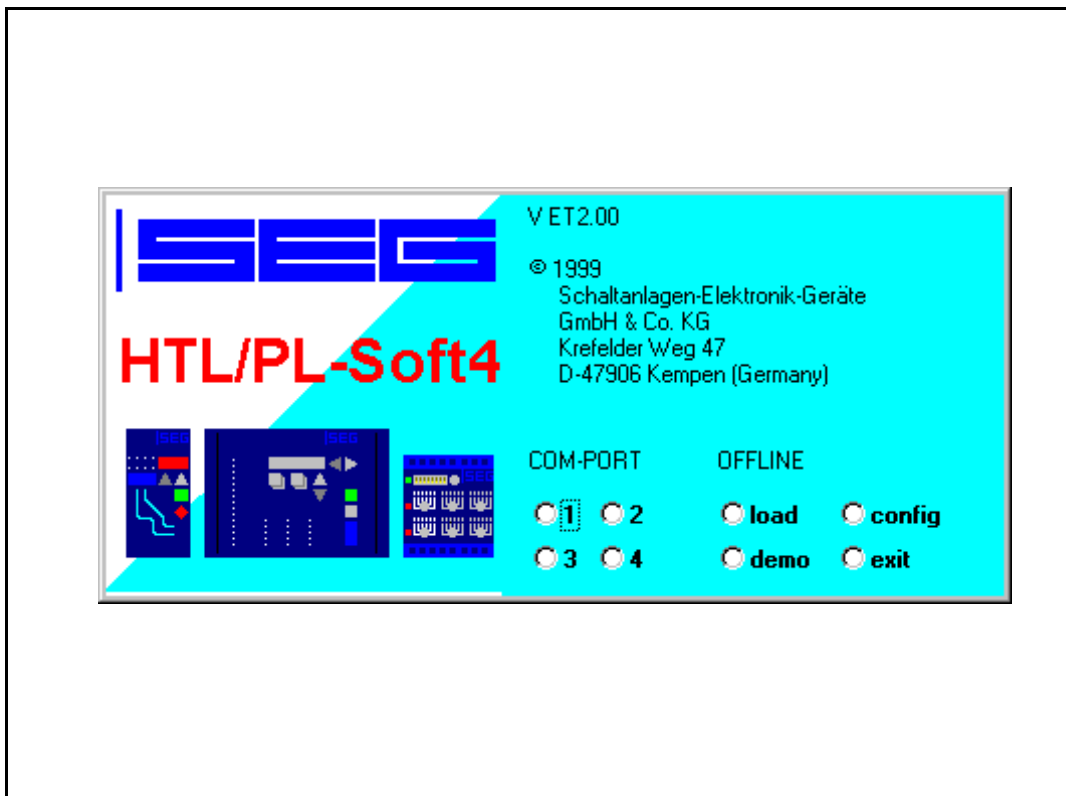




## HTL/PL-Soft4 - Diagnosis and setting software



## Contents

- 1 About HTL/PL-SOFT4**
- 2 Hardware requirements**
  - 2.1 PC configuration
  - 2.2 Interface configuration
- 3 Installation**
- 4 Online Help**
- 5 Order form**

## 1 About HTL/PL-SOFT4

To ensure optimum protection of your system and a convenient setting procedure, *HIGH TECH LINE* and *PROFESSIONAL LINE* include provision for data transfer. The *HIGH TECH LINE* relays can be equipped with a galvanically isolated RS485 interface for this purpose. On the *PROFESSIONAL LINE*, communication passes via the XRS1 serial interface adapter, which is likewise galvanically isolated. This enables all relays to communicate with an upper-level management system, e.g. a host computer. (The range of our RS485 interface is 1 km, compared with only 15 m for the RS232 PC interface).

The benefits of its communication capability are based for example on the fact that your relays can be adapted to suit changing grid configurations, e.g. in the event of a malfunction or when the characteristics of cables and overhead lines change, such as in summer/winter operation. In addition, you can record all data for subsequent evaluation by means of operating-data assessment program. If necessary, you can also block certain functions of the equipment.

The interfaces are linked by screened, twisted-pair cable, on which you can combine up to 32 *HIGH TECH LINE* or *PROFESSIONAL LINE* relays.

When starting up, you either set up the relays manually at site or, for greater convenience if there are several identical relays, by using PC (laptop or notebook). Our *HTL/PL-Soft4* diagnosis and setting up software assists in this.

All operating status or measurements can thus be displayed graphically in the Windows™ user environment.

When setting the relays, you can read off the current parameters via the *HTL/PL-Soft4*, save them on to the hard disk and transmit new settings to the relay, these in turn can be obtained from previously prepared data on the hard disk. Of course you can reset the relays. The password, which you define, regulates communication access. The display can either show actual online measured values where it is possible to carry out a setting comparison between several relays simultaneously and print this, or retain those registered after tripping, so that they can be saved onto the hard disk.

## 2 Hardware requirements

### 2.1 PC configuration

Your IBM-compatible PC has to satisfy various conditions for the HTL/PL-Soft4 to be installed. Regardless of the operating method, the PC must support the following requirements:

- CPU 486SX or higher
- Mains memory 4MB or higher
- Hard disk capacity 40MB or higher
- Screen resolution 640x480 or higher
- Disk drive for 3 ½ high density disks
- Mouse compatible with Windows
- MS-Windows™ 95
- 1 serial interface (COM) for mouse connection
- 1 additional serial interface with RS232/RS485 converter as follows:
  - Com 1 - 4 can be used for RS232/RS485 converters with automatic direction control.
  - Com 1 - 2 can be used for converters with RTS direction control.
- Connecting lead to RS485 converter.

The periphery can be extended by the following options, e. g.:

- Colour monitor or colour LCD,
- A printer compatible with Windows™ (and a printer interface on the computer)

The relays connected must have different slave addresses (see fig. 2.1).

### 2.2 Interface configuration

All *HIGH TECH LINE* relays and XRS1 adapter of *PROFESSIONAL LINE* can be connected to the PC via interface converter (RS485 to RS 232). Important is that data lines, especially if they are longer than 50 m, have to be terminated at the last relay with resistors (see fig. 2.1).

Note :

Relay type MRD1 of the *HIGH TECH LINE* can be directly connected to the existing RS232 interface (see fig 2.2).

On request an interface converter can be provided (from RS485 to RS232). type RSC2-485-232-1, incl. 1.8 m cable between PC and converter, plus suitable power supply type RSC2-NT1-230 incl. connection cable.

#### Important Note :

For distinguishing purposes each relay has its own address (Slave No.). In our works all HTL relays are set as Slave 1. Before initially starting up *HTL/PL-Soft4* this configuration has to be changed accordingly, which can only be done at the relay itself.

**It has to be ensured that each relay has a different Slave Address.**

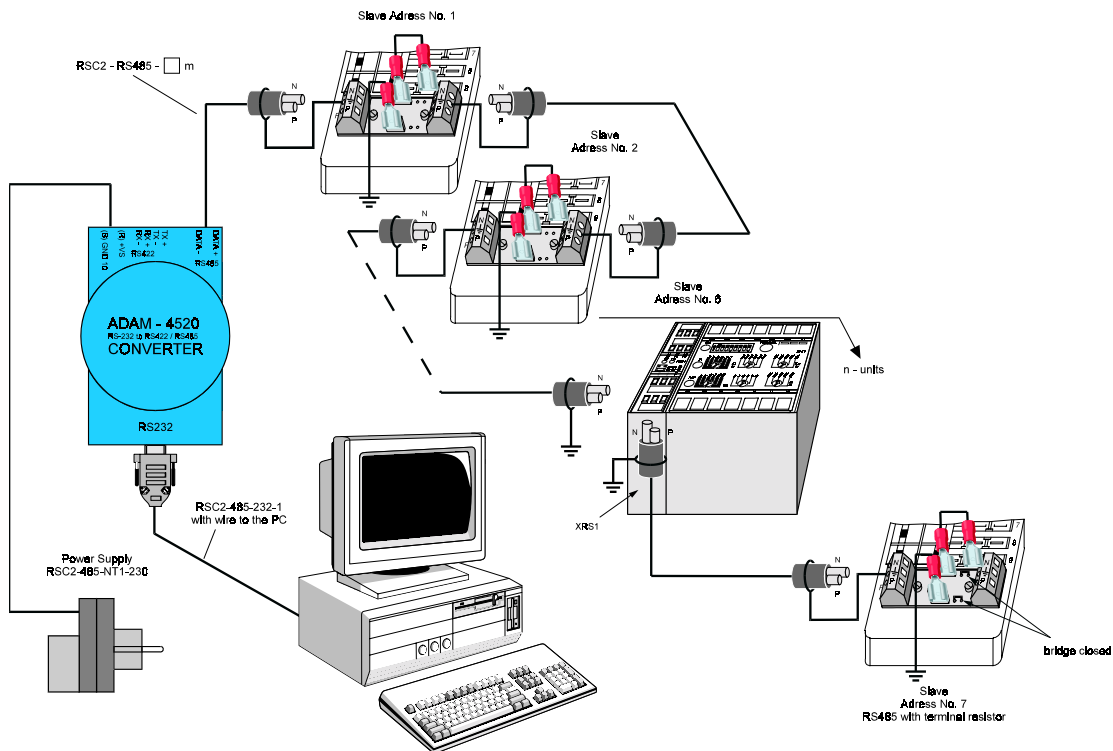


Fig. 2.1: Interface configuration

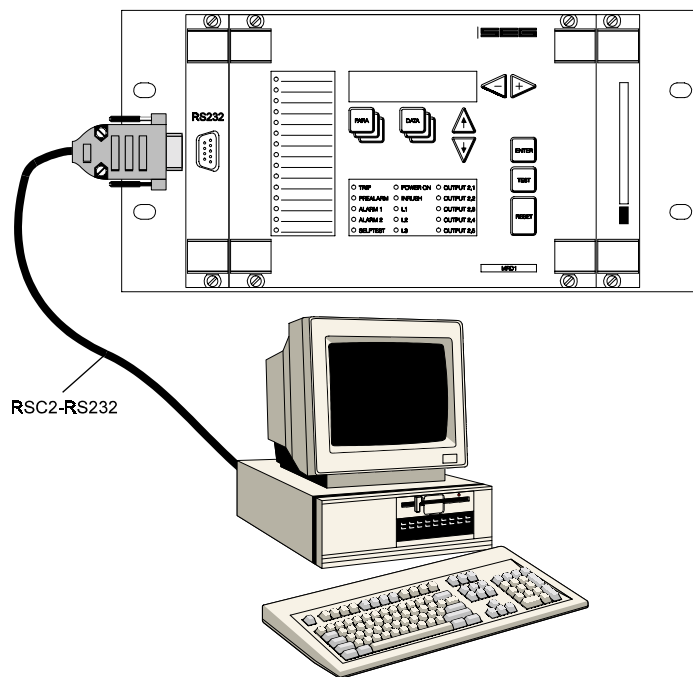


Fig. 2.2: Additional connection facility for the MRD1

### 3 Installation

Follow the procedure described below to install the *HTL/PL-Soft4*: Call up Windows™, place the *HTL/PL-Soft4* disk containing the program „HTL\_PL4.EXE” in the disk drive and call it up by selecting the command „Run” in the file menu of the Windows™ „File Manager”

and entering „A:INSTALL”. The installation is principally automatic; you are only required to enter data sometimes. The first time the *HTL/PL-Soft4* is started up, you are requested to enter your customer name.

## 4 Online Help

For further information, please refer to the online help of the installed *HTL/PL-SOFT4*.

## 5 Order form

For preparing a correct online connection the following accessories can be ordered.

Converter	<b>RSC2 485 - 232-1</b> RS485 to RS232 converter with galvanic isolation, incl. 1.8 m cable between PC and converter.
Power supply	<b>RSC2 - NT1 - 230</b> 230 V 50/60 Hz plug-in power supply for RSC2 - 485 - 232 - 1 with safety plug acc. to German standards
Cable	<b>RSC2 - RS485</b>     m
	Cable connection from RSC2 - 485 - 232 - 1 to the relays Length:       1 m 3 m 5 m
If only one cable is needed to RS232 interface of relay type MRD1, the following article can be ordered:	
	<b>RSC2 - RS232</b> 3 m cable connection with 9-pin D-Sub plug from interface RS232 to RS232



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