

Smart Zone 4TM

Expandable 4 zone board **SZ-4**

Making Life Comfortable

General Description

Smart Temp - Smart HVAC control

Smart Temp Australia has a well deserved reputation for providing innovative zone control solutions that are not only user friendly and reliable, but easy on the hip pocket. The SZ-4 is no exception.

The SZ-4 accepts inputs from standard Heat Cool type thermostats and based on the demands of each thermostat, will control the zone dampers and equipment to bring each zone to the desired set temperature.

Innovative energy management and comfort functions are built into each zone board to ensure the various comfort levels are met and maintained efficiently and the equipment is not stressed by excessive cycling. The SZ-4 employs advanced logic to analyze each zones demands, recent control history and number of active zones to best maintain system performance.

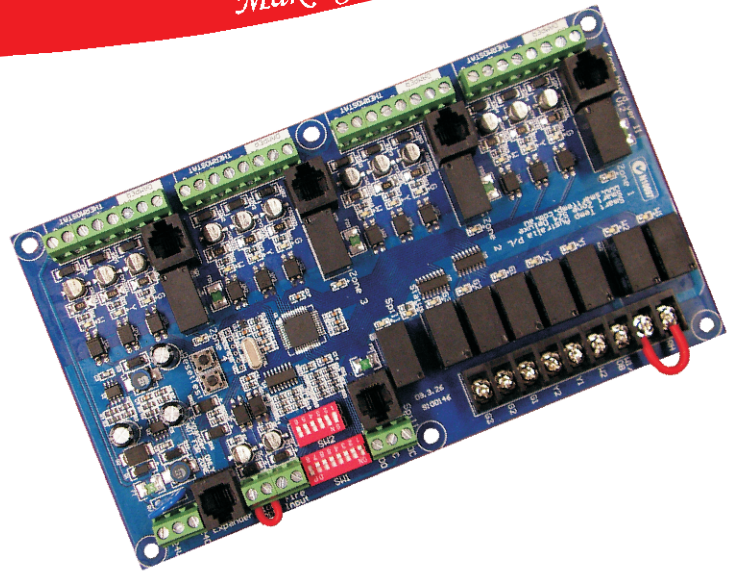
Expandable to meet growing demands.

The SZ-4 can be further enhanced by adding up to 5 of the optional SZ-4/E expander cards providing a maximum of 24 zones. Each expander also has its own programmable spill zone that will open based on the total number of zones across all zone boards. This provides very powerful spill (by-bass) logic.

Further, the SZ-4 can use zone 1 as a "master" zone that will be excluded for spill damper logic calculations further enhancing the capabilities of the system.

Better Energy Management.

As an added bonus, the expander board can also compare 2 different air temperatures with that of the return air to select the best location to draw return air for the current mode. When heating the SZ-4/E will compare the return air temperature to the 2 external temperature sensors and select the warmest air to be supplied to the system for heating. The same procedure is used in cooling mode thus saving energy and bringing the zone to the desired temperature as quickly as possible using the least energy.

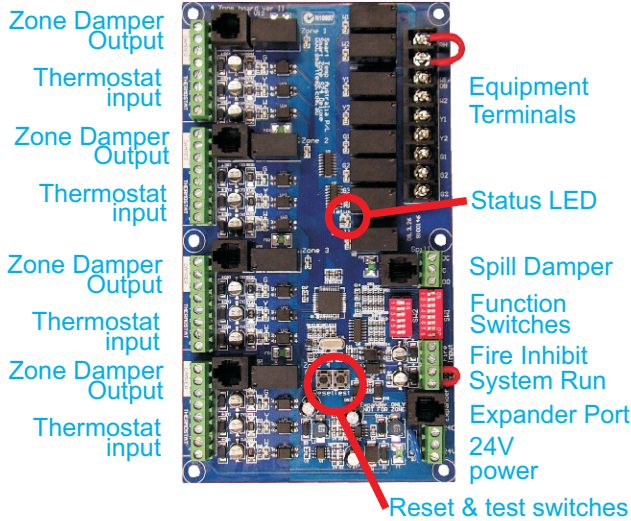


Features

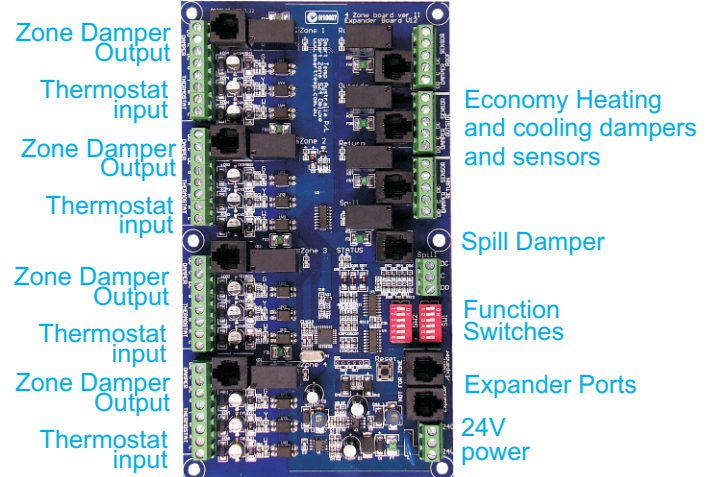
- 2 to 4 zone control - Expandable to 24.**
- Individual zone times & temperatures.**
- Programmable spill zone(s).**
- LED status indication on all inputs & outputs.**
- Built in logic for Heat Cool & Heat Pump systems.**
- Adjustable damper delay periods.**
- Multistage Equipment Control.**
- Multi-fan speed control.**
- Auto upstaging and timed upstaging.**
- Heating & Cooling economy cycle (with SZ4/E).**
- Input analysis with fault lock out.**
- Clock input - for master time clock control.**
- Fire shutdown - equipment OFF and all zones closed.**
- Safe - 24V powered.**
- Plug in (RJ12) or wired in damper connections.**
- Fully isolated inputs & outputs.**
- Supplied in quality enclosure.**
- Designed and built by Smart Temp Australia.**
- Comprehensive 3 year warranty.**

Board Layout

Main Board

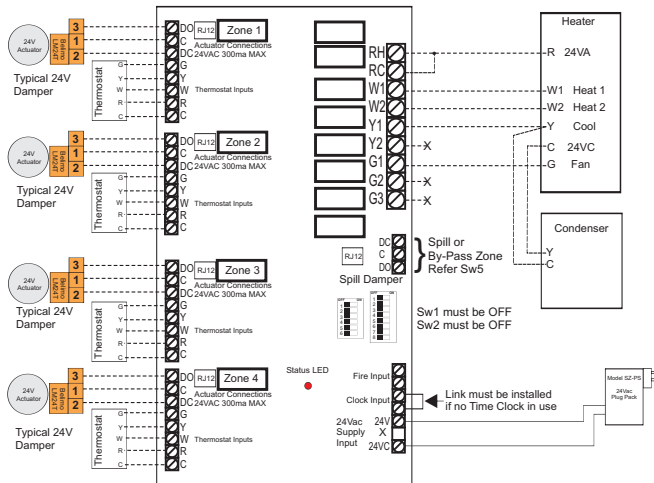


Option Expander Board

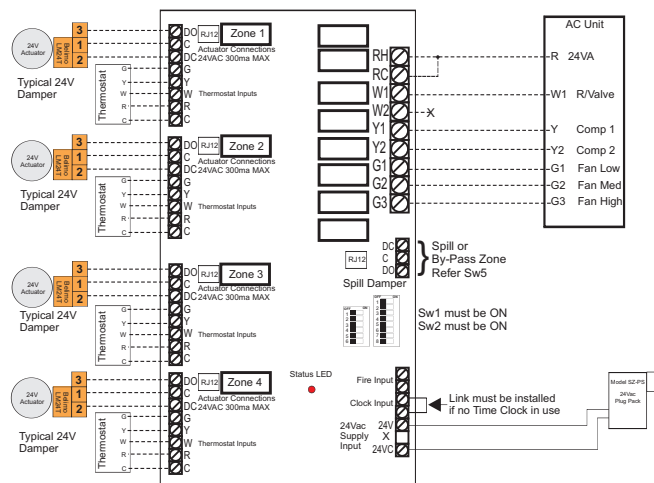


Typical Wiring

Typical 2 stage heat with add on cooling



Typical reverse cycle 3 fan speed



Authorised Distributor

SZ-4 works well with



SMT-770
Auto changeover



42-158
Manual changeover

Specifications

Input Voltage	24VAC 50/60 Htz +/- 15%.
Operating Temperature	0-50C (32 to 122F).
Operating RH	0-95% (non condensing).
Storage Temperature	0-65C (32 to 150F).
Size	110 x 200mm x 60mm.
Memory type	Non volatile No backup battery required.
Zone / Spill / Equipment Relays	24V @ 2amps max
Zone Sensor input	10K NTC type II (Smart Temp P/N RS1-D)
Expanders	Maximum 5 (24 zones in total)
Dip switch 1	1 Fan speeds 1/3 2 HC / HP logic 3 Rev Valve in cool / heat 4 2 / 6 min anti-cycle 5 Spill 2+ Zones / spill 1 zone 6 2 / 3 zones stage 2 7 10 / 20 min upstage 8 90 / 30 sec damper delay
Dip switch 2	1 ~ 5 Number of expander boards 6 Exclude zone 1 from spill
Equipment safety logic	Prohibit illegal thermostat calls (dynamic)
Time slicing	30 mins maximum
Zone damper logic	Last call Held
RV Logic	Held for 30 mins or till opposite mode called
Clock input	Equipment shut down on open.
Fire input	All zones & equipment shutdown.
Status Led	Heartbeat / system status (fault codes)
Damper Connections	Hard wired with parallel RJ12
Fuse	Main fuse and zone fuses - all auto reset.
Warranty	36 months RTB.