

Model	Description
AX527	Room thermostat for air-conditioning with 3 fan speeds, 24 V~ power supply.

APPLICATION AND USE

The AX527 room thermostat is used in industrial and residential air-conditioning plants where room temperature control is required.

The thermostat controls with a 0..10 V- proportional action either one motorized valve, or two valves in sequence. Typical applications: re-heating coil control with V.XT/MVT5 or V.B/MVB56 valves, small A.H.U., multizone plants, heating cooling coils with V.XT/MVT5 or V.B/MVB56 valves in heating-cooling sequence. The AX527 thermostat can also control MVH56- motorized valves.

OPERATION

The AX527 thermostat is equipped with a knob for set point adjustment. Such knob includes the device which fixes the minimum and maximum limits of the adjustable set. The equipment has a 0...10 V- analogue output. If temperature increases above the set level, the analogue output will increase until the maximum value of the proportional 10V range is reached. If temperature decreases, also voltage falls until 0 V is approximately reached. Voltage on terminal 19 can be switched through to an output terminal and a fan can be connected.

Remote sensor: The STR73 return temperature remote sensor can be used instead of the one located inside the thermostat.

The control type is proportional with a 10..0 V- output with reverse action (heating) and another 0..10 V- output with direct action (cooling). The proportional band of each output is fixed; while it is possible to set the dead zone between the two outputs. The fixed set point coincides with the 0 V d.c. signal of the first output (heating). In other words, when the set temperature coincides with the set value, the output 1 signal is 0 V-. Output 2 is fixed at 0 V- and begins increasing when the temperature will assume a value higher than the set point plus the set dead zone. In case a heating (in winter) and a cooling (in summer) valve are available using an outside switch, the valve can be switched to output 1 for heating or output 2 for cooling, see electrical connections.

MANUFACTURING CHARACTERISTICS

The AX527 is composed of a white ABS housing and of a base containing the electronic card and terminal board. The knob is situated on the front part on the right. The output power control is carried out through TRIAC.

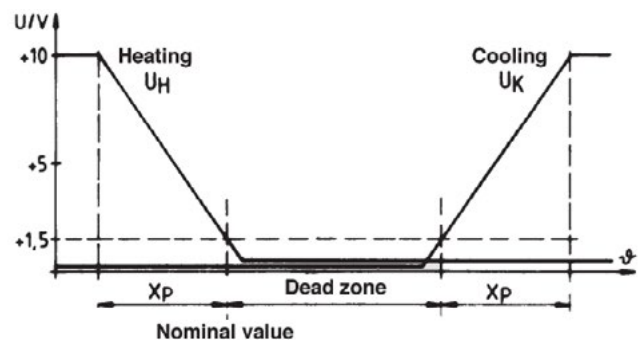


TECHNICAL CHARACTERISTICS

Power supply	24 V~ 50 - 60 Hz
Range	5T30 °C
Control	2 0...10 V- outputs
Action	output 1: reverse output 2: direct
Max electrical load	3 mA (control on each output 1 MVT57 or 1 MVB54/56)
Power consumption max.	3(2)A terminal output 6
Max. contact capacity	6(3)A terminal output 20-21-22
Proportional band	3K (0..10V)
Dead zone	adjustable 0,5 .. 7,5 K
Sensing element	NTC
Temperature:	
- working	-25T 40 °C
- storage	-25T 70 °C
Mounting	on wall
Protection degree	IP 30 (according to DIN 40050)
Protection class	II (according to IEC 950)
Weight	0,12 Kg
STR73 remote sensor	
4 m. double-pole cable	Ø 7.9 mm.
Max cable length	50 m.
Protection degree	IP67

Product conforms to EMC 89/336 directive according to the below-mentioned standards:
for emission EN 50081-1 for immunity EN 50082-1

OPERATION DIAGRAM



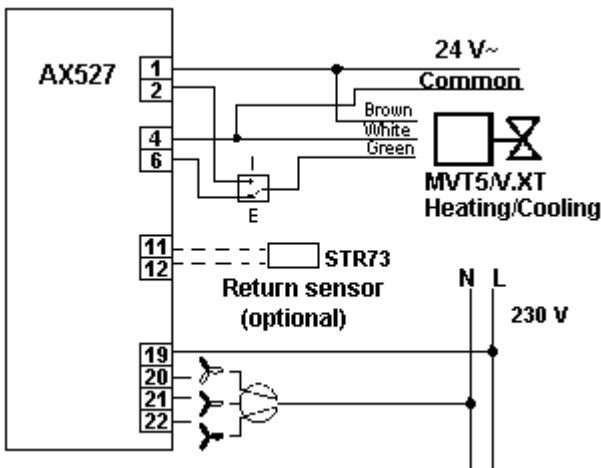
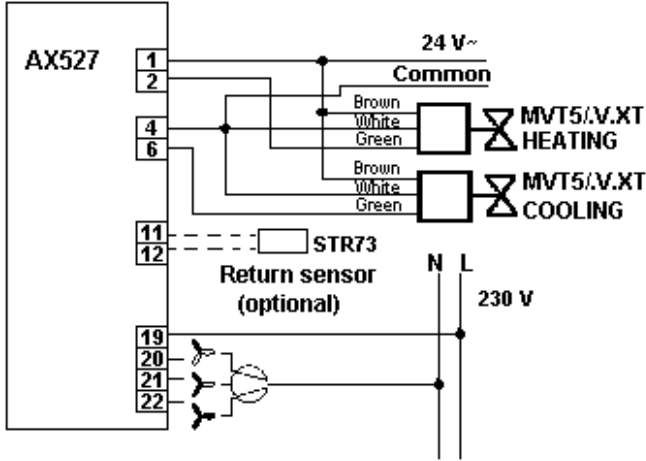
ELECTRICAL CONNECTIONS

The terminal board is accessible by removing the cover, after pulling off the knob and loosening the screw. Perform the wiring according to the following diagram and in compliance with existing standards. Use cables with 1 mm² minimum cross section. Warning: the cables connecting the actuator must not be routed in elios pipes carrying voltage lines.

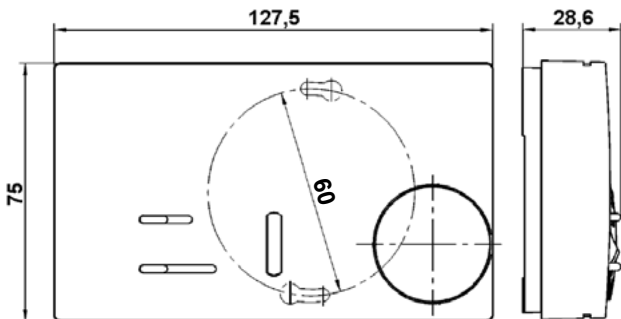
INSTALLATION AND START-UP

Install the apparel at approximately 1.5 m from the floor in a zone reflecting the room average temperature. Avoid mounting in air stagnation areas, near doors, windows or heat sources. Mount the apparel on wall through the two holes on the base (see overall dimensions) accessible by removing the cover, after pulling off the knob and loosening the screw. Make connections according to the application required; in case of heating/cooling valve sequence, set the dead zone value by positioning the trimmer P3. Place the knob onto the required value. It is possible to fix the minimum and maximum value of the adjustable set by positioning the cams placed on the back of the knob (the red cam for upper limit, the blue one for the lower).

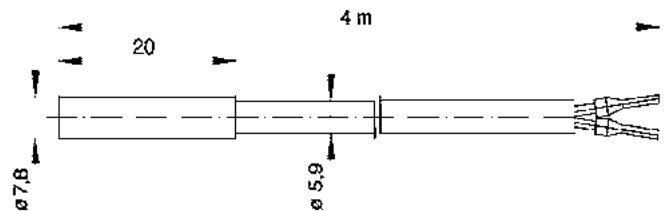
NOTE: When an remote sensor is used, it is necessary to cut the inner sensing element (identified on the board as R15) and interrupt the inner jumper (identified on the board as BR1).



OVERALL DIMENSIONS (mm)



AX527



STR73

The performances stated in this sheet can be modified without any prior notice due to design improvements