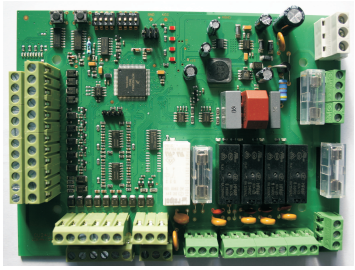
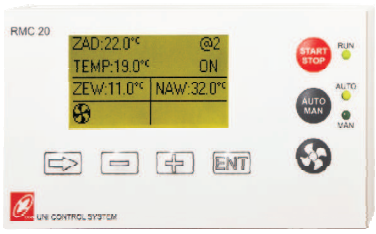
Controller
CU24V1





for AHU

Appplication

The **CU24V1** contoller is dedicated for jinlet-outlet AHU with exchanger or without.The contoller is delivered with a remote panel RMC20 with buit-in graphic display.

Functions

- **Temperature control**
  - Cascade control with min/max limit on supply air
  - Supply air temperature control
  - Water and electric heating control
  - Water cooling and compressor control
  - Preliminary heating function
  - Water heater frost protection
  - High temperature protection of electric heaters
- **Fans control**
  - Inlet and outlet fan control
  - Inverter control
  - Engine alarm
- **Heat recovery control**
  - Exchanger control
  - Exchanger frost protection
  - Exchanger protection by bypass damper or inlet fan speed modulation
- **Real time clock with week shedule**
- **Alarms**
  - Alarms informations on the RMC20 panel
  - Alarm clearing from the panel
- **BMS**
  - BMS facilities by RS485 serial comunication
  - MODBUS Comunication protocol

Uni Control System Sp. z o. o. tel: 58 305 19 87 e-mail: ucs@ucs.com.pl

Inputs

Type	Nr	Caracteristic
• Resistive:	4	PT1000 type, range -25 ...+70°C
• Digital:	5	Free potencjal contact

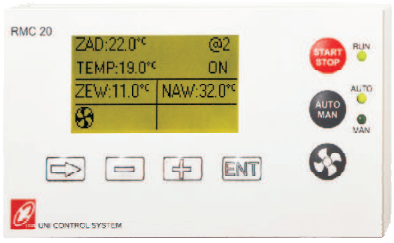
Outputsa

Type	Nr	Caracteristic
• Analog:	4	0-10V / 2mA
• Modulated:	2	21V ± 2VDC / 50mA
• Relay:	4	250VAC, 3A / Resistive load

Comunication

- RS485 serial port: 2 ports
- Odległość: up to 1200m
- Comunication protocol: MODBUS

Remote panel
RMC20



Data

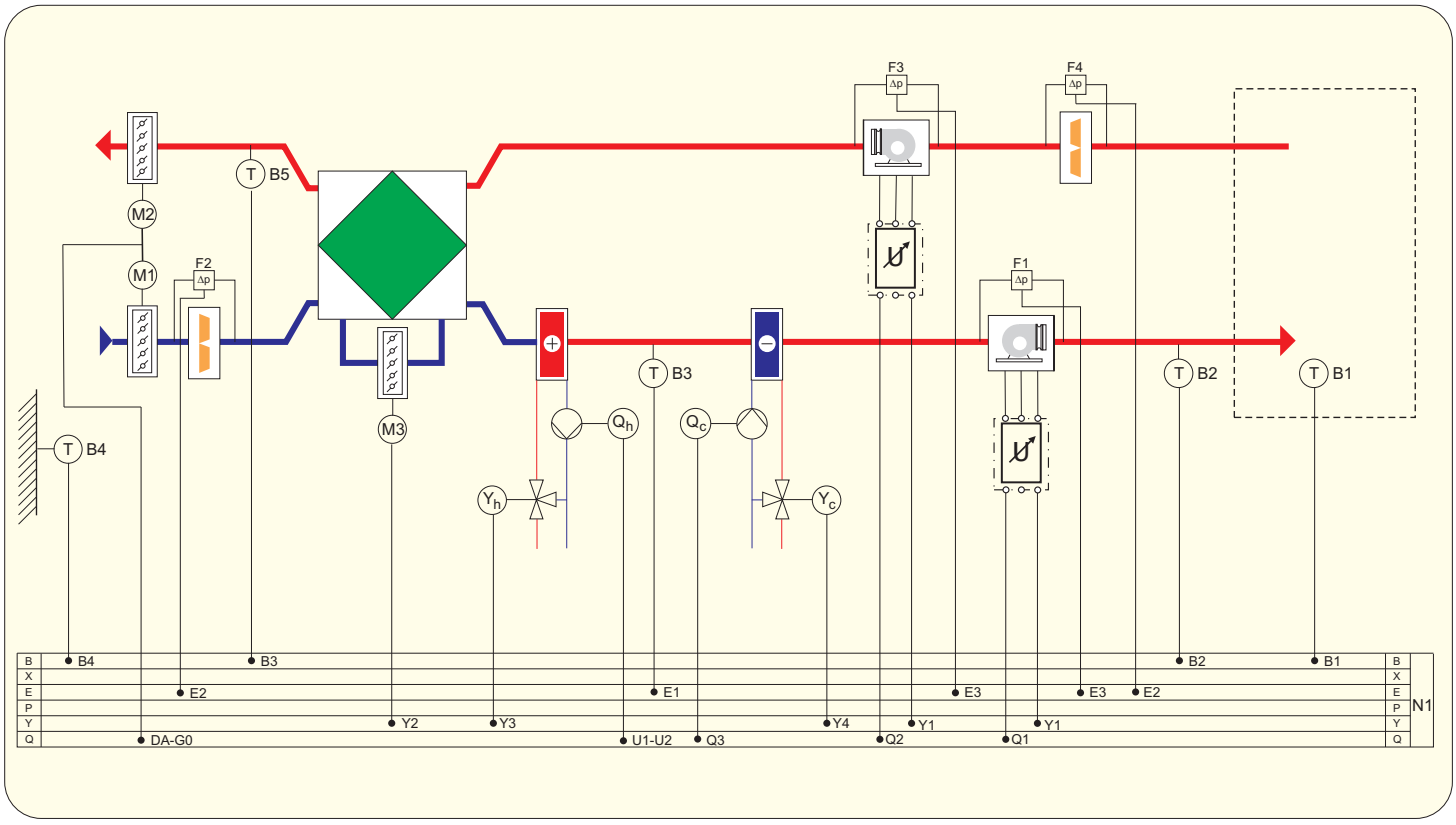
- Power supply: 24 VAC / DC
- Wiring: Shieled wire 5 x 0.5 mm2
- Dimensions: 120.6 x 69 x 25mm (Wide. x Height. x Deep.)

Comunication

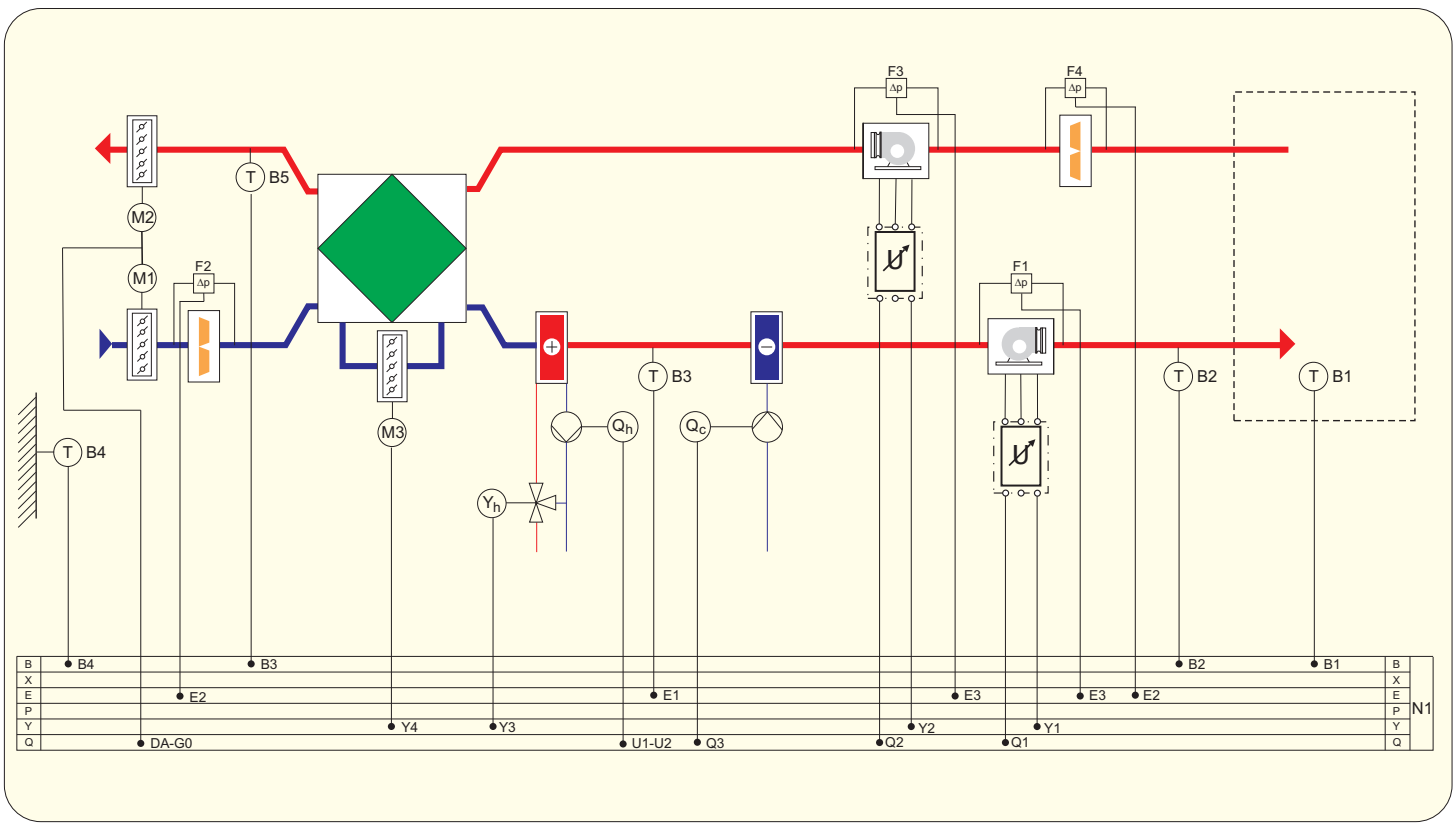
- RS485 serial port
- Lenght: up to 1200m
- Comunication protocol: MODBUS

Examples of aplications - 3-phase fans controlled by inverters

Inlet-Outlet AHU with exchanger , Water heater, Water cooler



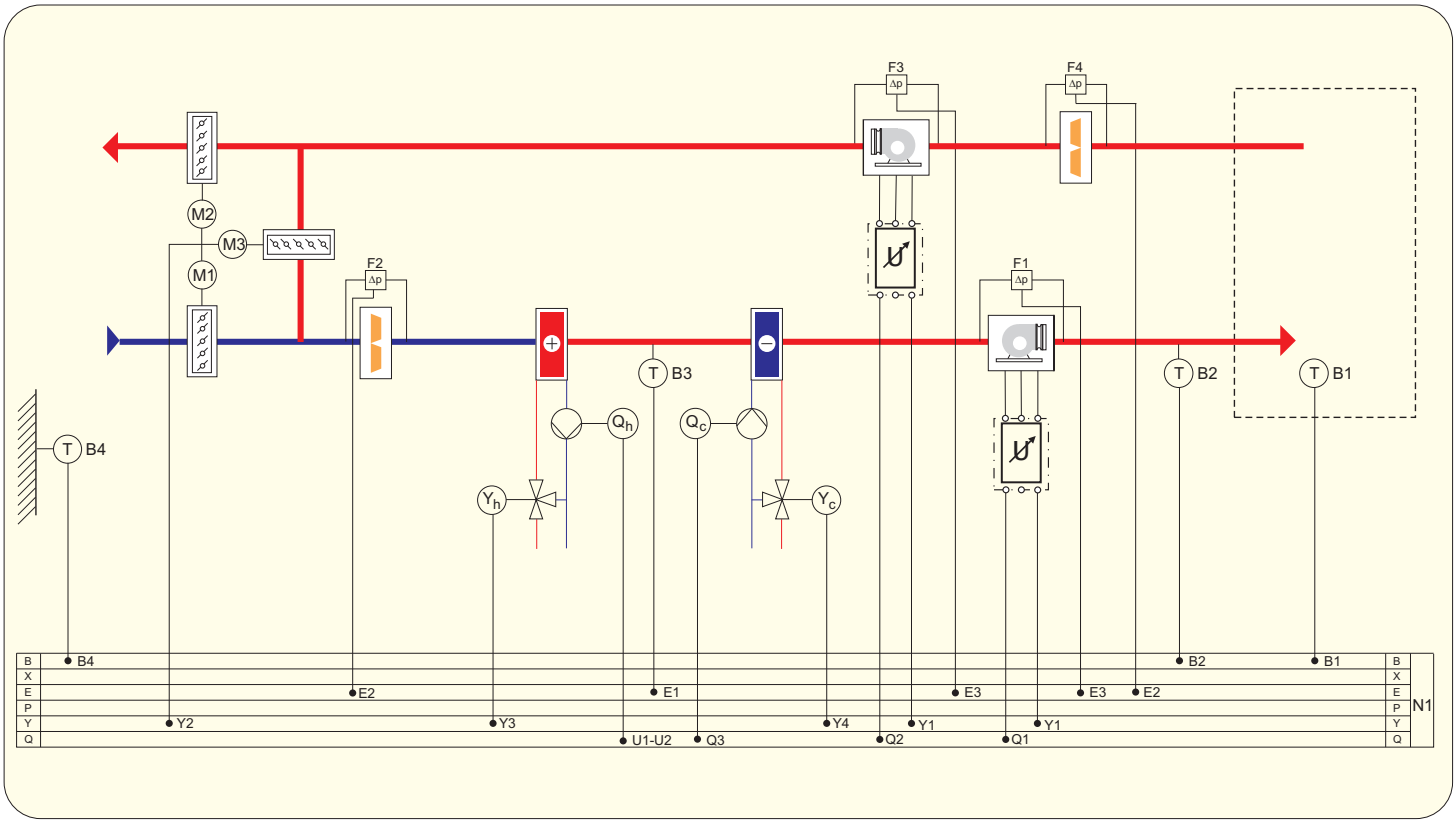
Inlet-Outlet AHU with exchanger , Water heater, Cooling compressor



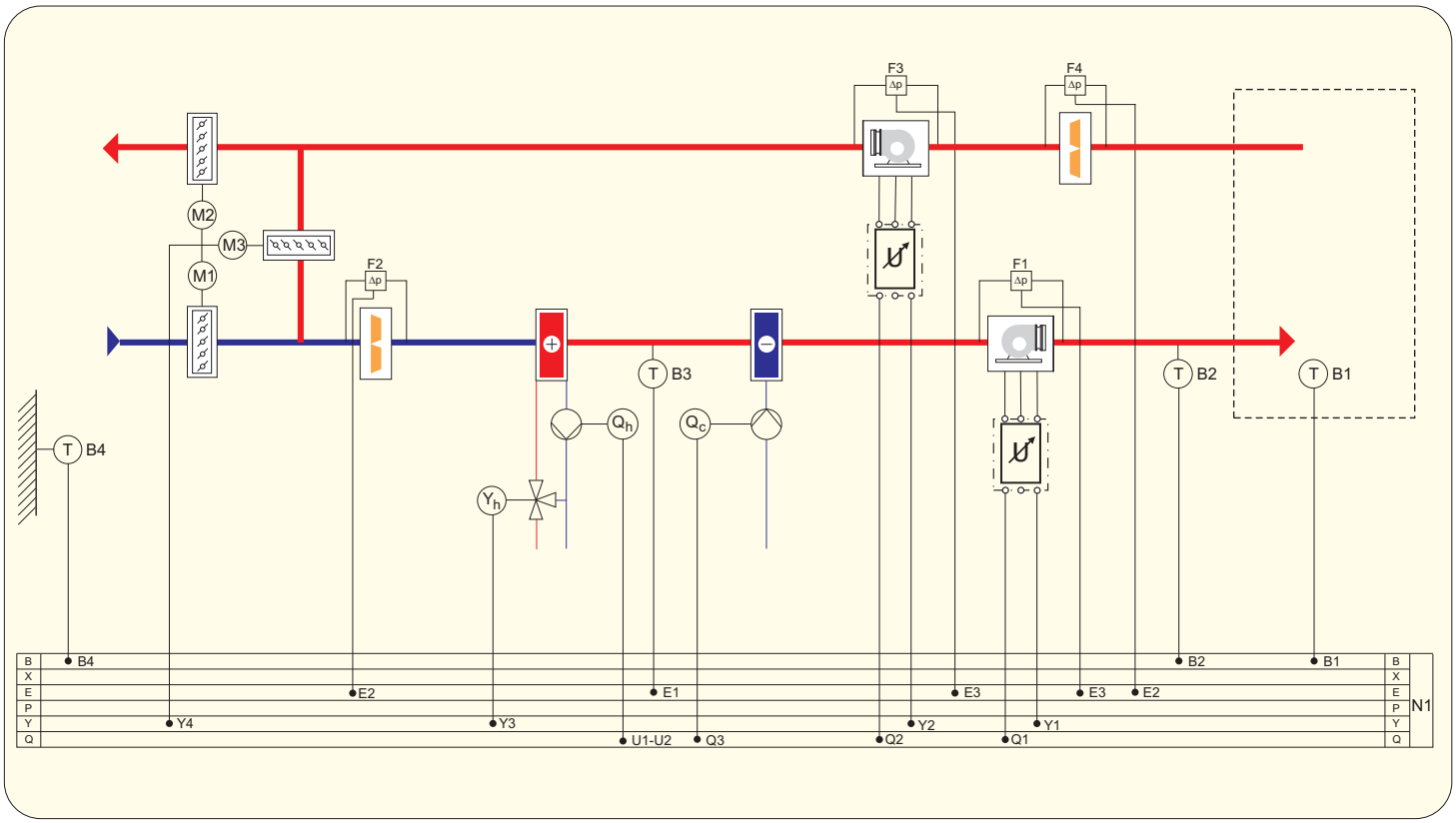
Uni Control System Sp. z o. o. tel: 58 305 19 87 e-mail: ucs@ucs.com.pl

Examples of aplications - 3-phase fans controlled by inverters

Inlet-Outlet AHU with recirculation dampers , Water heater, Water cooler

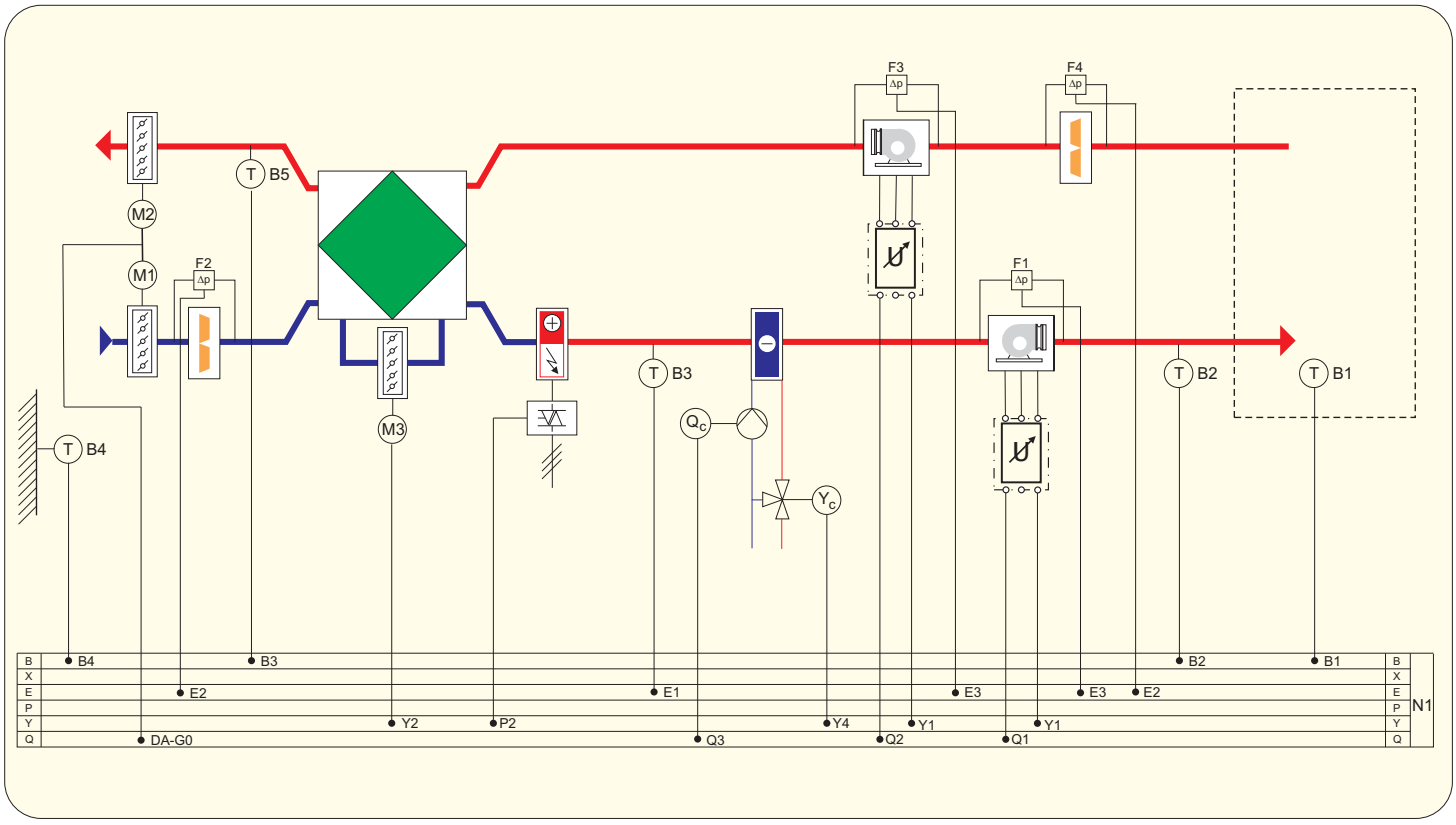


Inlet-Outlet AHU with recirculation dampers , Water heater, Cooling compressor

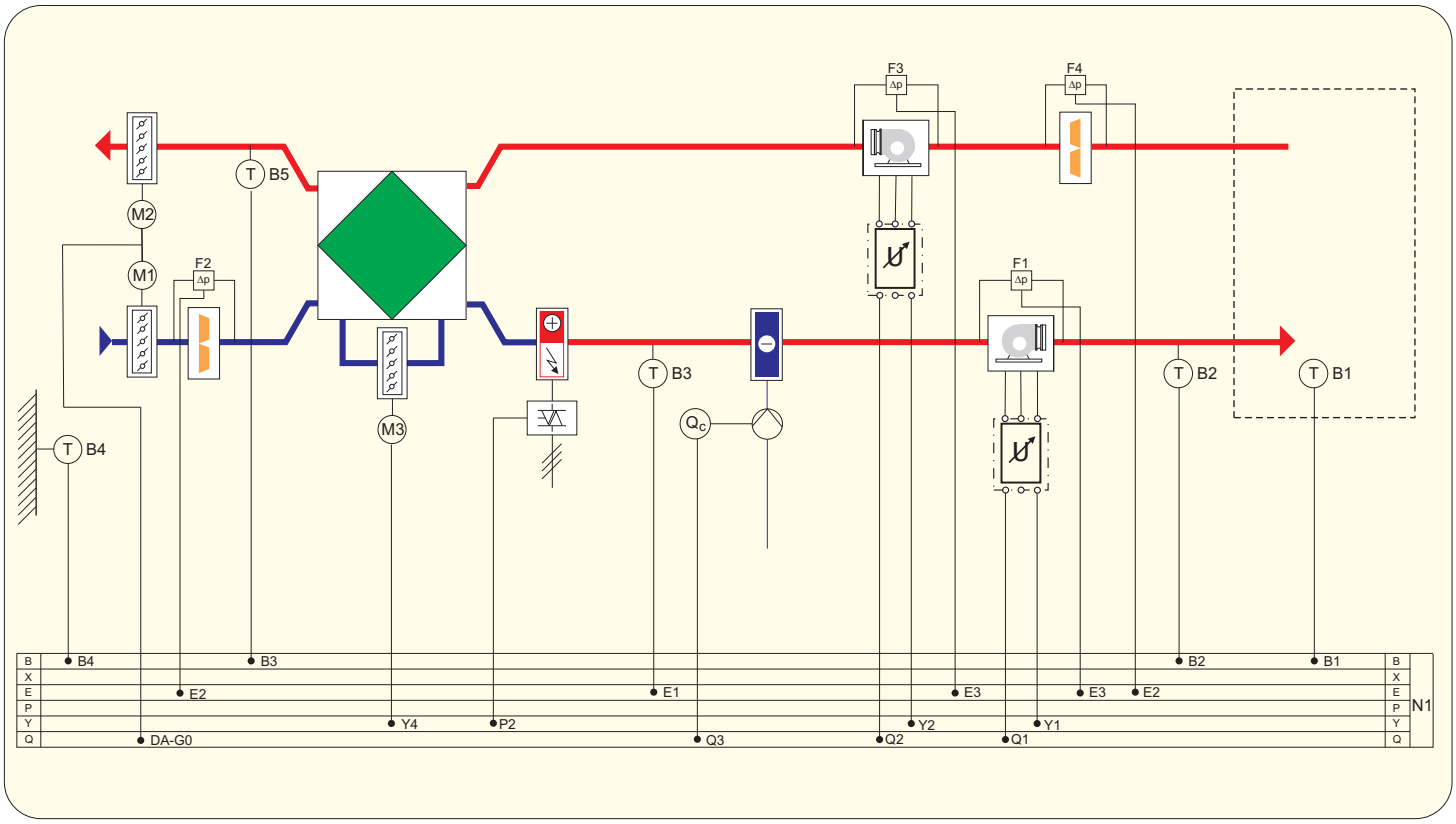


Examples of aplications - 3-phase fans controlled by inverters

Inlet-Outlet AHU with exchanger , Electric heater, Water cooler

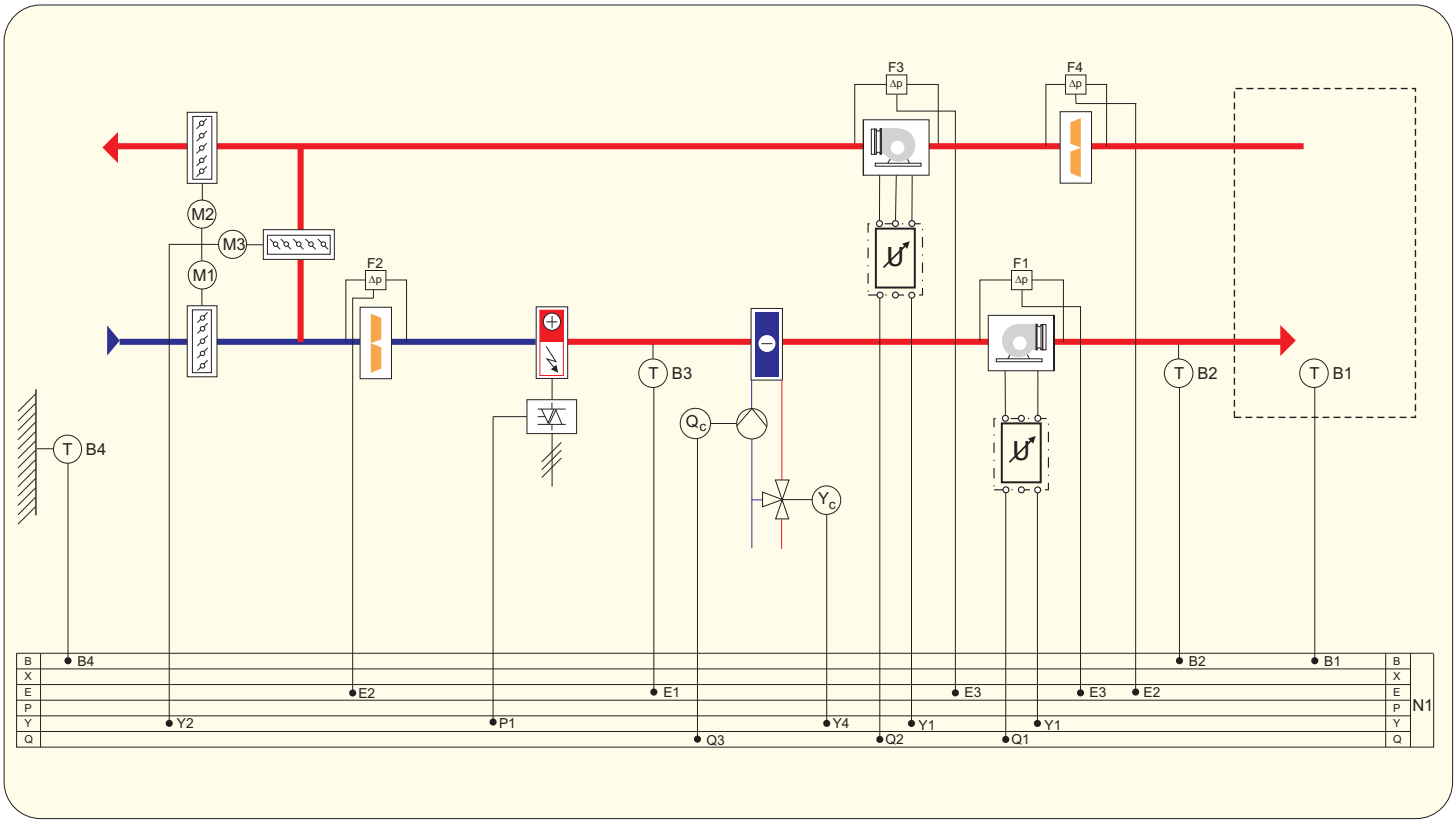


Inlet-Outlet AHU with exchanger , Electric heater, Cooling compressor

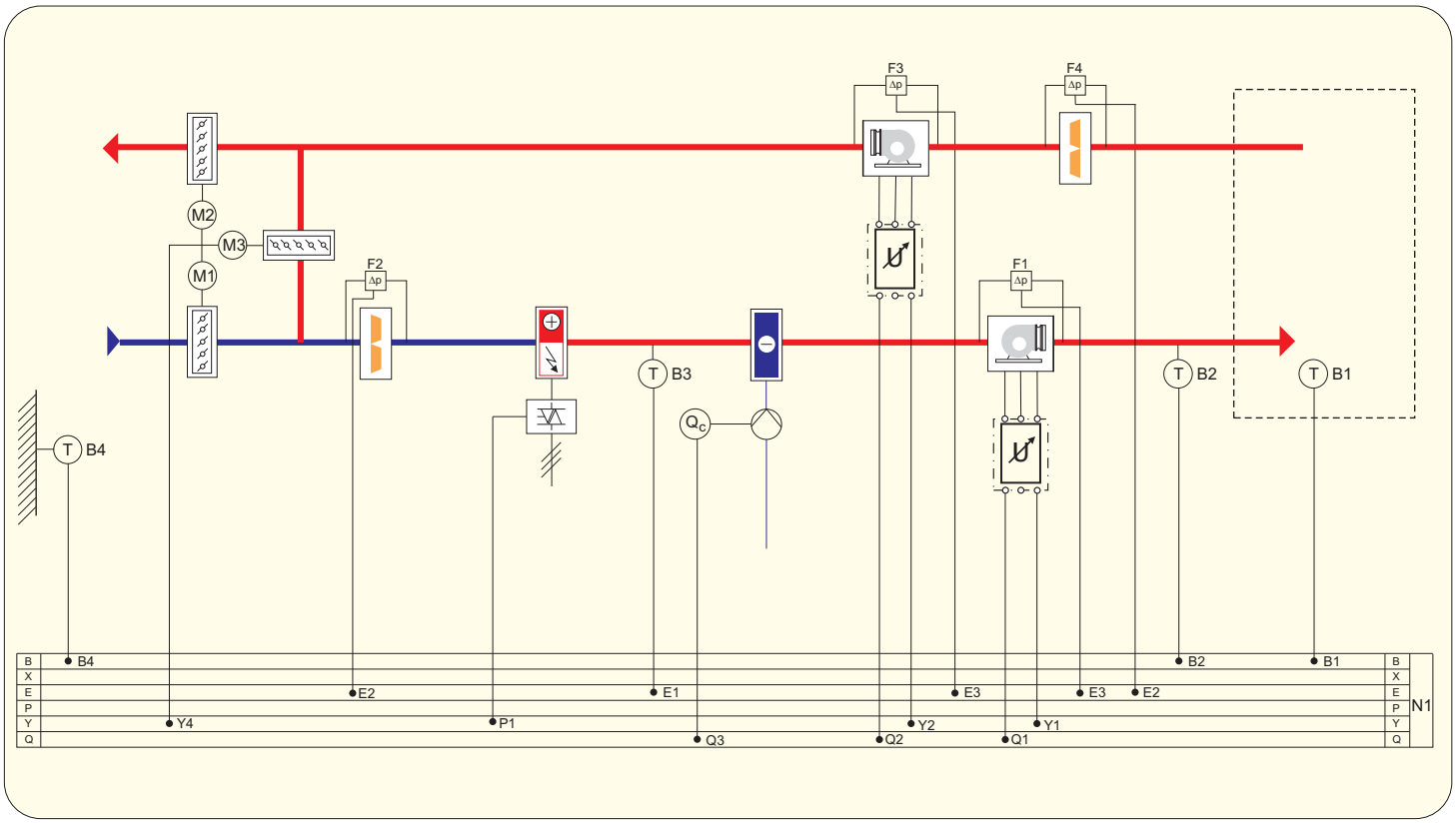


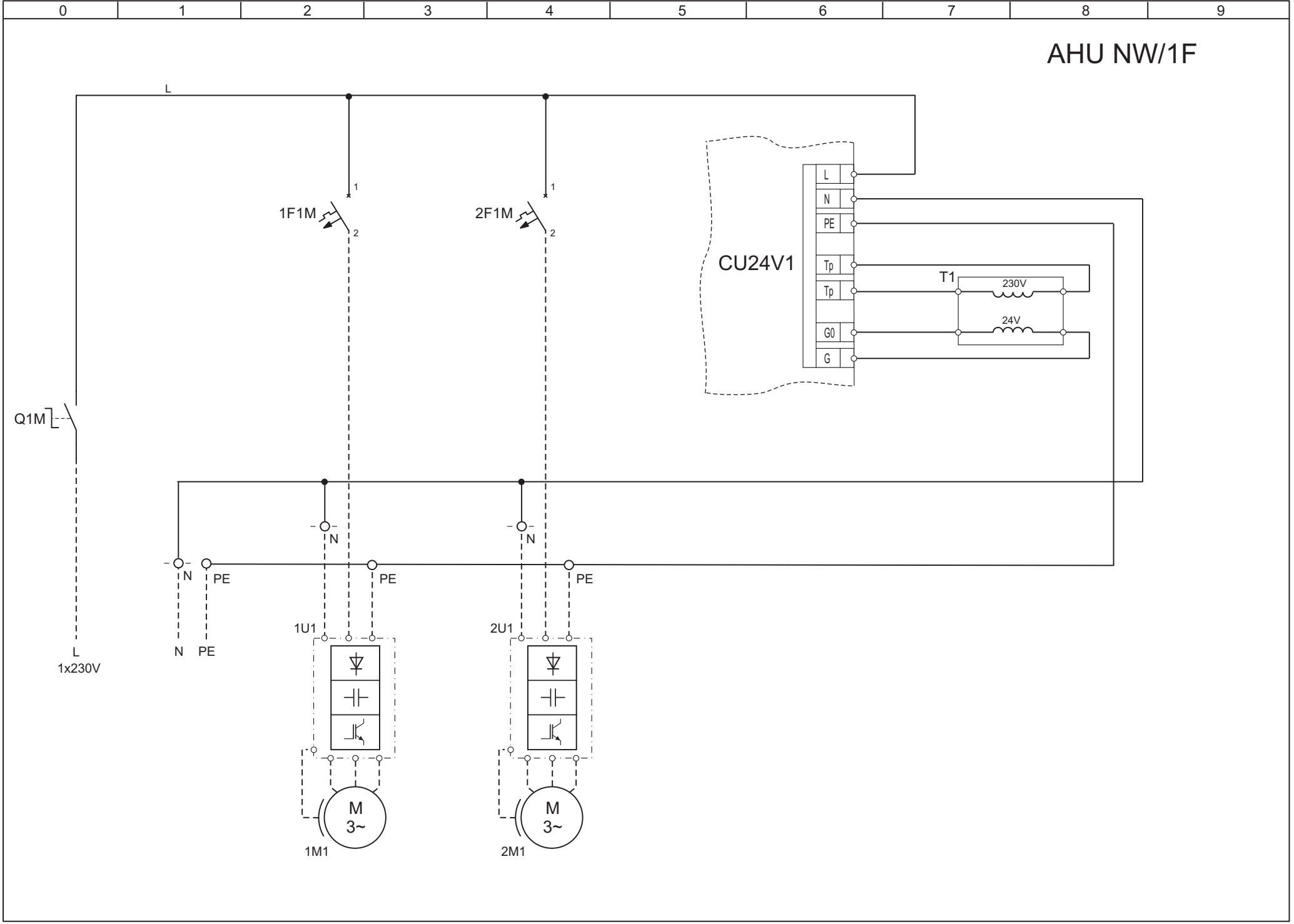
Examples of aplications - 3-phase fans controlled by inverters

Inlet-Outlet AHU with recirculation dampers , Electric heater, Water cooler

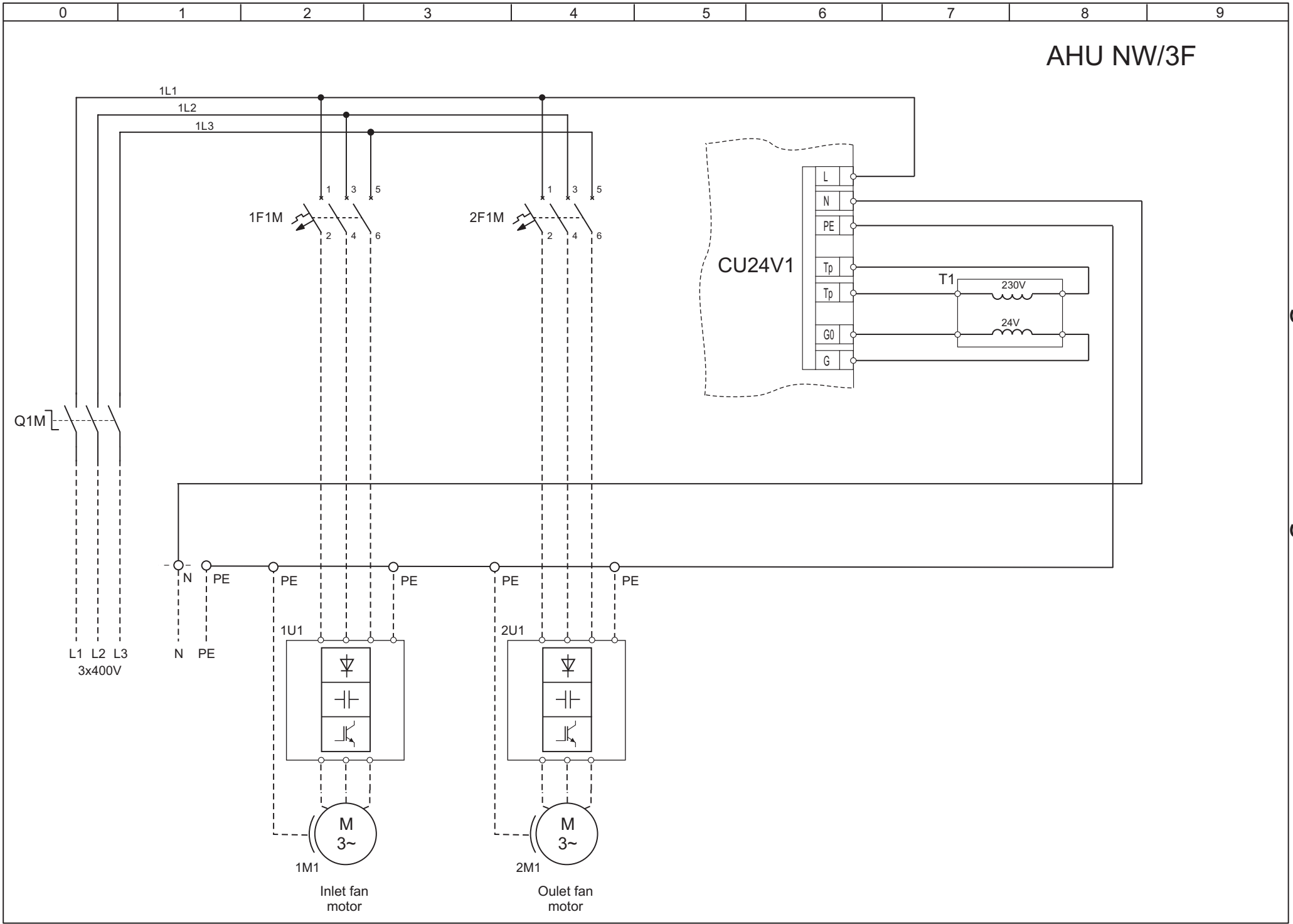


Inlet-Outlet AHU with recirculation dampers , Electric heater, Cooling compressor

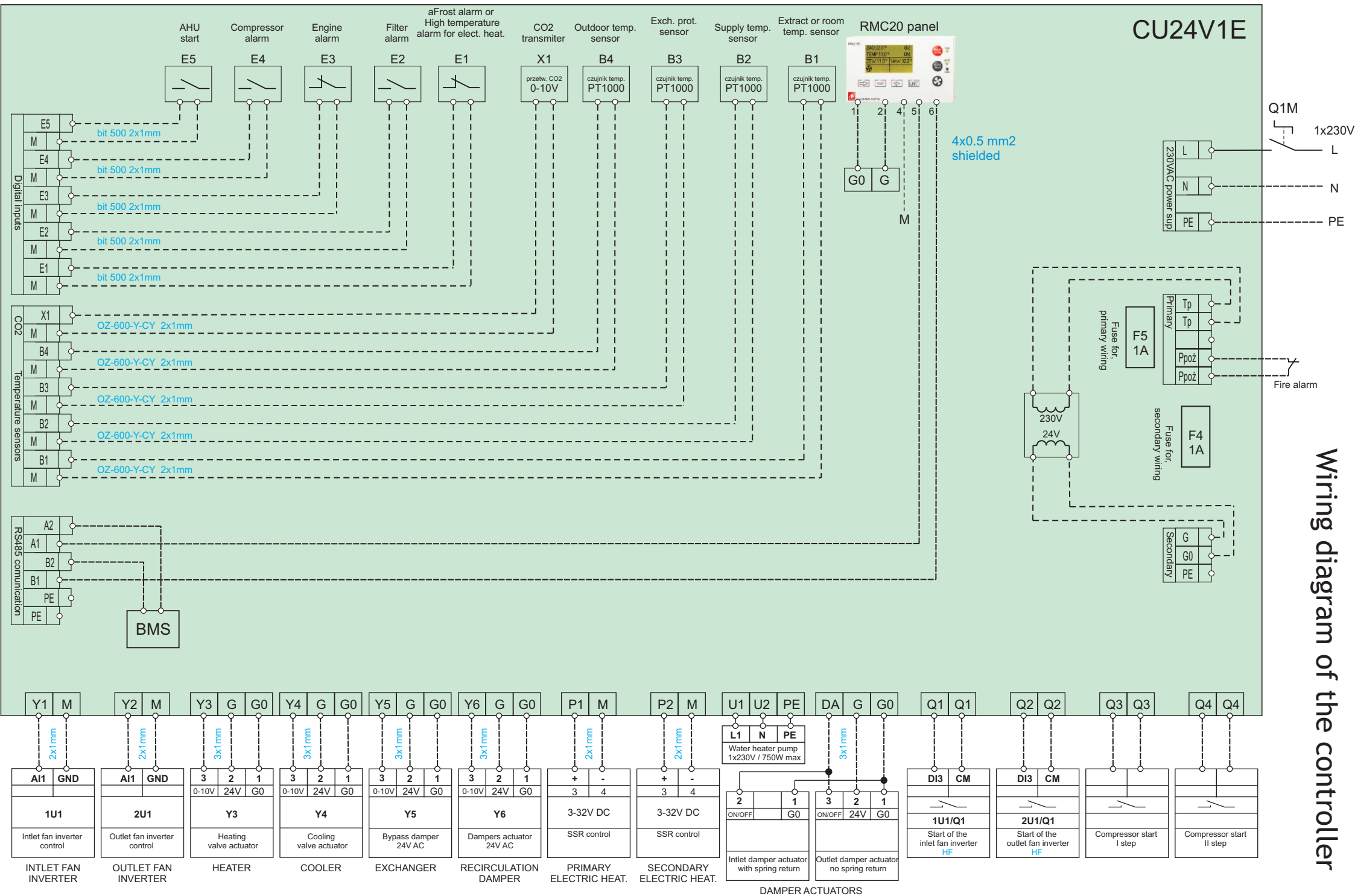




Electrical drawing of the switch gear for AHU NW/1F



Electrical drawing of the switch gear for AHU NW/3F


CU24V1E
AHU start
Compressor alarm
Engine alarm
Filter alarm
aFrost alarm or High temperature alarm for elect. heat.
CO2 transmiter
Outdoor temp. sensor
Exch. prot. sensor
Supply temp. sensor
Extract or room temp. sensor
RMC20 panel
E5
E4
E3
E2
E1
X1
B4
B3
B2
B1
przetw. CO2 0-10V
czujnik temp. PT1000
Digital inputs
CO2 Temperature sensors
bit 500 2x1mm
OZ-600-Y-CY 2x1mm
4x0.5 mm2 shielded
G0
G
M
Q1M
1x230V
L
N
PE
230VAC power sup
Primary
Tp
Ppoż
Fire alarm
Fuse for primary wiring
F5 1A
230V
24V
Fuse for secondary wiring
F4 1A
Secondary
G
G0
RS485 comunication
A2
A1
B2
B1
BMS
Wiring diagram of the controller
Y1 M
Y2 M
Y3 G G0
Y4 G G0
Y5 G G0
Y6 G G0
P1 M
P2 M
U1 U2 PE
DA G G0
Q1 Q1
Q2 Q2
Q3 Q3
Q4 Q4
2x1mm
3x1mm
AI1 GND
1U1
Intlet fan inverter control
INTLET FAN INVERTER
2U1
Outlet fan inverter control
OUTLET FAN INVERTER
3 2 1
0-10V 24V G0
Y3
Heating valve actuator
HEATER
Y4
Cooling valve actuator
COOLER
Y5
Bypass damper 24V AC
EXCHANGER
Y6
Dampers actuator 24V AC
RECIRCULATION DAMPER
+ -
3 4
3-32V DC
SSR control
PRIMARY ELECTRIC HEAT.
SECONDARY ELECTRIC HEAT.
L1 N PE
Water heater pump 1x230V / 750W max
2 1
ON/OFF G0
Intlet damper actuator with spring return
3 2 1
ON/OFF 24V G0
Outlet damper actuator no spring return
DAMPER ACTUATORS
DI3 CM
1U1/Q1
Start of the inlet fan inverter
HF
2U1/Q1
Start of the outlet fan inverter
Compressor start I step
Compressor start II step