

SERIE / SÉRIE / SERIE / SÉRIE

FDLA VALVE KIT

EDICIÓN / ÉDITION / PUBBLICAZIONE / EDIÇÃO

12.17

CATÁLOGO / BROCHURE / CATALOGO / CATALOGO

FDLAVK 01

SUSTITUYE / REMPLACE / SOSTITUISCE / SUBSTITUI

FDLAVK 01



INSTALLATION MANUAL



VALVE KIT FOR FDLA SERIES
HYDRONIC DUCTED LOW STATIC
FDLA VK 01
FAN COIL AIR CONDITIONERS

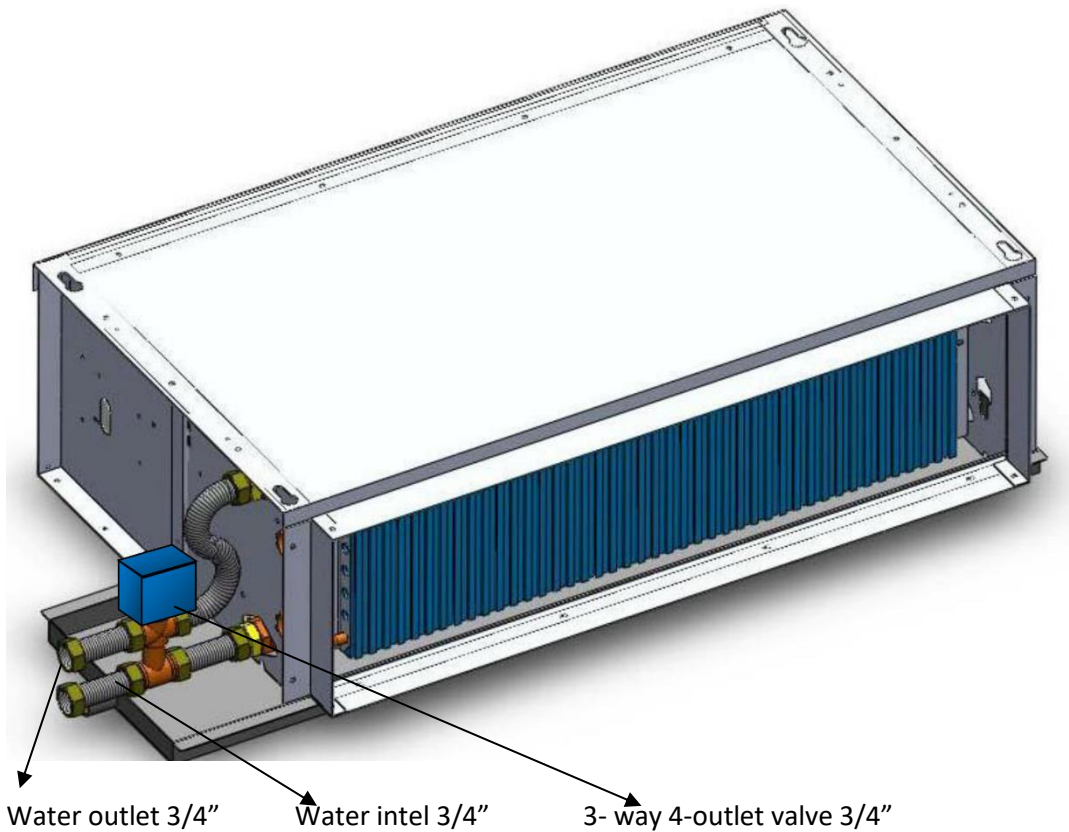
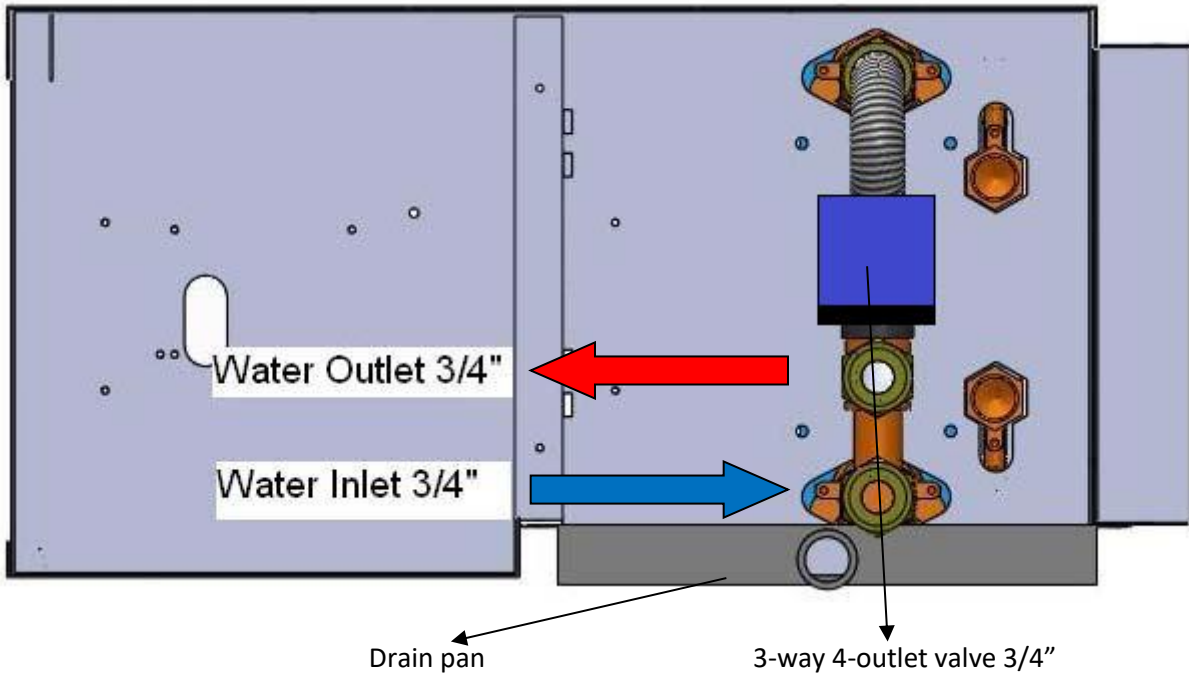
VALVE KIT FOR FDLA SERIES 2 / 4 PIPE HYDRONIC DUCTED LOW STATIC FAN COIL

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1. Valve Kit Installation

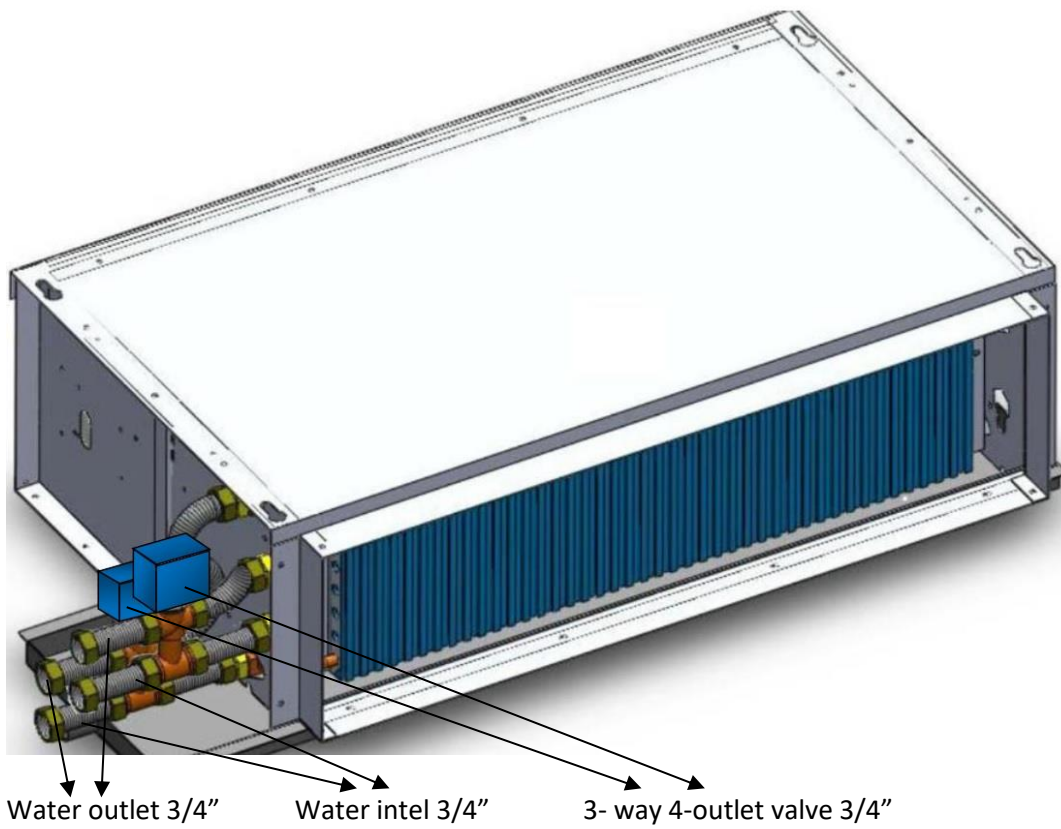
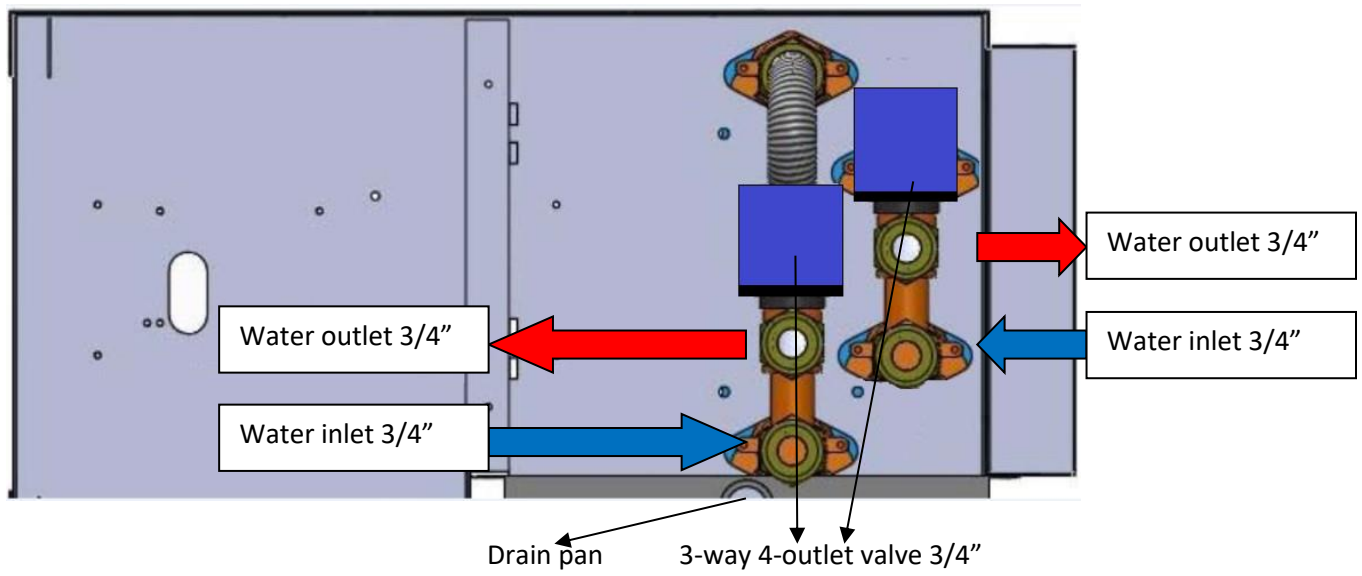
Piping for 2-pipe System



IMPORTANT

Gravity drainage maybe converted into forced drainage by fitting the condensate drain pump

Piping for 4-pipe System



IMPORTANT

Gravity drainage may be converted into forced drainage by fitting the condensate drain pump

2. Technical Information according to version

Model Definitions

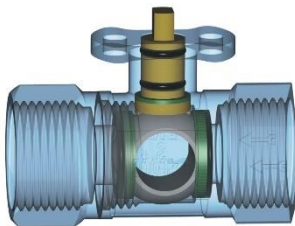
3-way ball valve with 3/4" connectors and on/off motorized actuator

2-way ball valve with 3/4" connectors and on/off motorized actuator

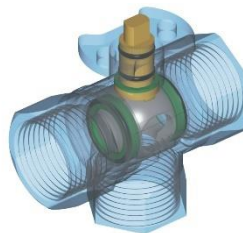


Specifications	Materials
Medium: Cool/Hot water or 60% glycol Structure: Two way or Three way Operating Mode: On/Off Power Supply: AC220V Power Consumption: 6W (during valve position change) Running Times: 15 sec. Pipe Fitting: NPT internal thread	Body: Forged brass, nickel plated Ball: Chrome plated brass Stem: Brass Seats: Fiberglass reinforced Teflon PTFE Seal: 2 EPDM O-rings, lubricated Pressure Rating: 2MPa Media Temp. Range: 34°F to 203°F (1°C to 95°C) Max. Differential Pressure: 1MPa Protection Grade: IP65 Types: 2-way Valve, 3-way Valve (base)

Structure Schematic of Valve Bodies



2- way Valve

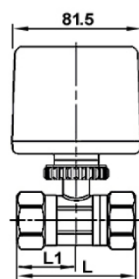


3- way Valve (base)

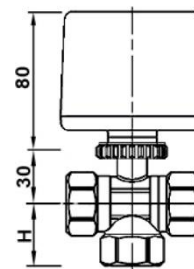
Wiring Diagrams



Dimensions and Kv Values



2-way Valve



3-way Valve

Caliber (inch)	Kv Value	L	L1	H
3/4" (DN20)	7.5	66	33	36

(All dimensions shown in mm)

Motorized Ball Valve

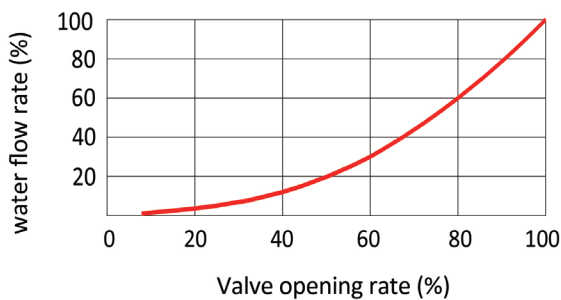
Ball valves are widely used in central air-conditioning cool/heat water system. It can accurately control the flow of cool/heat medium depending upon the requirements of the given application.

● Ball Valve features:

- ◆ High Differential pressure up to 1MPa and strict closure
- ◆ High flux and no sediment due to direct flow through of valve
- ◆ Soft shut-off and open to eliminate water hammer in most applications
- ◆ Actuator can not be affected by temperature of valve and environment
- ◆ Quick and easy replacement by movable actuator
- ◆ The actuator can be installed after the application and pipe was fixed that is efficient for installation, Valve can be operated by general tools when actuator has been removed
- ◆ The actuator is available for all of 1/2"-1 1/4" ball valves

Valve size	KvS	Close Diff. Pressure (MPa)	Working Pressure(MPa)
3/4" (DN20)	6.3	0.6	2.0
1" (DN25)	10.0	0.6	2.0
1-1/4" (DN32)	21.8	0.6	2.0

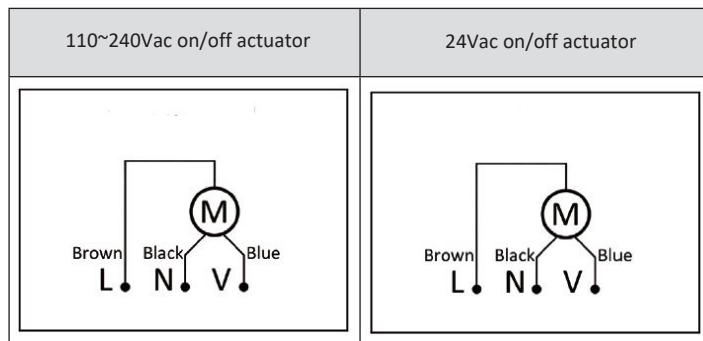
● Valve water flow curve



● Valve Actuator

◆ Valve Actuator types

There are 3 types of actuator. Two of them are on/off actuator, one of them is modulating actuator.



◆ Valve Actuator parameters

Running time: 45S (50Hz/90°)

Material: Upper cover : flame retardant ABS;

Bottom cover: flame retardant PC;

Gear: POM+ferrous powder metallurgy

Torque: 5Nm

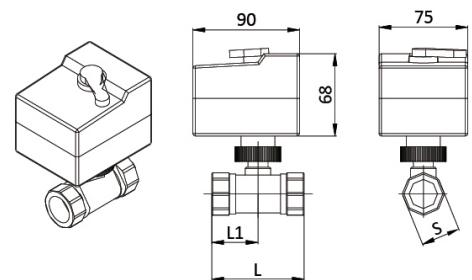
IP code: IP40



● Ball Valve material:

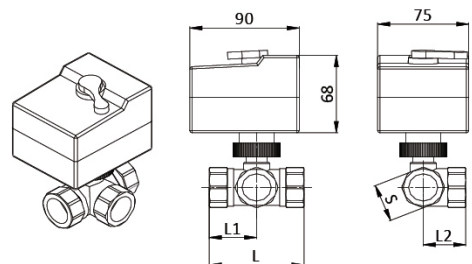
- ◆ Valve body: cast copper
- ◆ Valve ball & shaft: stainless steel
- ◆ Valve seat: PTFE
- ◆ Valve seal ring: NBR

● Dimensions of 2-way valve



2-way valve	L	L1	S
3/4"(DN20)	62	31	32
1"(DN25)	74	37	40
1 1/4"(DN32)	83	41	48

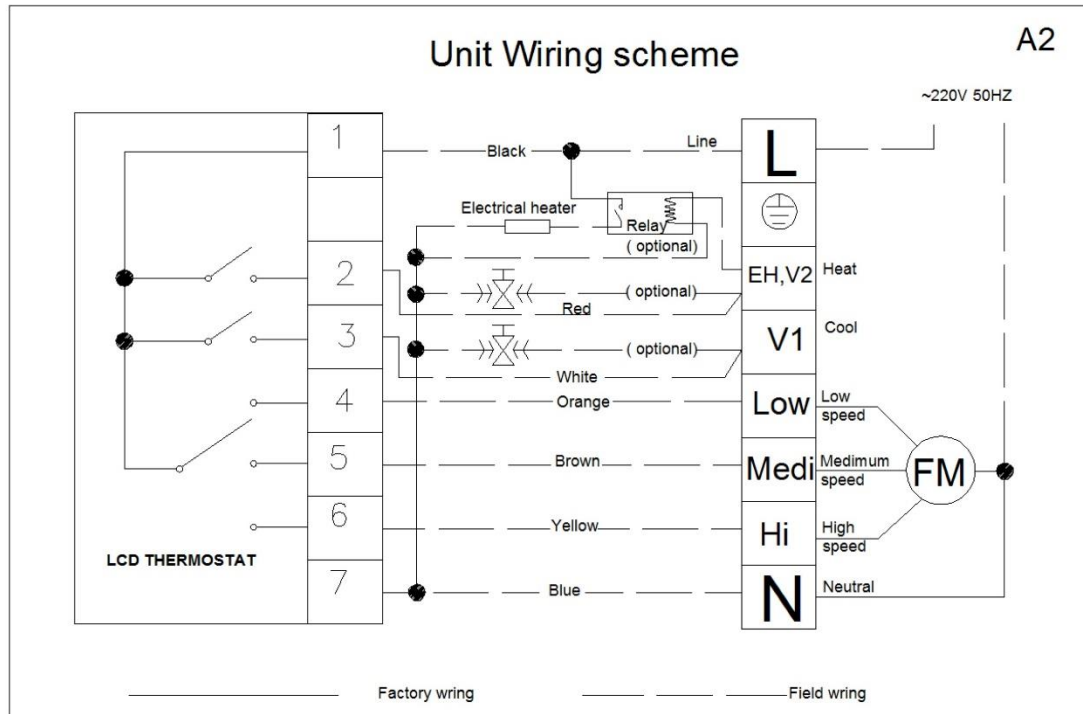
● Dimensions of 3-way valve



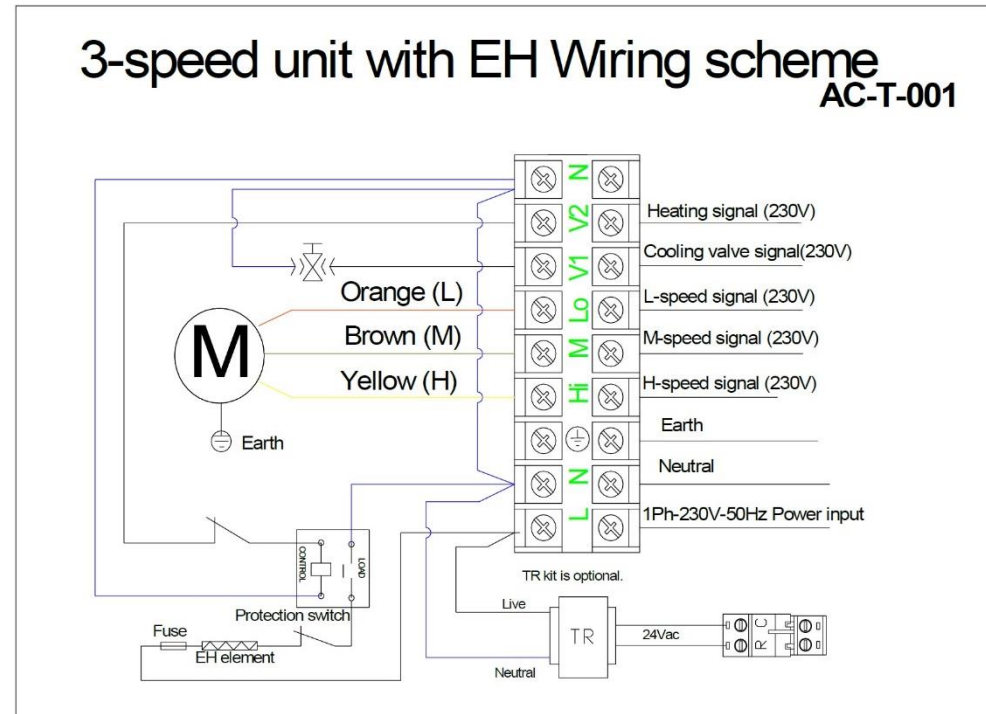
3-way valve	L	L1	L2	S
3/4"(DN20)	68	34	33	32
1"(DN25)	74	37	40	40

3. AC unit T Control Wiring Diagram (2-pipe/4-pipe)

2017 version



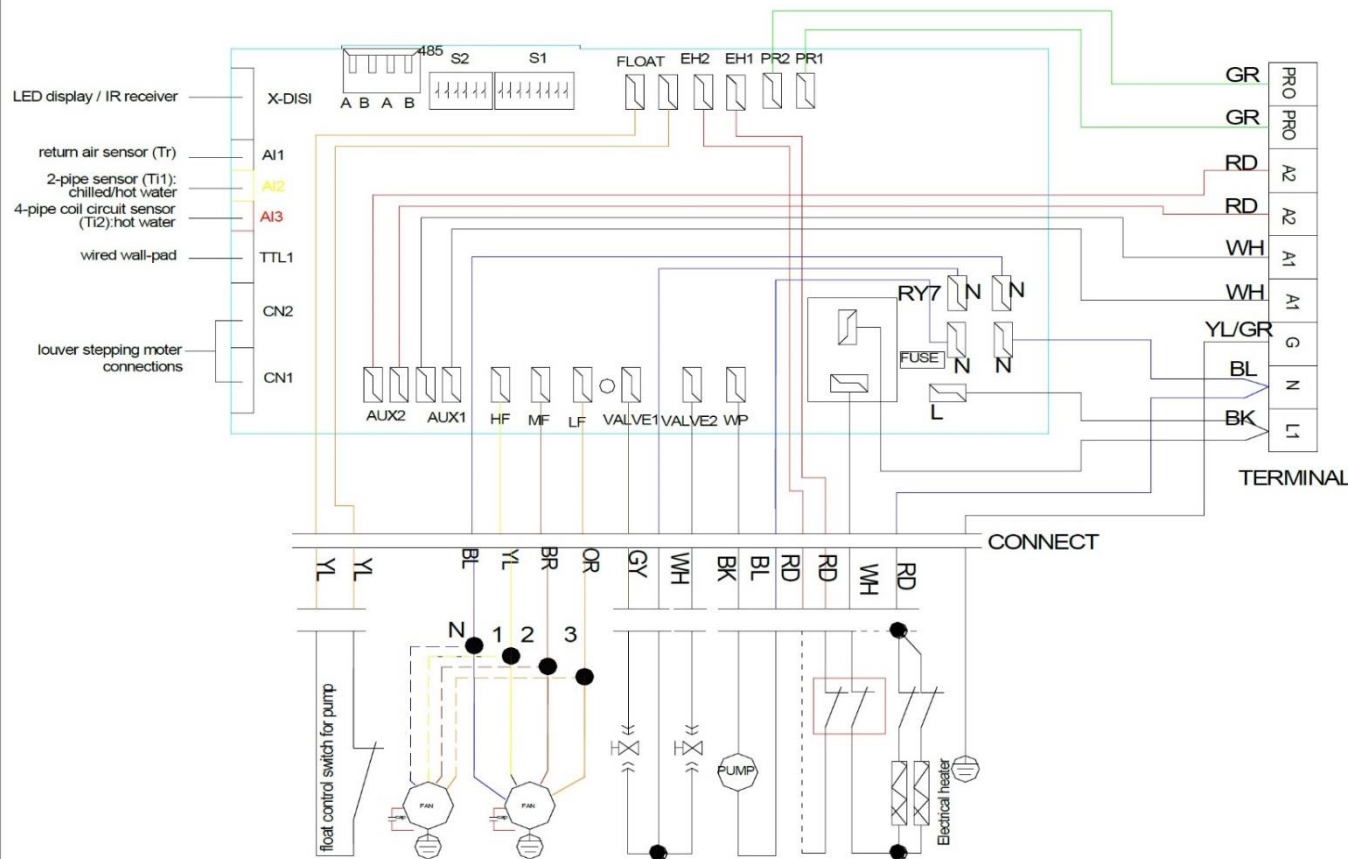
2018 version



Warning:
Switch shall be connected to the supply terminals and shall have a contact separation of at least 3 mm in each pole. Confirm that the unit has been switched OFF before installing or servicing the unit.

4. AC unit S Control Wiring Diagram (2-pipe/4-pipe)

AC-S1 Unit Wiring with 1Ph EH scheme



Legend:

AC-S1-2018

DIPA-S1

SW1-5: set the unit address

SW6: set unit type: master or slave

Mode Configuration:

SW7=0;SW8=0;unit operates in cooling/heating.

SW7=0;SW8=1;unit operates in cooling/heating with booster EH.

SW7=1;SW8=0;unit operates in colling only.

SW7=1;SW8=1;unit operates in cooling with primary EH

DIPB-S2

SW1: Occupancy contact setting

SW2: Unit configuration setting:0=2-pipe system
1=4-pipe system

SW3: On/off vavle configuration setting:

0=no vavle;

1=with vavle;

SW4: Pheheat setting: 0=36 C; 1=28 C.

SW5:Reserved.

SW6:1 = last unit on RS485 communication bus;
0 = other than above.

L1N :Power supply

VALVE1: 230V On/Off valve output.

(2-pipe: Cooling / Heating); (4-pipe: Cooling)

VALVE2: 230V On/Off valve output. (4-pipe: heating)

WP: 230V condensate pump output.

RYL: 230 V Electrical heater output.

HF: 230 V Fan motor high speed output.

MF: 230 V Fan motor medial speed output.

LF: 230 V Fan motor low speed output

AUX1: Voltage free contact;ON=unit in Heating mode.

AUX2:Voltage free contact;ON=unit in Cooling mode.

PRO:Occupancy contact.

FLOAT: Float swith for pump.

EH: protectionl swith for elecctrical heater

CN1~2: Stepping motor output.

TTL: Wired wall-pad.

AI3: Indoor coil temperature sensor 2 (Ti2).

AI2: Indoor coil temperature sensor 1 (Ti1).

AI1: Return air temperature sensor (Tr).

X-DIS1: LED recevier output.

RS485: Serial BUS contacts.

Warning:

Switch shall be connected to the supply terminals and shall have a contact separation of at least 3 mm in each pole. Confirm that the unit has been switched OFF before installing or servicing the unit.