Electric Heater Box

for ISDL 56K–110K, ISD 83K–230K

Installation Instructions

Fig. 1 **ISDL-K Indoor Unit**

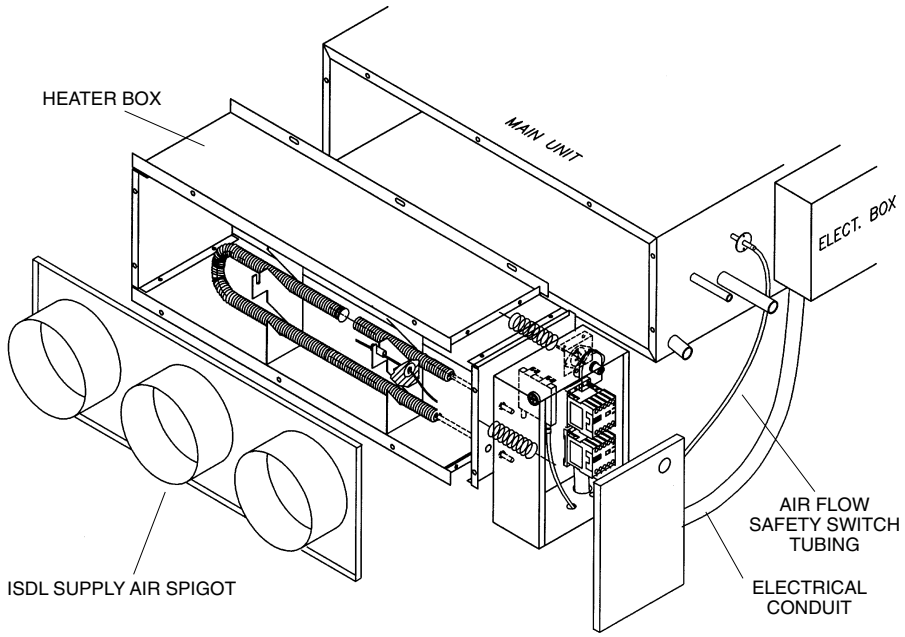
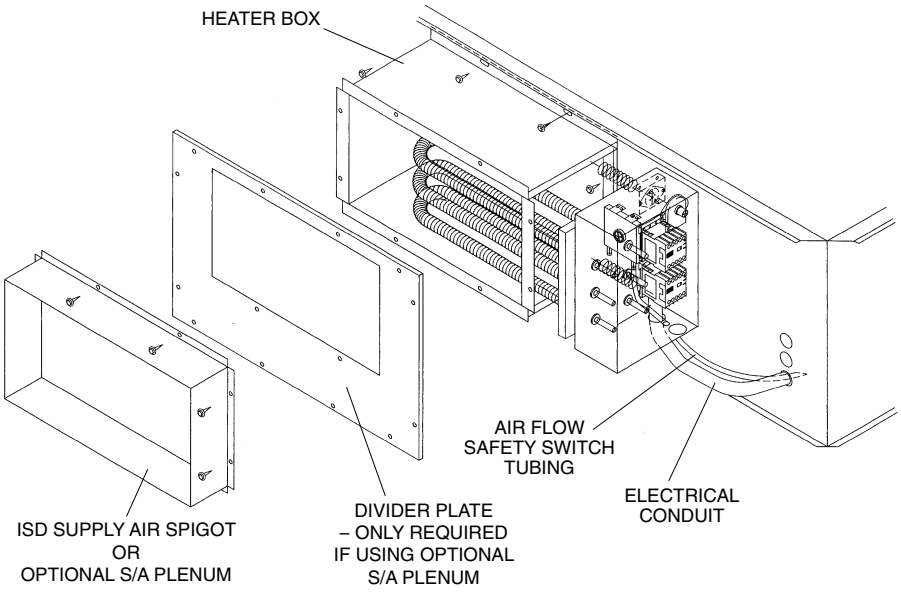


Fig. 2 **ISD-K Indoor Unit**



GENERAL

This electric booster heater box is designed specifically for the ISDL-K and ISD-K Series of ducted split system air conditioning systems using the **temperzone** SAT-1 thermostat. If not using a SAT-1, use a SAT-2 or other two stage thermostat to control the electric heat using the second control stage.

The box must be installed in accordance with all national and local safety codes. Installed correctly, this kit will permit the ISD unit to conform to AS/NZS 3350.2.40 1997.

Note: Non-combustable insulation must be used for ducting up to 250 mm downstream of the heater box.

Model	*kW*	*Electric Heater Box*
ISDL 56K:	2.0	Item No. 525 091 006
ISDL 83K:	2.0	Item No. 525 151 006
ISDL 96/110 K:	3.0	Item No. 525 201 006
ISD 83K:	2.0	Item No. 525 121 006
ISD 96/110 K:	3.0	Item No. 525 231 006
ISD 135/155/156/200/230 K:	4.5	Item No. 525 311 006

ISD/L-K INDOOR UNIT
ELECTRIC HEATER BOX
Components:

1. Electric heater box assembly
   - element/s, contactors, wiring loom, air flow safety switch (including attached tube), auto and manual high temp. safety switches.
2. Screws

Check that all items of the kitset are supplied and no damage has occurred to the items.

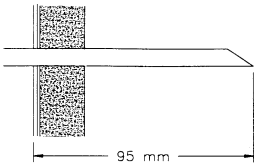
Note: A Divider Plate (supplied separately) is required if using one of **temperzone**'s optional Supply Air Plenums for ISD's.

Installation

1. Remove the ISD/L unit's electrical access panel, electrical box cover and the supply air spigot.
2. Remove the heater box's electrical access panel.
3. Secure the heater box, using screws supplied, to the unit in the same position vacated by the supply air spigot.
   Note: The elements and electrical box must be partially withdrawn to attach the two far end screws through to the unit.
4. Attach the supply air spigot to the heater box.
5. Use the supplied wiring loom to complete the wiring connections as shown in the appropriate wiring diagram (refer overleaf).

cont'd...

6. *ISDL-K models:* Secure the air flow safety switch tube to the location indicated on the unit in figure 1.
   ISD-K models: Locate the small hole in the ISD cabinet below the three electrical conduit holes (see Fig.2). Puncture the ISD unit's insulation at the point of entry for the safety switch tubing and push the tubing approximately 95 mm into the unit.



7. Ensure the plastic tubing airway is not in anyway restricted.
8. Ensure the high temperature t/stats (overloads) are not touching the elements.
9. Complete the wiring using the appropriate diagram overleaf.
10. Replace the electrical box covers and the unit's electrical access panel.

OSA OUTDOOR UNIT

1. Complete wiring as per the diagram included in this document.
   Note: For OSA 140RKS and OSA 156RKS combinations it is recommended the elements be powered by a separate 25 A fused supply line sourced via a two pole isolator on the Outdoor Unit. Wiring supplied in heater box must be altered to suit single phase power supply.
2. Replace the systems external fuse with the size recommended in the Quick Reference Table (back page) and mark the change on the Outdoor Unit's wiring diagram.
3. DIP switch 2 on the SAT-1 Controller PCB, located in the ISD/L electrical box, must be set to 'On' (refer wiring diagram).

TESTING

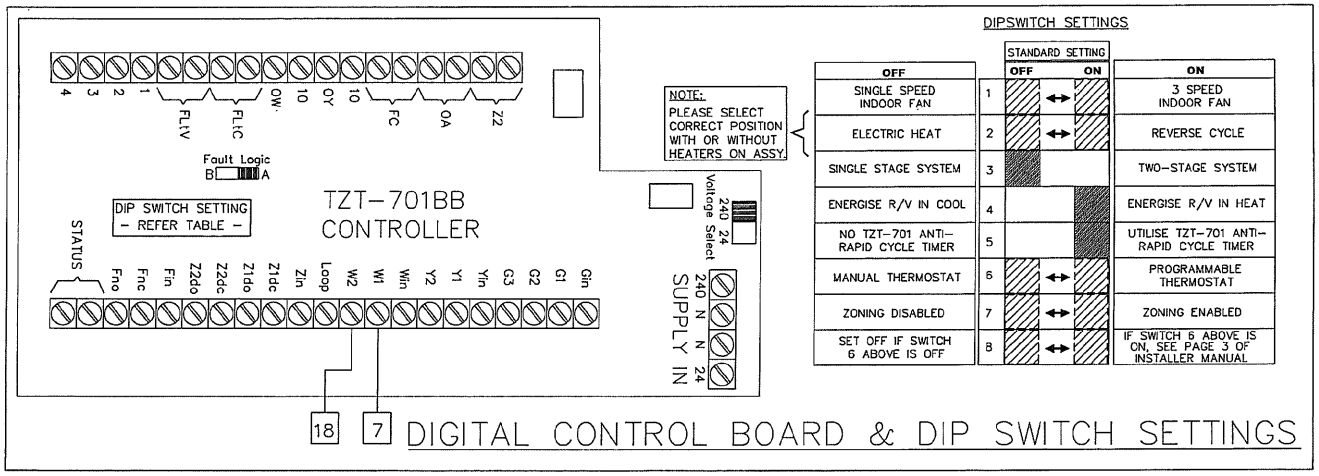
Air Safety Switch

Test the air safety switch by running the fan on its lowest speed and checking for electrical heating. Remove power to the fans and the electric elements should cut-out.

OPERATION

This electric heat kit includes both auto (90°C) and manual (120°C) high temp. safety thermostats. If the manual high temp. safety t/stat requires resetting and the auto high temp. safety t/stat does not reset, then the latter needs to be replaced.

This pamphlet replaces the previous issue no. 3463 dated 06/10. ISD 155K & ISD 156K added; ISD 160K removed.

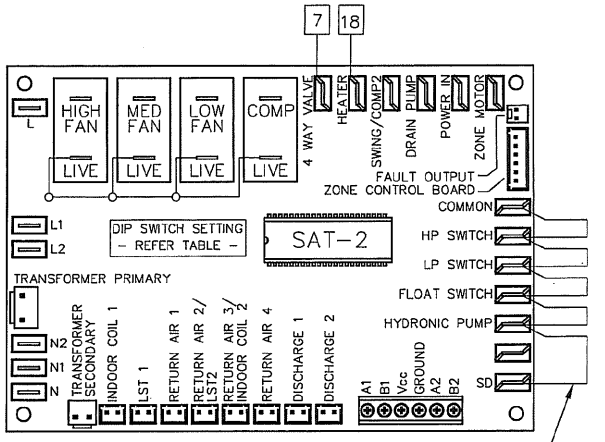


NOTE:
PLEASE SELECT CORRECT POSITION WITH OR WITHOUT HEATERS ON ASSY.

DIPSWITCH SETTINGS

OFF		STANDARD SETTING OFF	STANDARD SETTING ON	ON
SINGLE SPEED INDOOR FAN	1			3 SPEED INDOOR FAN
ELECTRIC HEAT	2			REVERSE CYCLE
SINGLE STAGE SYSTEM	3			TWO-STAGE SYSTEM
ENERGISE R/V IN COOL	4			ENERGISE R/V IN HEAT
NO TZT-701 ANTI-RAPID CYCLE TIMER	5			UTILISE TZT-701 ANTI-RAPID CYCLE TIMER
MANUAL THERMOSTAT	6			PROGRAMMABLE THERMOSTAT
ZONING DISABLED	7			ZONING ENABLED
SET OFF IF SWITCH 6 ABOVE IS ON	8			IF SWITCH 6 ABOVE IS ON, SEE PAGE 3 OF INSTALLER MANUAL

SAT-2 CONTROL BOARD & DIP SWITCH SETTINGS



NOTE :
LINK ONLY NECESSARY IF 'SD' SPADE TERMINAL EXISTS, OTHERWISE CUT OFF AND DISCARD.

DIPSWITCH SETTINGS

OFF		STANDARD SETTING OFF	STANDARD SETTING ON	ON
COOL ONLY	1			HEAT PUMP
NO ELECTRIC HEATERS	2			ELECTRIC HEATERS FITTED
1.5°C DIFFERENTIAL CONTROL	3			1.0°C DIFFERENTIAL CONTROL
FAN ON IN COOL CYCLE DEAD BAND (RECOMMENDED FOR IN-DUCT SENSORS)	4			FAN OFF IN COOL CYCLE DEAD BAND
AIR COOLED	5			HYDRONIC
TWO STAGE	6			SINGLE STAGE
ALARM RELAY TURNS ON UPON COMPLETE LOCKOUT OF SYSTEM FAULT.	7			ALARM RELAY TURNS ON WHENEVER THERE IS SYSTEM FAULT.
FAN ON IN HEAT CYCLE DEAD BAND (RECOMMENDED FOR IN-DUCT SENSORS)	8			FAN OFF IN HEAT CYCLE DEAD BAND

NOTE:
PLEASE SELECT CORRECT POSITION WITH OR WITHOUT HEATERS ON ASSY.

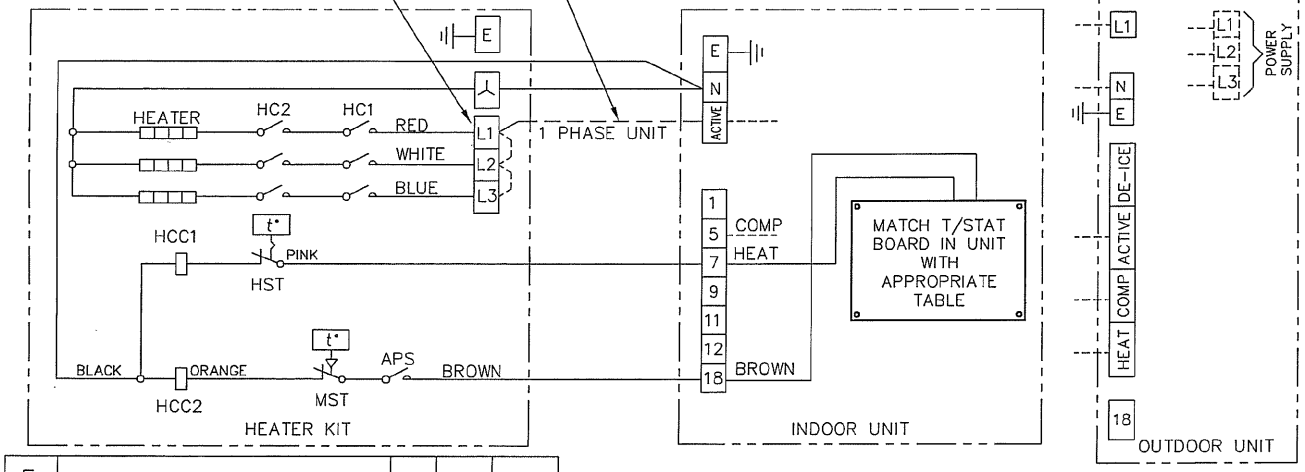
WHEN FITTING A 3 ELEMENT HEATER KIT TO A SINGLE PHASE OUTDOOR UNIT, LINK BETWEEN L1, L2, L3 AS SHOWN BELOW.

OTHERWISE

IF THE OUTDOOR UNIT IS A THREE PHASE MODEL, DO NOT FIT THE L1, L2, L3 LINKS SHOWN. INSTEAD, RUN WIRES TO THE CORRESPONDING L1, L2 AND L3 TERMINALS IN THE OUTDOOR UNIT.

NOTE:
TO ACTIVE ON INDOOR UNIT UP TO ISD/L 110.

FOR ISD 135-160 WITH 1 PHASE OUTDOOR, DIRECT TO L1 ON OUTDOOR UNIT.



ISSUE	MODIFICATION	ECN	DATE	APRVD
F	ISD 135 WAS ISD 140	N2402	30-11-09	D.A.B
E	ISD 230K WAS ISD 223K	N2333	10-10-09	D.A.B
D	DIGITAL OPTION ADDED. TITLE UPDATED	N1998	09-09-08	D.A.B
C	WAS SAT-1, NOW SAT-2 & 'SD' TERM. ADDED	N1962	12-08-08	B.P.
B	REMOVE WIRE D12 TO D13,SWITCH 2 WAS AT OFF	N1750	04-02-08	CMW

APS	AIR PRESSURE SWITCH
CMC	COMPRESSOR CONTACTOR
E	EARTH STUD
HC1 & 2	HEATER CONTACTOR
HCC1 & 2	HEATER CONTACTOR COIL
HST	AUTO HIGH TEMP. T/STAT
MST	MANUAL HIGH TEMP. T/STAT

CLIENT WIRING
Interconnections between units by client. Double insulated multi-core cable.

PLOTTED
30-11-09

Title ISDL 55-110K & ISD 80-230K SAT-2 & DIGITAL T/SAT HEATER KIT WIRING SCHEMATIC

temperzone

Drawn B.P.	Date 28.03.07	Drawing No. 525-094-006	Revision F
Scale	Checked		