



PS 4500-TA2-3S-FC-Super-Native Modbus Protocol



**Main Controller All-IN-ONE™
Fan-Coil applications, with thermal
actuators, proportional outputs,
with Modbus Protocol.**

General

The PS 4500-TA2-3S-FC-SUPER is a main controller for Fan coils applications with Modbus Protocol.

The PS 4500-TA2-3S-FC-SUPER has most of the applications built-in, field selectable.

This flexibility gives the customers the advantage of having one main controller for most of Fan coils applications.

The PS 4500-TA2-3S-FC-SUPER has a modular and modern design for the high requirements of the market today.

The PS 4500-TA2-3S-FC-SUPER is factory pre-programmed to save valued time on field programming.

Features

- All-In-One system for Fan Coil applications
- Main Input- 220Vac
- Proportional output for thermal actuators on 24Vac with external transformer
- Applications with jumper selection:
 - 2-pipe systems
 - 4-pipe systems
 - no valves system
- Auto-change over sensor (Mode is set based on temperature of the incoming water flow, ideal for 2-pipe systems)
- Discharge sensor- option (2-pipe system)
- 3 Speeds output- 220Vac, 3Amp each- with Auto Speed function
- Indoor coil sensor for Heat (soft-start)
- Surface and flush mount thermostats- option
- Fault input dry contact, voltage-free, for occupancy sensor, window contact or fault input
- Occupancy sensor- option with 12Vdc supply



Dimensions

Length	150mm
Width	83mm
Height	17mm

Specifications

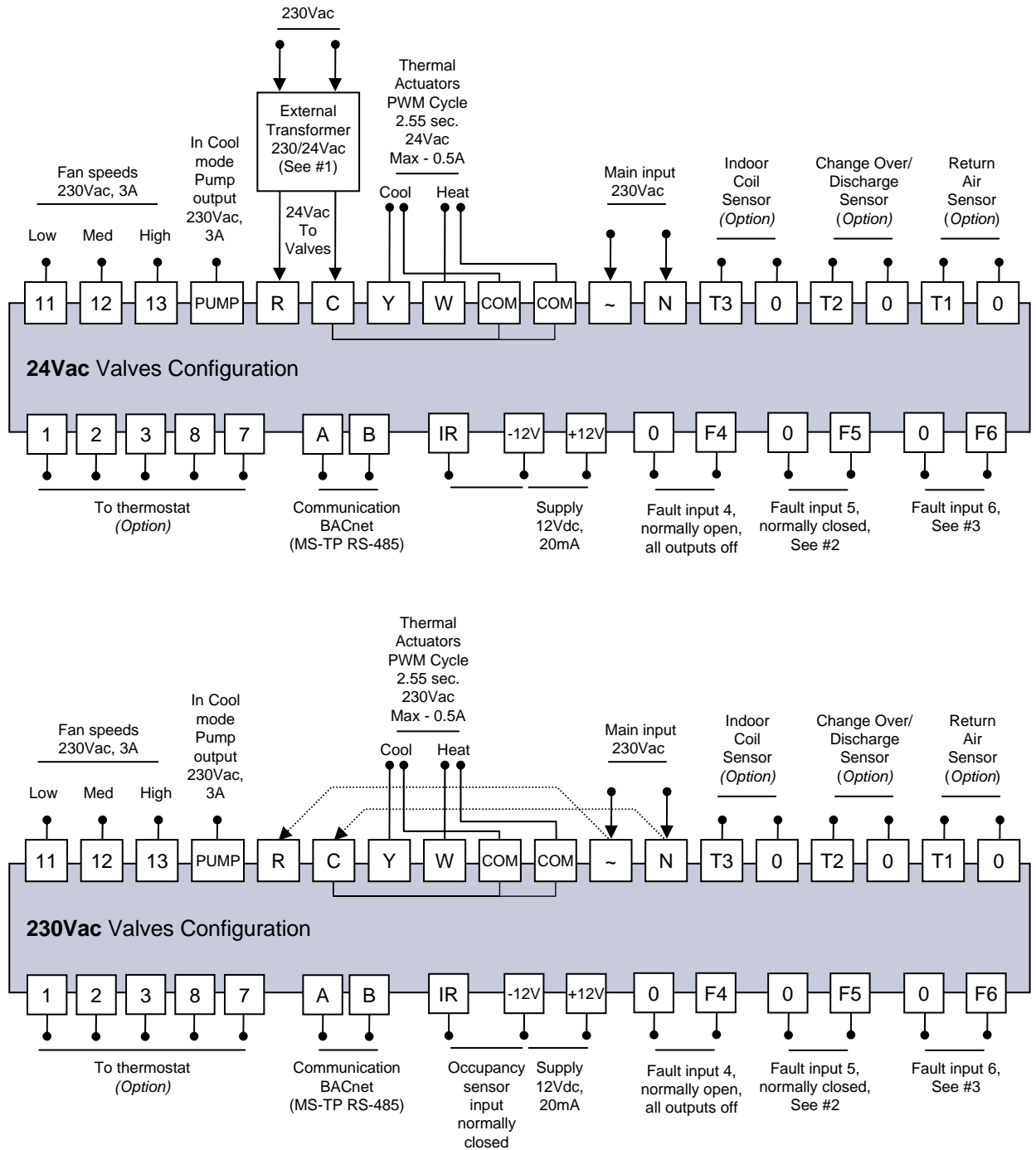
Temperature Range	10÷30°C
Weight	0.250Kg
Scale	°C
Accuracy	±1°C
Flammability	UL 94V-0

Accessories

Part Number	Description
FMH X500	FMH - X500 – Flush Mount panel- Horizontal
ETN X500	ETN - X500 – Surface Mount panel
FMT X500	FMH - X500 – Flush Mount panel- Vertical
IRP X500	Receiver panel for remote control
RT03	IR remote control
TS01	Temperature Sensor - 80 cm Cable
RS01	Temperature Sensor into decorative box
RS02	Average Temperature Sensor into decorative box
WP4	Decorative back plate for ETN panel



Electrical Diagram



#1- Common for Valves - If 24Vac is selected, the user must provide an external transformer.

#2-F5- Selection for thermostat; Shorted= with Fan Only mode
Open = without Fan Only mode (only Cool-Heat-Cool/Heat)

#3-F6- Contact input- without logic into thermostat, with indication through the protocol only.

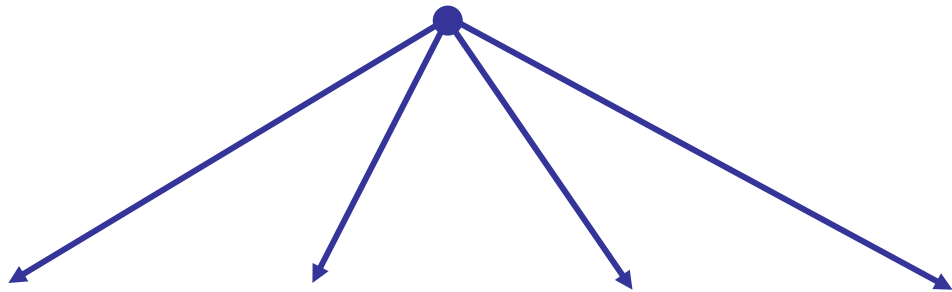


Configurations



Main Board

PS4500 - Main Controller
All-IN-ONE™ for Fan-Coils applications
with Native Modbus Protocol



Control Panels / Accessories



ETN-X500 – Wall mount thermostat with built in temperature sensor* and LCD display.

OR



FMH-X500 – Flush mount thermostat with built in temperature sensor* and LCD display.

OR



IRP-X500 - Receiver Panel with built in temperature sensor* + IR Remote Control unit.

OR



TS01 – Return air sensor ONLY- connected to main board. NO wall panel needed.

*The temperature may be sensed either through the wall panel's built in temperature sensor **OR** through the return air sensor connected to the main board (DIP Switch selectable).



Sample Object List

IMPORTANT: The following Object List is for example purposes ONLY and will vary according to each specific project.

Modbus- RTU mode, Time_Out 100 ms, Baud 9600

N	Address	Description	Value	Default	Remarks
1	0 x 0000	ID	4		
2	0 x 0001	Set Point	10°C...30°C		-
3	0 x 0002	Set Point Limit Low	10°C...30°C	10°C	Does not limit display
4	0 x 0003	Set Point Limit High	10°C...30°C	30°C	Does not limit display
5	0 x 0004	0= Fan Only, 1= Cool, 2= Heat, 3= Auto Change	Mode	Cool	Auto Change- ONLY for 4-pipe systems Fan Only- selectable option (shorting terminals F5,0)
6	0 x 0005	0= Auto Speed, 1= Low, 2= Med, 3=High	Fan	Low	-
7	0 x 0006	Offset T1 ambient	-6.0°C...6.0°C	0.0°C	For display on thermostat
8	0 x 0007	Dead zone Cool	0.5°C...5.0°C	1.0°C	Only for Auto Change
9	0 x 0008	Dead zone Heat	0.5°C...5.0°C	1.0°C	Only for Auto Change
10	0 x 0009	Differential (for Cool, Heat)	2.0°C...10.0° C	2.0°C	-
11	0 x 000A	Thermostat On / Off	Off /On		-
12	0 x 000B	T1- Return air sensor	7°C...32°C		-
13	0 x 000C	T2- Discharge sensor	-65°C...150°C		-
14	0 x 000D	T3- Indoor coil sensor	-65°C...200°C		-
15	0 x 000E	Cool / Heat value	0%...100%		Indication
16	0 x 000F	Cooling	Off /On		Indication
17	0 x 0010	Heating	Off /On		Indication
18	0 x 0011	Fan: Speed Low	Off /On		Indication
19	0 x 0012	Fan: Speed Medium	Off /On		Indication
20	0 x 0013	Fan: Speed High	Off /On		Indication
21	0 x 0014	Fault Input- F4 (all units OFF)	Off /On		Indication
22	0 x 0015	IR Input- 12/IR	Off /On		Indication
23	0 x 0016	Fault Input- F6 (indication only in protocol)	Off /On		Indication