

PBT 102
Process Operation Keyboard

Device Description
A91M.12-271635.21-1290EN

Translation of the German Description
A91M.12-271608

Notes

Application Note



Caution The relevant regulations must be observed for control applications involving safety requirements. For reasons of safety and to ensure compliance with documented system data, repairs to components should be performed only by the manufacturer.

Training

AEG offers suitable training that provides further information concerning the system (see addresses).

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Terminology



Note This symbol emphasizes very important facts.



Caution This symbol refers to frequently appearing error sources.



Warning This symbol points to sources of danger that may cause financial and health damages or may have other aggravating consequences.



Expert This symbol is used when a more detailed information is given, which is intended exclusively for experts (special training required). Skipping this information does not interfere with understanding the publication and does not restrict standard application of the product.



Path This symbol identifies the use of paths in software menus.

MMI Man-machine interface

VIP Visual display processor

Figures are given in the spelling corresponding to international practice and approved by SI (Système International d' Unités).

I.e. a space between the thousands and the usage of a decimal point (e.g.: 12 345.67).

Objectives

The objective is to explain the following devices to the persons configuring and the users:

- ❑ the application
- ❑ the mechanical structure
- ❑ the operator and display elements
- ❑ the circuitry
- ❑ the port.

Arrangement of This Guide

- Chapter 1** contains the description of the application and the mechanical structure. Additionally, the chapter contains a survey of the connection possibilities.
- Chapter 2** contains the description of the operator elements and the display elements.
- Chapter 3** contains the description of the setting modes (TB, XT, AT) and the device connection (local range, parallel operation).
- Chapter 4** contains the specifications.

Related Documents

In addition to this documentation we recommend to read the following publications, thus you will get a better understanding of the associated equipment.

Viewstar 200
Catalog
(for ordering details)
(under development)

Process Peripherals
Front Connection
A130 / A350 / A500
User Manual
A91M.12-271613EN
(contains module description
VIP 101)

Viewstar 200 XA
Integrated MMI-Station
Operating Instructions
A91M.12-271884EN

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Chapter 1

General

- Application
- Mechanical Structure
- Connection Possibilities

1.1 Application

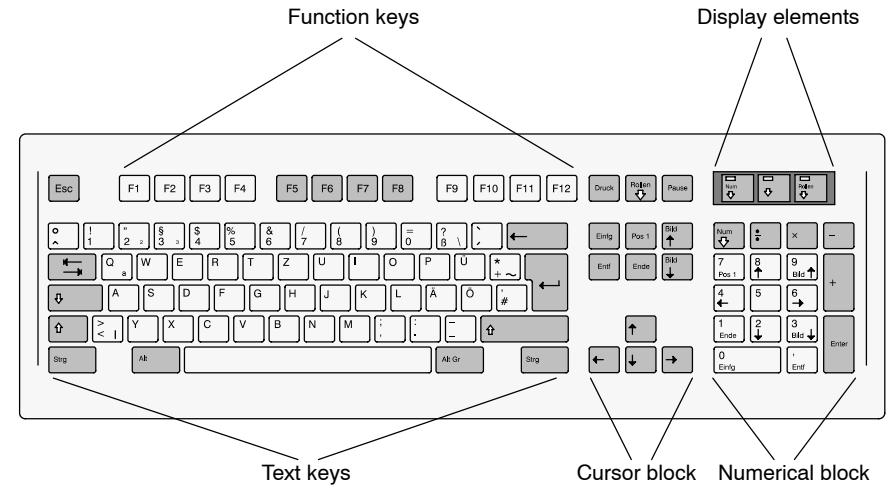


Figure 1 PBT 102 Process Operating Keyboard

The PBT 102 process operating keyboard is an operating device of the Viewstar 200 XA product line.

PBT 102 is connected to the VIP 101 module.

PBT 102 has a TTL interface and is intended for office environment in the local range.

The F1 - F8 function keys, the cursor block and the numerical block are used to operate Viewstar 200 XA. All the remaining keys are not relevant to the operation.

1.2 Mechanical Structure

PBT 102 is designed as a stroke keyboard. The integrated connection cable can be fed by screwing on the keyboard either to the left or the right or in the middle of the keyboard.

1.3 Connection Possibilities

1.3.1 Standard Combination

There are different combination possibilities for connection VIP 101. Connection of PBT 102 to CMR 121 color monitor is available as standard combination in office environment and in local range.

1.3.2 Further Connection Possibilities

If required, the standard combination can be expanded using other monitors and/or keyboards.

- CMR 125
Monitor keyboard device for the local and remote range in the industrial environment
- CMR 121
Color monitor for the local and remote range in the office environment
- CMR 122
Color monitor for the local and remote range in the industrial environment
- PBT 103
Process operating keyboard for the local and remote range in the industrial environment

Combination possibilities can be selected from the following table. The detailed description of connection is located in chapter 3 of the corresponding device description.



Caution No reciprocal interlocking of the keyboards is possible during the parallel operation.

There are various combination possibilities during the connection of the peripherals.

The latter are listed in the table below.

The meaning of the symbols \square \diamond \triangle \curvearrowright \circ ∇ \triangleleft \ominus :

If the devices are marked to the same symbols it means that they can be connected simultaneously on VIP 101.

Example:

(The combination possibilities of this example appear in the table with a grey background.)

If the **CMR 125** device is operated on VIP 101 in the **Remote** range, it means that the following can be connected simultaneously:

either

- the **CMR 121** device in the **Local** range (\square)
and

- the **PBT 102** device in the **Local** range (\square)

or

- the **PBT 102** device in the **Local** range (\triangle)
and

- the **CMR 122** device in the **Local** range (\triangle).

		CMR 125		CMR 121		PBT 102		CMR 122		PBT 103	
		L	R	L	R	L	R	L	R	L	R
CMR 125	L				□				△		
	R			□		□	△	△			
CMR 121	L		□		○	× □ ⊃ ○			⊃ ◇	◇	⊃ ○
	R	□		○		○		▽		▽	○
PBT 102	L		□ △	× □ ⊃ ○	○			△ ⊃	⊃ ⊃		⊃ ○
	R										
CMR 122	L		△		▽	⊃ △			⊃ ⊃	× ▽ ⊃	⊃
	R	△		⊃ ◇		⊃ ⊃		⊃ ⊃		◇ ⊃	× ⊃ ⊃
PBT 103	L			◇	▽			× ▽ ⊃	◇ ⊃		
	R			⊃ ○	○	⊃ ⊃ ○		⊃	× ⊃ ⊃		

L = Local Range R = Remote Range X = Standard Combination

Figure 2 Combination Possibilities of the Peripherals on VIP 101

Chapter 2

Operation

- Operator Elements
- Display Elements

2.1 Operator Elements

The operation and function of the keys are described in the operating instructions of "Viewstar 200 XA".

2.2 Display Elements



LED lights up: Numerical block is used to input numerals
LED does not light up: Numerical block is used to control the cursor



LED lights up: Capital letters are used
LED does not light up: Small initial letters are used

Not relevant in Viewstar 200 XA



LED lights up: Scroll screen contents: ON
LED does not light up: Scroll screen contents: OFF

Not relevant in Viewstar 200 XA

Figure 3 Display Elements

Chapter 3

Configuration

- Settings
- Device Connection

3.1 Settings

3.1.1 Condition on Delivery

PBT 102 is set for the operation on VIP 101 on delivery ex works (TB-setting mode).

The DIP switch is located on the second keyboard PCB.

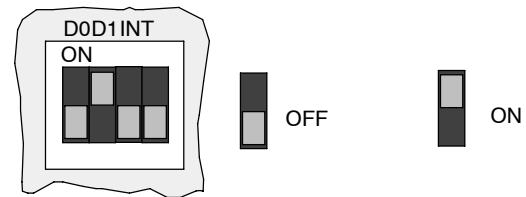


Figure 4 Condition on Delivery (TB)

3.1.2 XT-Setting Mode

The bed plate has to be unscrewed and the DIP switch selected to XT-setting mode in order to operate the keyboard on the XT-PCs.

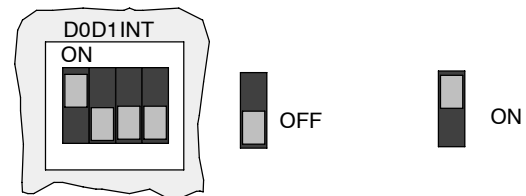


Figure 5 XT-Setting Mode

3.1.3 AT-Setting Mode

The bed plate has to be unscrewed and the DIP switch selected to AT-setting mode in order to operate the keyboard on the AT-PCs.

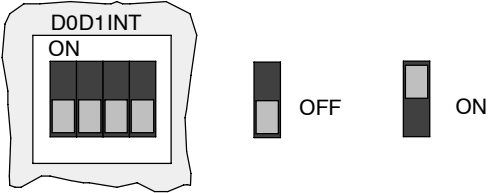


Figure 6 AT-Setting Mode

3.2 Device Connection

3.2.1 Connection of PBT 102 to VIP 101

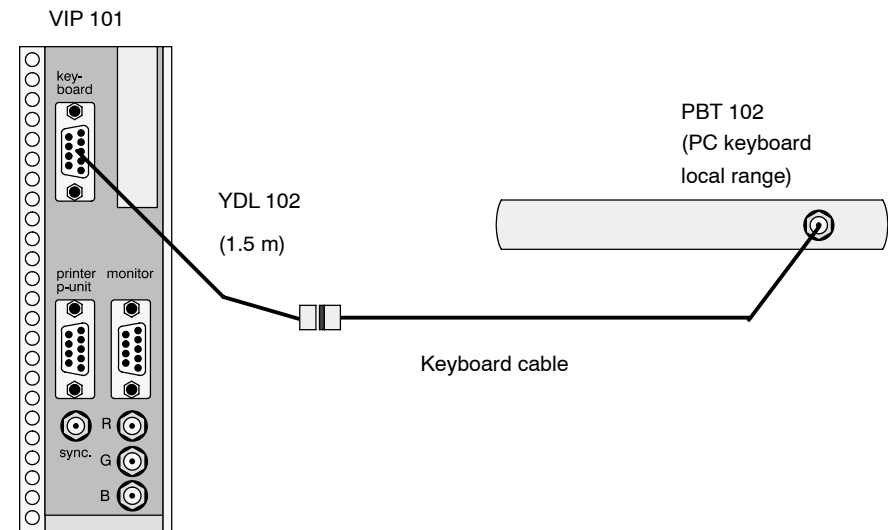


Figure 7 PBT 102 - VIP 101 Port

3.2.2 Parallel Operation

PBT 102 can, e.g., be operated in parallel (in local range) to PBT 103 (in remote range).



Caution No reciprocal interlocking of the keyboards is possible during the parallel operation.

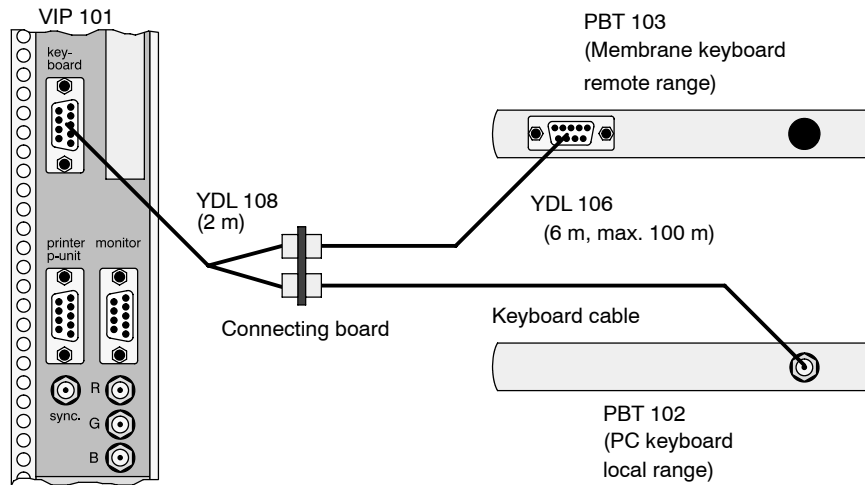


Figure 8 PBT 102 / PBT 103 - VIP 101 Port: Parallel Operation

If required, the cable YDL 106 can be supplied to a length of up to 100 m. The connecting board of the YDL 108 cable has to be mounted on a mounting set for EMC reasons. This set has to be ordered separately.

Chapter 4

Specifications

- Assignment
- Power Supply Interface
- Data Interface
- Mechanical Structure
- Environmental Characteristics
- Ordering Details

Specifications

Assignment

Device	A350/A500
Product Line	Viewstar 200 XA
Module	VIP 101

Power Supply Interface

Power Supply	+5 VDC \pm 5% (via VIP 101)
Current Consumption	300 mA

Data Interface

Interface	Serial, synchr. TTL level IBM-PC/-XT/-AT compatible
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Mechanical Structure

Connector	DIN connector, 5 pole
Connection Cable	Shielded helix cable Unstretched approx. 1 m Stretched approx. 2.8 m
Layout	According to DIN 2 137, part 2
Cable Function	Either on the left, on the right or in the middle of the housing

Measurements 485 x 200 x 40 mm (W x D x H)

Weight 1.6 kg

Environmental Characteristics

Ambient Temperature -5 ... +50 °C

Storage Temperature -20 ... +70 °C

Ordering Details

E-No. 424-

Process Operating Keyboard
PBT 102 Including
Keyboard Cable

274 016

Cable

YDL 102 (1.5 m)

241 574

We reserve the right to make technical alterations!

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