

SPECIFICATIONS

BRAND NAME: ZELLER
PRODUCT NAME: FANCOIL CONTROLLER 2CH2P
MODEL NO: ZFCU2CH2P
Body Material: ABS
CERTIFICATION: RoHS
FIRE RESISTANCE LEVEL: UL94V-0
APPLICABLE TEMPERATURE: -25° ~ 60°C

FEATURES

- Up to two blocks to control 2-pipe fan coil units
- LED status indicator
- Total data saving on Z-BUS failure
- Size 72 x 87 x 60mm (4 DIN units)
- DIN rail mounting (EN 50022), with fixing clamp
- Integrated Z-BUS BCU
- Possibility of connecting different phases to adjacent outputs

Programming

- Manual Pairing Programming on wall Panels.
- Advanced Software Configuration & Programming

Operation Protection

- PID Compressor Sequence
- Protecting Delay 0-60min
- Startup Delay 0-25 Sec.
- BUS Rv. Polarity Protection
- BUS Short Circuit Protection

System Compatibility

AHU (Air handling Units)
FCU (Fan Coil Units)
Single and Multi-Stage Cool/Heat with 3 Fan Speeds (H, M, L)

Outputs

6 x Separated switched latch relay outputs rated at 16A each channel (for fan coil relays)
2 x Separated switched non-latch relay outputs rated at 10A (for pump relays)

Presets

Accept Celsius and Fahrenheit temperature Settings
Cool temp Preset, Heat Preset.

Installation

- 35mm DIN-Rail Mount Ready
- Wall Mount Ready (4P)

Wiring Terminals

4 each is good for 2 x 2.5mm₂ or 1 x 4mm₂ max conductor size

Z-BUS DC Supply

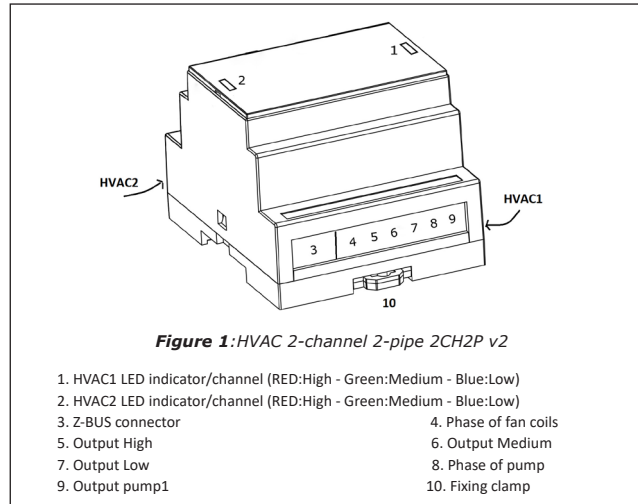
24VDC with flexible tolerance between 15-32VDC. Flexible ability to add power supply as to be needed anywhere.

Control IO

2 x Advanced RS485 Z-BUS serial port links (both train & screw link types)

DIN-Rail Mount Device is Great choice For Controlling of Standard FCU/AHU Air conditioning and Ventilation systems, it is Bus Enabled, Manual Programming Enabled. Also good for Single-stage and Multi-stage climate control units (Heat, Cool, Single stage/Humidifier/Air freshener. Fan low, Fan Med, Fan High) = All Contact latch Relays are Rated 16A and pump relays are 10A. (Warning: Higher Loads Require Adding of Contactors for Protection per channel = is a Must)

TECHNICAL DOCUMENTATION for HVAC 2-channel 2-pipe



GENERAL SPECIFICATIONS

Concept		Description
Type of device		Electric operation control device
ZBUS SUPPLY	Voltage (typical)	24 VDC SELV
	Voltage range	15 ~ 32VDC
	Maximum consumption (voltage typical 24dc)	35mA - 840mW
	Connection type	Z-BUS Phoenix Connector 3.81 mm (4pin) for cat5e cable
External power supply		Required
Operation temperature		0 ~ +55 °C
Storage temperature		-25 ~ +60 °C
Operation humidity		5 ~ 95%
Storage humidity		5 ~ 95%
Complementary characteristics		Class B
Protection class / Overvoltage category		II / III (4000 V)
Operation type		Continuous operation
Electrical stress period		Long
Degree of protection / Pollution degree		IP20 / 2 (clean environment)
Installation		Independent device to be mounted inside electrical panels with DIN rail (IEC 60715)
Minimum clearances		Not required
Response on Z-BUS failure		Data saving according to parameter-ization

This device consists of two parts (HVAC 1-channel 2-pipe) each one should be considered separately in search and programming with advanced software:

- A) SB_HVAC_DN(1)
B) SB_HVAC_DN(2)

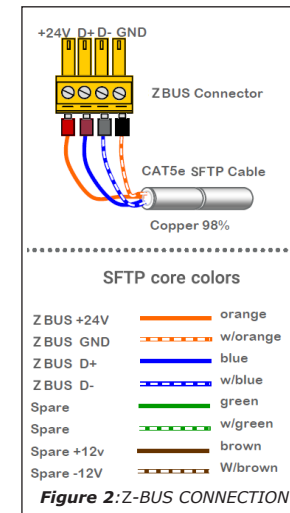


Figure 2: Z-BUS CONNECTION

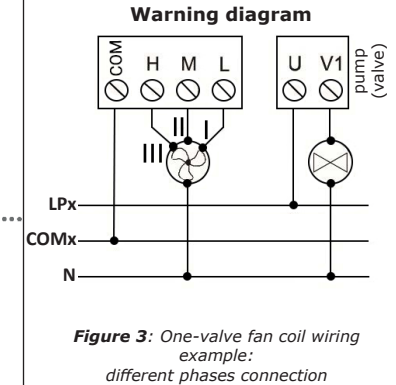


Figure 3: One-valve fan coil wiring example: different phases connection

⚠ In order to ensure the expected status of the relays, please check that the device is connected to the z-bus before energizing the power circuit.

OUTPUTS SPECIFICATIONS AND CONNECTIONS

Concept		Description
Number of fan coil blocks		2
Output type / Disconnection type		Potential-free outputs through bistable relays / Micro-disconnection
Rated current per output		AC (16) A @ 250 VAC (4000 VA) for fan coil relay AC (10) A @ 250 VAC for pump relay
Maximum load per output	Resistive	4000 W
	Inductive	1500 VA
phases connection		Possibility of connecting different phases. It is not allowed to connect power supplies of different order, SELV with NO SELV, in the same block
Maximum current per fan coil relay		20 A
Short-circuit protection		No
Overload protection		No
Connection method		Screw terminal block
Cable cross-section		1.5 ~ 4 mm ² (IEC) / 26-10 AWG (UL)
Outputs per common		3/1 (per fan/per valve)
Maximum response time		15 ms
Relay type		Fan coil relays : Latching relay Pump relay: Non-latching relay
Mechanical lifetime (min. cycles)		3 000 000

SAFETY INSTRUCTIONS AND ADDITIONAL NOTES

- Installation should only be performed by qualified professionals according to the laws and regulations applicable in each country.
- Do not connect the mains voltage nor any other external voltage to any point of the Z-BUS; it would represent a risk for the entire Z-BUS system. The facility must have enough insulation between the mains (or auxiliary) voltage and the Z-BUS or the wires of other accessories, in case of being installed.
- Once the device is installed (in the panel or box), it must not be accessible from outside.
- Keep the device away from water (condensation over the device included) and do not cover it with clothes, paper or any other material while in use.
- The WEEE logo means that this device contains electronic parts and it must be properly disposed of by following the instructions at zellerco.com