

Technical Manual Alarm Message Module

SMP 19160, SMP 29160

No. 5311041-04/01 E
Softw.Vers. 990428

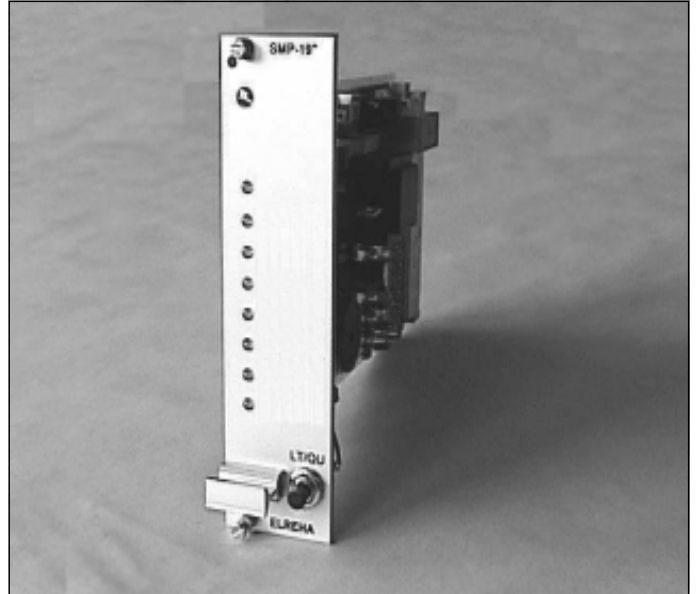
Brief Description

The Alarm Message Module SMP-x9160 is qualified for monitoring any alarm messages coming with a mains voltage signal. Machine states can be monitored, displayed and forwarded by potential free contacts or by a data interface. All states of the module can be read via data interface. The module comes with factory set characteristics (described below), but can be configured by a PC-configuration software via interface.

The module contains the following features:

- | | |
|-------------------|------------------------|
| - Alarm Relay | 8 LED's for |
| - Operating Relay | Operation Ready |
| - Data Interface | and any alarm messages |

Available Types: SMP 19160...230V, SMP 29160...115V



Functional Description of the factory set characteristics

Stand-by operation

If all mains voltage signals (related to pin d16) are available, the module signalizes state of readiness, the green LED is ON and the operation relay and the alarm relay are activated.

Capture an alarm message

If a disturbance occurs (mains voltage at an input) the green LED goes OFF and the red LED of the corresponding input lights up, both relays will be de-activated without delay (see table next page). If the disturbance is removed, the operation relay will be activated again, but the state of the alarm relay and the display remains until the module will be reset.

By removing a jumper the characteristic can be changed.

Jumper **J1** open: The operation relay can be activated only if the disturbance is removed.

Jumper **J2** set: If the disturbance is removed, the operation relay will be activated automatically.

Reset

Occured disturbances remain stored. The alarm relay, the LED-display and the internal buzzer can be reset first if the disturbance is removed.

Reset process

- Push key 'LT/RST' (LED test at the same time) **or**
- connect mains voltage-signal to the external reset input (LED test at the same time)
- via interface by a PC

These functions can be changed by the PC-program "SMP_cfg" via the data interface.

Technical Data

Supply Voltage SMP 19160 ... 230V / 50-60 Hz, max. 3VA
SMP 29160 ... 115V / 60 Hz, max. 3VA
Ambient Temperature 0...+50°C
Message Inputs 230V, 3 mA max.
Relay Outputs 10A cos phi= 1, 4 A ind.
Interface 1 x RS 485
Software-Protocol *E-Link*, max. 78 controller units
Length of data wire max. 1000 m
Display LED, 3mm, color selectable by softw.
Construction / Connection 19"-module, 7TE, connector „F“

	pin No.	OK	colour			input		time delay	Priority (Rel 1=operation Rel 2=alarm)						
			red	yell.	green	activ	pas-siv		OFF	Rel 1+2	Rel 1	Rel 2	Operat.	Display	
Factory Settings		input													
(Standard:	z20	1	X				X	0'		X					
all LED's	z22	2	X				X	0'		X					
unlabelled)	z24	3	X				X	0'		X					
	z26	4	X				X	0'		X					
	z28	5	X				X	0'		X					
	z30	6	X				X	0'		X					
	z16	7	X				X	0'		X					
Your Settings															
	z20	1													
	z22	2													
	z24	3													
	z26	4													
	z28	5													
	z30	6													
	z16	7													

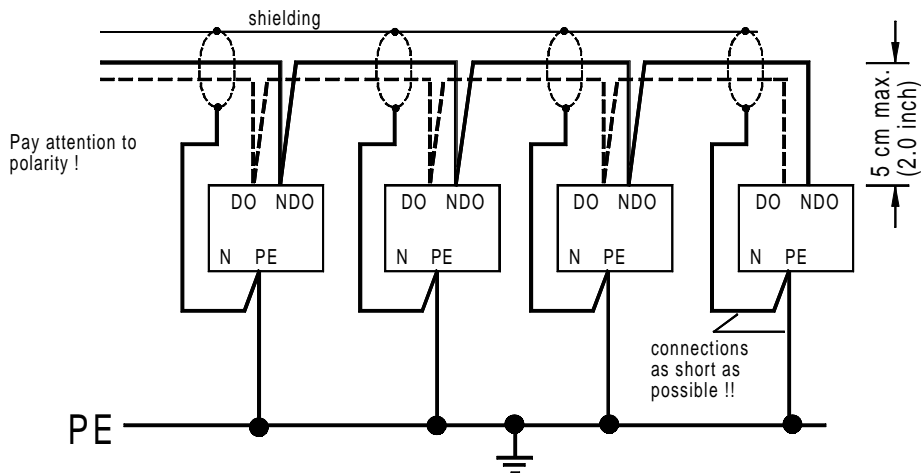
Alarm relay passive, no buzzer Operation time counter 1: _____ Address: _____
 passive + buzzer Operation time counter 2: _____ Baudrate: _____
 Alarm relay aktive, no buzzer Operation time counter 3: _____ Operation Relay AutoON: _____
 Alarmrelais aktive + buzzer Operation time counter 4: _____ Jumper J1: _____

Factory settings: Alarm relay: passive, no buzzer, electronic counters: not assigned to an OK-input, Address: 78, Baudrate 9600, Operation relay AutoON: 0, Jumper J1: set.

Installation Networking of Alarm Message Modules

- Connect both N - pins (for power supply / alarm messages)
- Connect PE-pin (z 32).
- Unused alarm message inputs must be connected to mains voltage or must be disabled by software configuration.

All SMP-moduls can be networked together with other controller units by their built-in RS-485-interface and can be controlled by a host. Mostly this is a PC with a remote/recording software. Remote operation from the Message Unit **SMZ** is possible too. Because all modules are connected parallel on the data wire (party-line), a network address must be assigned to each module, to ensure a specific data transfer. So it is possible to read and process data from selected modules.



Runup in a network

The SMP-module itself offers no option to select a network address. To set an address, the MS-Windows-program "SMP_CFG" must be used, which runs on your Laptop or PC. You can download SMP_CFG from our website - www.elreha.de. You will find it under "service / download", additionally it is a part of our Info-CD.

Hardware-Conditions

PC with integrated RS-485-interface or PC/Laptop with interface-converter SSC-1022.

Preparation

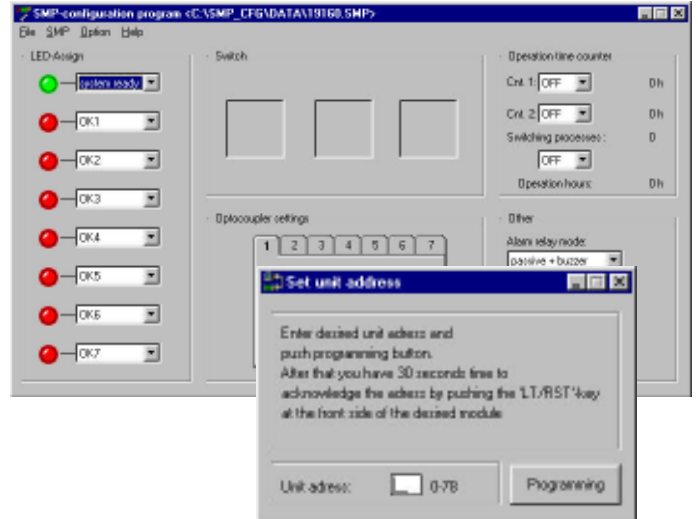
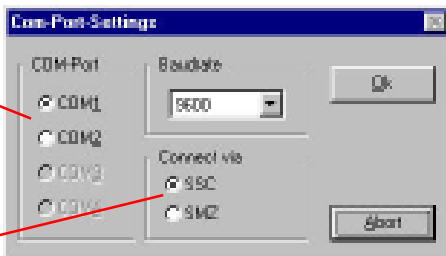
Mount and wire all modules, test function. Connect data interface, start PC and the program "SMP_CFG".

Take up connection PC -> SMP

1. Choose "Option / Interface"

2. Select the interface at the PC where the module to configure resp. the interface converter is connected.

Choose if an interface converter or an SMZ-alarm message module connects PC and SMP.



Select address

1. Choose "SMP / Assign Adress"
2. Enter an address which is not used till now
3. Click on "Programming"

As a result the LED's of all SMP's in the network are flashing in groups of 3.

4. Now push the 'LT/RST'-key of the module which should get the new address. Now flashing stops, the module has taken over the address. The other modules are not affected.

5. After all modules stop flashing after 30 seconds, repeat this procedure for further modules from step (2.).

Configuration of the module by PC-Software

The module will be delivered with the characteristics described above, but the great advantage of this module is that the behavior of inputs and outputs can be changed by the PC-program "SMP_CFG".

The standard settings can be restored at any time. Preparation and hardware conditions like above.

The program 'SMP_CFG' runs under MS-Windows 95/98. Configurations will be stored as files. While the software setup, the configuration-files of the most important SMP-types will be copied to your harddisk.

Start program

After the start of the program you get an empty form and you can begin to create a new configuration. Alternatively you can open an existing configuration by "File/Open".

The Main Menu

File

- New** Empty form, create new configuration
- Open** Open existing configuration
- Save** Save configuration
- Save as** Save configuration with a new name
- Exit** Close, exit SMP_CFG

SMP

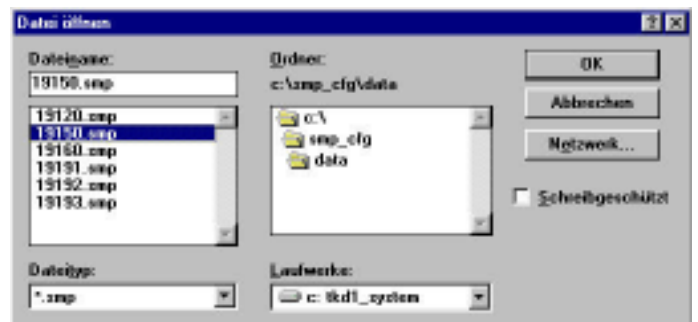
- Programming** Transfer configuration to a SMP
- Read** Read data from a SMP
- Assign Address** Select an adress for a SMP
- Change Baudrate** Change data transfer speed

Option

- Interface** Choose PC-interface for the connection
- Language** Select *smp_cfg*- language

Help

- Info** Software Version



In this example we have loaded the standard-configuration of the SMP-19160.

A click on a LED shows a colour assortment. The selected colour lights up at the module later.

This LED will be assigned to that OK-input or function. Unused inputs can be disabled.

The power switch of the module. (click to change)

Tabs for 7 OK-inputs.

Output/Priority which should forward the message.

- OFF:** Input affects no message
- Relay 1+2:** If an alarm occurs, the operation relay will be de-activated immediately, the alarm relay will be de-activated first after the time delay.
- Relay 1:** The operation relay switches after the time delay is run down.
- Relay 2:** The alarm relay switches after the time delay is run down.
- Operation:** Optical indicator only, relays does not switch.
- Display:** Optical indicator + failure message via PC-software. Relay does not switch, after the end of an alarm the LED must be reset.

Input active = alarm state : mains voltage
Input passive = alarm state : 0V

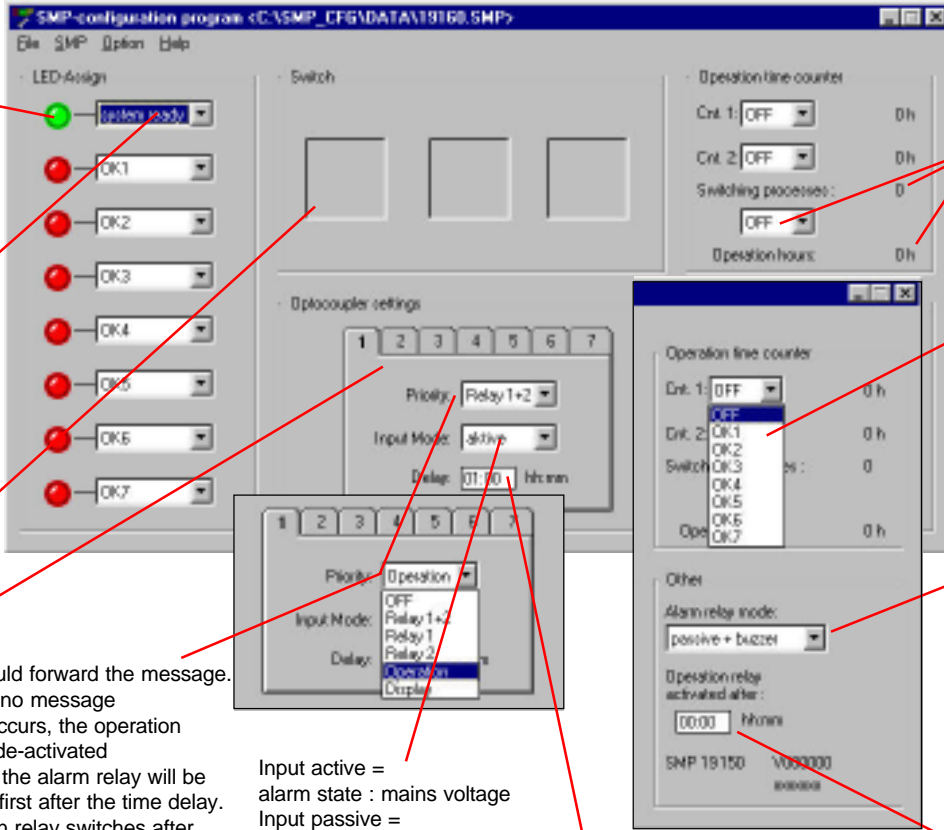
Time delay for this input. If a delay is selected and an alarm occurs, the LED flashes as long as the timer is running down. After that the LED's light permanently and the relay switches.

Number of switching processes and the operation hours of this input.

Two electronic, software readable operation time counters can be assigned to this inputs.

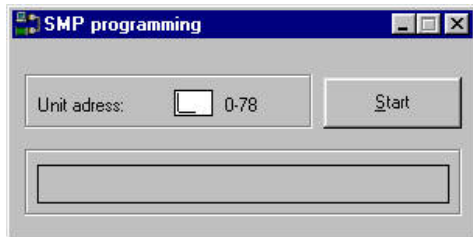
The alarm relay will be switched that way:
(passive: de-activated when an alarm occurs, active: activated when an alarm occurs)
- active, no buzzer
- passive, no buzzer
- active + buzzer
- passive + buzzer

After this time is run down, the operation relay will be reset automatically.



Transfer configuration to the SMP

"SMP/Programming" opens this dialog box. Enter the adress of the unit to configure and click "Start". Now the created or changed configuration will be transferred to the selected unit. Please save the configuration before by "File/Save As" and a matching name.



Change data transfer speed:

Depending on your application, it can be necessary to change the factory set data transfer speed. Open "SMP/Change Baudrate", choose adress of the unit and baudrate and click on "Change".



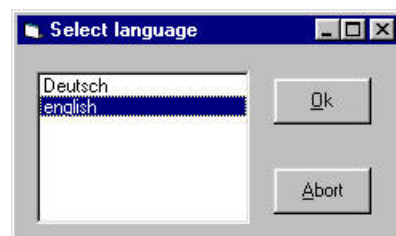
Read a configuration from a SMP-unit:

Read the actual configuration of a SMP-module with "SMP/Read". Enter the adress of the unit to read before.

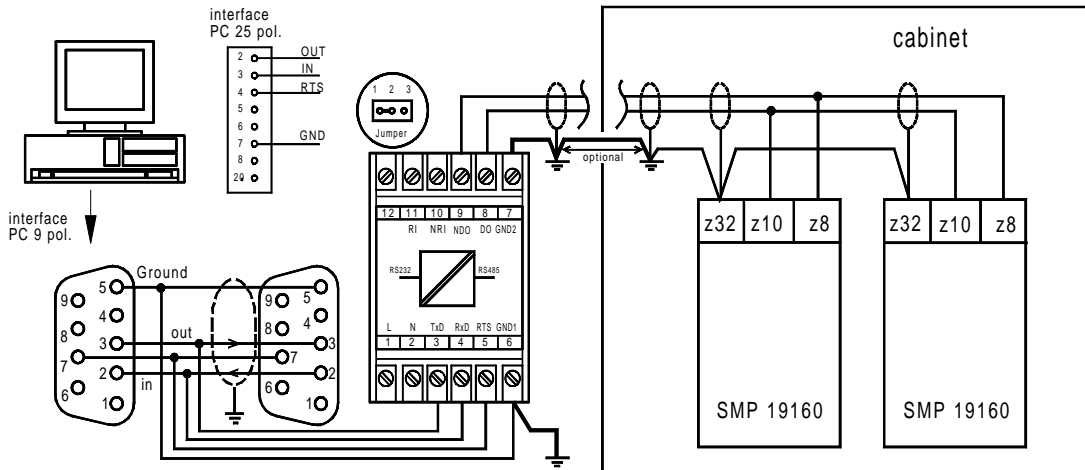
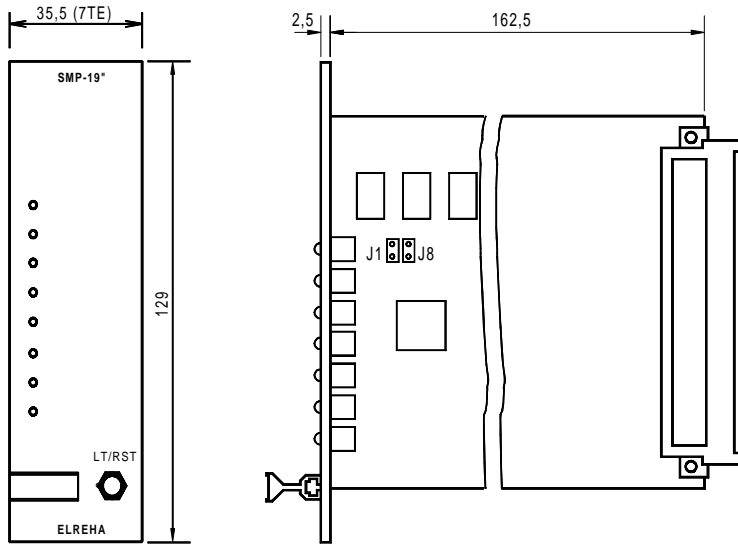


Change Program Language

Open "Option/Language" and select desired language. Restart the program. Now 'SMP_cfg' runs in the choosen language.

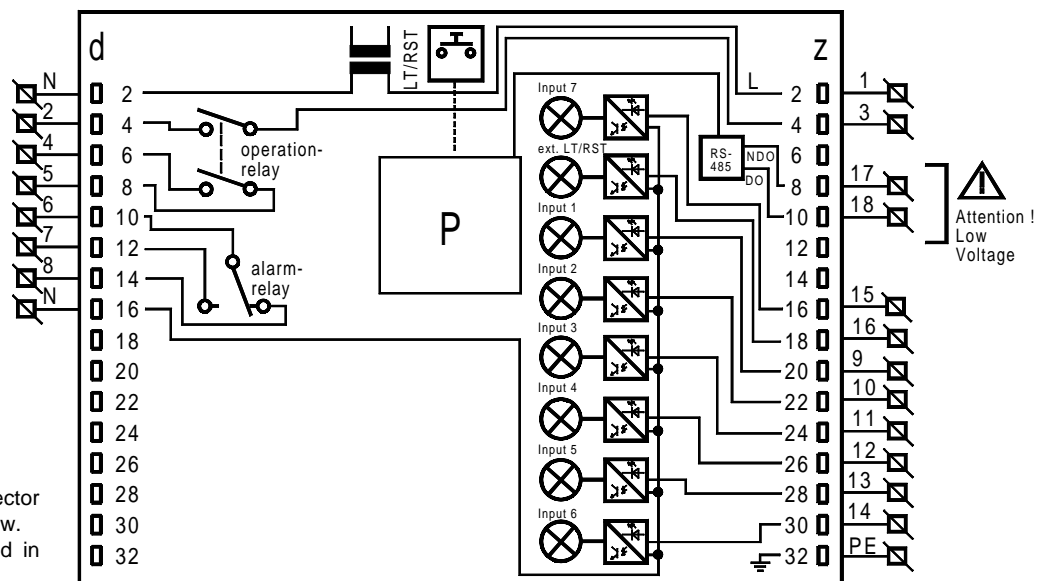


Dimensions / Connection



The connection is possible optional by the SUB-D connector or the screw terminals

Data connection to a PC/Laptop with serial COM-interface (RS-232). Here an interface converter SSC 1022 is used.



Wiring diagram show a connector equal to DIN 41612 "F", rear view. The terminal numbers are used in ELREHA pre-wired subracks.

EG-Statement of Conformity



We state the following: When operated in accordance with the technical manual, the criteria have been met that are outlined in the guidelines of the council for alignment of statutory orders of the member states on electro-magnetic consistency (89/336/EWG). This declaration is valid for those products covered by the technical manual which itself is part of the declaration. Following standards were consulted for the conformity testing with regard to electromagnetic consistency :

**IEC 1000-4-1, IEC 1000-4-2, IEC 1000-4-3*, IEC 1000-4-4, IEC 1000-4-5, EN 55011 B, EN 50081, part 1 and 2;
EN 50082, part 1 and 2, EN 61010 part 1, EN 61010-1/A2 part 1/A1**

This statement is made from the manufacturer / importer
ELREHA Elektronische Regelungen GmbH
68766 Hockenheim
(Name / Anschrift / name / adress)

by:
**Klaus Birkner, Development and
and leader of the EMC-Laboratory**

Hockenheim
Ort/ city

22.3.1999
Datum/ date

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*The conformity with IEC 1000-4-3 is derived from the IEC 1000-4-2 and IEC 1000-4-4 test results. The correlation with IEC 1000-4-3 is based on test results which are located on site at the manufacturer.

This manual, which is part of the product, has been set up with care and our best knowledge, but mistakes are still possible. If you have any problems, difficulties or questions please don't hesitate asking our technical support. Technical details can be changed without notice, especially the software. Please note that the described functions are only valid for units containing the software with the version-number shown on page 1 of this manual.

set-up: 5.2.01, tkd/jr	checked: 5.2.01, ek/ha	approved: 6.2.01, mv/sha
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