

Front Panel Printer

System Z1

Two different Printing Technologies
for 58 mm Paper Width

Series GPN-9XX: 8 Needle-Plain Paper
Series GPT-32XX: Fixed Thermal Print Line

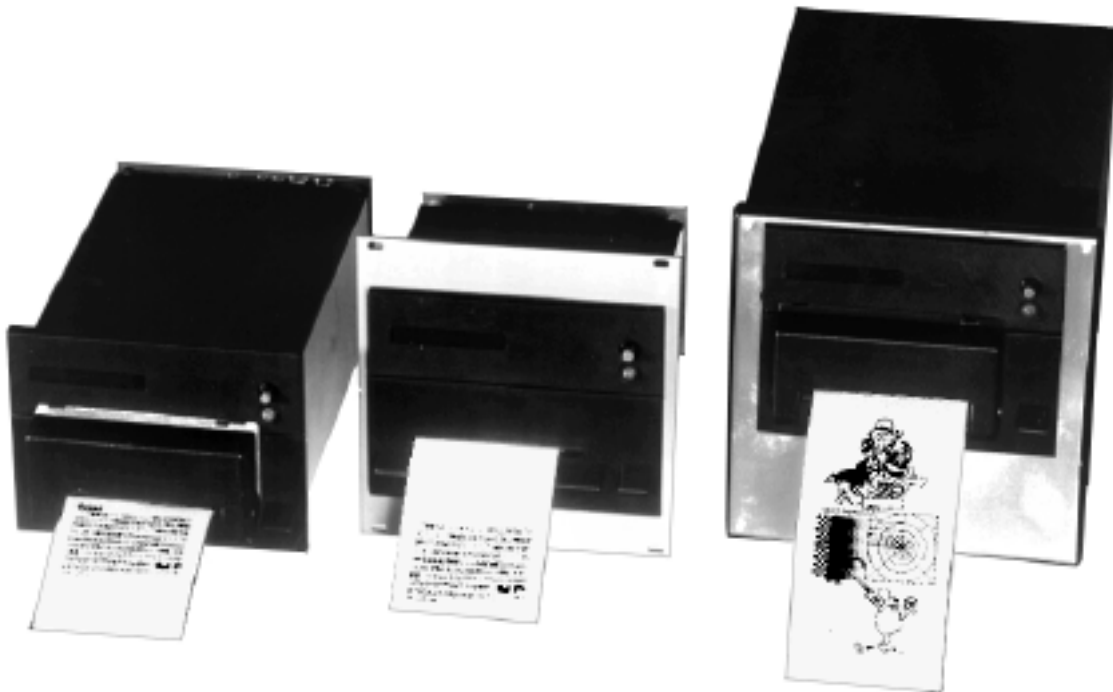
GeBE

Elektronik und
Feinwerktechnik GmbH
Modules and Devices for Input, Analysis,
Display, and Printing
of analog and digital Data

GeBE Document No.:

SKI-E-301

Deutsch >> SKI-D-300



Professional Front Panel Printer System

2HU-Cassette Version

3HU-Front Panel Version for 19"
DIN Panel Installation • 144x144 mm

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Service friendly:

With the Z1 system GeBE is introducing a new generation of front panel printers, which set new standards regarding the service friendliness, and the robustness. Z1 printers were designed for industrial applications. Service technicians will appreciate the easy handling on a hectic day.

For convenient service, the front lid can be unbolting to remove the printer cassette from the metal housing. Now, the necessary service can be performed at any kind of work station. This allows the installation of the printer in areas that are not very accessible.

Four adaptable basic types:

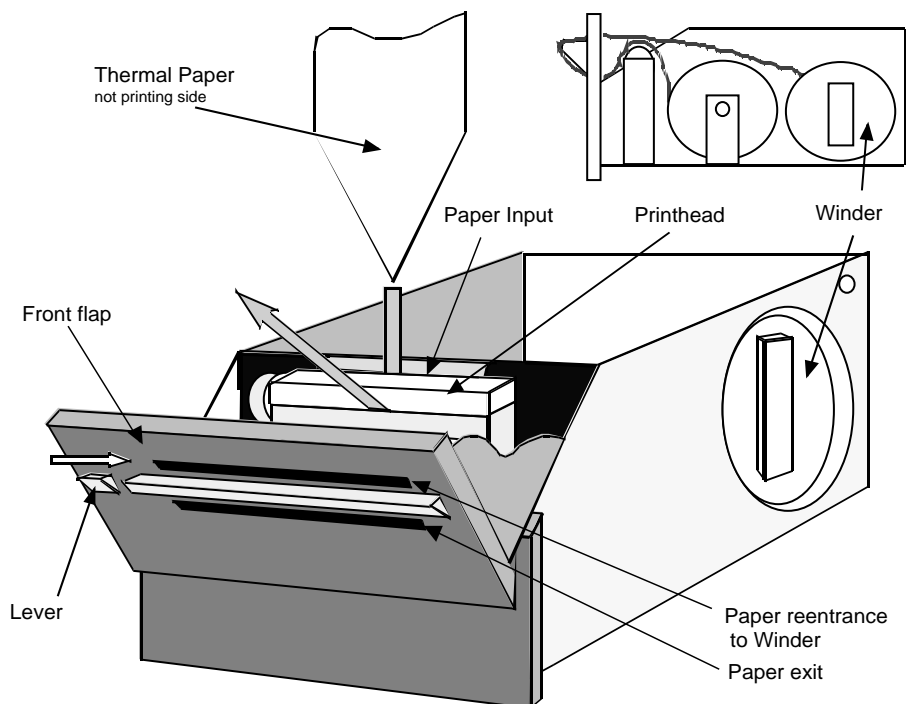
With the four different versions, the Z1 system is very well equipped for various applications.

The basic version "40" is a compact front panel printer that is only 120 mm (4.7") deep. The paper roll is inside the housing, and there is a paper tear-off bar on the front.

Version "41" offers an auto cutter with a rotating blade. A "half-cut" version, where the paper is cut, leaving only two small connections, is also available as an option. The longer versions "42" and "43" have a paper rewriter installed in the back. In addition to that, version "43" has an auto cutter. All models can be equipped with an optional paper end sensor, which signalizes the near end of the paper roll.

Three variants of installation:

The basic types have a cassette housing that can be installed in a front panel of any thickness. The 4 mounting screws are covered by the front of the printer. For 19" systems, two types of 3HU front panels are available. For switchboard installation, we offer versions in DIN-housings, 144x144 mm, including power supply and interface connectors.



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Safe operation:

When we designed this printer system, we took special care to ensure that it was suitable for EMV and in SMD technique. All Z1 printers can be operated with a voltage of only 5V, which enables the use in portable devices as well. 24VDC and 230VAC supplies are available on request.

An operating voltage control and a watchdog ensure safe operation.

Interface:

The standard printer has a parallel Centronics, and a serial RS232 interface. A TTL interface that enables the use of RS422/485 or current loop interface adapters is available as an option.

To relieve the host systems, the printer type GPN-9xx is equipped with a 1kByte data buffer. Because of the very high printing speed of the GPT-32xx, a large buffer is not necessary.

The two different Printing Technologies

Plain Paper Shuttle Printer: GPN-9XX

- Fast: 2 serial 4-needle heads
- Emergency mode feature
- Fast paper feed:
 - up to 5 cpl (printer mechanism GPN-910-24);
 - up to 3.6 cpl (printer mechanism GPN-910-40)
- Easy exchange of ink ribbon due to ink cartridge
- Font size can be shifted
- Interrogation of 10% sensor

Thermal Printer with fix Head: GPT-32XX

- High printing speed
- High printing quality: (200 dpi)
- Robust, as it has only a few moving parts
- Print attributes, graphics and text can be mixed within the line
- Reverse paper transport by the line
- Gray printing
- Program EEPROM can load up to 8 stored text files
- Power down

Important technical Data about the Printers

Printer Type	GPN-9XX	GPT-32XX
Controller Board	GCN-983	GCT-3281
Printer Mechanism	MD910 or MD911	LTP3245
Printing Technique	Shuttle 8 needle	Fixed thermal head
Fonts	24/32 or 30/40 cpl	24, 32, 42, or 48 cpl
Paper / Printing Width	57.5 / 48 mm	57.5 / 48 mm
Resolution	3/4 or 3.7/5 dots / mm	8 dots / mm
Dots per Line	144/192 or 180/240	384
Printing Speeds	2.5 / 1.8 C/sec	22.5 mm/sec 7-12 C/sec
Operating Voltage	5 V	5 V
Max. Power Consump.	4 A	3 - 8 A adjustable
MTBF	5 x 10 ⁵ lines	30 km (18.6 miles)

Fonts and resolution:

Z1 printers are equipped with an IBM II character set. The print samples below show text and graphic printouts of the two printing technologies for comparable font sizes with 32 characters per line. For the type GPN-9xx this also determines the printer mechanism with the corresponding effective resolution. The GPT-32xx equipped with a fix print line, is designed for printing high-resolution graphics.

Bar code:

A bar code that can be read reliably should be printed with a resolution of at least >150 dpi. The printer type GPT-32xx is very good for this application.

Printing official documents:

Nowadays, standard thermal paper can be saved over a long period of time, without the printing suffering considerably. If the printing is required to be light-resistant, you have to use paper that is accepted for use in official documents. The thermal printing technology has developed rapidly within the last years. Today, fat-, water-, alcohol- and light-resistant papers with 5-, 15- or even a 99 - year warranty are available.

For impact printing on plain paper, a black ink ribbon needs to be used in place of the usual blue ribbon.

Tell us about your application. We will be happy to assist you in selecting the right paper.



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Self test and online diagnosis:

After power-on and during operation, self-diagnosis routines are monitoring the printer status continuously, and automatically report occurrences at the printer (e.g. paper end) to the host system.

Simple system inclusion:

As far as the printing technology allows, the devices are equipped with the same software platform, so that different types can be operated by the same host software. For the control of the data buffer, synchronous data can be sent specifically from the printer to the host.

Parallel and serial interfaces:

The high efficiency of Z1 printers is based on their ability to receive data or give feedback through both interfaces at the same time, while they carry out the printing parallel to that.

Convenient print attributes:

All printers have convenient print attributes for formatting of text, and they all print graphics.

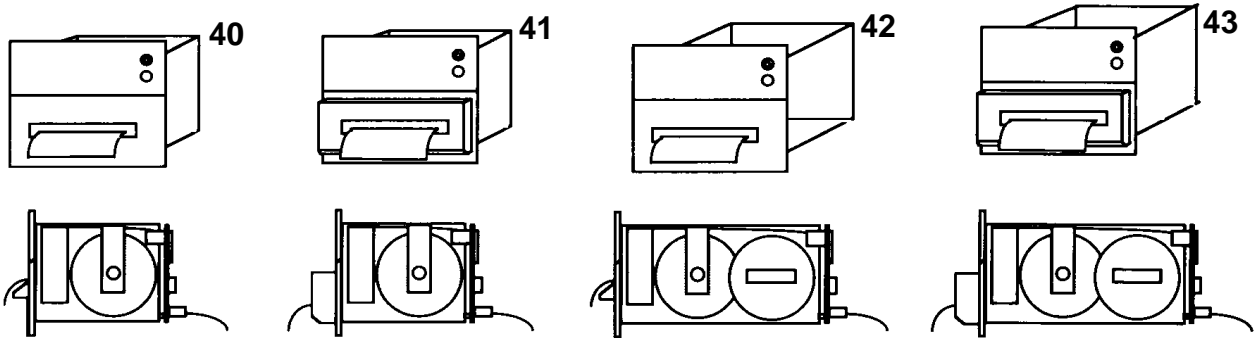
Helpful stored text files:

Advertising text, small logos, initialization, or even macros can be filed in the often used stored text files, and fetched by command.

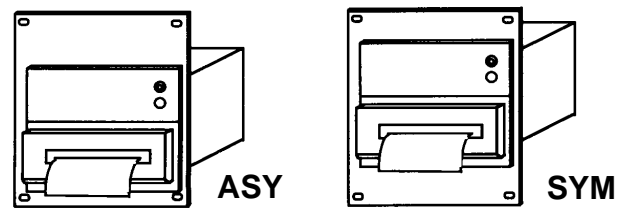
ESC-Sequences control the Printers

CHR	GPN-94x	GPT-324x
@	• Software RESET	• Software RESET
A	• Erase print buffer	• Erase print buffer
B	• Print horizontal bars	• Print horizontal bars
C	• Activate auto cutter	• Activate auto cutter
D	• Print data mode	• Print data mode
E		• Power down
F	• Line feed by f lines (10 dot lines)	• Line feed by f lines
G	• Pixel graphics	• Pixel graphics
H	• Print double height	• Print double height
I		• Print white on black
J		• Print bold
K		• Print italic
L		• Print underline
M	• Predefine bar pattern	• Print gray
N	• Absolute TAB on pixel position n	• Absolute TAB on pixel position n
O		• Print superscript
P		
Q	• Print narrow	• Print in letter-quality mode
R	• Abs. TAB on character raster r	• Relative TAB on pixel position
S		
T	• Stored text file no. t	• Stored text file no. t
U	• Interrogation of 10% sensor	• Print subscript
V	• Serial feedback	• Serial feedback
W	• Print double width	• Print double width
X	• Print 4 complete lines	• Print complete line with graphics
Y	• Print 4 complete lines +2 empty	• Adjust blackening
Z	• Print special character no. z	
(• Adjust power consumption
\		• Reverse transport by n lines

Housing versions

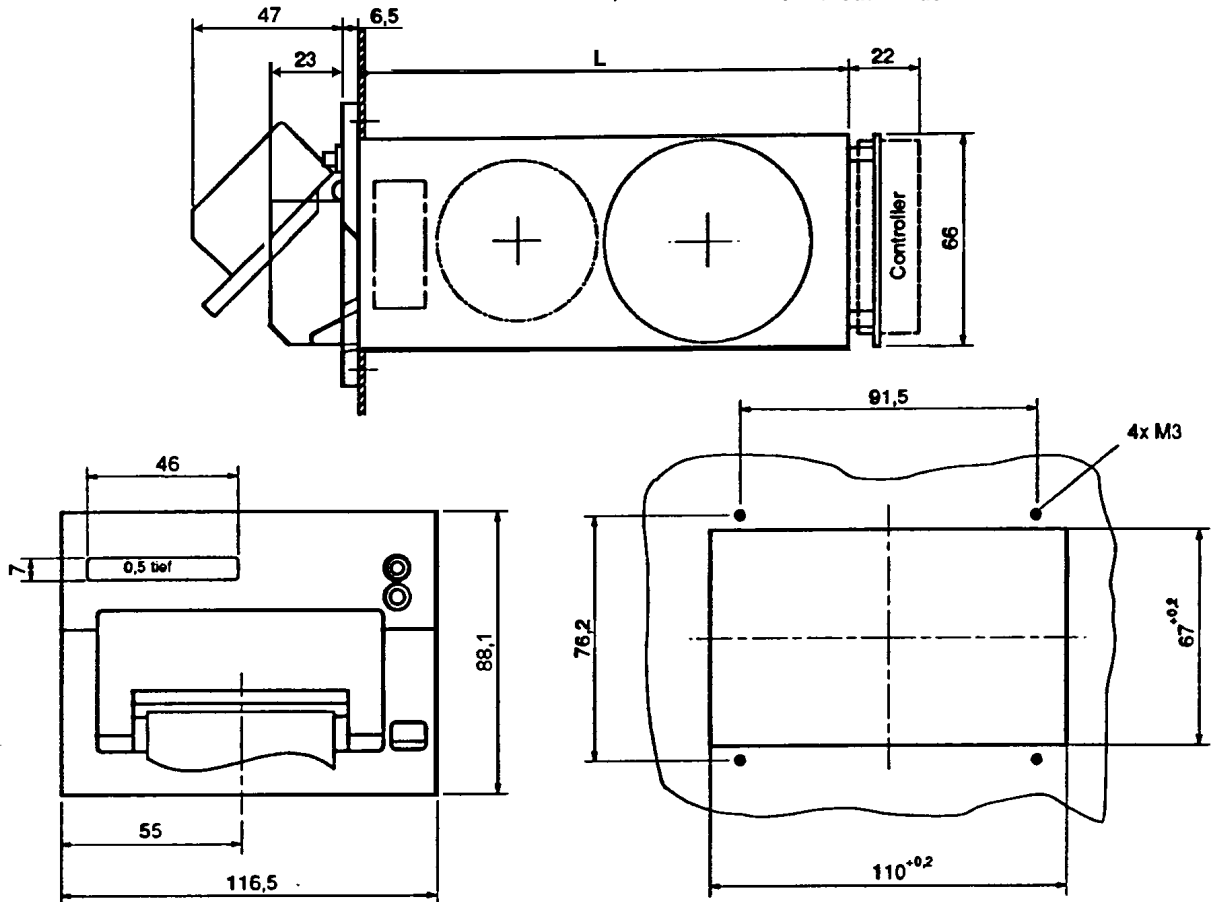


3HU Versions



Dimensions and Housing detail

L = 152,6 mit Aufwickler / with Winder
 L = 97,6 ohne Aufwickler / without Winder



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Z1 printer in DIN housing:

When a Z1 printer is installed into a 144x144 mm big panel housing, not only do all advantages of the Z1 system remain, but the housing adds an additional protection for the extended system.

The right power supply:

Two different power supplies (85-265 VAC or 18 - 36 VDC) that are made to work with the printer are available.

Suitable interfaces:

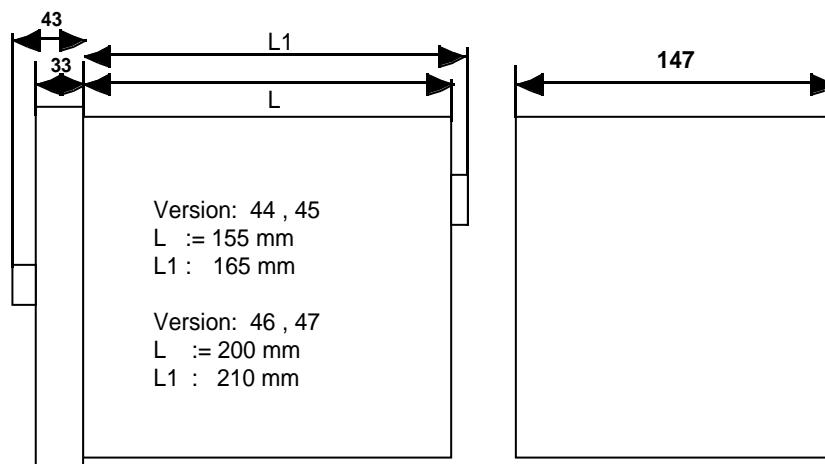
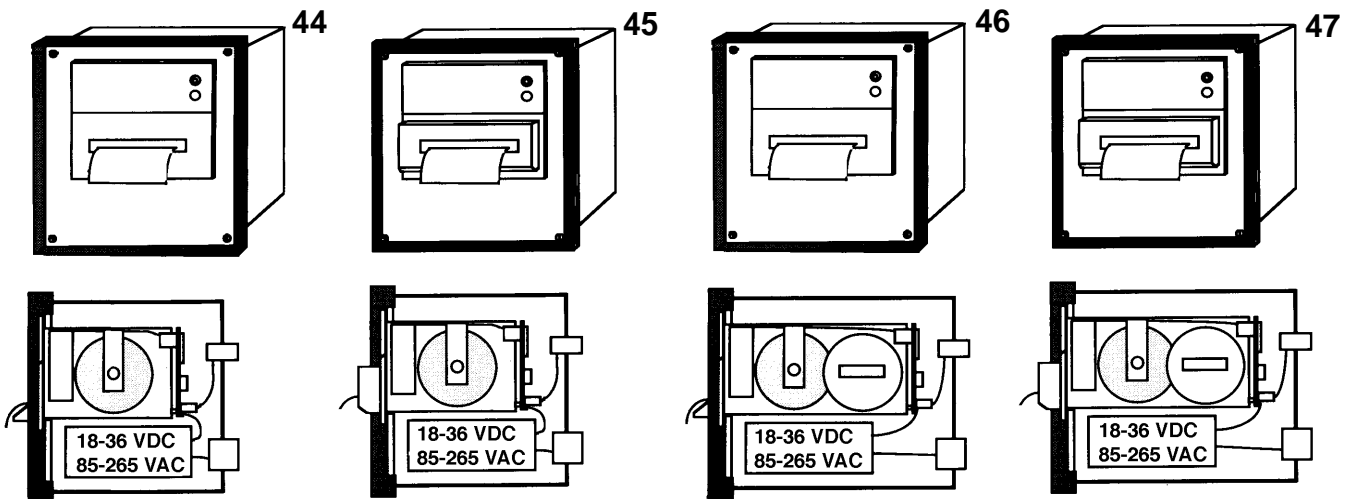
The serial RS-232 interface and the power supply are carried out on the back through standard connectors.

Options: Centronics, Current loop and RS422/485

Protective front door IP42:

If no auto cutter is needed, the front can be covered with a perspex door to protect against dust and spraying water.

On request, an extra paper output slot can be mill-cut in the door, which allows the printing on long paper strips, even without a paper rewriter, and when the door is shut.





Printer in Plastic Enclosure

**Different Printing Technologies
with 58 or 80 mm Paper Width**

Printer System VARIO

**Different Printing Technologies
with 80 or 112 mm Paper Width**



Printer Mechanisms and Controller Boards

**Different Printing Technologies
with 45 mm up to DIN A4 Paper Width**

**Special Printer
Keyboards and Terminals
Special Development
Production of Electronic Devices**