

# SMSManual



- ❖ INNOVATIVE & SMALL
- ❖ EASY TO PROGRAM
- ❖ LOST COST FACTOR



- ❖ REPLACES MINI  
PLCs

## User Manual

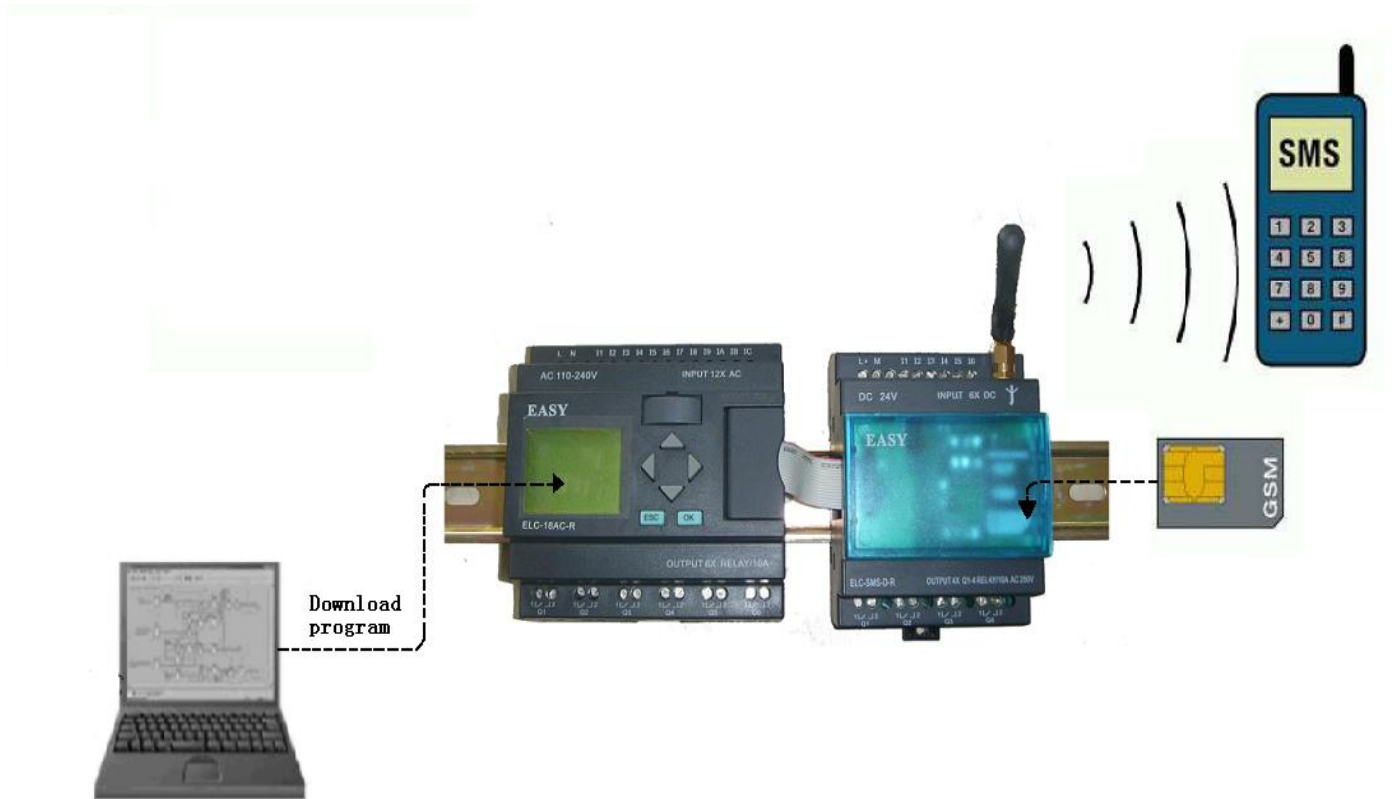
# SMSModule

Updated: January 2009

The xLogic SuperRelay is an Easy  
Electronic Co., Ltd manufactured  
product.

## Operating instruction

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### Short description of the ELC-SMS-D-R module

ELC-SMS-D-R module is a remote control and messaging system, also is an expansion module connected to ELC-18 CPU module, however, this SMS module is only applied to STANDARD type ELC-18 CPU module.

Six digital inputs and four relay outputs with alternating contacts are monitored by means of a SMS (Short Message System) via a mobile telephone network\* (SIM card determines the provider). Additional 10 message inputs and 10 message outputs are supplied in software through which you can switch the input status and get alarm messages by SMS, cause it is used as expansion module , the function blocks usually used in PLC would be used by ELC-SMS module to realize some complex control function by means of short messages.

The device's own phone book saves up to 5 mobile phone numbers of the receivers. Each status change from "0" to "1" at the message output sends a pre-defined message by SMS to the selected receivers. The receivers are processed cyclically, according to the order chosen. The message inputs can be switched on and off by means of a pre-defined message by SMS. In order to obtain an overview of the state of the installation, the input and output status can also be queried by SMS, but you must special pre-design your program in software because the short message only change the message input status and cannot change the physical input status directly.

The programming of the ELC-SMS is carried out with the xLogicSoft. In this way the settings can be configured conveniently ,flexibly and easily.

\***GSM network:** 850MHz, 900MHz, 1800MHz, 1900MHz (quad-band GSM module inside)

Notes: Please refer to xLogic super relay's user manual for the information of ELC-18 series CPU module .


#### Naming rule:

**ELC-SMS-D-R**

①    ②    ③ ④

1. Series name
2. Type name
3. D: DC supply(24V)
4. R: Relay output

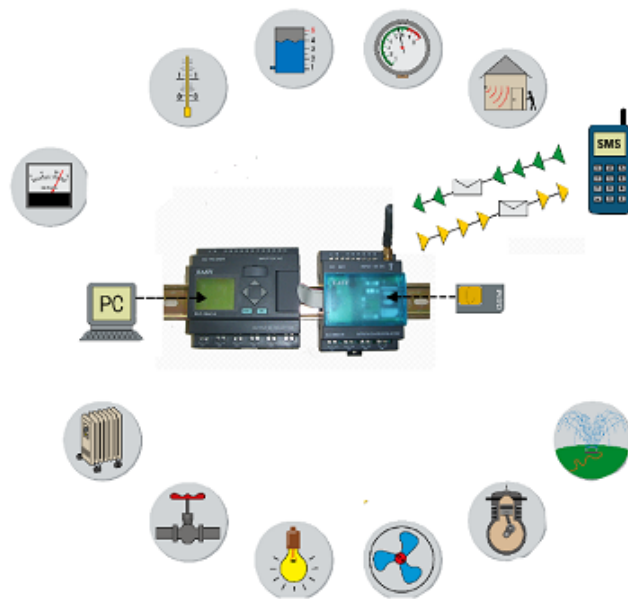
## Short instructions

1. Select a kind of STANDARD type ELC-18 series CPU module (PLC), not available for “economic type ELC-18 series CPU module”.
2. Link ELC-SMS to CPU module
3. Connect the RS232/USB interface of your PC or Notebook with the programming interface of the CPU module through the programming cable (ELC-RS232/ELC-USB)
3. Now switch on the CPU module and ELC-SMS.
4. Choose your prepared file or create a new file with your configuration.
5. Select a free COM port (Menu Configuration – Select port)
6. Download the file to the CPU module (  download)
7. Place the SIM card in the card holder

Note: please note the modules' respective voltage class. The ELC-SMS-D-R is the DC 24V type .

## Application examples

- Heating control
- Pump control
- Irrigation installations
- Alarm transmission
- Level monitoring
- Temperature monitoring
- Pressure monitoring
- Valve control
- Voltage monitoring



## Safety instructions

The electrical installation of the ELC-SMS module is the same with the other module of ELC series must be carried out by a competent person.

Please read the complete operating instructions before installation and commissioning.

GSM network failure or power interruptions cannot guarantee a secure monitoring. The use of a prepaid SIM card is possible. It is recommended to use a SIM card with subscription.

This avoids possible credit balance problems.

The individual responsibility for protecting the SIM card against abuse lies solely on the SMS-2 owner.

EASY does not accept any liability for possible damage to persons, buildings and/or machines, which occur due to incorrect use or from not following the details. EASY does not accept any responsibility for the application and use of the ELC-SMS module. In particular EASY cannot guarantee the connection security with the mobile network.

## Installation details/ scope of supply

### Antenna

The ELC-SMS module comes together with the SMS-ANT small device antenna. The place of installation must be taken into account for the antenna selection.

#### PLEASE NOTE:

The small device antenna is not suitable for installation in a switch cabinet (shielding).

Here the SMS-ANT-MAG antenna with magnetic feet external signal antenna provide a much better result. Please take this into account when ordering.



**SMS-ANT**



**SMS-ANT-MAG**

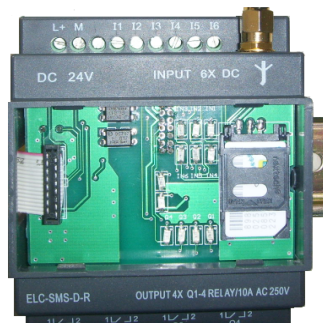
### Install SIM card



1. Take off the cover of SMS relay.



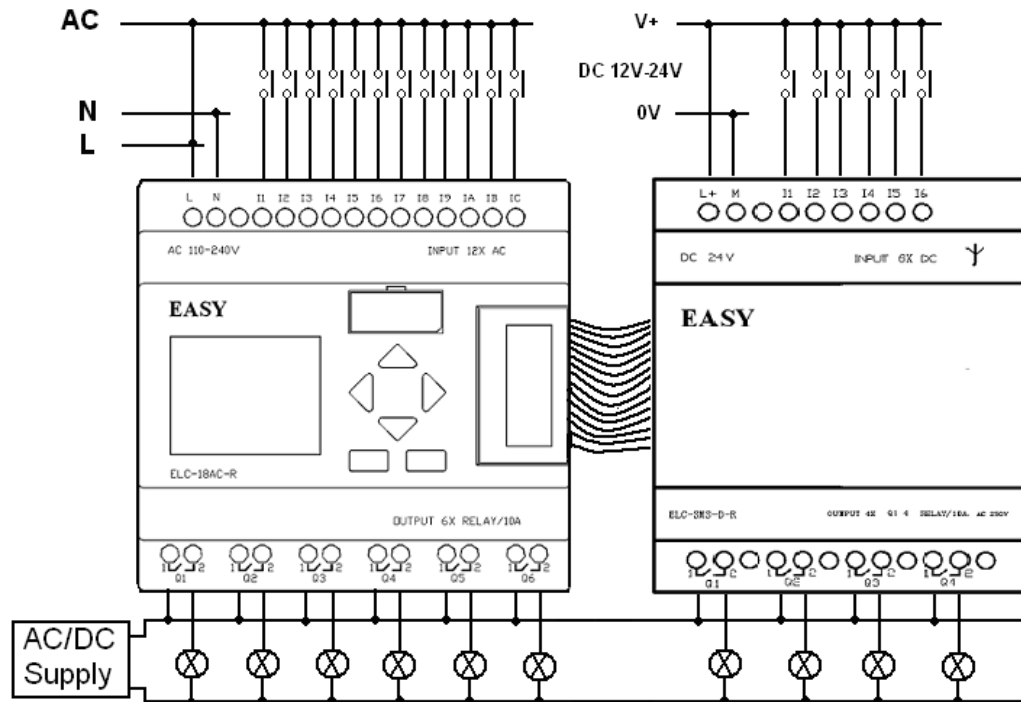
2. Insert SIM card



### Wiring

The ELC-SMS-D-R must be connected according to the following schematic:

SMS-4



Notes:1. ELC-SMS-D-R can be connected to any voltage class Standard type ELC-18 series CPU module.

2.The regulations and common standards are to be followed for the electrical installation and the installation must be carried out by a competent person

### LED status display

The ELC-SMS-D-R has two LEDs, the GSM LED under the status LED. Both LEDs can be seen from the outside and are located below the cover. The following states are displayed:

#### GSM-LED

- flashing regularly (every second)  
Module is not registered in the GSM network.
- short flashing (approx. every three seconds)  
Module is registered but there is no communication.
- Continuous lighting  
Communication connection is made
- Irregular flashing  
Data are transmitted (SMS)

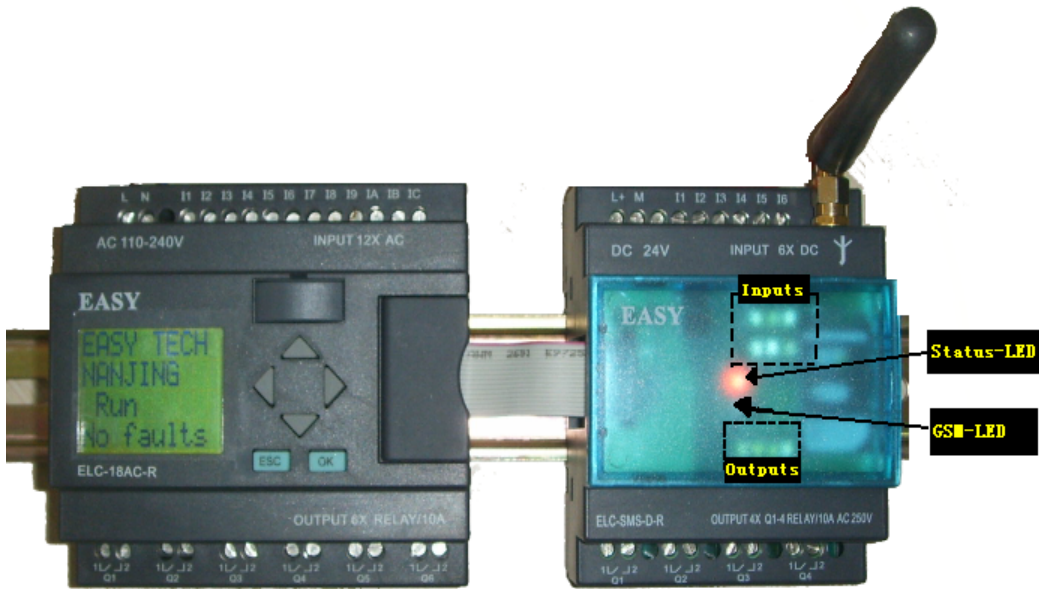
#### Status-LED(power)

- dark LED Power is off
- light LED Power is on

#### Inputs / Outputs

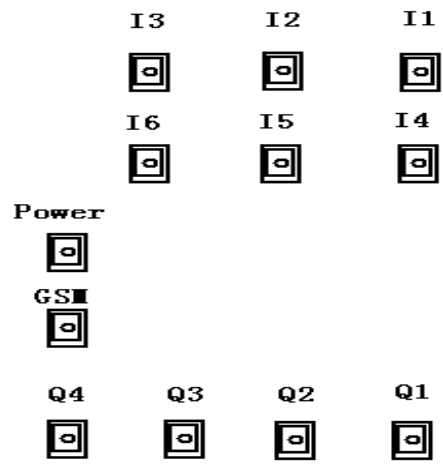
In addition the states of the inputs and outputs are displayed by means of an LED. These LEDs are designated as follows:

Inputs I1, I2, I3, I4, I5, I6 (LED lighting = input is switched on)  
 Outputs Q1, Q2, Q3, Q4 (LED lighting = output is switched on)



xLogic SuperRelay-----SMS Module

LED sketch map:



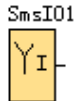
Configuration of the ELC-SMS module with the “xLogicSoft”.

General

The ELC-SMS module is configured and prepared for use with the xLogicSoft. The ELC-SMS module can be prepared before installation i.e. the ELC-SMS configuration (telephone book creation, input messages) can be created without connecting to the device. In order to do this the software is started, a new or existing file opened and edited. The file created needs only to be downloaded to the Standard Type ELC-18 CPU module with the ELC-RS232/ELC-USB programming cable.

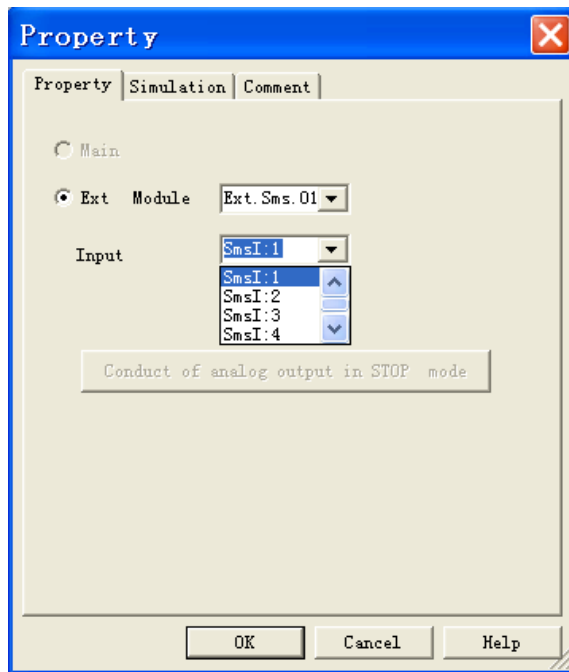
### General SMS I/O function

#### 1. SMS input



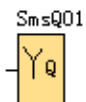
SMS input blocks represent the input terminals of ELC-SMS. Up to 6 digital inputs are available to you.

In your block configuration, you can assign an input block a new input terminal, if this terminal is not already used in the circuit program.



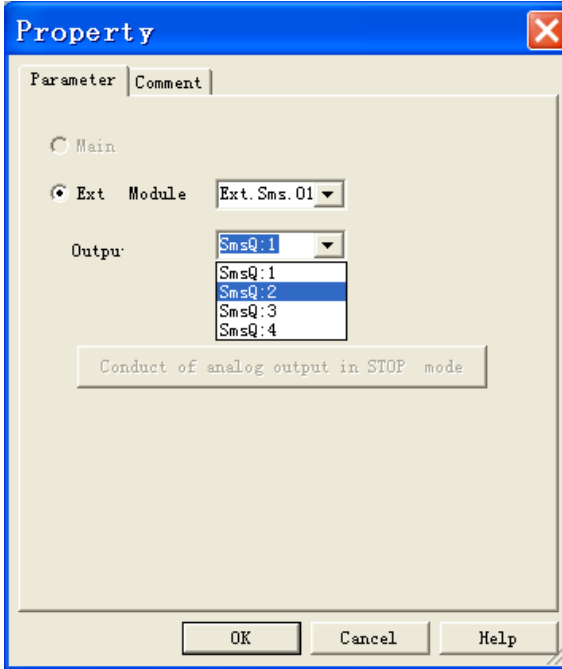
The SMS input used as same as other modules of ELC series. It is a digital input.

#### 2. SMS output



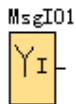
SMS output blocks represent the output terminals of ELC-SMS. You can use up to 4 outputs. In your block configuration, you can assign an output block a new terminal, provided this terminal is not already used in your circuit program.

The output always carries the signal of the previous program cycle. This value does not change within the current program cycle.



The SMS input used as same as other modules of ELC series. The ELC-SMS-D-R module is relay output.

### 3. SMS message input



Up to 10 SMS message inputs are available to you. SMS message inputs are programmed for the circuit program in the same ways as other inputs. SMS message inputs allow operator control of the circuit program by means of short message by users' handsets. Users send pre-set short message content to change the status of SMS message inputs from "0"/OFF to "1"/ON or "1"/ON to "0"/OFF. So, the program running state would change to realize a certain control function.