eatec

we control
your comfort

smart control solution
2023EN

Plus points

NK 5500

NK 7500

NK 8400

NK 1260

NK 3000

Speed

One of the main goals of the **NK** programmable platform is to give customers the tools to find faster, more effective solutions for their customers. Many features of **NK** make it possible to effectively reduce the time between defining a new application and putting it into production.

Compact size

The new **NK** programmable platform enables customers to keep costs at a competitive level. The **NK** controllers are made with particular emphasis placed on technological solutions and physical size, for significant results in terms of simplicity, modularity and compactness. The integrated solutions and small size of **NK** controllers provide real, immediate economic advantages for customers.

Efficiency

The **NK** programmable platform, complete and scalable across various levels of complexity, offers customers great freedom in choosing the solution they feel is best suited to their own requirements. This makes it easier to find solutions which take account of costs and/or the reduction of product codes, including solutions which are more open to future development or future system requirements, with particular reference to connectivity.

Reliability

The high quality of the new **NK** programmable platform allows customers to reduce any costs linked to a lack of quality, during both the production process and on-site installation procedures. The controllers **NK 5500**, **NK 3000**, **NK 7500** and the development environment **NK Studio** were designed using innovative but carefully reconstructed criteria, adopting advanced and stable technological solutions as well as certified, monitored production processes. Eliwell has always been associated with reliability.

The targets

Manufacturers of:
- AHU (Air Handling Units)
- Chiller
- Heat pumps
- Rooftop

Contractors/system integrators:
- Air systems
- Hydronic systems
- Combo systems (air/water)
- Commercial automation
- BMS

Wholesalers/Retail/Distributors

Connectivity NK 5500

NKW5522(L)

NKP5522(L)

NKP5510

The controllers **NK 5500** are equipped with a serial port for easy integration with the supervision systems of the plant in which they are installed.

ModBus standard protocol makes it possible to access all the controller resources, thereby guaranteeing complete system control.

All models have TTL supplied as standard; 050400 / 050H00 models have an integrated RS485 serial port.

A special firmware version also offers Modbus MASTER functions.

Maximum configuration for NK 5500

- max 1 NK 5500 model
- max 1 NKE expansion via LAN serial port
- max 1 NKP5510 terminal with controller ECHO function
- max 1 NKW5522(L) or NKP5522 (L) terminal with dedicted menu, with the possibility of monitoring the environment temperature and humidity
- max LAN distance: 100m
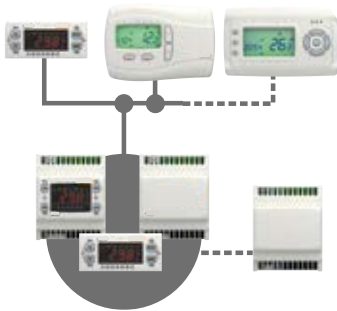
Update function for NK 5500

The Multi Function Key (MFK 100) can be used to upload and download the parameter map for rapid configuration, to upload IEC and BIOS applications.

Multi Function Key / DMI		
PC ➔　　　　　　　← NK 5500		
Data download direction	➔	←
Parameter map	-	-
Application IEC	✓	-
BIOS	✓	-

Multi Function Key		
MFK ➔　　　　　　← NK 5500		
Data download direction	➔	←
Parameter map	✓	✓
Application IEC	✓	-
BIOS	✓	-

Rete (Network)		
PC ➔　　　　　　　← NK 5500		
Data download direction	➔	←
Parameter map	✓	✓
Application IEC	✓	-
BIOS	✓	-

Available IEC resources for programmer

CPU	14.7 MHz
available memory for Application	190 KByte
RAM memory - automatic mapping	2300 Byte
RAM memory - Modbus mapping	1024 Byte
EEPROM variables	1024 Byte

Minimum kit for the developer

· Installation setup NK STUDIO
· 1 NK 5500
· 1 NKI55100-3 Manufacturer + yellow cable TTL
· 1 MFK optional + blue cable TTL
· Wiring and power transformer for NK 5500

Connection examples in Modbus Slave or Master

Example Modbus Slave

versione RS485

RS485

RS485 version

TTL

TTL

Bus**Adapter** 150

Example Modbus Master

RS485
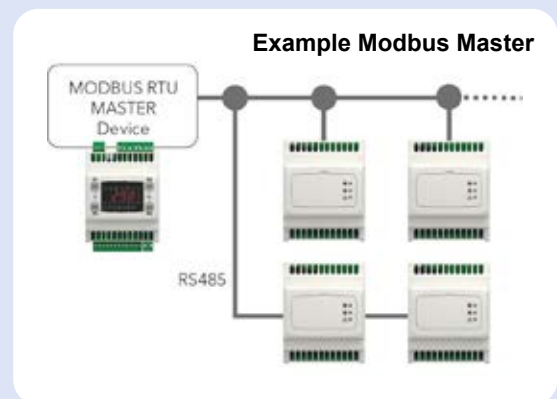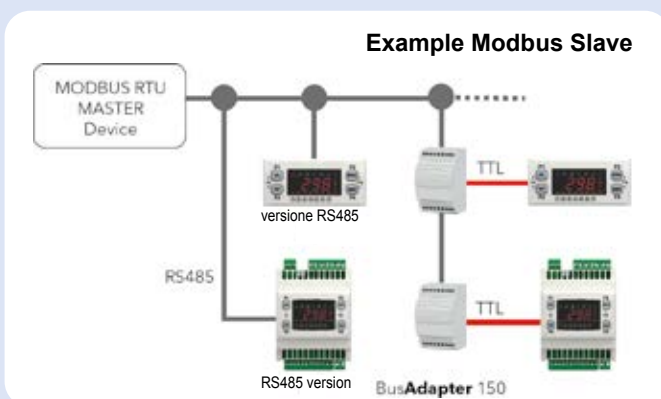
For models without RSBus use exclusively Adapter 150

NKP, NKD, NKC5500

NKP5500	NKD5500	NKC5500

Technical specification

format	32x74x80 mm (LxHxP)	4 DIN	4 DIN
display	LED 4 digit - 7 segments	LED 4 digit - 7 segments	-
power supply	12...24V~ / 24VC	12...24V~ / 24VC	12...24V~ / 24VC
digital relay outputs	5 x 2A 250V~	5 x 2A 250V~	5 x 2A 250V~
analogue outputs	2 x O.C. PPM/PWM	2 x O.C. PPM/PWM	2 x O.C. PPM/PWM
	3 x 0...10V	3 x 0...10V	3 x 0...10V
digital O.C. outputs	1 Open Collector	1 Open Collector	1 Open Collector
digital inputs	6 voltage free	6 voltage free	6 voltage free
analogue inputs	3 x NTC / D.I.	3 x NTC / D.I.	3 x NTC / D.I.
	2 x NTC / D.I. / 0...20mA / 4...20mA / 0...10V / 0...5V / 0...1V	2 x NTC / D.I. / 0...20mA / 4...20mA / 0...10V / 0...5V / 0...1V	2 x NTC / D.I. / 0...20mA / 4...20mA / 0...10V / 0...5V / 0...1V
connectivity	TTL	TTL	TTL
	RS485 (only 050400 models)	RS485 (only 050400 models)	RS485 (only 050400 models)
	LAN for connection to NKP/NKW terminal or to NKE expansion model	LAN for connection to NKP/NKW terminal or to NKE expansion model	LAN for connection to NKP/NKW terminal or to NKE expansion model
working temperature	-20...+55°C	-20...+55°C	-20...+55°C

Part number

Part number	NKP5500	NKD5500	NKC5500
010400	standard	standard	standard
050400	with RS485 Modbus	with RS485 Modbus	with RS485 Modbus
EXP	NKE5500050400		

Electrical wirings and installation

Only 050400 versions

NKP5500

NKD5500 - NKC5500

NKD, NKC5545, Expansion NKE5545

NKD5545

NKC5545

NKE5545

Technical specification

| format	4DIN	4DIN	4DIN
display	LED 4 digit - 7 segments	-	-
power supply	100...240V~	100...240V~	100...240V~
digital relay outputs	4 x 2A 250V~	4 x 2A 250V~	4 x 2A 250V~
analogue outputs	2 x Open Collector PWM/D.I.	2 x Open Collector PWM/D.I.	2 x Open Collector PWM/D.I.
	2 x 0...10V	2 x 0...10V	2 x 0...10V
	1 x 4...20mA / 0…20mA	1 x 4...20mA / 0…20mA	1 x 4...20mA / 0…20mA
analogue inputs	3 x NTC / Pt1000 / D.I.	3 x NTC / Pt1000 / D.I.	3 x NTC / Pt1000 / D.I.
	2 x NTC / D.I. / 0...20mA / 4...20mA / 0...10V / 0...5V / 0...1V	2 x NTC / D.I. / 0...20mA / 4...20mA / 0...10V / 0...5V / 0...1V	2 x NTC / D.I. / 0...20mA / 4...20mA / 0...10V / 0...5V / 0...1V
connectivity	TTL	TTL	TTL
	RS485 (only 050H00 models)	RS485 (only 050H00 models)	-
	LAN for connection to NKP/NKW terminal or to NKE expansion module	LAN for connection to NKP/NKW terminal or to NKE expansion module	LAN for connection to NK 5500
working temperature	-20...+55°C	-20...+55°C	-20...+55°C

Part numbers

Part numbers	NKD5545	NKC5545	NKE5545
	standard	standard	standard
010400			
050400	with RS485 Modbus	with RS485 Modbus	-

Electrical wirings
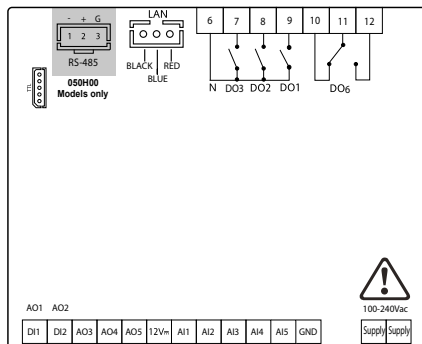
NKD5545 - NKC5545
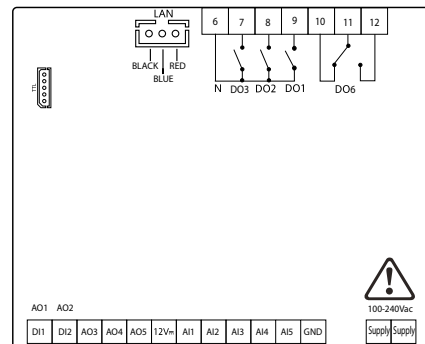
Expansion module NKE5545

Interfaces, NK 5500 terminals

NKP5510   NKW5522(L)   NKP5522(L)

Technical specification

formats (LxDxH)	74x32x30mm	135x98x30mm	160x98x30mm
installation	panel	wall	panel
display	LED 4 digit - 7 segments	LCD (**model 22L**: LCD back lit)	LCD (**model 22L**: LCD back lit)
power supply	from the basis module	from the basis module	from the basis module
analogue inputs	-	1 x integrated NTC	1 x remote NTC
	-	1 x remote NTC / D.I. / 0...20mA / 4...20mA	1 x remote NTC / D.I. / 0...20mA / 4...20mA
connectivity	LAN for connection to NK 5500	LAN for connection to NK 5500	LAN for connection to NK 5500
wiring	cable NKC5500332000 included in the package	cable NKC5500332000 included in the package	cable NKC5500332000 included in the package
working temperature	-20...+55°C	-5...+60°C	-5...+60°C
humidity modul	-	NKW5522P10000 - not included (see page accessories)	-

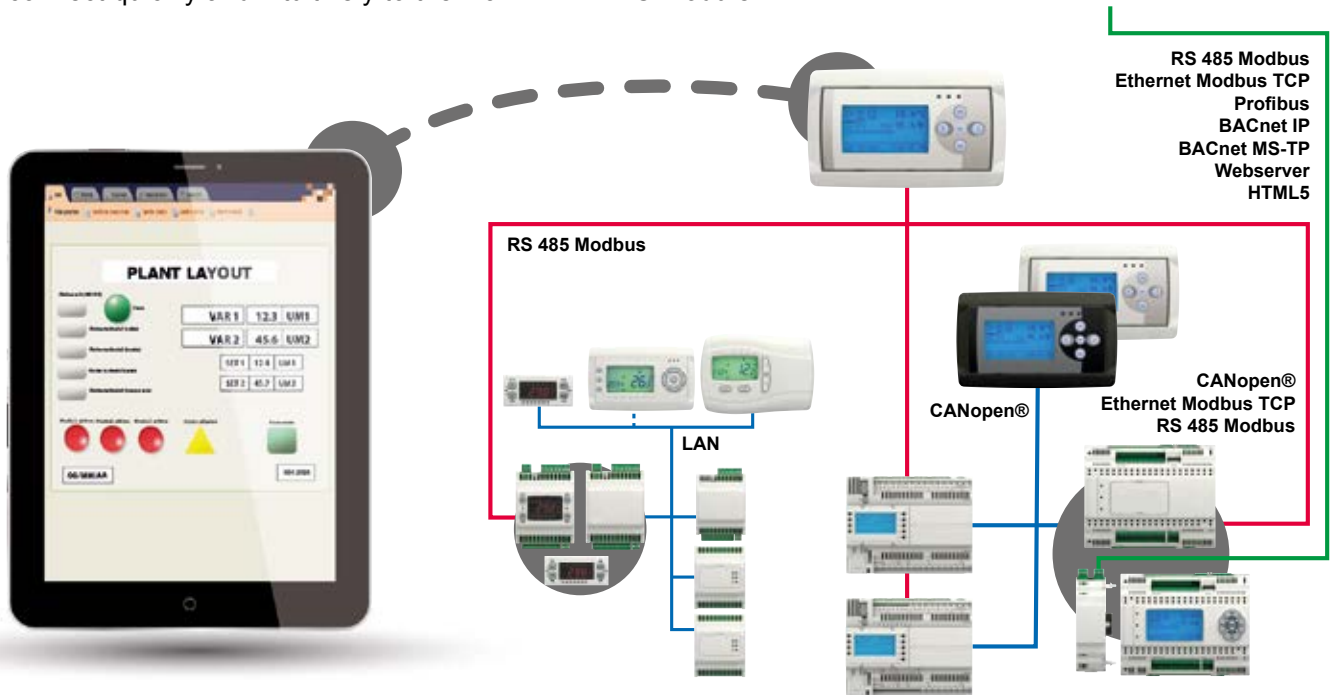## Electrical wirings and installation
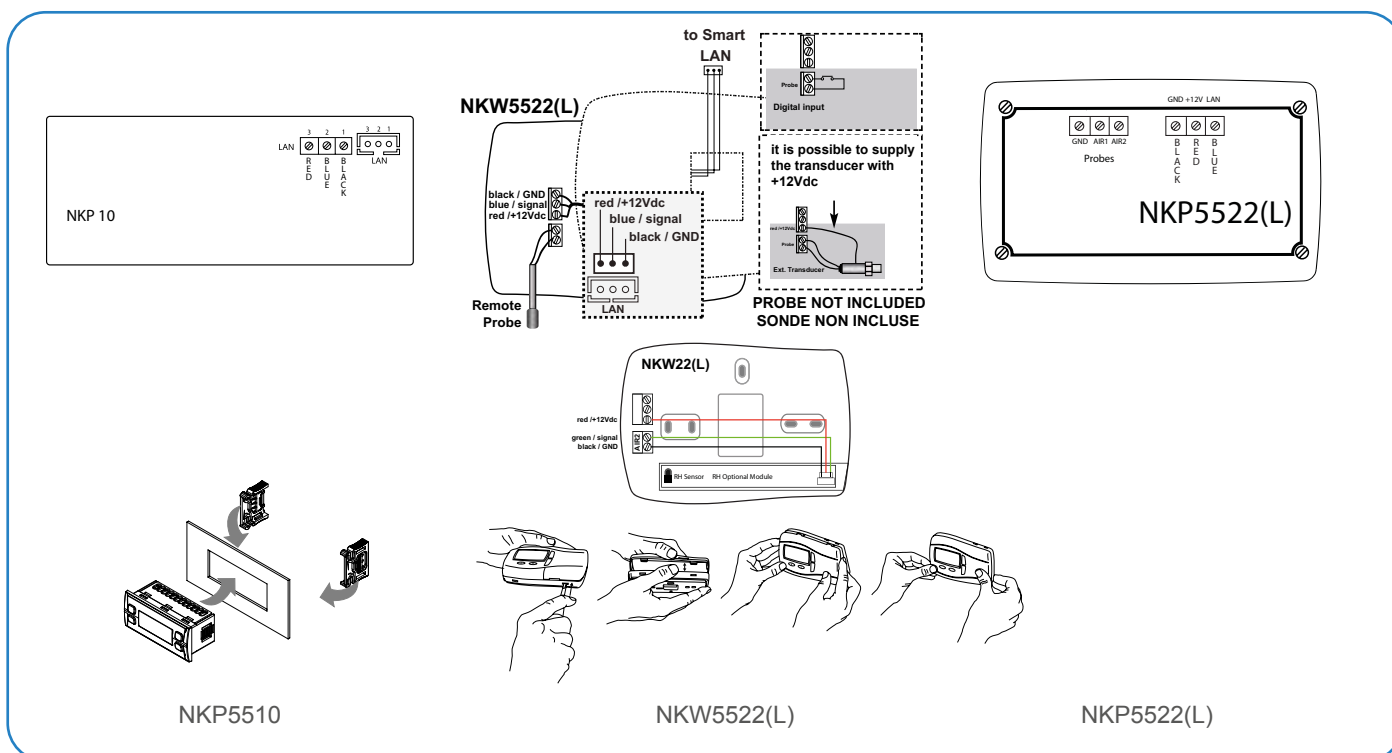
NKP5510   NKW5522(L)   NKP5522(L)

Connectivity NK 8400, NK 1260, NK 7500

The **NK 7500**, **NK 8400** and **NK 1260** models have RS-485 and CANbus serials integrated as standard. They can be integrated into industrial systems, BMS and Ethernet networks through the range of plug-ins and 2DIN modules that connect quickly and intuitively to the main NKD/NKC module.

RS 485 Modbus
Ethernet Modbus TCP
Profibus
BACnet IP
BACnet MS-TP
Webserver
HTML5

RS 485 Modbus

CANopen®
Ethernet Modbus TCP
RS 485 Modbus

CANopen®

LAN

NK 8400   NK 1260   NK 7500

WEB functionalities

NK 8400, NK 1260, NK 7500 and NKP 3000 are WEB-enabled, giving machine manufacturers and system integrators integral remote access.

Having a web-based connection in machines significantly reduces support and maintenance costs

This is also beneficial for end users, who can control their system from multiple devices.

- Web-based access
- Remote reading and support.
- Local and remote system control, including alarms management.
- Preventive and predictive maintenance.
- Email alarm alerts.
- Next generation system interface on PC, Tablet and Smartphone

SD card Datalogging		
SD card ➔ ⬅ NK 8400-1260		
Data download direction	➔	⬅
Parameter map	-	-
Application IEC-HMI	✓	✓
Data file	✓	✓
BIOS	-	-

USB Host		
PC ➔ ⬅ NK 8400-1260		
Data download direction	➔	⬅
Parameter map	✓	✓
Application IEC-HMI	✓	✓
Data file	✓	✓
BIOS	✓	-

Ethernet/USB Device/RS485		
PC ➔ ⬅ NK 8400-1260		
Data download direction	➔	⬅
Parameter map	✓	✓
Application IEC-HMI	✓	-
Data file	✓	✓
BIOS	✓	-

USB Host		
USB ➔ ⬅ NK 7500		
Data download direction	➔	⬅
Parameter map	✓	✓
Application IEC-HMI	✓	-
Data file	✓	✓
BIOS	✓	-

USB Device		
MFK ➔ ⬅ NK 7500		
Data download direction	➔	⬅
Parameter map	-	-
Application IEC-HMI	✓	✓
Data file	✓	✓
BIOS	-	-

USB-RS485/Ethernet+Plugin		
PC ➔ ⬅ NK 7500		
Data download direction	➔	⬅
Parameter map	✓	✓
Application IEC-HMI	✓	-
Data file	✓	✓
BIOS	✓	-

NKD8400, NKC8400

NKD8400

NKC8400

Technical specification

format	8DIN	8DIN
display	graphic LCD 128x64 pixel backlit	-
power supply	24V~ not isolated	24V~not isolated
	+20...+38 Vdc not isolated	+20...+38Vdc not isolated
digital outputs	8: 7 x 3A, 1 x 1A 250V~	8: 7 x 3A, 1 x 1A 250V~
	-	-
analog outputs	4:2 x 0-10V, 2 x 0-10V/4...20mA / ON-OFF/PWM/O.C. 24 VC 30mA max	4:2 x 0-10V, 2 x 0-10V/4...20mA / ON-OFF/PWM/O.C. 24 VC 30mA max
digital inputs	6 x safety extra low voltage SELV	6 x safety extra low voltage SELV
	2 x voltage free Fast counter 2kHz	2 x voltage free Fast counter 2kHz
analog inputs	8 x NTC 103AT / NTC NK103 / D.I. /PTC KTY81/Pt1000/0...20 mA/ 4...20 mA / 0-10V / 0-5V	8 x NTC 103AT / NTC NK103 / D.I. /PTC KTY81/Pt1000/0...20 mA/ 4...20 mA / 0-10V / 0-5V
connectivity	USB; 1 x plug-in NKS	USB; 1 x plug-in NKS
	ETHERNET: BACnet IP	ETHERNET: BACnet IP
	CANBus: CANopen	CANBus: CANopen
	2 x RS485: Modbus RTU (1 x RS485 may be BACnet MS/TP)	2 x RS485: Modbus RTU (1 x RS485 may be BACnet MS/TP)
wiorking temperature	-20...+60°C	-20...+60°C

Part numbers

	NKD8400	NKC8400
060500	with USB	with USB

Electrical wirings and installation

NKD8400 - NKC 8400

Available IEC resources for programmer

CPU	120 MHz, 32 MB RAM
available memory for Application	1 MByte
available memory for User Interface	1.5 MByte
memory FLASH data	8 MByte
RAM memory - automatic mapping	512 KByte
memoria RAM - Modbus mapping	5000 word
EEPROM variables	4000 word (applications) + 10000 word (BACnet objects)

Minimum kit for the developer

· Installation setup NK STUDIO
· 1 NK 8400
· USB cable mini USB for connection with PC
· Ethernet cable for network connection
· Power transformer for NK 8400
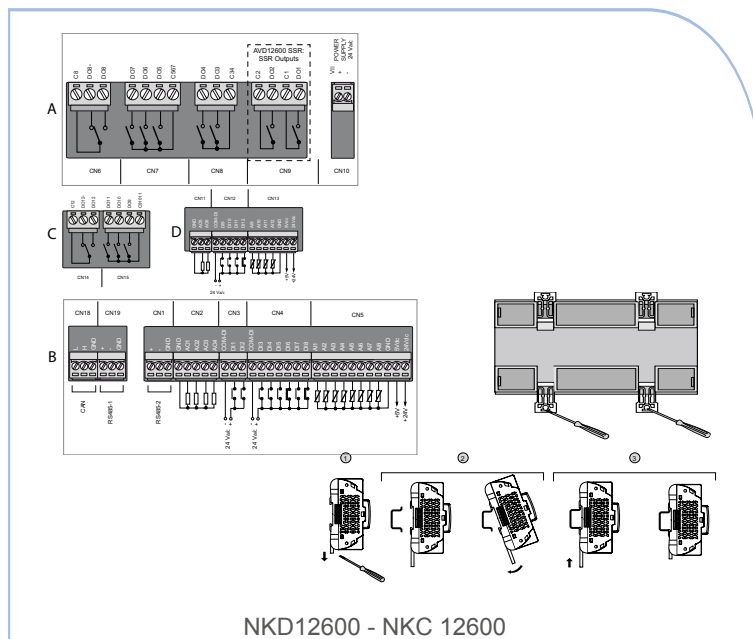
NKD12600, NKC12600

NKD12600

NKC12600

Technical specification

format	8DIN	8DIN
display	graphic LCD 128x64 pixel backlit	-
power supply	24V~ not isolated	24V~ not isolated
	+20...+38Vdc not isolated	+20...+38Vdc not isolated
digital outputs	12: 10 x 3A, 2 x 1A 250V~	12: 10 x 3A, 2 x 1A 250V~
	-	-
analog outputs	6:4 x 0-10V, 2 x 0-10V/4...20mA / ON-OFF/PWM/O.C. 24 VC 30mA max	6:4 x 0-10V, 2 x 0-10V/4...20mA / ON-OFF/PWM/O.C. 24 VC 30mA max
digital outputs	10 x safety extra low voltage SELV	10 x safety extra low voltage SELV
	2 x voltage free Fast counter 2kHz	2 x voltage free Fast counter 2kHz
analog inputs	12 x NTC 103AT / NTC NK103 / D.I. /PTC KTY81/Pt1000/0...20 mA/ 4...20 mA / 0-10V / 0-5V	12 x NTC 103AT / NTC NK103 / D.I. /PTC KTY81/Pt1000/0...20 mA/ 4...20 mA / 0-10V / 0-5V
connectivity	USB; 1 x plug-in NKS	USB; 1 x plug-in NKS
	ETHERNET: BACnet IP	ETHERNET: BACnet IP
	CANBus: CANopen	CANBus: CANopen
	2 x RS485: Modbus RTU (1 x RS485 may be BACnet MS/TP)	2 x RS485: Modbus RTU (1 x RS485 may be BACnet MS/TP)
working temperature	-20...+60°C	-20...+60°C

Part numbers	NKD1260	NKC1260
060500	with USB	with USB

Electrical wirings and installation

NKD12600 - NKC 12600

Available IEC resources for programmer

CPU	120 MHz, 32 MB RAM
available memory for Application	1 MByte
available memory for User Interface	1.5 MByte
memory FLASH data	8 MByte
RAM memory - automatic mapping	512 KByte
memoria RAM - Modbus mapping	5000 word
EEPROM variables	4000 word (applications) + 10000 word (BACnet objects)

Minimum kit for the developer

· Installation setup NK STUDIO
· 1 NK 12600
· USB cable mini USB for connection with PC
· Ethernet cable for network connection
· Power transformer for NK 12600

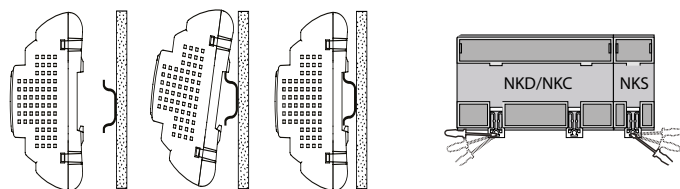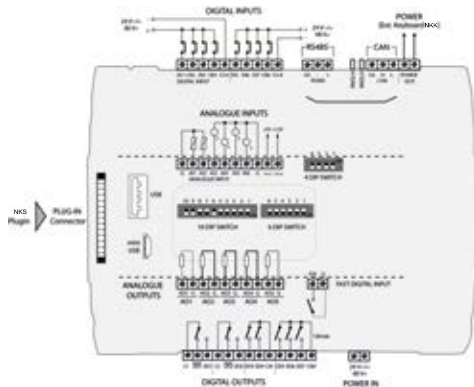# NKD7500, NKC7500

NKD7500

NKC7500

Technical specification

format	8 DIN	8 DIN
display	graphic LCD 128x64 pixel backlit	-
power supply	24V~/C - 48VC	24V~/C - 48VC
digital outputs	**7**: 2 x 8A, 5 x 5A 250V~	**7**: 2 x 8A, 5 x 5A 250V~
	-	-
analogue outputs	5 x 0...10V / 4...20mA / (switch 0..20mA) A04/A05 configurable as O.C. 12VC 100mA max each	5 x 0...10V / 4...20mA / (switch 0..20mA) A04/A05 configurable as O.C. 12VC 100mA max each
digital inputs	8 x safety extra low voltage SELV	8 x safety extra low voltage SELV
	1 x voltage free Fast counter 1KHz	1 x voltage free Fast counter 1KHz
analogue inputs	2 x NTC 103AT / NTC NK103 / D.I.	2 x NTC 103AT / NTC NK103 / D.I.
	4 x NTC 103AT / NTC NK103 / D.I. / Pt1000 / 4...20 mA / 0...10V / 0...5V	4 x NTC 103AT / NTC NK103 / D.I. / Pt1000 / 4...20 mA / 0...10V / 0...5V
connectivity	USB (only 060B00 version); 1 x Plug-in NKS	USB (only 060B00 version); 1 x Plug-in NKS
	CANBus: CANopen	CANBus: CANopen
	RS485: Modbus RTU	RS485: Modbus RTU
working temperature	-10...+55°C	-10...+55°C

Part numbers

	NKD7500	NKC7500
010B00	standard	standard
060B00	with USB	with USB

Electrical wirings and installation

NKD7500 - NKC 7500

Available IEC resources for programmer

CPU	72 MHz, 32 MB RAM
available memory for Application	1 MByte
available memory for User Interface	1.5 MByte
memory FLASH data	128 MByte
RAM memory - automatic mapping	512 KByte
memoria RAM - Modbus mapping	5000 word
EEPROM variables	4000 word

Minimum kit for the developer

· Installation setup NK STUDIO
· 1 NK 7500
· USB/RS485 converter or plug in Ethernet plug-in for connection with PC
· Power transformer for NK 7500

Expansion modules NKE, terminal NKK

NKE7500

NKE7542

NKK7510

Technical specification

format	8 DIN	4 DIN	160x96x10mm
installation	on DIN rail	on DIN rail	panel-mounted (for wall-mounting see Accessories page)
display	-	-	Backlit LCD
power supply	24V~/c - 48Vc	24V~/c non isolata	12...24V~ / 24Vc
digital outputs	2 x 8A 250V~	1 x 5A 250V~	-
	5 x 5A 250V~	3 x 3A 250V~	
analogue outputs	5 x 0...10V / 4...20mA / switch 0..20mA	2 x 0...10V	-
digital inputs	8 x safety extra low voltage SELV 1xvoltage free Fast counter 1KHz	4 x safety extra low voltage SELV	-
analogue inputs	2 x NTC 103AT / NTC NK103 / D.I.	4 x NTC 103AT / NTC NK103 / D.I. / Pt1000 / PTC / 4...20 mA / 0...10V / 0...5V	-
	4 x NTC 103AT / NTC NK103 / D.I. / Pt1000 / 4...20 mA / 0...10V / 0...5V		
connectivity	CANBus: CANopen	CANBus: CANopen	CANBus: CANopen
	RS485: Modbus RTU	-	-
	1 x NKS Plugin (only NKS RS485, NKS CAN)	CANbus / TTL non isolated	-
working temperature	-10...+55°C	-10...+55°C	-5...+55°C

Part numbers

NKE7500000B00	NKE7542000B00	NKK7510000B00

Electrical wirings and installation

NKE7500

NKE7542

Plugin NKS

Plug-in models 2DIN; power supply based on NKD / NKC		
Part number	Output dangerous voltage	Connectivity protocoll
NKS10R2000000	1 x SPDT 5A 250V~	Modbus ASCII
NKS00R4000000	-	Modbus RTU
NKS00CA000000	-	CANopen
NKS00ET000000	-	Modbus TCP - BACnet IP - HTTP
NKS00PB000000	-	Profibus DP Slave-V0

NKS

Touch Screen MTS

Technical specification

Display TFT LCD	16:9
Dimensions	7"
Resolution	800x480
Colours	262144
CPU RISC	400MHZ
FLASH	128M
Power supply	24 VC ±15%
Consumption	6W
SD card	1
Serials	5
RS485 (Modbus-RTU)	2
USB Device (USB-A)	1
USB Host (USB-B)	1
Ethernet (LAN Modbus TCP-IP)	1
Dimensions	228x154x41
Cutout (mm)	221x138
Weight	1,5 KG
Protection degree (frontal)	IP65
Working temperature	-10...+65°C
Working humidity	10...90%RH
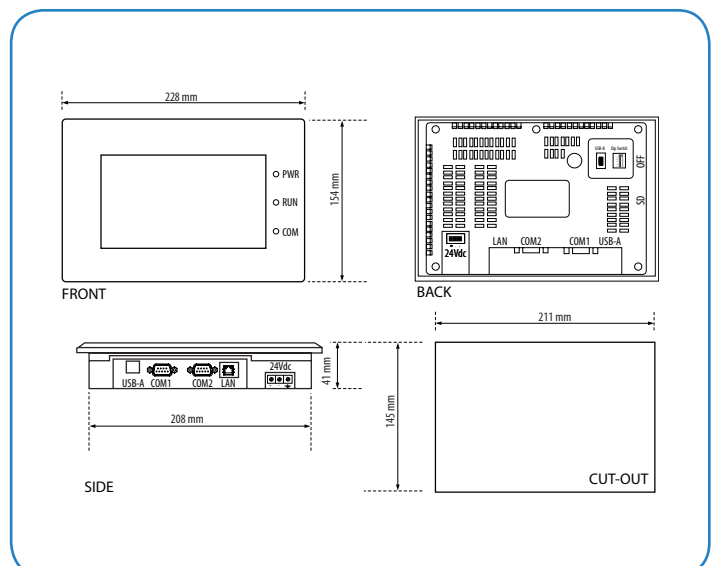
With the possibility to create graphic pages.

MTS700C

Installation

FRONT

BACK

SIDE

CUT-OUT

Models NKP 3000

NKP 3000 is an HMI and communications based controller with the same programming capabilities making it ideally suited for distributed control systems, a centralized gateway device, and linking NK 7500 e NK 5500 or third-party controllers.

NKP 3000 guarantees high performance in terms of memory, user interface, connectivity Master/slave and can be expanded by CANbus (field) up to 12 expansion modules as well as straightforward programming, maintenance and servicing.

NKP 3000 can also be wall-mounted using a special backplate, available as an accessory.

NKP 3000

NK 3300 equipped with RTC (Real Time Clock). / **NK 3500** equipped with RTC (Real Time Clock) and humidity sensor.

Part number	Installation	Display	Inputs safety extra low voltage SELV	Serial
NKP3300010B00	panel (for wall-mounting see Accessories page)	LCD backlit	1 x NTC integrated; 1 x NTC remote; 1 x 4...20mA remote	CANbus; RS485; Ethernet
NKP3500010B00	panel (for wall-mounting see Accessories page)	LCD backlit	1 x NTC integrated; 1 x NTC remote; 1 x %RH integrated	CANbus; RS485; Ethernet

KEY: SELV = Safety Extra Low Voltage

Technical specification

format	160x96x10mm	160x96x10mm
display	LCD graphic display 128x64px backlit	LCD graphic display 128x64px backlit
power supply	24V~/C - 48VC	24V~/C - 48VC
analogue inputs	**AI1** 1 x NTC incorporated **AI2** 1 x NTC / D.I. remote **AI3** 1 x 4...20mA / 0...5V / 0...10V remote	**AI1** 1 x NTC incorporated **AI2** 1 x NTC / D.I. remote **AI4** 1 x %RH incorporated
connectivity	CANBus: CANopen RS485: Modbus RTU, BACnet MSTP Ethernet: Modbus TCP - BACnet IP - HTTP	CANBus: CANopen RS485: Modbus RTU, BACnet MSTP Ethernet: Modbus TCP - BACnet IP - HTTP
working temp.	-5...+55°C	-5...+55°C

USB-RS485; Ethernet		
PC ➔ ⬅ NK 3000		
Data download direction	➔	⬅
Parameter map	✓	✓
Application IEC-HMI	✓	-
Data file	✓	✓
BIOS	✓	-

Part numbers

NKP3300010B00	NKP3500010B00

Electrical wirings and installation
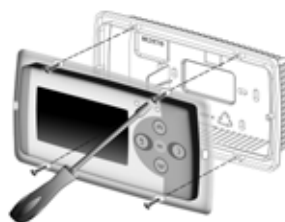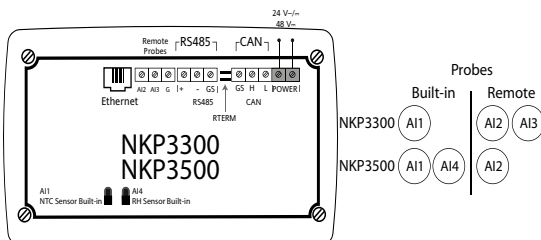
NKP3300 - NKP3500

Available IEC resources for programmer

CPU	72 MHz, 32 MB RAM
available memory for Application	1 MByte
available memory for User Interface	1.5 MByte
memory FLASH data	128 MByte
RAM memory - automatic mapping	512 KByte
memoria RAM - Modbus mapping	5000 word
EEPROM variables	4000 word

Minimum kit for the developer

· Installation setup NK STUDIO
· 1 NK 3000
· USB/RS485 converter or plug in Ethernet plug-in for connection with PC
· Power transformer for NK 3000
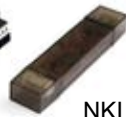
NK 3000

Accessories

Backplates NKP / NKK

Pressure transducers

Converter USB/RS485

NKI

In association with **NK** series **Eatec** supplies a wide range of accessories, from the protected transformer to IP68 temperature probes, pressure/ratiometric transducers and pressure switches.

Single-phase (with a current from 2 to 9A) and three-phase fan modules are also available.

The connection of ratiometric pressure sensors, external modules (e.g. fan modules) and terminals does not require the use of any other serial interfaces.

Part number	Description	Details
Converters, interfaces, programming keys		
SAR0RA00X701	USB/485 MINI KIT converter	Only for NK 7500
NKI5510030020	Interface module DMI100-3 Manufacturer	Only for NK 5500
MFK100T000000	MFK: programming key for uploading/downloading parameters, applications	Only for NK 5500
Wiring		
NKC55IO00000	Wiring for I/O connection - safety extra low voltage SELV - cable 1mt (*)	Only for NK 5500 12...24V
NKC55OA00000	Wiring RS485	Only for NK 5500 12...24V
NKC55BUS0000	Wiring AO3-4-5 - cable 1mt (*)	Only for NK 5500 12...24V
Backplates		
NKC55WMRC0000	White backplate kit (4 pcs) for wall mounting.	For NKP/NKK
NKC55WMRC0001	Black backplate kit (4 pcs) for wall mounting.	For NKP/NKK
Humidity module		
NKW5522P10000	%RH Humidity module	For NKW terminal
Transformers		
NKC55TF411205	230V~/12V 6VA transformer (protected)	Only for NK 5500
NKC55TF411210	230V~/12V 11VA transformer (protected)	Only for NK 5500

KEY: SELV = Safety Extra Low Voltage
(*) different cable lengths available on request

The software

The NK STUDIO software suite is compatible with all 5 standard programming languages (IEC61131-3).
Each project can be composed of several programs; the developer can use one or more languages in the same project.

Each new program can be chosen from the 5 programming languages, 2 texts and 3 graphics:

> • ST, Structured Text
> • FBD, Functional Block Diagram
> • LD, Ladder
> • IL, Instruction List
> • SFC, Sequential Function Chart

Main functions

Display of variables with running application

Debugging of variables by displaying their status in numeric format when the application is running and connected to NK 5500, NK 8400, NK 1260, NK 7500 and NK 3000.

Libraries of functions
Managing default function libraries and/or created by the developer.
Any additional tabs are handled by the developer.

Display of graphic variables
Debugging of variables by displaying their status in graphic format when the application is running and connected to NK 5500, NK 8400, NK 1260, NK 7500 and NK 3000.

Reading / writing variables
The software allows:
• create dedicated menus to visualize on the device display
• read and write BIOS parameters (parameters + I / O values)
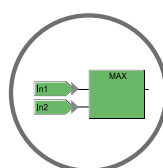• read and write the parameters and variables defined by the developer in the Application associated with the menu

Online Help to assist the programmer at any stage of the program's development, which is accessed at the same time by pressing the F1 key.
The entire help is also available in printable pdf format
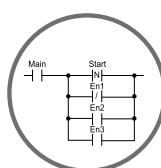
Baselines and ready-to-download libraries via web.
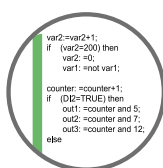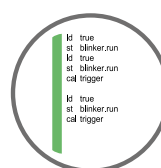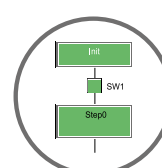
ST   FBD   LD   IL   SFC

We operate successfully in the field of air conditioning with a wide range of solutions characterized by the ease of installation and use.

The wide range of controllers offered allows to meet various customer requirements coming up to the development of customized solutions.

We developed some standards as following.

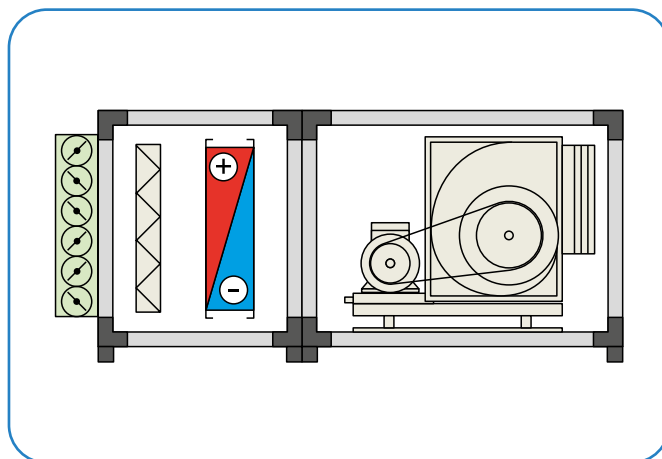# APPLICATION NK5500

Software code UTA0B1-000000

Air handling unit with 1 battery

All external air.
- Heating / cooling water.

Compensated temperature regulation or supply fixed temperature control:
- Limit control of supply temperature, antifreeze temperature and outside temperature.
- Control of ventilation motor, damper and modulating battery.
- Visualization of the status and alarms (clogged filters, engine block, defective sensor, micro ports, etc.)
- Manual adjustment of the set point either locally or remotely via an LCD terminal (optional).
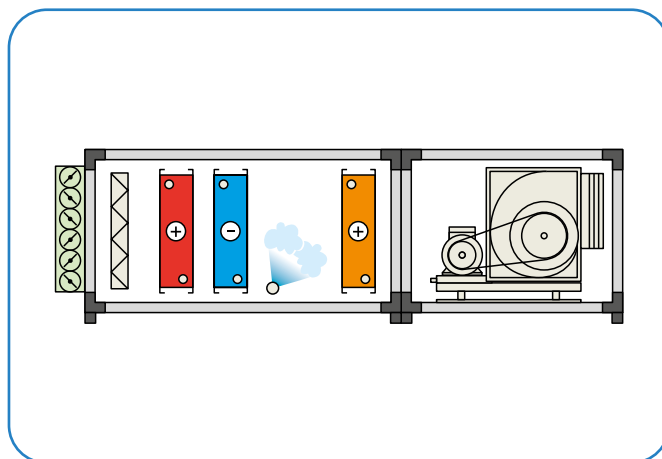

Software code UTAUB3-0000000

Air handling unit with 3 batteries with on-off humidification

All external air.
- Water pre-heating.
- Water cooling.
- Water post-heating.
- ON-OFF Humidification.

Compensated temperature/humidity control or supply fixed temperature control.
- Limit control of supply temperature, antifreeze temperature, outside temperature and supply humidity.
- Control of the fan motor, damper, modulating batteries and humidification on-off.
- Visualization of the status and alarms (clogged filters, engine block, defective sensor, micro ports, etc.)
- Manual adjustment of the set point either locally or remotely via an LCD terminal (optional).

Software code	
UTA0B1-000000	1 heating / cooling battery
UTA0B2-000000	1 heating battery and 1 cooling battery
UTA0B3-000000	1 pre-heating battery, 1 cooling battery, 1 post-heating battery
UTAUB1-000000	1 heating / cooling battery with on-off humidification
UTAUB2-000000	1 heating battery and 1 cooling battery with on-off humidification
UTAPUB3-00000	1 pre-heating battery, 1 cooling battery, 1 cooling battery with on-off humidification

APPLICATION NK7500
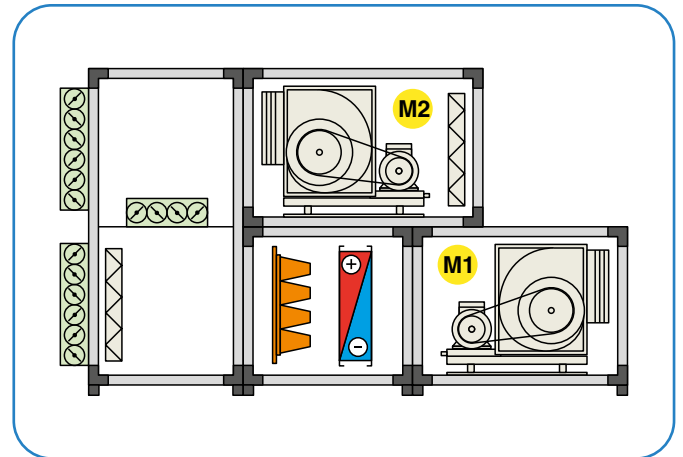
Software code CTA0B1-000000

Air handling unit with 1 battery

All external air or return air in ambient.
- Water heating / cooling.

Compensated temperature control or return fixed temperature control:
- Limit control of supply temperature, antifreeze temperature and outside temperature.
- Control of ventilation motor, damper and modulating battery.
- Visualization of the status and alarms (clogged filters, engine block, defective sensor, micro ports, etc.)
- Manual adjustment of the set point either locally or remotely via an LCD terminal or touch screen (optional).
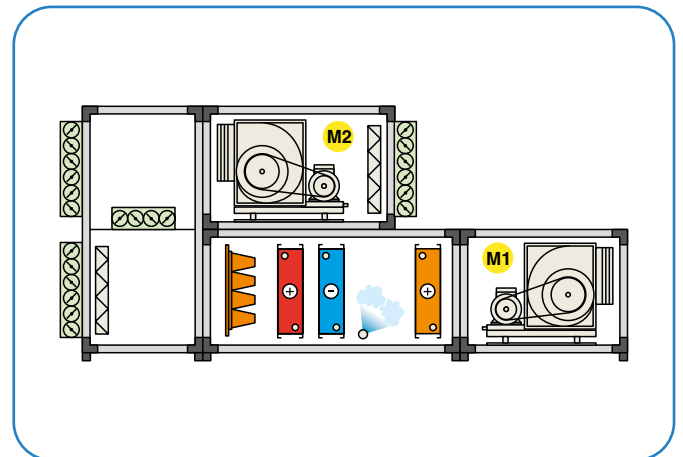
Software code CTAUB3-000000

Air handling unit with 3 batteries with modulating humidification

All external air or return air in ambient.
- Water pre-heating.
- Water cooling.
- Water post-heating.
- Modulating 0...10 Vdc humidification.

Compensated temperature/humidity control or return fixed temperature control.
- Limit control of supply temperature, antifreeze temperature and outside temperature and supply humidity.
- Control of the fan motor, damper, modulating batteries and modulating humidification.
- Visualization of the status and alarms (clogged filters, engine block, defective sensor, micro ports, etc.)
- Manual adjustment of the set point either locally or remotely via an LCD terminal or touch screen (optional).

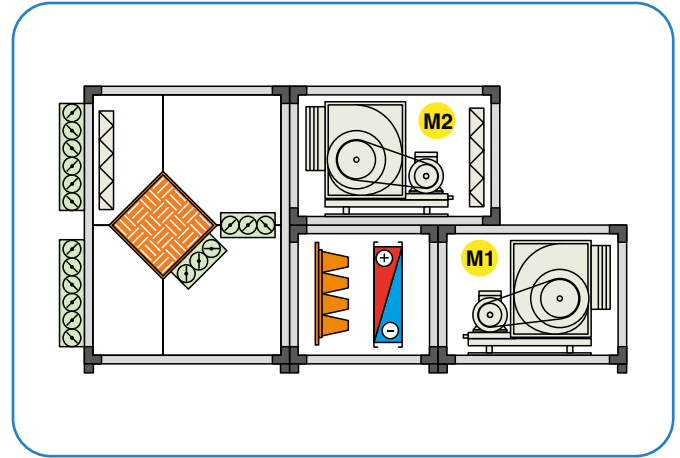| Software code	
CTA0B1-000000	1 heating / cooling battery and modulating mixing air room
CTA0B2-000000	1 heating battery and 1 cooling battery and modulating mixing air room
CTA0B3-000000	1 pre-heating battery, 1 cooling battery, 1 post-heating battery and modulating mixing air room
CTAUB1-000000	1 heating / cooling battery and modulating mixing air roomwith on-off humidification
CTAUB2-000000	1 heating battery, 1 cooling battery and modulating mixing air room with on-off humidification
CTAUB3-000000	1 pre-heating battery, 1 cooling battery, 1 post-heating battery modulating mixing air room with on-off humidification

Software code RTA0B1-000000

Air handling unit with 1 battery

All external air or return air in ambient with cross flows heat recovery.
- Water heating / cooling.

Compensated temperature control or return fixed temperature control.

- Limit control of supply temperature, antifreeze temperature and outside temperature.
- Control of ventilation motor, damper and modulating battery.
- Visualization of the status and alarms (clogged filters, engine block, defective sensor, micro ports, etc.)
- Manual adjustment of the set point either locally or remotely via an LCD terminal or touch screen (optional)


Software code RTAUB3-000000

Air handling unit with 3 batteries with modulating humidification

All external air or return air in ambient with cross flows heat recovery.
- Water pre-heating.
- Water cooling.
- Water post-heating.
- Modulating 0...10 Vdc humidification.

Compensated temperature/humidity control or return fixed temperature control.
- Limit control of supply temperature, antifreeze temperature and outside temperature and supply humidity.
- Control of the fan motor, damper, modulating batteries and modulating humidification.
- Visualization of the status and alarms (clogged filters, engine block, defective sensor, micro ports, etc.)
- Manual adjustment of the set point either locally or remotely via an LCD terminal or touch screen (optional).
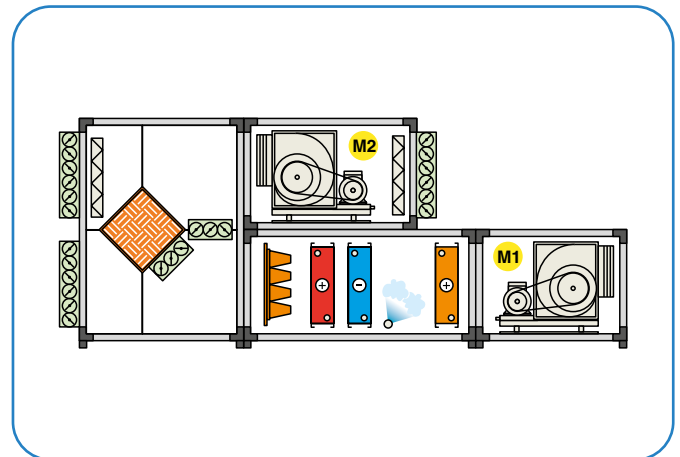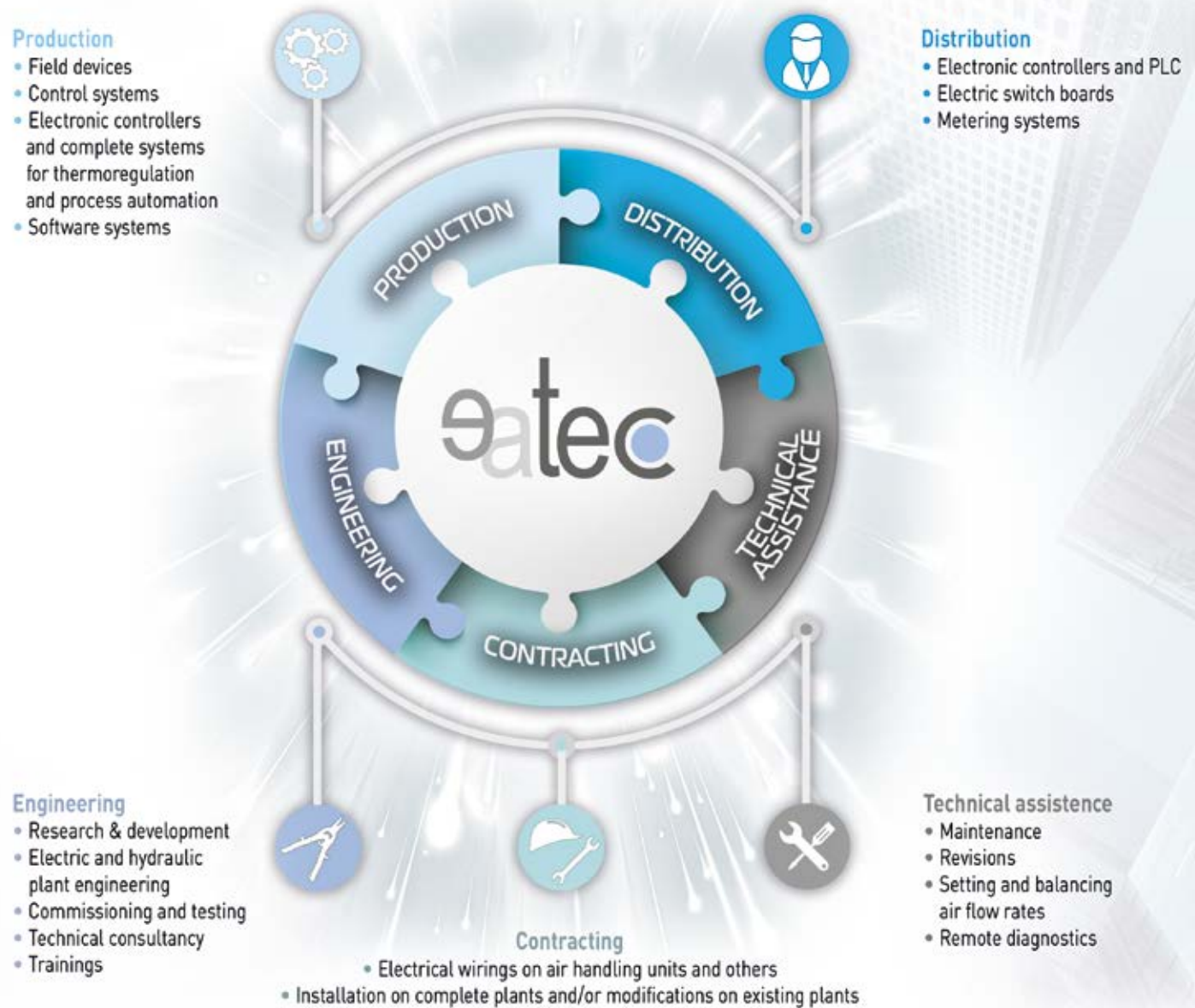

Codice Applicazione	
RTA0B1-000000	1 heating / cooling battery, modulating mixing air room and heat recovery
RTA0B2-000000	1 heating battery and 1 cooling battery, modulating mixing air room and heat recovery
RTA0B3-000000	1 pre-heating battery, 1 cooling battery, 1 post-heating battery, modulating mixing air room and heat recovery
RTAUB1-000000	1 heating / cooling battery , modulating mixing air room and heat recovery with on-off humidification
RTAUB2-000000	1 heating battery, 1 cooling battery, modulating mixing air room and heat recovery with on-off humidification
RTAUB3-000000	1 pre-heating, 1 cooling, 1 post-heating battery, modulating mixing air room, heat recovery with on-off humidification

Our services

EATEC is not only technology.
It is also an organization of people with a wealth of professional skills. A team updated on the latest technologies and changes in the arket, ready to assist customers, whatever their sector or size, finding tailor-made solutions in short time.

Production
- Field devices
- Control systems
- Electronic controllers and complete systems for thermoregulation and process automation
- Software systems

Distribution
- Electronic controllers and PLC
- Electric switch boards
- Metering systems

Engineering
- Research & development
- Electric and hydraulic plant engineering
- Commissioning and testing
- Technical consultancy
- Trainings

Contracting
- Electrical wirings on air handling units and others
- Installation on complete plants and/or modifications on existing plants

Technical assistence
- Maintenance
- Revisions
- Setting and balancing air flow rates
- Remote diagnostics

Our application areas

We develop the ideal solution in accordance with the type of system and the need of the customer:

- Commercial offices
- Hotel
- Industrial plants
- Residential

- Data Processing Centers
- Hospitals
- Research centers
- Public offices

- Schools
- Sports facilities
- Shopping centers
- Airports

general sales conditions

PRICES

The prices mentioned in our current price list are in Euro (€) do not include VAT and, even if confirmed, can be subject to variations due to increases in raw materials and labour costs. If the price is tied to parity between the Euro and a foreign currency, the rate of exchange value is specified by publication by the Banca d'Italia, as indicated in the „Il Sole 24 Ore" daily newspaper. If the rate of exchange varies by more than 5%, we reserve the right to modify at any time our prices and the discounts applied to current orders. In such a case the buyer is entitled to withdraw immediately from the order.

The said prices do not include transport and insurance costs, im-port license expenses, customs charges, etc., and are considered chargeable to the Buyer.

Our quotations are not binding for the order; the Buyer accepts our delivery terms. After issuing our order acknowledgement, the order is confirmed.

Minimum ordering amount: € 250,00 net (under this amount the price in force is not confirmed). Neutral products are supplied without a surcharge but minimum 50 pieces/part number.

Certificates of origin issued by Chamber of Commerce € 50,00. Certificates legalized by foreign embassy min. € 250,00.

PACKING

Packing is included in the sale price. Packing different from standard will be invoiced at cost (standard plastic pallets at € 20,00 net each).

DOCUMENTS

We reserve rights on all documents referring to the products and/or made available with quotations, acknowledgements or on delivery. Such documents may neither be copied nor made available to third parties without our written agreement. They must be returned to us on request.

SHIPMENT

Shipment is ex our works, unless otherwise agreed.

As soon as the goods are handed over to the forwarder, all our obligations are considered fulfilled.

Therefore, all expenses and risks will be the Buyer's responsibility without any exceptions, even if the shipping charges are prepaid by us.

It is the Buyer's responsibility to insure the goods against damage and/or loss. We therefore cannot be held liable for damage and/or loss.

The shipping rates for Italy are at cost price, and we reserve the right to select the most suitable means of transport.

In case of payment by cash on delivery, the fees are always in-curried by us and debited to the Buyer.

DELIVERY TERMS

Delivery terms are indicative and are not binding. We cannot be held liable for any production or shipment delay, if such a delay is caused by one of the following reasons: a commercial blockade, difficulties in obtaining raw materials and/or other circumstances beyond our control. In that case we do not accept any penalties and the Buyer renounces any claims for indemnity and/or reimbursement of damages.

We reserve the right to delivery the goods before the agreed date.

CLAIMS

Clams have to be brought to our attention within 8 days after the receipt of the goods, otherwise we will not accept the said claims. Claims do not authorise delays in payment or further price reductions. In case of packing received damaged, the Buyer must inform the forwarder immediately, and send a copy to us for information.

PAYMENT TERMS

Invoices are payable in the currency specified in the invoice.

Payments must be remitted within the agreed expiry data. We reserve ownership of the goods until the invoice and any accessory expenses have been fully paid. Failure by the Buyer to pay by the due date automatically gives rise to interest, giving us the right to deem the contract cancelled because of such failure, unless we prefer to ask for settlement of the amount due, by recourse to law if necessary, with bank interest and damages added. If the Buyer stops a payment, the outstanding amount becomes immediately due and we will file a petition for bankruptcy.

Interest on arrears: in the case of delayed payments, interest on arrears will be calculated at the rate of 7 (seven) points above the official rate of discount of the Banca d'Italia in force at the time such interest was applied.
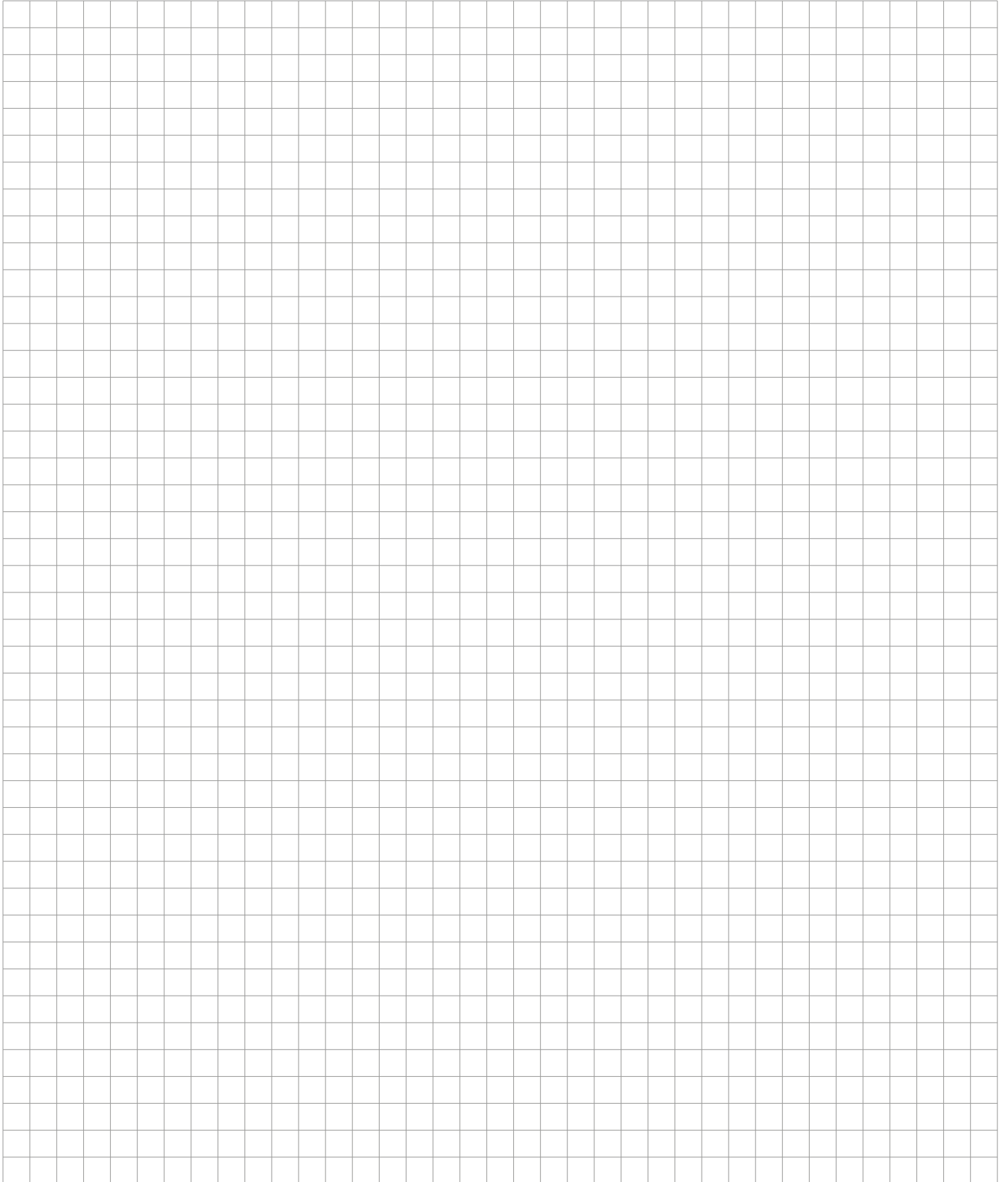
WARRANTY

All the products supplied by us are guaranteed against construction faults or defects of material for 24 months from the date of delivery, the term by which we shall repair the faulty parts in order to restore correct operation of the appliances. We do not accept any responsibility for direct or indirect damage caused by the use of the said appliances. Any return of material must be requested from us in writing, must reach us free our works and will be re-turned ex our works.

The guarantee is restricted exclusively to the repair at our plant, of appliances acknowledged to be defective, whereas all other costs of transport or labor for technical operations on the appliances are charged to the Buyer. The guarantee is voided if the appliances are found to have been tampered with or dismantled.
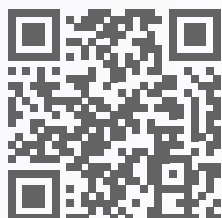
If interventions on appliances not considered to be under guarantee are requested, we reserve the right to debit the Buyer for management of the return € 40,00 spare parts, manpower etc. not included.

In the event of a dispute, the Buyer accepts that the Bolzano Court of Law is competent and accepts the laws in force in Italy.