

KPSW

CONSOLE TERMINAL UNIT



	Cooling	Heating
KPSW 2	2.40 kW	3.75 kW
KPSW 3	3.19 kW	4.07 kW
KPSW 4	3.60 kW	5.30 kW

CE MARKING

This product marked CE conforms to the essential requirements of the Directives :

- Low voltage no. 2006/95/EC,
- Electromagnetic Compatibility no. 89/336 EEC, modified 92/31 and 93/68 EEC.



SUMMARY

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1 - PRESENTATION

1.1 - UTILISATION

- Units intended for climate control in buildings and the comfort of people.
- Do not place the device in rooms with high humidity or exposed to projections of water.

1.2 - FUNCTIONS

- Cooling or heating by means of a 2-pipe water coil.
- Ventilation with filtration (built-in filter).

1.3 - APPLICATIONS

- These units, derived directly from direct expansion models, are characterized by:
 - attractiveness,
 - compactness (using unused spaces),
 - a low sound level,
 - various installation possibilities (floor, wall or ceiling).

1.4 - MODELS

- "2-pipe" for all sizes, with wire or infrared remote control: KPSW B 5B and KPSW B 5X.

2 - TECHNICAL CHARACTERISTICS

2.1 - NOMINAL CONDITIONS

Model				KPSW 2	KPSW 3	KPSW 4
Total cooling capacity	(1)	HS	kW	2.40	3.19	3.60
		MS	kW	1.80	2.40	3
		LS	kW	1.07	1.13	1.77
Sensible cooling capacity	(1)	HS	kW	1.97	2.47	3.06
		MS	kW	1.50	1.80	2.50
		LS	kW	0.93	0.95	1.48
Heating capacity	(2)	HS	kW	3.48	4.07	5.30
		MS	kW	2.70	3.40	4.30
		LS	kW	1.84	2.05	2.40
Air flow rate	HS		m ³ /h	415	520	675
			m ³ /s	0.115	0.144	0.188
	MS		m ³ /h	300	430	570
			m ³ /s	0.083	0.119	0.158
	LS		m ³ /h	200	210	330
			m ³ /s	0.056	0.058	0.092
Water flow rate in cooling	HS		l/h	420	550	617
	MS		l/h	312	413	520
	LS		l/h	184	191	309
Pressure drop on water in cooling in the appliance (10 kPa = 1 m WG)	(1)	HS	kPa	21	26.6	25.8
		MS	kPa	12.1	19.9	19
		LS	kPa	4	4.4	7.4
Pressure drop on water in cooling in the flexible tubes (accessory) (10 kPa = 1 m WG)	(3)	Short length	kPa	4.1	7	8.8
		Long length	kPa	6.4	11	13.8
Pressure drop on water in heating	(2) (3)		kPa	13	23.7	23
Power supply			V/f/Hz	230/1/50	230/1/50	230/1/50
Max. power consumption			kW	0.034	0.046	0.080
Max. current consumption			A	0.16	0.23	0.40
Hydraulic connection				1/2" Gaz male	1/2" Gaz male	1/2" Gaz male
Sound power level	HS		dB(A)	48	50	54
	MS		dB(A)	43	45	51
	LS		dB(A)	35	35	40
Calculated sound pressure (at 2 m indoors)	HS		dB(A)	40	42	46
	MS		dB(A)	35	37	43
	LS		dB(A)	27	27	32

(1) Air inlet: 27°C (DB) / 19°C (WB); water: inlet at 7°C, outlet at 12°C.

(2) Air inlet: 20°C; water inlet: 50°C (same flow-rate as under other conditions (1)).

(3) Estimated value in high speed cooling operation, with two 90° elbows on each hose.

2.2 - OTHER CONDITIONS

• Consult us.

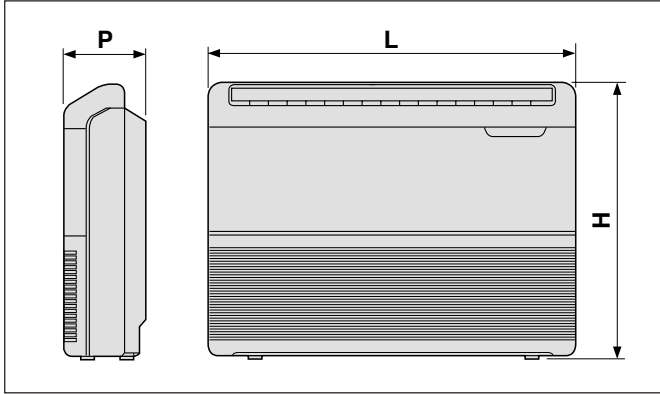
• **Operating limits:**

- Minimum water inlet temperature : 4°C.
- Maximum water inlet temperature : 60°C.
- Maximum operating pressure of the hydraulic circuit: 16 bar.
- Minimum air recirculation temperature : 5°C.
- Maximum air recirculation temperature : 32°C.

3 - PHYSICAL CHARACTERISTICS

• **Materials:**

- Painted metal frame.
- Plastic body.
- Copper/aluminium exchanger.
- Copper piping.



			KPSW
Overall dimensions	L	mm	900
	H	mm	680
	P	mm	190
	Weight	kg	23.5
Overall packed dimensions	L	mm	1 011
	H	mm	813
	P	mm	296
	Weight	kg	31

4 - DESCRIPTION

Model	KPSW 2	KPSW 3	KPSW 4
Copper/aluminium thermal exchanger	●	●	●
Number of rows	2	2	2
Frontal surface area	m² 0.178	0.178	0.178
Water capacity	litres 1	1	1
Hydraulic connection	1/2" Gaz male	1/2" Gaz male	1/2" Gaz male
Electrical motor with internal thermal protection	●	●	●
Power supply	230 V / 1 + Earth / 50 Hz	●	●
Number of speeds	3	3	3
Capacitor	µf 1.2	1.5	2
Tangential fan	●	●	●
Air filter in class HB polypropylene (UL94) - Washable	●	●	●
Flexible connection tubes	accessory ●	●	●
Condensate drain pan expanded polystyrene, supplied with drainage hose	●	●	●
End fitting OD	mm 18	18	18
Wire remote control version	●	●	●
Infrared remote control version	●	●	●

5 - ACCESSORIES

5.1 - FLEXIBLE TUBES for hydraulic connection

- Set of 2 insulated metal flexible tubes (these tubes do not crush when bent).

Code	Length (mm)	Connections	
		air handler side	installation side
70600060	550	1/2" Gaz female	1/2" Gaz male
70600059	1 250	1/2" Gaz female	1/2" Gaz male

5.2 - ACTIVE CARBON FILTER

- Code 397021907.

5.3 - 3-WAY VALVE + BY-PASS

- Code 70600071.
 - 1/2" Gaz male.
 - KVS 1.6.
 - "On/Off" motor 230 VAC.
 - To be assembled outside the unit.
- Note:** The valve is supplied without connection or tube.
- This valve kit can be mounted on all models **and is obligatory for cold water use**.
- If this valve is not installed, there is a risk of condensation forming on the machine when it is switched off by the thermostat.

5.4 - REMOTE CONTROLS (for the wire remote control version)

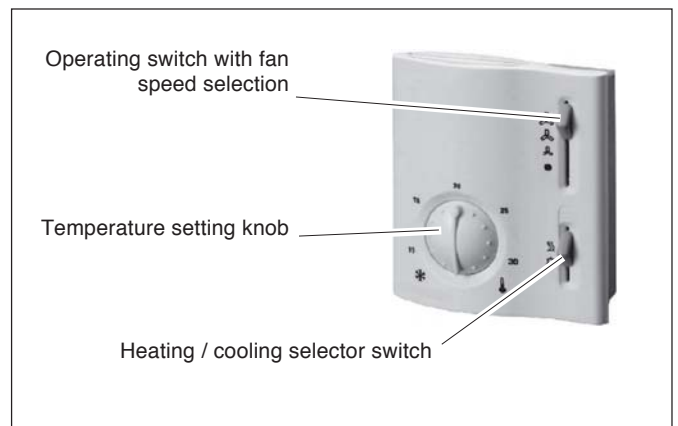
Model	KPSW
70250076 Manual remote control	•
70250051 RCC 10 automatic remote control for 2-pipe units	•
70250053 Change/over sensor with bracket for RCC (<i>may be used as an air recirculation sensor</i>)	•
70250054 Air temperature sensor in box for RCC	•

Note: "On-Off" action on valve, 230 VAC (accessory) or action on ventilation.

A - MANUAL REMOTE CONTROL

- Code 70250076.
- The operating mode is selected **manually** by a switch on the front of the control unit.

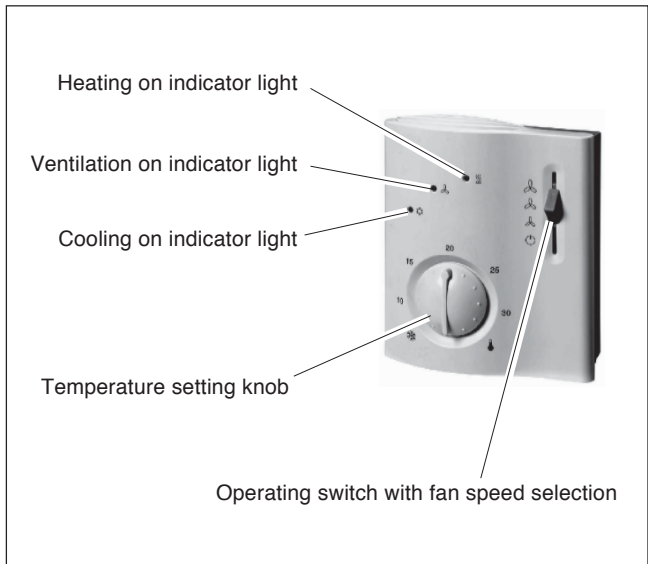
• Technology	: electromechanic.
• Power supply	: 230 Vac
• Set-point adjustment range: 8 / 30°C (possibility of mechanical limitation by jumpers on the knob)	
• "On-Off" action	
• Control differential	: $\leq 1^{\circ}\text{K}$
• Operating temperature	: 0 / 50°C
• Relative humidity	: < 95%
• Protection class	: cl. II
• IP	: 30
• Colour	: White RAL 9003



B - AUTOMATIC REMOTE CONTROL

- **Type RCC 10 - code 70250051.**
- Selection of the operating mode is done **automatically**.
- **For the 2-pipe units** capable of heating and cooling operation, a change-over sensor must be connected (accessory, code 70250053) to the installation on the water piping.
This change-over sensor can be replaced by a potential-free contact (not supplied), the closing of which causes changeover to cooling mode.
- There is a possibility to connect a remote air temperature sensor, bare (accessory, code 70250053) or box mounted (accessory, code 70250054).
- Permanent or slaved ventilation.
- Mode change is possible (Eco or Stand-by) by an external potential-free contact (not supplied).

• Technology	: electronic.
• Power supply	: 230 Vac
• Set-point adjustment range: 8 / 30°C (possibility of mechanical limitation by jumpers on the knob)	
• "On-Off" action	
• Heating differential	: adjustable 1 or 4 ^K
• Cooling differential	: adjustable 0.5 or 2 ^K
• Neutral zone (on RCC 20)	: adjustable 2 or 5 ^K
• Setpoint in "Eco" mode	: 16°C in heating mode 28°C in cooling mode
• Setpoint in "Standby"	: 8°C in heating mode
• Operating temperature	: 0 / 50°C
• Relative humidity	: < 95%
• Protection class	: cl. II
• IP	: 30
• Colour	: White RAL 9003



C - TEMPERATURE SENSOR (BARE)

- Code **70250053**.
- For RCC type remote control.
- Use:
 - change over sensor (equipped with a tube retaining clip) for "2-tube" appliances may operate in heating and cooling mode,
 - air recirculation sensor.
- Thermistance type CTN 3 k Ω at 25°C.
- IP 65 - protection class: cl. II.

D - BOX-MOUNTED AIR TEMPERATURE SENSOR

- Code **70250054**.
- For RCC remote controls.
- Enables the control unit to be placed outside the room to be air conditioned.
- Thermistance type CTN 3 k Ω at 25°C.
- The unit is mounted in a box similar to the remote control (IP 30 - protection class: cl. II - colour: white RAL 9003).



Due to our policy of continuous development, our products are liable to modification without notice.

Technibel

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