



Technical Documents

Interbus Diagnostics Device

342-0IA00

Order-No.: VIPA HB144E_IBS-DIAG
Reference: RE_342-0IA00
Rev. 09/22

General Information

The diagnostics device VIPA 342-0IA00 serves for connection to an Interbus (IBS) master module from VIPA with Mini-DIN diagnostics jack. By means of the diagnostics device operation and fault conditions may be represented, recognized and localized. For this the device has a multi-line LCD display for display and a key field for menu-assisted service. The hardware platform of the diagnostics device (USC/4-DIAG-L) comes from Phoenix Contact as like the IBS hardware platform of the master (USC4-2). In the following the single components are described only briefly. In the "Diagnostics guide" of Phoenix Contact a detailed description of the diagnostics possibilities may be found.

Connect the diagnostics device



The diagnostics device is directly supplied by the Mini-DIN jack of the IBS master and is ready for operation after connection. Please consider that the arrow on the plug ► shows to the right side when the diagnostics device is connected to the Mini-DIN jack.



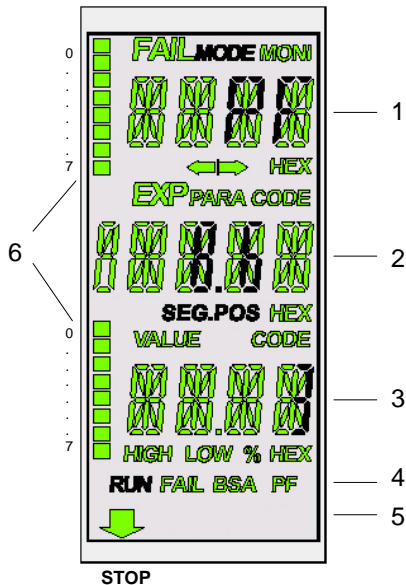
Attention!

Please consider the sufficient grounding when connecting the diagnostics device. Hardware-caused there is the risk to come in contact to a pin of the plug while the diagnostics device is connected. This could damage the device by an electrostatic discharge.

LCD-Display

The diagnostics display consists of the following components:

- 3 main lines to display operating states, addresses and data.
- 16 status segments on the left side of the display for binary representation of input and output data.
- CPU STOP status indicator (Arrow is displayed).
- Red (error) or green (normal operation) background illumination, depending on the operating state of the bus.

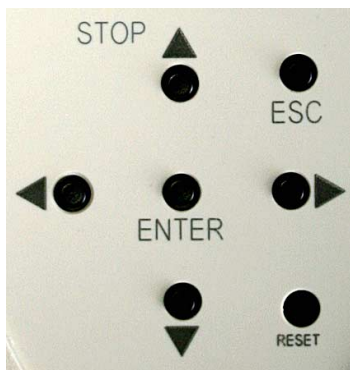


<p>[1] FAIL</p> <p>MODE</p> <p>MONI</p> <p>HEX</p>	<p>Indicates that an error has occurred and provides information about the error type.</p> <p>When MODE active, further menu items may be selected.</p> <p>Indicates that monitor mode is activated.</p> <p>The value in the 1. main line is displayed in hexadecimal notation. If the HEX segment is not activated, the value is displayed in decimal notation.</p>
<p>CTRL</p> <p>RBUS</p> <p>LBUS</p> <p>BUS</p> <p>OUT1</p> <p>OUT2</p> <p>DEV</p> <p>PF</p>	<p>Controller error</p> <p>Remote bus error</p> <p>Local bus error</p> <p>General bus error</p> <p>Error at the outgoing interface</p> <p>Error at the branching interface</p> <p>Device error</p> <p>Peripheral fault</p>

[2]	PARA CODE SEG.POS HEX	<p>The displayed value is a parameter of a message.</p> <p>The displayed value represents a code.</p> <p>The displayed value is a device number (bus segment and position).</p> <p>The value in the 2. main line is displayed in hexadecimal notation. If the HEX segment is not activated, the value is displayed in decimal notation.</p>
[3]	VALUE CODE HIGH LOW % HEX	<p>The displayed number is a value.</p> <p>The displayed value represents a code.</p> <p>The displayed number is a high-order word of a 32-bit value.</p> <p>The displayed number is a low-order word of a 32-bit value.</p> <p>The displayed number is a percentage term.</p> <p>The value in the 3. main line is displayed in hexadecimal notation. If the HEX segment is not activated, the value is displayed in decimal notation.</p>
[4]	RUN FAIL BSA PF	<p>Indicates the current operating state of the IBS master: Off: Interbus at state READY or BOOT Flashes: Interbus at state ACTIVE On: Interbus at state RUN</p> <p>Active in the event of controller, user or bus errors.</p> <p>(Bus Segment Aborted) Active when a bus segment is switched off and inactive when all segments are switched on again.</p> <p>(Peripheral Fault) Active when a device indicates a peripheral fault.</p>
[5]	CPU-STOP status	If the superimposed CPU is in STOP state, an arrow appears in the bottom line of the display pointing to the "STOP" label of the front panel.
[6]	Status segments	The 16 status segments for the binary representation of in and output words, are indicated, if an appropriate menu were opened.

Keypad

The keypad enables menu-driven operation of the diagnostics display using the arrow keys.



Key	Description
▲	Go up
▼	Go down
▶	Selection of a menu item or address
◀	Selection of a menu item or address
ENTER	Confirm selection
ESC	Exit menu item or switch to the next level up
RESET	This button is reserved for internal functions and is deactivated at diagnostics operation.

Selecting a menu item

Different menu items may be selected on the display. You may move within a menu level using the ◀▶. To jump to the next level down, confirm the selected menu item by pressing ENTER.

The currently selected menu item is always shown in the 1. line. If there is another level under this menu item, the name of one of the available menu items will flash in the 2. line. Press ESC to return to the previous level.

Menu structure

To access the MODE and MONI menu items from the standard view, press ▶.

MODE Here you may get information about the current bus configuration and status. Statistical data about the state of the bus system can also be requested e.g., the error frequency of specific devices. Further general information such as the firmware version or the serial number are centralized

MONI Via the MONI item the states of inputs and outputs may be displayed. This monitor function is adapted to the addressing syntax of the CPU.