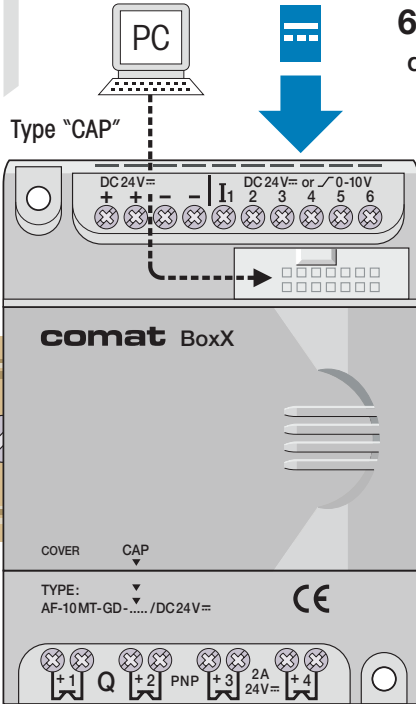


- ✓ Programming via snap-on display or with PC
- ✓ Remote controlling and voice message over telephone network or Cellular phone
- ✓ Remote maintenance and remote operation
- ✓ Comprehensive function block library
- ✓ Programmable timers
- ✓ Real time clock with automatic summer/winter time adjustment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

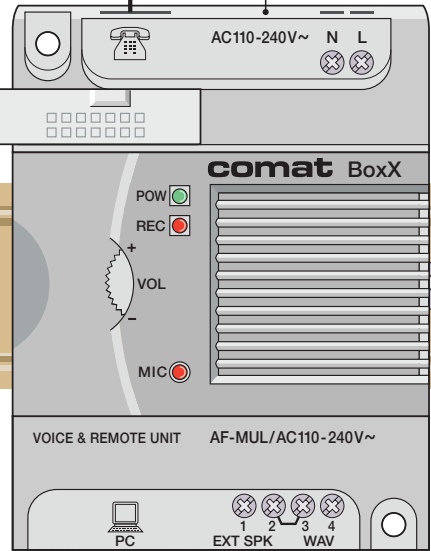
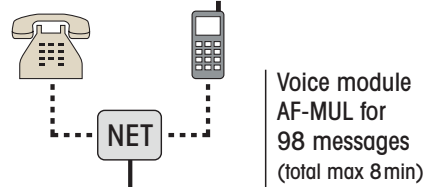
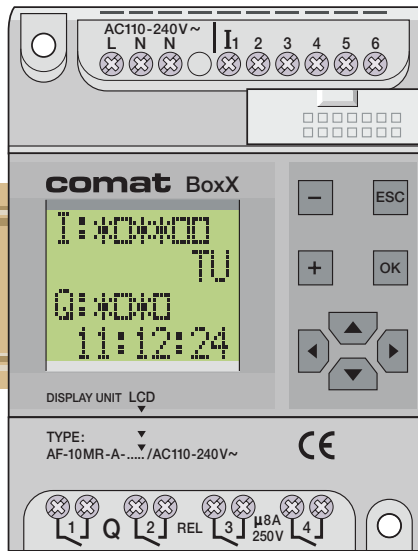
The Controller

127	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

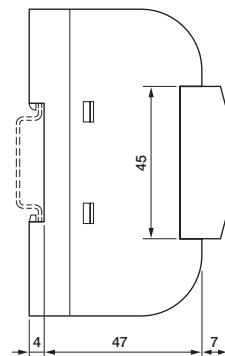
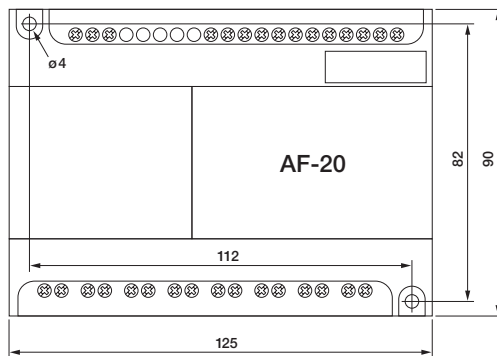
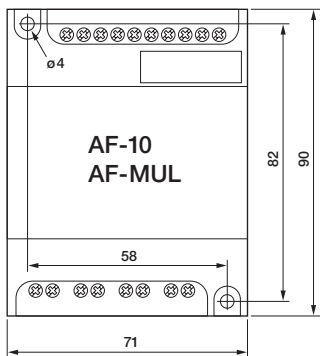
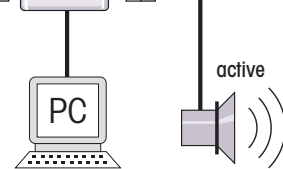
6 / 12 Inputs
digital / analog



Type "LCD"



4 / 8 Outputs
Relay / Transistor



The Application

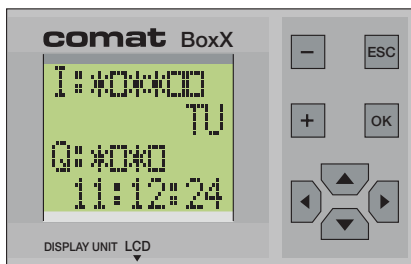
The Comat BoxX can be programmed by PC or with the snap-on LCD display with integrated function keys.

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.

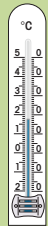
The 24V versions of the Comat BoxX can also process analogue signals 0...10V with increments of 0.1V. All inputs can be used or configured at random as analogue or digital inputs.

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

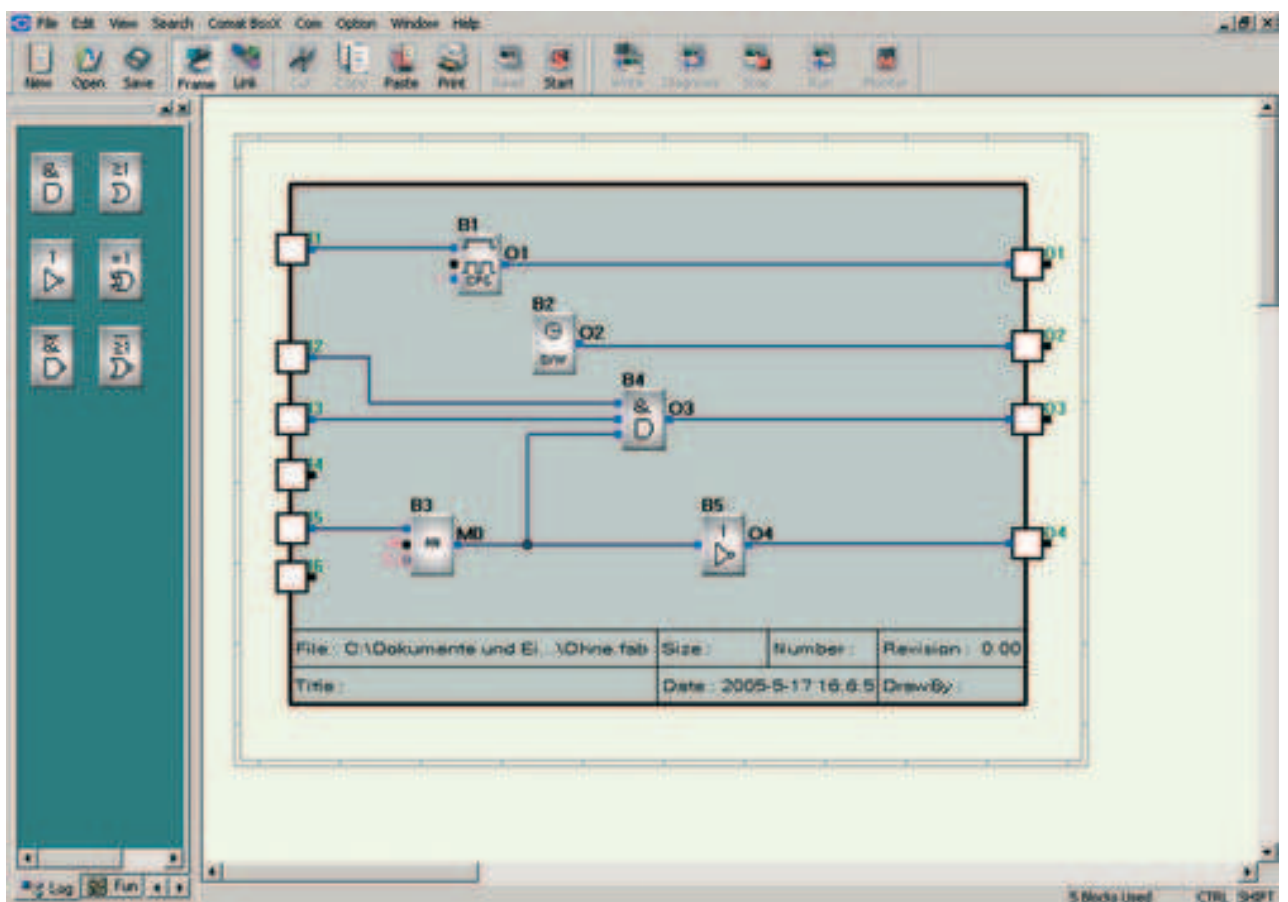


The voice module allows the playing of messages through either the built-in or external loud speakers. The voice module also replays phone calls or dials phone numbers to send emergency or status messages.

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

Programming software Quick II

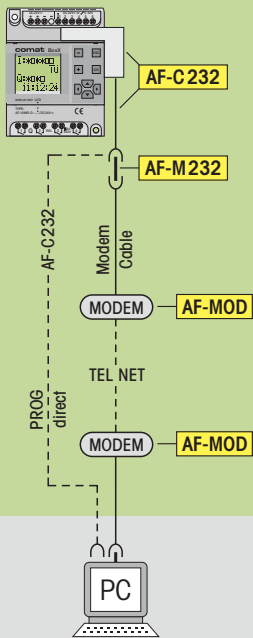
Example: Programming environment



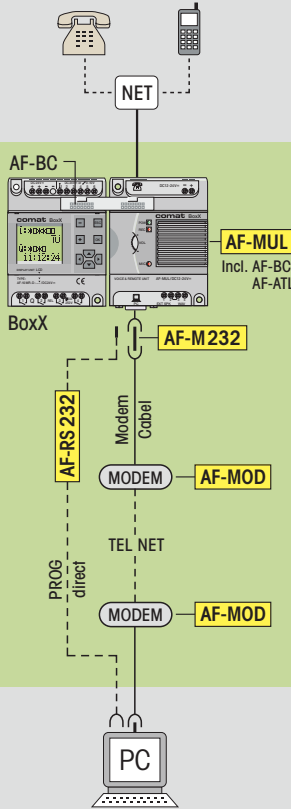
The Extension module

Remote maintenance and remote operations with voice message

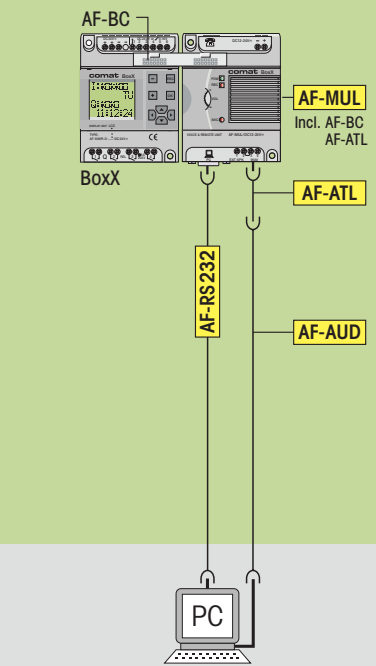
Recording of messages with the PC



Remote maintenance






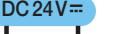
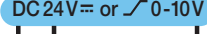

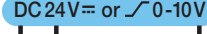
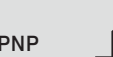
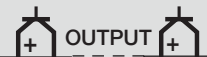
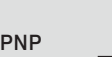
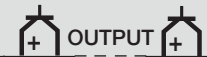


Each Comat BoxX can be controlled via a telephone line if connected to the extension module AF-MUL (voice & remote unit). The AF-MUL will answer calls and allows access after the password is accepted. The Comat BoxX with the AF-MUL is able to broadcast up to 98 predefined conditions, for example alarms, 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>	 U_B	6 INPUTS 4 OUTPUTS	 U_B	12 INPUTS 8 OUTPUTS	
	 <p>4/8 Outputs relays 8A 250V~</p>	<p>AC110-240V</p> <p>50/60Hz</p> <p>L N N U_B</p> <p>comat BoxX</p> <p>AF-10MR-A-...</p> <p>RELAY μ8A 250V</p> <p>OUTPUT 4x</p> <p>Q1 Q2 Q4</p>	<p>AC110-240V~</p> <p>INPUT</p> <p>I1 I2 6x I6</p> <p>comat BoxX</p> <p>AF-10MR-A-...</p> <p>RELAY μ8A 250V</p> <p>OUTPUT 4x</p> <p>Q1 Q2 Q4</p>	<p>AC110-240V</p> <p>50/60Hz</p> <p>L N N U_B</p> <p>comat BoxX</p> <p>AF-20MR-A-...</p> <p>RELAY μ8A 250V</p> <p>OUTPUT 8x</p> <p>Q1 Q2 Q8</p>	<p>AC110-240V~</p> <p>INPUT</p> <p>I1 I2 12x I12</p> <p>comat BoxX</p> <p>AF-20MR-A-...</p> <p>RELAY μ8A 250V</p> <p>OUTPUT 8x</p> <p>Q1 Q2 Q8</p>
Order no.	without display with display	AF-10MR-A-CAP/AC110-240V AF-10MR-A-LCD/AC110-240V	without display with display	AF-20MR-A-CAP/AC110-240V AF-20MR-A-LCD/AC110-240V	
 <p>6/12 Inputs configurable: digital / analog 0-10V (0,1V)</p>	 DC 24V=	 DC 24V= or 0-10V	 DC 24V=	 DC 24V= or 0-10V	
	<p>4/8 Outputs relays 8A 250V~</p>	<p>DC 24V=</p> <p>+ + - -</p> <p>I1 I2 6x I6</p> <p>comat BoxX</p> <p>AF-10MR-D-...</p> <p>RELAY μ8A 250V</p> <p>OUTPUT 4x</p> <p>Q1 Q2 Q4</p>	<p>DC 24V= or 0-10V</p> <p>INPUT</p> <p>I1 I2 6x I6</p> <p>comat BoxX</p> <p>AF-10MR-D-...</p> <p>RELAY μ8A 250V</p> <p>OUTPUT 4x</p> <p>Q1 Q2 Q4</p>	<p>DC 24V=</p> <p>+ + - -</p> <p>I1 I2 12x I12</p> <p>comat BoxX</p> <p>AF-20MR-D-...</p> <p>RELAY μ8A 250V</p> <p>OUTPUT 8x</p> <p>Q1 Q2 Q8</p>	<p>DC 24V= or 0-10V</p> <p>INPUT</p> <p>I1 I2 12x I12</p> <p>comat BoxX</p> <p>AF-20MR-D-...</p> <p>RELAY μ8A 250V</p> <p>OUTPUT 8x</p> <p>Q1 Q2 Q8</p>
Order no.	without display with display	AF-10MR-D-CAP/DC 24V AF-10MR-D-LCD/DC 24V	without display with display	AF-20MR-D-CAP/DC 24V AF-20MR-D-LCD/DC 24V	
<p>4/8 Transistor outputs PNP 2A 24V=</p>	 PNP 2A 24V=	 PNP 2A 24V=	 PNP 2A 24V=	 PNP 2A 24V=	
	Order no.	without display with display	AF-10MT-GD-CAP/DC 24V AF-10MT-GD-LCD/DC 24V	without display with display	AF-20MT-GD-CAP/DC 24V AF-20MT-GD-LCD/DC 24V
Accessories	Order no.	AF-MUL/AC110-240V	Voice and remote unit ¹⁾	AF-C232	Programming cable
	Order no.	AF-MUL/DC12-24V	Voice and remote unit ¹⁾	AF-USB	Converter USB-RS 232
Order no.	AF-RS232	AF-MUL Programming cable	AF-MOD	Modem	
Order no.	AF-BC	AF-MUL Bridge connector ²⁾	AF-M232	Modem Interface connector	
Order no.	AF-ATL	AF-5MUL Audio Cable ²⁾	AF-LCD	Display with function keys	
Order no.	AF-AUD	Audio Cable	AF-CAP	Cover (instead of AF-LCD)	
Order no.			AF-CDR1	CD-ROM	
		¹⁾ Inclusive AF-BC and AF-ATL			
		²⁾ Included with AF-MUL			

The Data

	AF-10	AF-20	AF-MUL
Operating voltage U_a	AC110-240V~ 50/60Hz		AC110-240V~
	DC24V=  max. 10%		DC 12-24V=
Power consumption	3VA/1,5W	5VA/1,5W	0,8VA
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

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