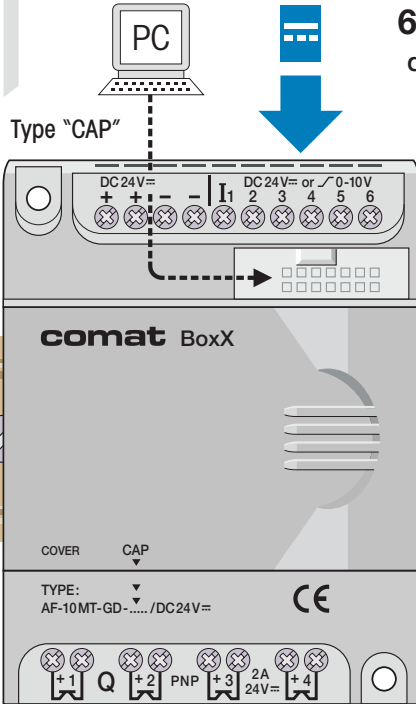


- ✓ Programming via snap-on display or with PC
- ✓ Remote controlling and voice message over telephone network or Cellular phone
- ✓ Remote maintenance and remote operation
- ✓ Comprehensive function block library
- ✓ Programmable timers
- ✓ Real time clock with automatic summer/winter time adjustment
- ✓ Password protected

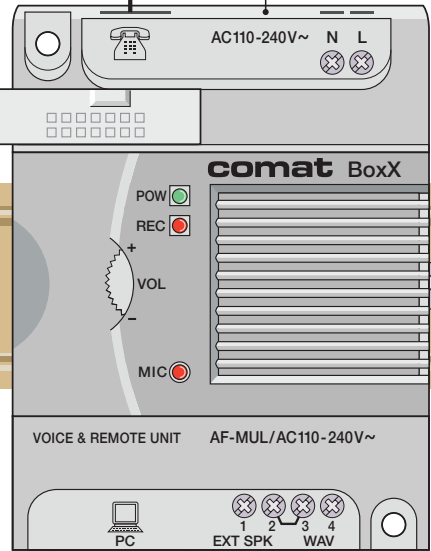
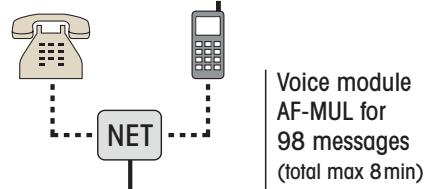
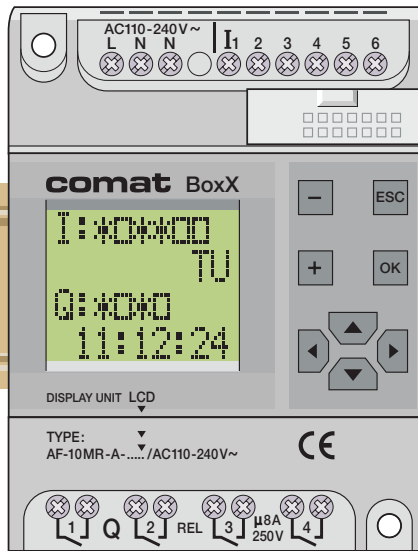
## The Controller

<b>127</b>	Function blocks	• Program storage	64 kByte
	Intermediate relays	• Time range	0,01s-99,99h
	Timer instructions	• Counting values	1-999'999
	(up to the year 2099)	• System timer back up	100h

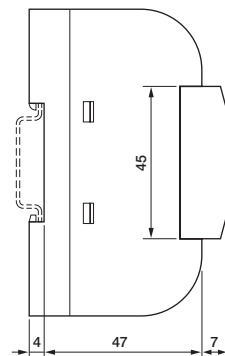
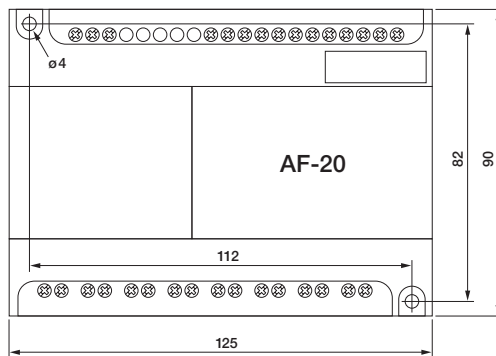
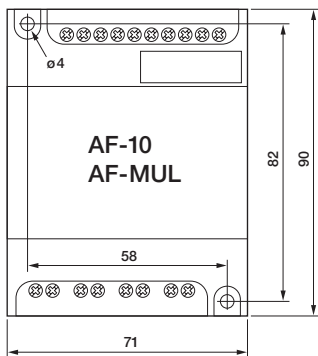
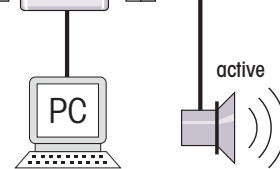
**6 / 12 Inputs**  
digital / analog



Type "LCD"



**4 / 8 Outputs**  
Relay / Transistor



## The Application

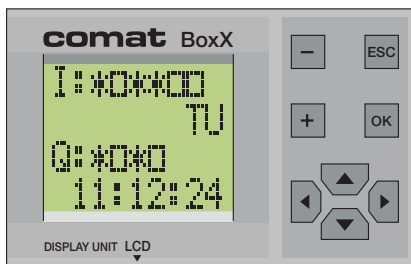
The Comat BoxX can be programmed by PC or with the snap-on LCD display with integrated function keys.

It is possible to modify time intervals of the function blocks in the existing control program on site directly on to the 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 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: Page 4

### Programming the function blocks

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

Programming codes in a high-level 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

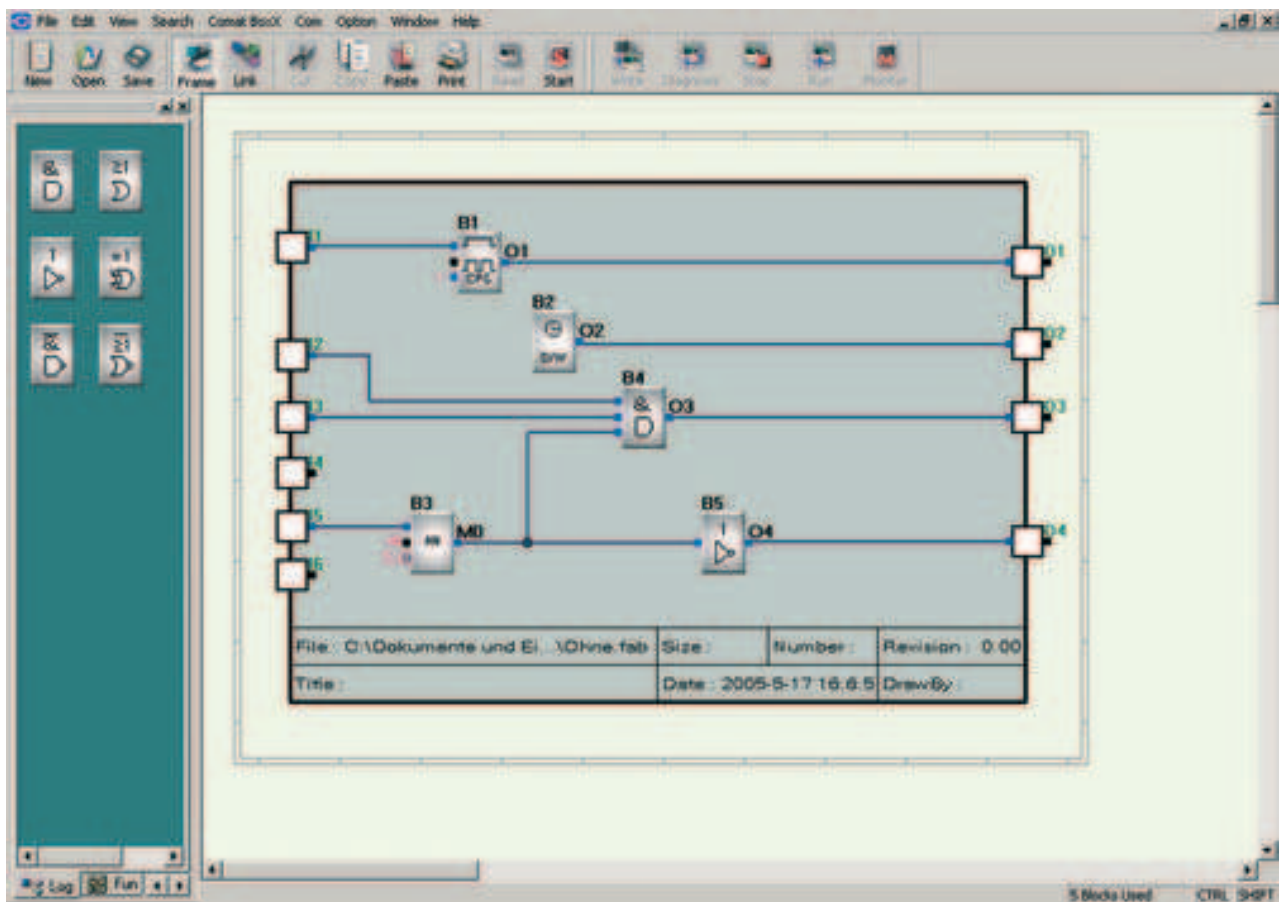


The voice module allows the playing of messages through either the built-in or external loud speakers. The voice module also replays phone calls or dials phone numbers to send emergency or status messages.

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

## Programming software Quick II

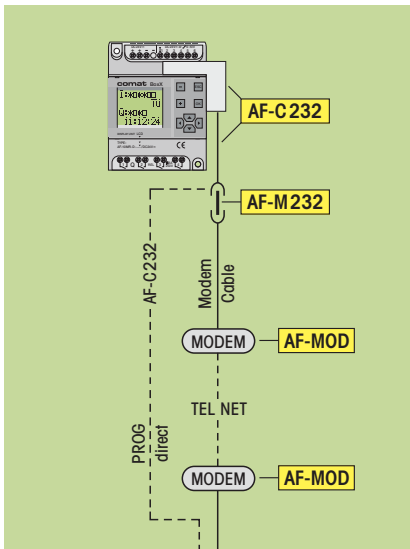
Example: Programming environment



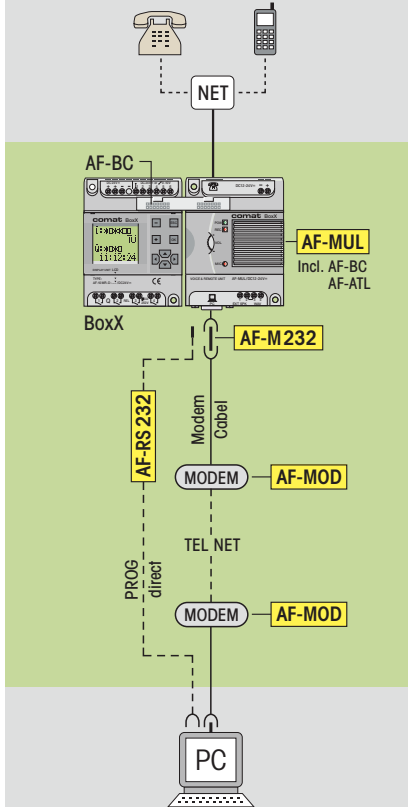
## The Extension module

Remote maintenance and remote operations with voice message

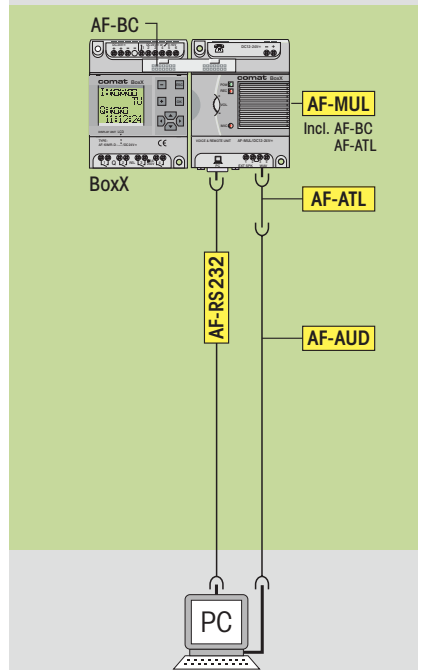
Recording of messages with the PC



Remote maintenance




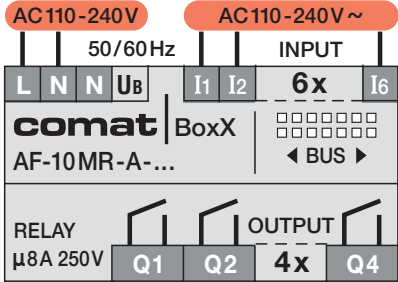
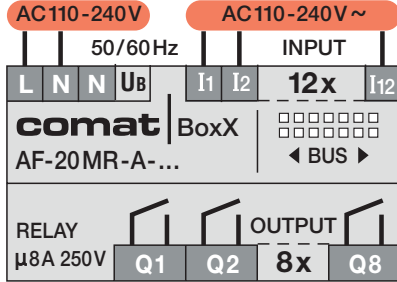

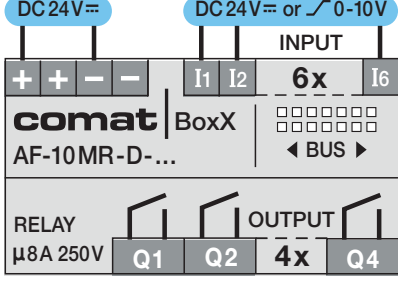
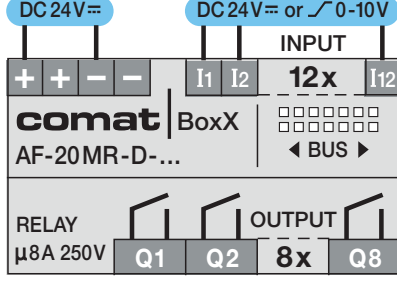
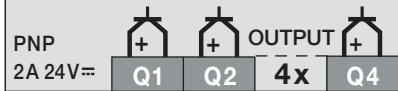
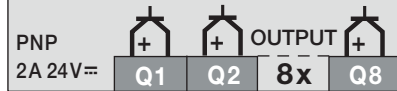


Each Comat BoxX can be controlled via a telephone line if connected to the extension module AF-MUL (voice & remote unit). The AF-MUL will answer calls and allows access after the password is accepted. The Comat BoxX with the AF-MUL is able to broadcast up to 98 predefined conditions, for example alarms, over the phone network. The designated phone number is dialled and the recorded message is played over the telephone. The message can also be broadcast over auxiliary loudspeakers.



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

## The Types

 <p>6/12 Inputs digital AC110-240V</p>	 <p><b>6 INPUTS</b> <b>4 OUTPUTS</b></p>	 <p><b>12 INPUTS</b> <b>8 OUTPUTS</b></p>
	<p>AC110-240V AC110-240V~</p>  <p>comat BoxX AF-10MR-A-... RELAY μ8A 250V Q1 Q2 4x Q4</p>	<p>AC110-240V AC110-240V~</p>  <p>comat BoxX AF-20MR-A-... RELAY μ8A 250V Q1 Q2 8x Q8</p>
<p>4/8 Outputs relays 8A 250V~</p>	<p>without display AF-10MR-A-CAP/AC110-240V with display AF-10MR-A-LCD/AC110-240V</p>	<p>without display AF-20MR-A-CAP/AC110-240V with display AF-20MR-A-LCD/AC110-240V</p>
 <p>6/12 Inputs configurable: digital / analog 0-10V (0,1V)</p>	<p>DC 24V= DC 24V= or 0-10V</p>  <p>comat BoxX AF-10MR-D-... RELAY μ8A 250V Q1 Q2 4x Q4</p>	<p>DC 24V= DC 24V= or 0-10V</p>  <p>comat BoxX AF-20MR-D-... RELAY μ8A 250V Q1 Q2 8x Q8</p>
	<p>4/8 Outputs relays 8A 250V~</p>	<p>without display AF-10MR-D-CAP/DC 24V with display AF-10MR-D-LCD/DC 24V</p>
<p>4/8 Transistor outputs PNP 2A 24V=</p>	<p>PNP 2A 24V=</p>  <p>comat BoxX AF-10MT-GD-... OUTPUT Q1 Q2 4x Q4</p>	<p>PNP 2A 24V=</p>  <p>comat BoxX AF-20MT-GD-... OUTPUT Q1 Q2 8x Q8</p>
<p>Order no.</p>	<p>without display AF-10MT-GD-CAP/DC 24V with display AF-10MT-GD-LCD/DC 24V</p>	<p>without display AF-20MT-GD-CAP/DC 24V with display AF-20MT-GD-LCD/DC 24V</p>
<p>Accessories</p>	<p>Order no.</p> <p>AF-MUL/AC110-240V Voice and remote unit<sup>1)</sup></p> <p>AF-MUL/DC12-24V Voice and remote unit<sup>1)</sup></p> <p>AF-RS232 AF-MUL Programming cable</p> <p>AF-BC AF-MUL Bridge connector<sup>2)</sup></p> <p>AF-ATL AF-5MUL Audio Cable<sup>2)</sup></p> <p>AF-AUD Audio Cable</p> <p><sup>1)</sup> Inclusive AF-BC and AF-ATL <sup>2)</sup> Included with AF-MUL</p>	<p>Order no.</p> <p>AF-C232 Programming cable</p> <p>AF-USB Converter USB-RS 232</p> <p>AF-MOD Modem</p> <p>AF-M232 Modem Interface connector</p> <p>AF-LCD Display with function keys</p> <p>AF-CAP Cover (instead of AF-LCD)</p> <p>AF-CDR1 CD-ROM</p>

## The Data

	AF-10	AF-20	AF-MUL
Operating voltage U <sub>s</sub>	AC110-240V~ 50/60Hz		AC110-240V~
	DC24V= ☹ max. 10%		DC12-24V=
Power consumption	3VA/1,5W	5VA/1,5W	0,8VA
Switching power	☹ 8A 250V~ ☼ 2A 24V=		
Ambience conditions	T <sub>u</sub> without display -25 ... +55 °C	T <sub>u</sub> with display 0 ... +55 °C	Rel. humidity: 5 ... 95% (non condensing) Protection IP20

This issue replaces all previous issues. Availability, errors and specifications subject to change without notice.