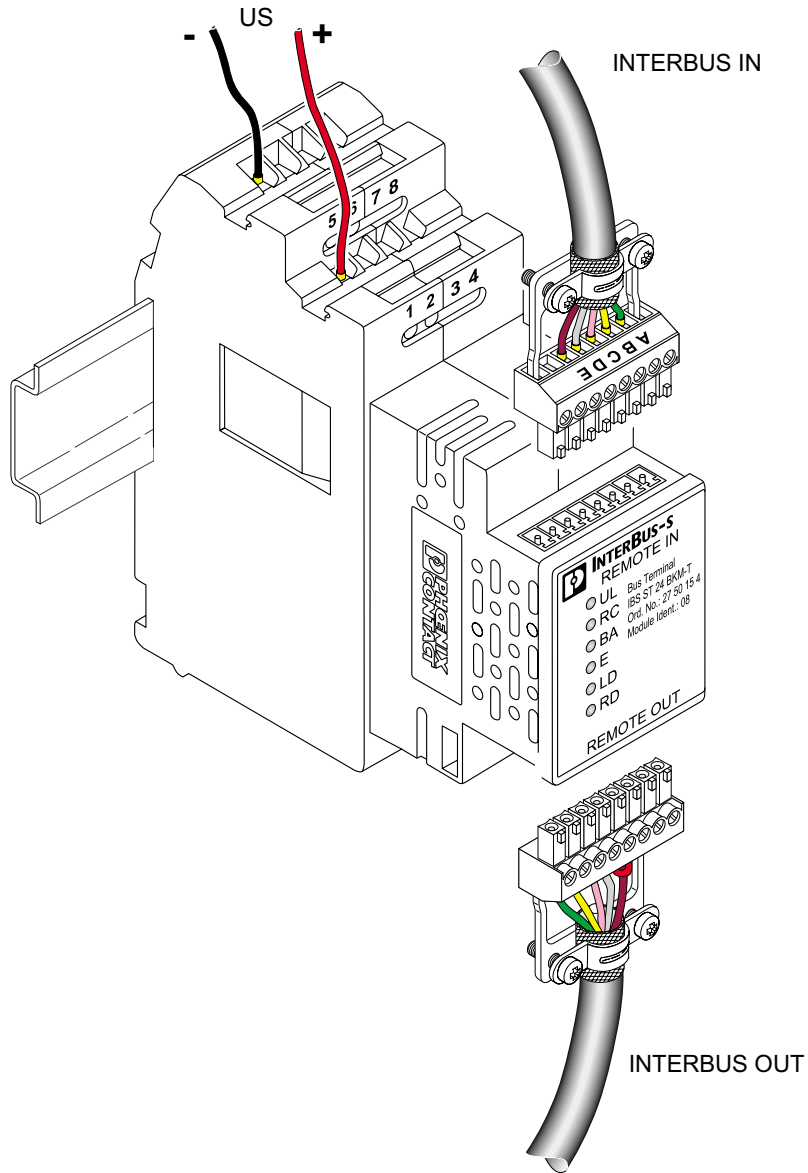
Bus connection with remote bus cable:

The remote bus cable must be fitted with the MINI-COMBICON male connectors supplied with the module.

Plug the connectors into the corresponding terminal strips (Figure 2), the keying tabs point towards the front plate of the bus terminal. REMOTE IN designates the incoming remote bus, REMOTE OUT the outgoing remote bus. The module supply voltage U_S must be provided via bus terminal contacts 1 (+) and 5 (-), as it is not supplied via the bus cable.

Connection Example

Connection of the Supply Voltage and Bus Cables



5145B002

Figure 2 Connection of the supply voltage and bus cables

Pin Assignment of the Remote Bus Connector

| REMOTE IN | | | | | | | | |
|----------------------|--------|-----------------|--------|-----------------|------|-------|----------|--------|
| Pin | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| Terminal designation | | A | B | C | D | E | | |
| Signal | Shield | \overline{DO} | DO | \overline{DI} | DI | COM | Not used | Shield |
| Wire color | | Green | Yellow | Pink | Gray | Brown | | |

| REMOTE OUT | | | | | | | | |
|----------------------|--------|-----------------|--------|-----------------|------|-------|------|--------|
| Pin | 1 | 2 | 3 | 4 | 5 | 6* | 7* | 8 |
| Terminal designation | | F | G | H | J | K* | L* | |
| Signal | Shield | \overline{DO} | DO | \overline{DI} | DI | COM | RBST | Shield |
| Wire color | | Green | Yellow | Pink | Gray | Brown | | |



* Ensure that a jumper is installed between contacts K and L of the **outgoing** remote bus connector, if the remote out is used.



Ensure that on the bus terminal module, the ST cable for the local bus **is connected before the module is snapped** onto the mounting rail, as the terminal block base and the module electronics are not pluggable.

Programming Data

| | |
|-------------------------|---------------------------------------|
| ID code | 8_{hex} (8_{dec}) |
| Length code | 0_{hex} |
| 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 |

Technical Data

| General | |
|--|---|
| Housing dimensions (width x height x depth) | 44 mm x 117 mm x 116 mm (1.732 in. x 4.606 in. x 4.567 in.) |
| Permissible operating temperature | From 0°C to 55°C (32°F to 131°F) |
| Permissible storage temperature | From -20°C to 70°C (-4°F to 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 (4921.26 ft.) above sea level |
| Air pressure (storage) | From 66 kPa to 108 kPa, 3500 m (11,482.94 ft.) above sea level |
| Electrical isolation | |
| Between incoming and outgoing remote bus | 500 V AC test voltage, 50 Hz, 1 min. |
| Between incoming remote bus and ST local bus | 500 V AC test voltage, 50 Hz, 1 min. |
| Emitted interference | EN 50081-2, Class A |
| Preferred installation position | Panel mounting (on a horizontally mounted DIN rail) |
| Protective Ground Connection | Via DIN rail |
| Weight | 200 g, typical |

| Interfaces | |
|--|--------------------------------|
| INTERBUS | |
| Incoming remote bus | 8-pos. MINI-COMBICON connector |
| Outgoing remote bus | 8-pos. MINI-COMBICON connector |
| ST interface | ST cable |
| Number of ST modules that can be connected | 4 (note the current load) |
| Supply current for the local bus | 500 mA |

| Power Consumption | |
|--|-------------------------|
| Communications power | 9 V DC |
| I/O supply voltage U_S | 24 V DC |
| Current consumption of U_S | |
| Without ST local bus modules | 150 mA at 24 V, typical |
| Maximum | 350 mA at 24 V, typical |
| Total current consumption of all I/O modules at the ST local bus | 500 mA at 9 V, maximum |

| I/O Supply Voltage (U_S) | |
|--|--|
| Nominal value | 24 V DC |
| Permissible ripple | 3.6 V _{pp} 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 local bus modules | 150 mA at 24 V, typical |
| Maximum | 350 mA at 24 V, typical |
| Permissible total current consumption of all I/O modules from the ST local bus | 500 mA at 9 V, maximum |



Polarity reversal of the input voltage and a current of > 2 A can damage the module electronics as there is no module internal fuse. Therefore, install a 2 A external fuse.

Ordering Data

| Meaning | Order Designation | Order No. |
|--------------------------------------|-----------------------|------------|
| BK module (screw-clamp terminals) | IBS ST 24 BKM-T | 27 50 15 4 |
| BK module (spring-clamp terminals) | IBS ST ZF 24 BKM-T | 27 24 96 0 |
| Replacement shield clamp | IBS RB-SHIELD | 27 22 74 2 |
| Replacement remote bus connector set | IBS RB PLSET/MC 1.5/8 | 27 22 75 5 |

