



SA121, SA122, SA123, SA128 and SA1219 Self-acting Temperature Control Systems

Description

A range of self-powered control systems that incorporate sensor, actuator, set point adjustment/indicator for use with the following valve types:-

2-port KA, KB, KC, KX, KY, SB, SBRA, BX and BXRA, BM, BMRA, BMF, BMFRA, NS and NSRA

3-port TW

Available types

Set point adjustment at sensor

SA121	For use on	2-port valves	DN15 to DN80
		3-port valves	DN20 to DN50
SA1219	For use on	3-port valves	DN80 and DN100
SA128	For use on	2-port valves	DN15 to DN25
		3-port valves	DN20 and DN25

Set point adjustment at valve

SA122	For use on	2-port valves	DN15 to DN25
		3-port valves	DN20 and DN25

Remote set point adjustment

SA123	For use on	2-port valves	DN15 to DN80
		3-port valves	DN20 to DN50

Optional extras

Union kit Direct immersion

Pocket Indirect immersion

Pocket material options include copper and stainless steel.

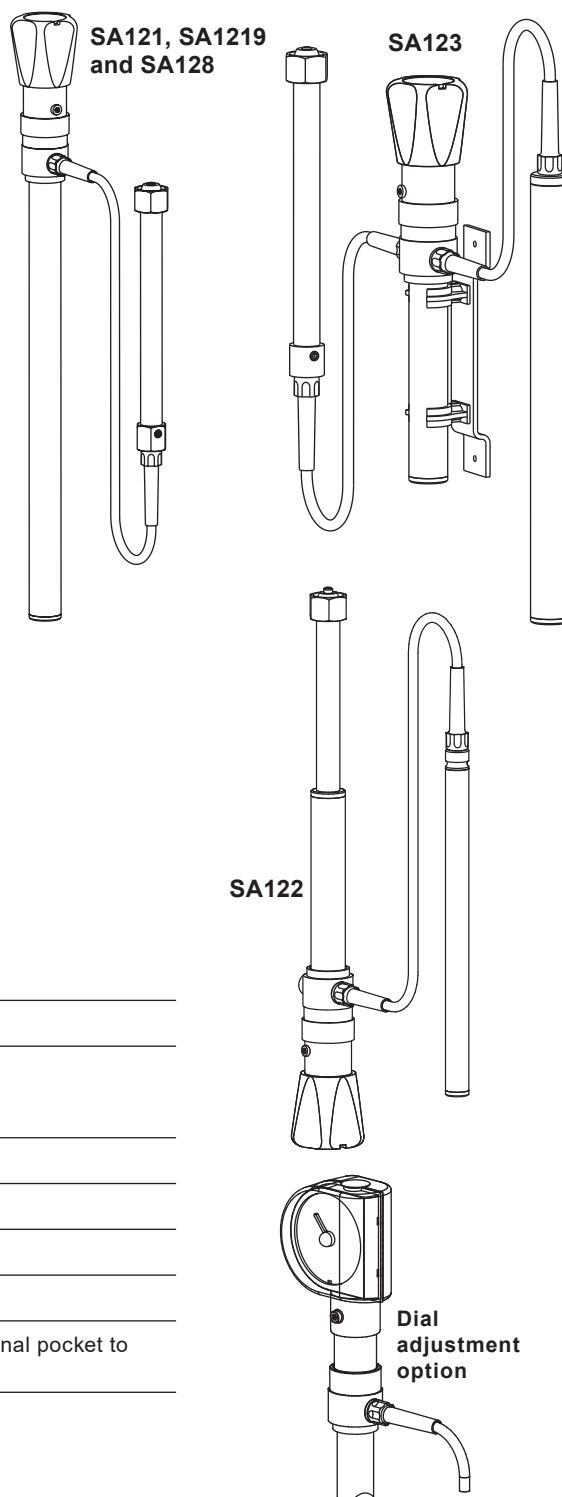
Wall bracket

Duct adaptor Duct mounting

Nickel plating

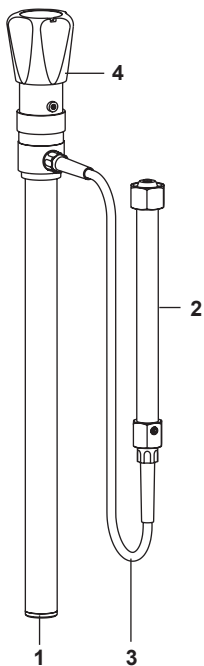
Dial type set point adjuster

Pt100 temperature sensor SA122TP and SA123TP incorporate an internal pocket to accept a Pt100 sensor

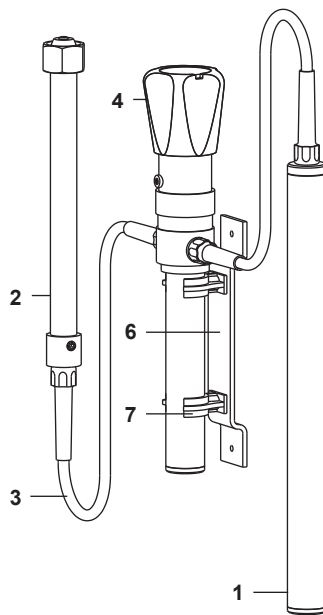


Materials

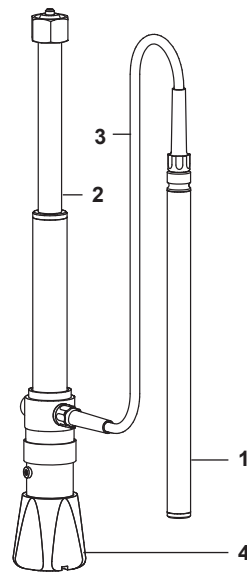
SA121, SA1219
and SA128



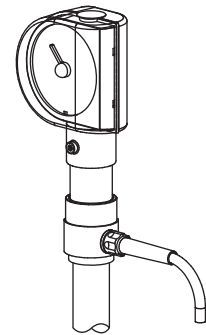
SA123



SA122



Dial adjustment
option



No. Part	Material	
1 Sensor	Brass	
2 Actuator	Brass	
3 Capillary tube	Copper with PVC coated armoured covering	
4 Adjustment head	Polypropylene	
5 * Union kit	Brass	
6 Mounting bracket	Steel	
7 Clip	Polypropylene	
8 * Adaptor plate (Duct fixing adaptor)	Steel	
9 * Pocket	Copper Stainless steel	BS 2871 C106 BS 3605 CFS 316S 18
10 Liquid fill	Kerosene	

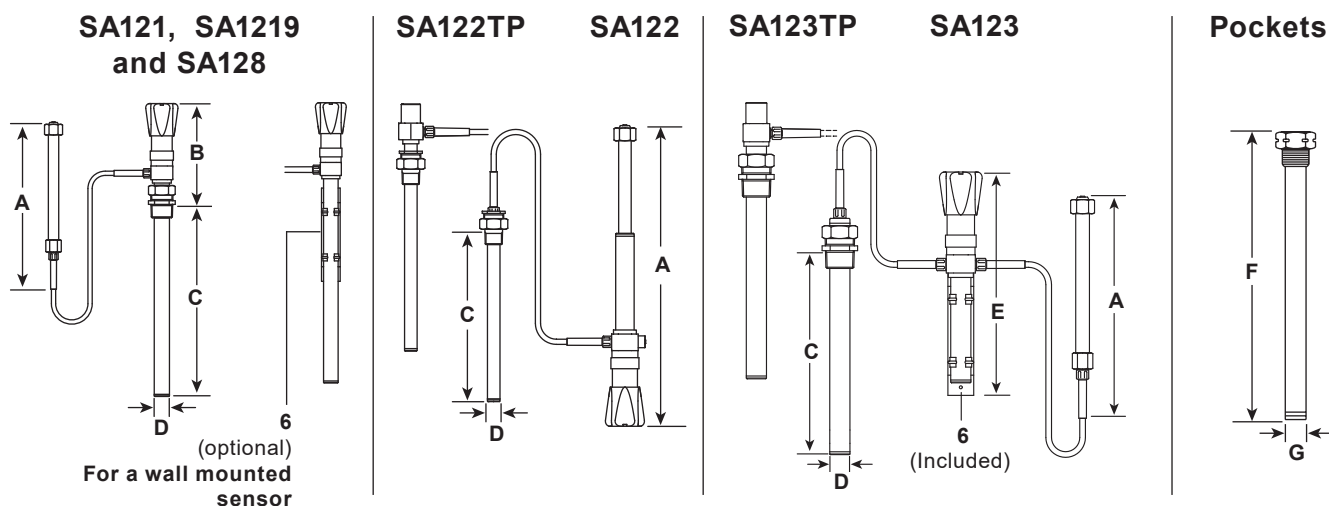
* Items 5, 8 and 9 are shown on page 3

Temperature ranges

SA121, SA1219 and SA123	Range 1	-15 °C to 50 °C
	Range 2	40 °C to 105 °C
	Range 3	95 °C to 160 °C
Over temperature protection	55 °C over set value to 190 °C maximum 215 °C maximum for SA123	
SA122	Range 1	-20 °C to 120 °C
	Range 2	40 °C to 170 °C
Over temperature protection	55 °C over set value	
SA128	Range 1	-20 °C to 110 °C
	Range 2	40 °C to 170 °C
Over temperature protection	55 °C over set value to 190 °C maximum	
Note - Ambient design temperature	Minimum	-35 °C
	Maximum	+50 °C

Capillary tube

Standard length 2 m, 4 m, 8 m and maximum special length is 16m.



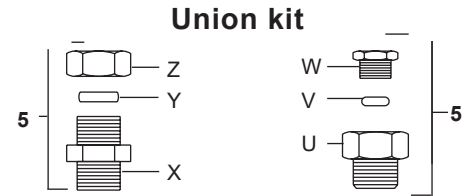
Dimensions/weights (approximate) in mm and kg

Model	Control system				Metal pockets			Weight excluding pocket
	A	B	C	D	E	F	G	
SA121	252	185	310	25	-	333	28	2.0
SA1219	350	185	310	25	-	333	28	2.3
SA122	441	-	240	17	-	271	20	1.8
SA122TP	441	-	255	17	-	271	20	2.0
SA123	252	-	248	25	272	276	28	2.5
SA123TP	252	-	255	25	272	276	28	2.7
SA128	252	185	178	25	-	196	28	1.8

Union kit (for sensor immersion without pocket)

Includes gland nut, compression ring and union nipple.

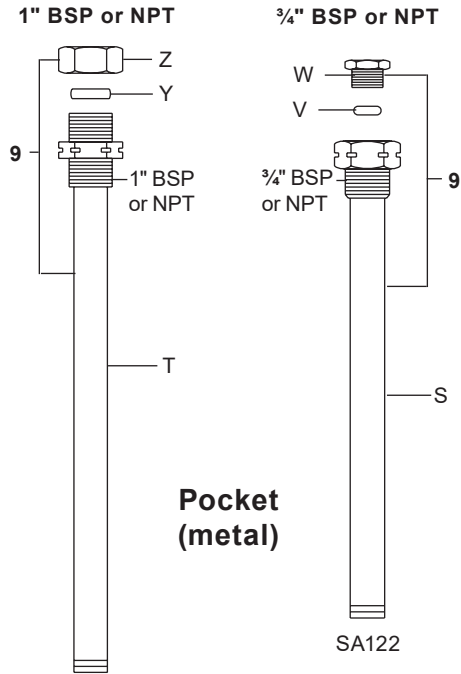
SA121, SA1219, SA123 and SA128	Items Z, Y and X
SA122	Items W, V and U



Pockets (for indirect immersion)

Includes pocket, gland nut and compression ring.

SA121, SA1219, SA123 and SA128	Items T, Z and Y
SA122	Items S, W and V.
Available materials	Copper and stainless steel



SA121,
SA1219,
SA123
and
SA128

Long pockets (SA122 and SA123 only)

To special order only.

Having a minimum length 0.5 m, maximum length to order.

Includes pocket, bracket and rubber bung

SA122 and SA123	Items S, V, W and T, Z, Y
Available materials	Copper and stainless steel

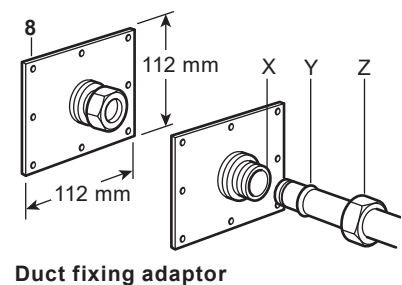
Wall mounting bracket (Item 6)

SA121, SA1219, SA122, SA123 and SA128	Optional
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Duct fixing adaptor (for air sensing within ducts)

Includes adaptor plate, union nipple, compression ring and gland nut.

SA121, SA1219, SA123 and SA128	Items 8, X, Y and Z
SA122	Not available



Safety information, installation and maintenance

For full details see the Installation and Maintenance Instructions supplied with the product.

How to order

Example: 1 - Spirax Sarco SA121 temperature control system, having temperature range 2, 2 m capillary and stainless steel pocket.