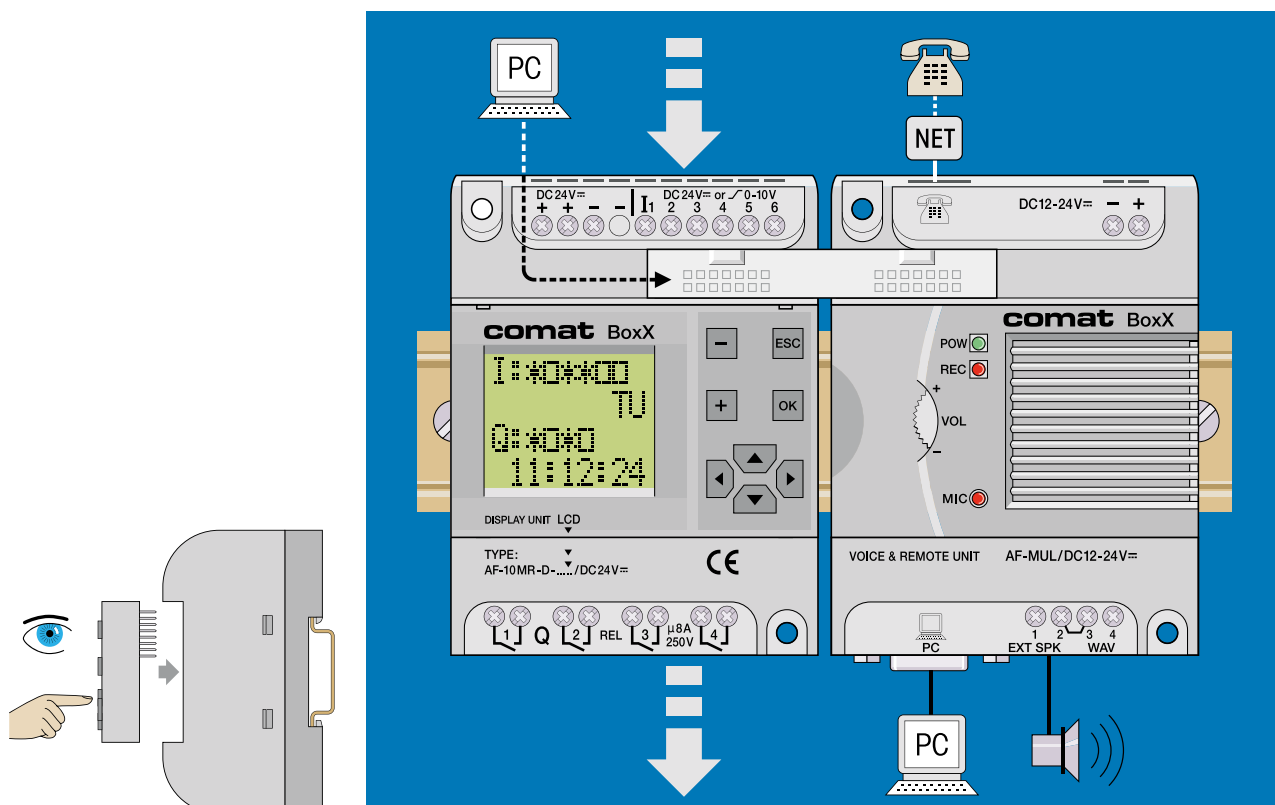


### 1.3.2 Smart Relay

## Smart Relay "BoxX" Miniature Controller (with Voice Module)



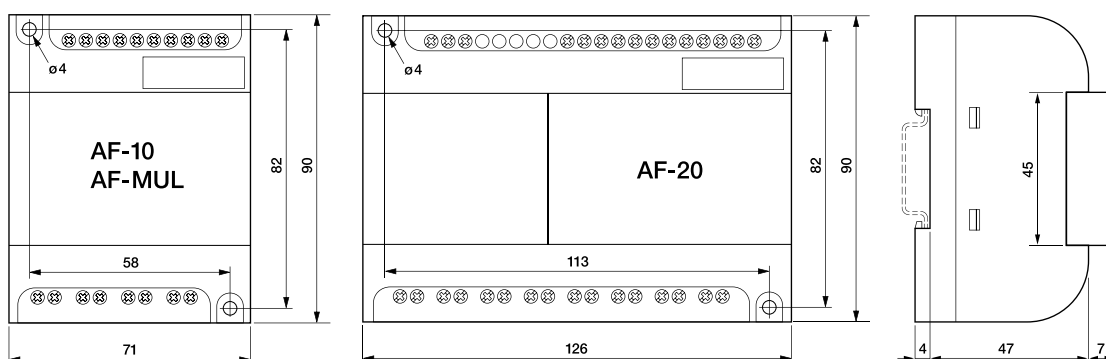
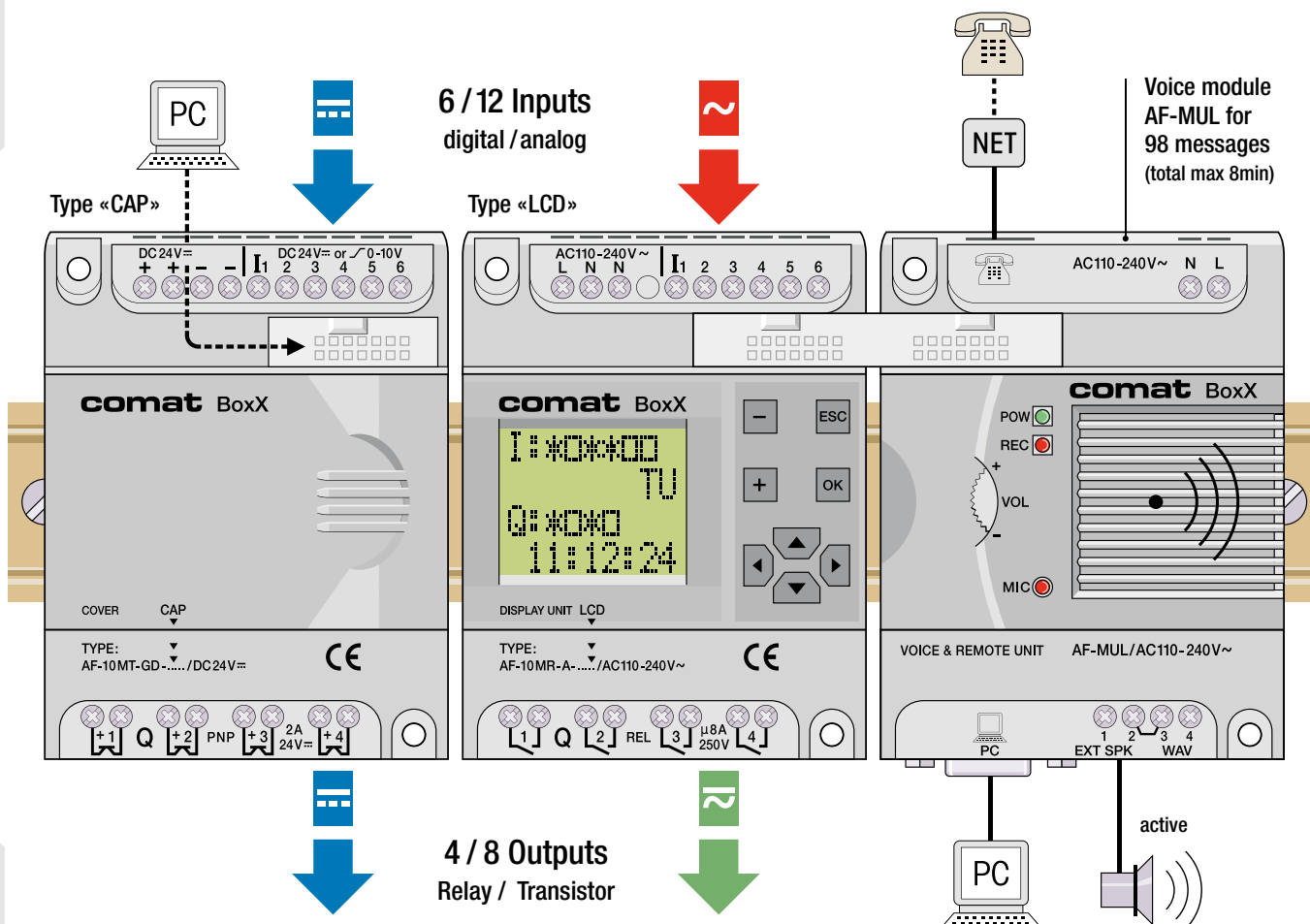
- Programming via PC
- Remote controlling and voice message over telephone network
- Comprehensive function block library
- Password protected

## The Controller

# 127

Function blocks  
Intermediate relays  
Timer instructions  
(up to the year 2099)

- Program storage 64 kByte
- Time range 0,01s-99,99h
- Counting values 1-999'999
- System timer back up 100h



## The Application

The Comat BoxX can be programmed by PC or with the snap-on LCD display with integrated function keys.

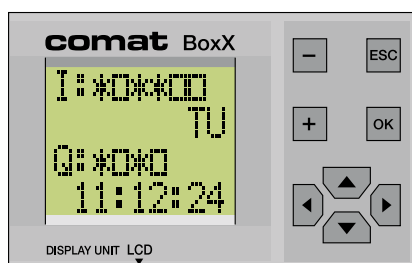
It is possible to modify time intervals of the function blocks in the existing control program on site directly on installation.

The LCD display can be connected to the Comat BoxX to visualize conditions or may be removed (without voltage) and used on another Comat BoxX.

The 24V versions of the Comat BoxX can also process analogue input signals 0...10V with increments of 0.1V.

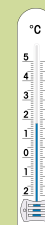
All inputs can be used or configured at random as analogue or digital inputs.

Function blocks for the comparison of analogue values are available, i.e. to monitor temperature in a heating system.



## Setting the display

## Analogue inputs



## Programming software

The programming software QUICK II allows easy and transparent programming of the Comat BoxX with a PC.

QUICK II is based on Windows®.

127 function blocks can be stored inside the program memory of the Comat BoxX.

Stored programs cannot be lost even during a power loss.

Therefore back up batteries are not needed.

With the simulation tool, the set up can be tested on the PC before commissioning.

Example: next page

## Programming the function blocks

Control tasks can be solved easily with the function blocks available in the library.

Programming codes in a highlevel program language are not required.

Simply place the corresponding function blocks and link them with other function blocks according to the required control function.

## The voice and remote module

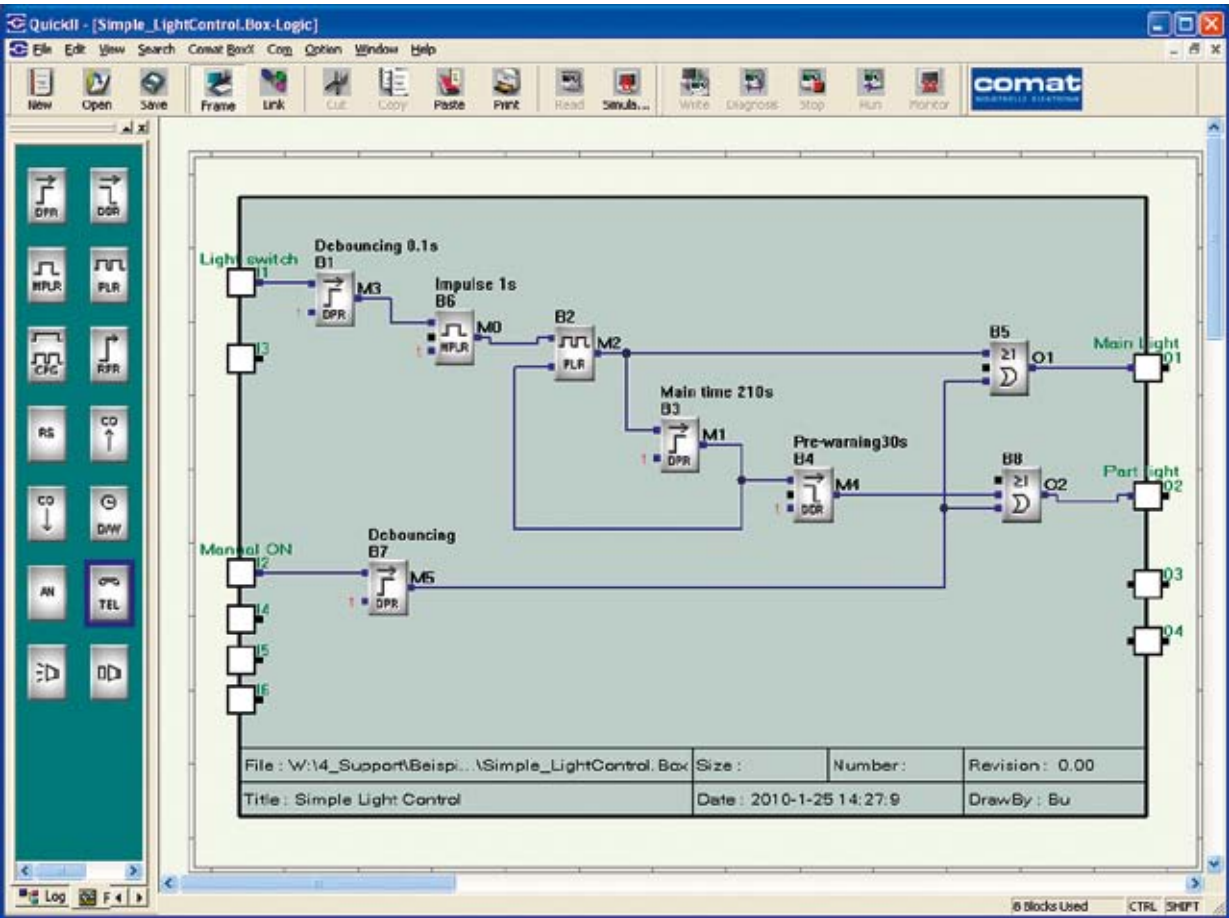


The voice module allows the playing of messages through either the built-in or external loud speakers. The voice module also replays phone calls or dials phone numbers to send emergency or status messages.

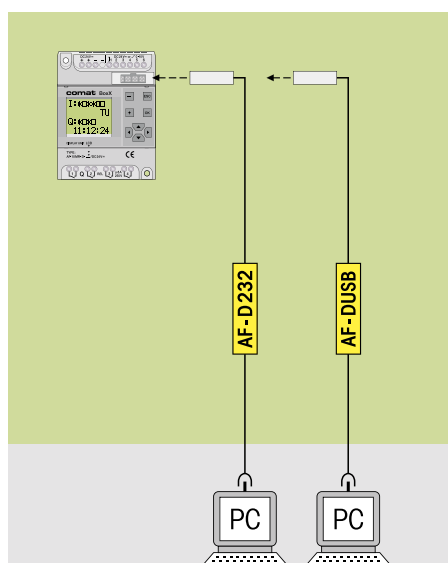
Messages are recorded directly over the built-in microphone or are transferred as\*.wav files directly from the PC.

Programming software Quick II

Example: Programming environment

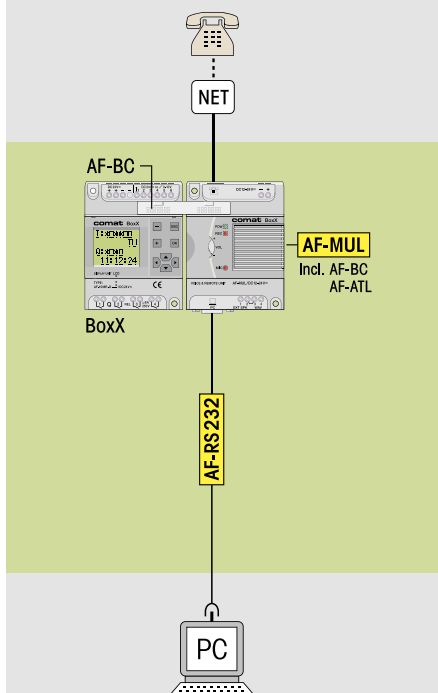


## The Extension module



Programming simulation and monitoring with the PC.

Programming via the MUL voice and remote unit



Each Comat BoxX can be controlled via a telephone line if connected to the extension module AF-MUL (voice & remote unit).

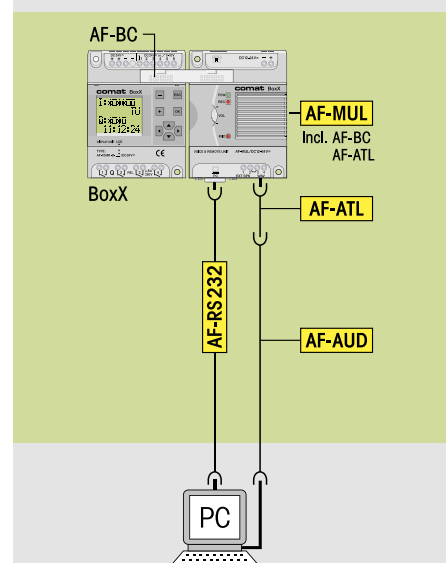
The AF-MUL will answer calls and allows access after the password is accepted.

The Comat BoxX with the AF-MUL is able to record up to 98 predefined conditions, for example alarm messages over the phone network. The designated phone number is dialled and the recorded message is played over the telephone.

The message can also be broadcasted over auxiliary loudspeakers.




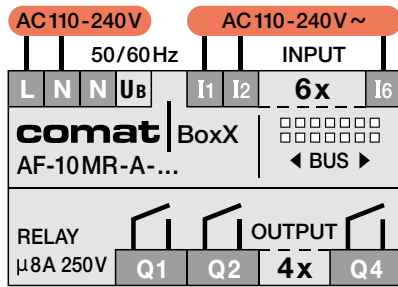
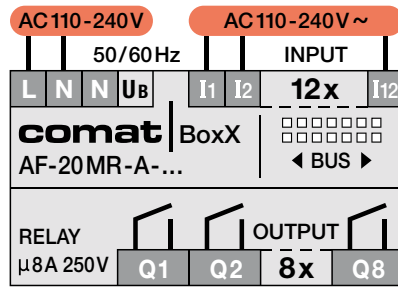

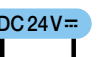
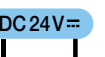
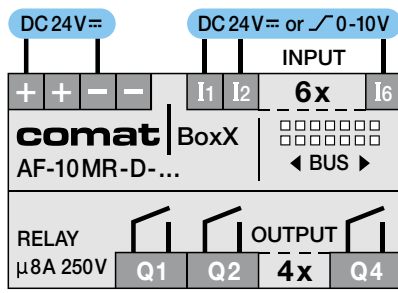
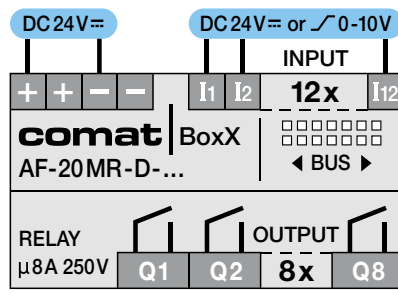


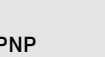
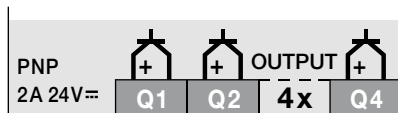
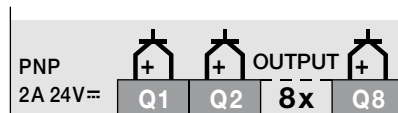
At the same time, the controller can be remotely accessed by phone, and phone Keys are used to send remote signals to control the installation or to activate controlling steps.

Recording of messages with the PC



Messages are transferred to the voice module as \*.wav files directly from the PC over the AF-AUD cable.

## The Types

	<b>6/12 Inputs</b> digital AC110-240V	<b>4/8 Outputs</b> relays 8A 250V ~	 <b>UB</b>	<b>6 INPUTS</b> <b>4 OUTPUTS</b>	 <b>UB</b>	<b>12 INPUTS</b> <b>8 OUTPUTS</b>
						
	<b>6/12 Inputs</b> configurable: digital / analog 0-10V (0,1V)	<b>4/8 Outputs</b> relays 8A 250V ~	 <b>UB</b>	<b>without display</b> <b>AF-10MR-A-CAP/AC110-240V</b> <b>with display</b> <b>AF-10MR-A-LCD/AC110-240V</b>	 <b>UB</b>	<b>without display</b> <b>AF-20MR-A-CAP/AC110-240V</b> <b>with display</b> <b>AF-20MR-A-LCD/AC110-240V</b>
						
	<b>4/8 Transistor</b> outputs PNP 2A 24V ~	<b>4/8 Transistor</b> outputs PNP 2A 24V ~	 <b>UB</b>	<b>without display</b> <b>AF-10MT-GD-CAP/DC24V</b> <b>with display</b> <b>AF-10MT-GD-LCD/DC24V</b>	 <b>UB</b>	<b>without display</b> <b>AF-20MT-GD-CAP/DC24V</b> <b>with display</b> <b>AF-20MT-GD-LCD/DC24V</b>
						

### Accessories

#### Order no.

<b>AF-MUL/AC110-240V</b>	Voice and remote unit <sup>1)</sup>
<b>AF-MUL/DC12-24V</b>	Voice and remote unit <sup>1)</sup>
<b>AF-RS232</b>	AF-MUL Programming cable
<b>AF-BC</b>	AF-MUL Bridge connector <sup>2)</sup>
<b>AF-ATL</b>	AF-5MUL Audio Cable <sup>2)</sup>
<b>AF-AUD</b>	Audio Cable
<b>DR-15-24</b>	Power supply 15W, 24V

<sup>1)</sup> Inclusive AF-BC and AF-ATL  
<sup>2)</sup> Included with AF-MUL

#### Order no.

<b>AF-D232</b>	Programming cable (RS 232)
<b>AF-DUSB</b>	Programming cable (BoxX/USB)
<b>CMS-USB</b>	Converter USB- RS 232
<b>AF-LCD</b>	Display with function keys
<b>AF-CAP</b>	Cover (instead of AF-LCD)
<b>AF-CDR</b>	CD-ROM

## The Data

	AF-10	AF-20	AF-MUL
Operating voltage $U_B$	AC110-240V ~ 50/60Hz DC24V ~ max. 10%		AC110-240V ~ DC12-24V ~
Power consumption	Transistor: 2W Relay: 4W	Transistor: 2W Relay: 5W	0,7W
Switching power	8A 250V ~ 2A 24V ~		
Ambience conditions	$T_u$ without display -25 ... +55 °C	$T_u$ with display 0 ... +55 °C	Rel. humidity: 5 ... 95 % (non condensing) Protection IP20