

ComatReleco PLC + HMI

BoxX 2



Versatile small control

- Compact small controller for versatile applications in buildings, plant construction, industry, etc.
- Free programming software
- Efficient programming: one single software for display and ladder diagram
- Function block programming and large programme memory capacity
- Real-time clock function for time controls
- Removable LCD display with security password lock function
- Integrated inputs and outputs



Box 2: Versatile and reliable small controller for efficient programming



Digital and analogue inputs:

Three unit types with different inputs are available:



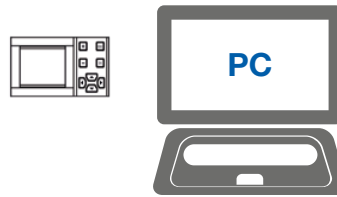
- ✓ AC 110 – 240 V
- ✓ DC 12 – 48 V
- ✓ DC 0 – 10 V
- ✓ DC 4 – 20 mA

6 or 8 inputs



Plug and play:

Programming via display or with PC.



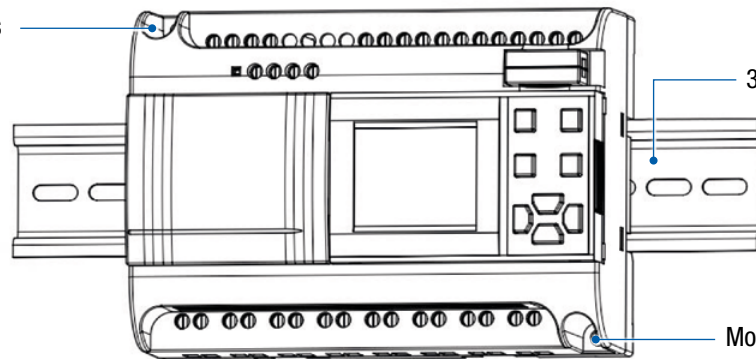
ComatReleco BoxX 2 PLC with display

The compact PLC (programmable logic controller) is a reliable controller for small applications. You create the applications quickly and easily according to your needs.

Your advantages:

- + The LCD display with buttons can be mounted and dismounted according to your needs.
- + The BoxX 2 comes in a compact and high-quality housing and can be mounted on a DIN rail or mounting plate.
- + The Free QUICK II programming software can be downloaded from our website under [Download](#).
- + Efficient programming thanks to a single software for display and ladder diagram.
- + The control is programmed with function blocks. An extensive function block library is available.
- + The programme is permanently saved in the unit and can be overwritten or read out again if necessary.
- + The BoxX 2 has a real-time clock with which you can programme up to 127 different time functions.
- + The simulation tool can be used to check the programme on the PC before commissioning.
- + You can set your own security password to block access to the programme.
- + Two RS-485 ports are available as communication interfaces. The BoxX 2 supports the standard MODBUS RTU protocol.

Mounting hole for screws



35 mm DIN rail

Mounting hole for screws

Snap-in mechanism on the underside

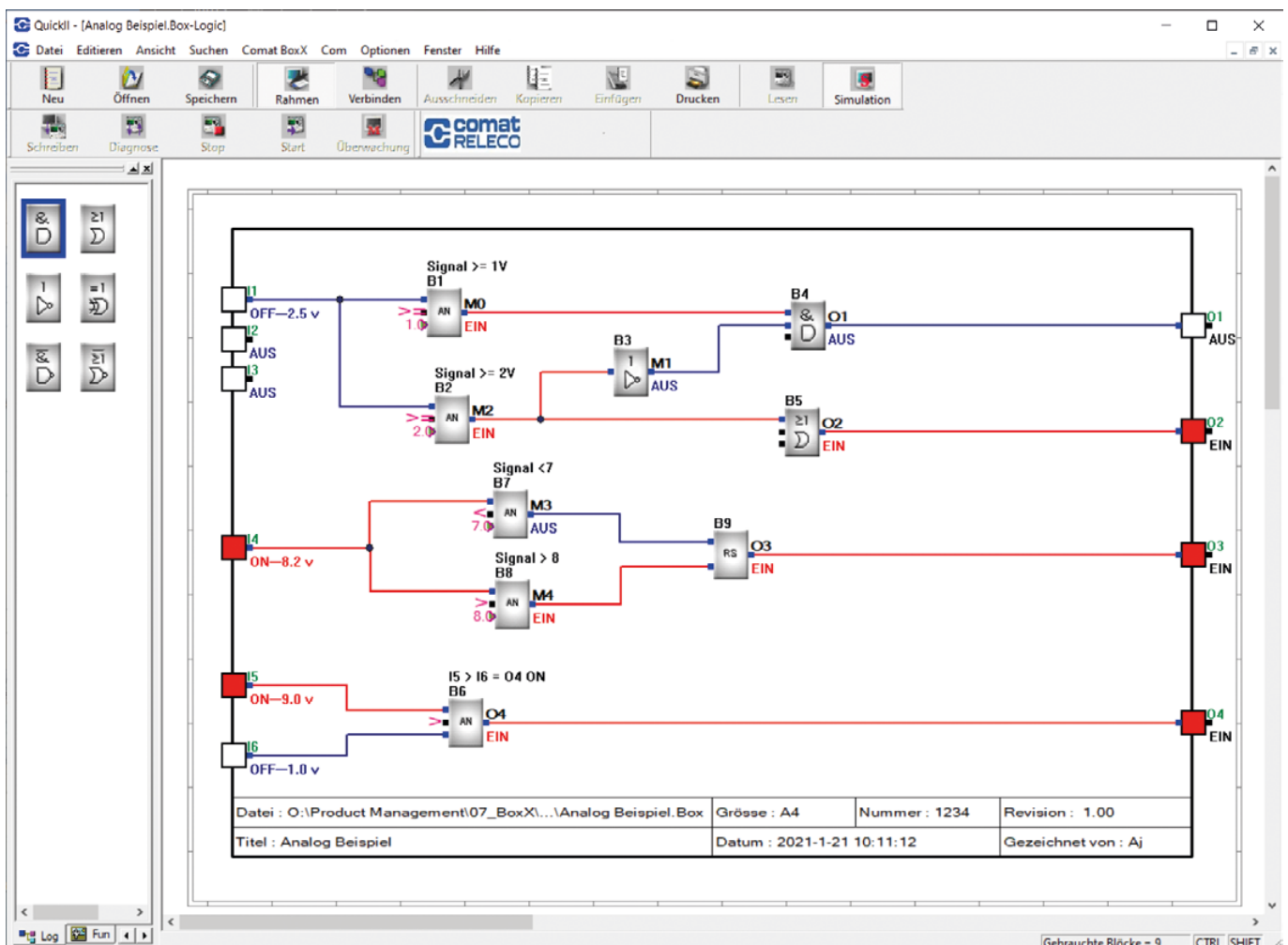
- Compact PLC for small and versatile applications
- as a single controller or several units in a network via Modbus RTU
- Removable LCD display with security password lock function
- with connection to a higher-level system (e.g. connection to a control system via Modbus RTU)

Commissioning

- To shorten commissioning, the programme can be simulated on the PC.
- The programme is transferred to the unit via the USB interface (AF-DUSB2).
- The LCD display can be used for visualisation and operation.

QUICK II software

- Programming is done with the intuitive programming software QUICK II. See screenshot below.
- The programme in the Box X 2 can hold up to 127 function blocks.
- The Box X 2 has a real-time clock function and you can set up to 127 different time functions.
- You are completely Free in the input and output configuration of the unit. You decide which inputs and outputs are active and how they are physically assigned.
- The programme is permanently saved in the unit and can be overwritten or read out again if necessary.





«
*All-in-one device for
automation and control
of building
services equipment.*
»

Service

We offer you the following services with our professional competence:

- individual consultation
- defined solution approaches
- Planning and project engineering based on specifications
- Customised programming solutions

Replacement for previous device series

- The 6 unit types AF-10MR-A2 / AF-20MR-A2; AF-10MR-D2 / AF-20MR-D2 as well as AF-10MT-GD2 / AF-20MT-GD2, cover all units already in the field from ComatReleco.
- The dimensions, the connection diagram as well as the nominal voltages are identical to the previous unit series.
- Existing BoxX programmes can be reused.

Function block library

Logical functions

AND, OR, NOT, NAND, XOR, NAND, NOR

Time functions

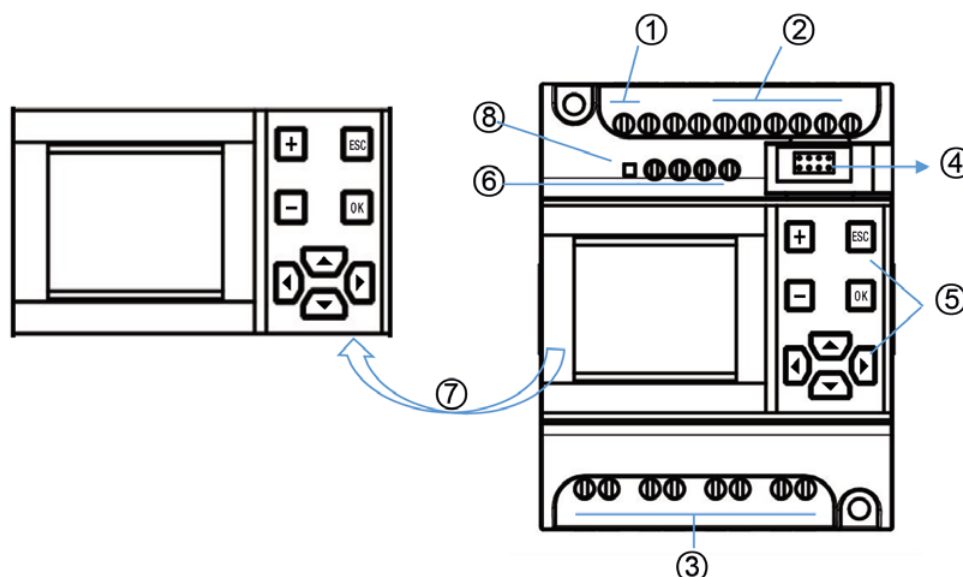
ON time delay, OFF time delay, Single pulse time relay, Puls relay, Clock pulse generator, Hold ON time delay relay

Clock switch function block

Weekly, date

Counter function blocks

Up and down counter



- ① Power supply
- ② Inputs
- ③ Outputs (relay or transistor)
- ④ Programme download connection
- ⑤ Operating buttons
- ⑥ Two channels of RS-485 communication interface (A1/B1 + A2/B2)
- ⑦ LCD visualisation
- ⑧ Power indicator (red indicator, flashing frequency 1 Hz)

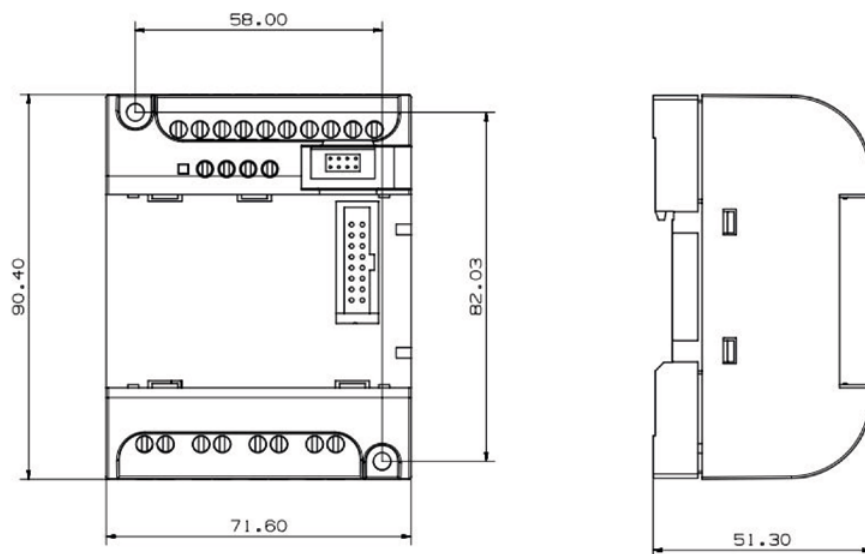
Accessories

Type	ELDAS number	Description
AF-HMI	560820910	Removable LCD display, for visualisation and operation
AF-CAP	560895200	Cover, if the BoxX 2 is operated without LCD display
AF-DUSB2	560990010	Communication cable with USB interface to download programmes

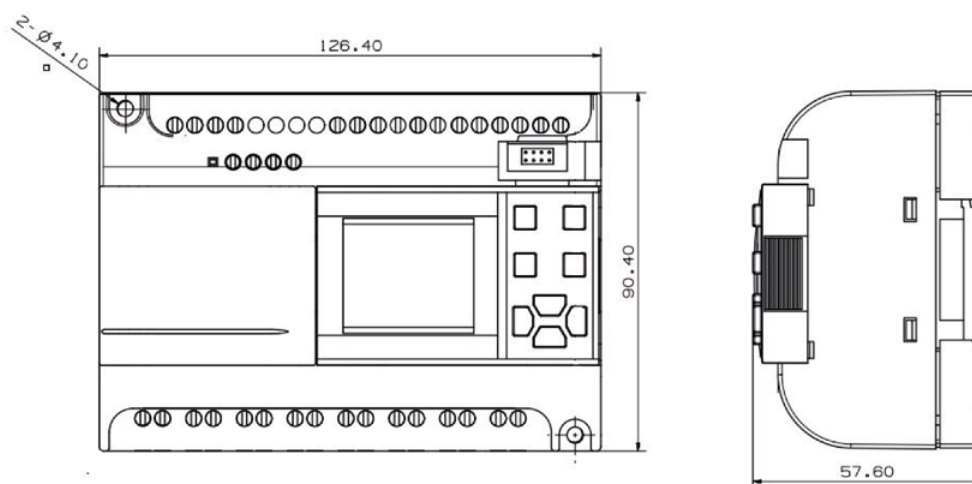
Technical data

Type	AF-10MR-A2 / AF-20MR-A2	AF-10MR-D2 / AF-20MR-D2	AF-10MT-GD2 / AF-20MT-GD2
Rated voltage and frequencies	110 - 220 V AC 50 - 60 Hz	12 - 24 V DC	12 - 24 V DC
Operating voltage and frequency ranges	85 - 260 V AC 47 - 63 Hz	10 - 28 V DC	10 - 28 V DC
Maximum / typical power consumption	6 W / 10 W	4 W / 5 W	2 W
Inputs	6 x / 12 x digital Switch-on threshold Signal 0: 0 - 40 V AC Signal 1: 80 - 240 V AC	6 x / 12 x per input optionally digital or analogue Digital: Switch-on threshold Signal 0: < 3.5 V DC Signal 1: 10 - 24 V DC Analogue: 0 - 10 V DC	6 x / 12 x per input optional digital or analogue Digital: Switch-on threshold Signal 0: < 3.5 V DC Signal 1: 10 - 24 V DC Analogue: 0 - 10 V DC
Number of switching outputs / Max. switching capacity	4 x / 8 x 10 A 250 V relay outputs		4 x / 8 x 2 ≤ 80 V DC transistor outputs (equivalent NPN)
Ambient conditions	-40 - +70 °C Ambient temperature -40 - +70 °C Operating temperature 0 - 95 % relative humidity (non-condensing) Protection class: IP 20		

AF-10 Serie:



AF-20 Serie:



Order references

Type	ELDAS number	Power supply	Inputs	Outputs
AF-10MR-A2	560820200	110 - 220 V AC	6 x digital inputs AC	4 x relay outputs
AF-10MR-D2	560820217	12 - 24 V DC	6 x digital inputs (with analogue) DC	4 x relay outputs
AF-10MT-GD2		12 - 24 V DC	6 x inputs (with analogue) DC	4 x transistor outputs (equivalent NPN)
AF-20MR-A2	560820230	110 - 220 V AC	12 x digital inputs AC	8 x relay outputs
AF-20MR-D2	560820247	12 - 24 V DC	12 x digital inputs (with analogue) DC	8 x relay outputs
AF-20MT-GD2		12 - 24 V DC	12 x inputs (with analogue) DC	8 x transistor outputs (equivalent NPN)

