



SA121, SA122, 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	(½" to 3")
		3-port valves	DN20 to DN50	(¾" to 2")
SA1219	For use on	3-port valves	DN80 and DN100	(3" to 4")
SA128	For use on	2-port valves	DN15 to DN25	(½" to 1")
		3-port valves	DN20 and DN25	(¾" to 1")

Set point adjustment at valve

SA122	For use on	2-port valves	DN15 to DN25	(½" to 1")
		3-port valves	DN20 and DN25	(¾" to 1")

Optional extras

Union kit	Direct immersion
Pocket	Indirect immersion
Pocket material options include copper and stainless steel.	

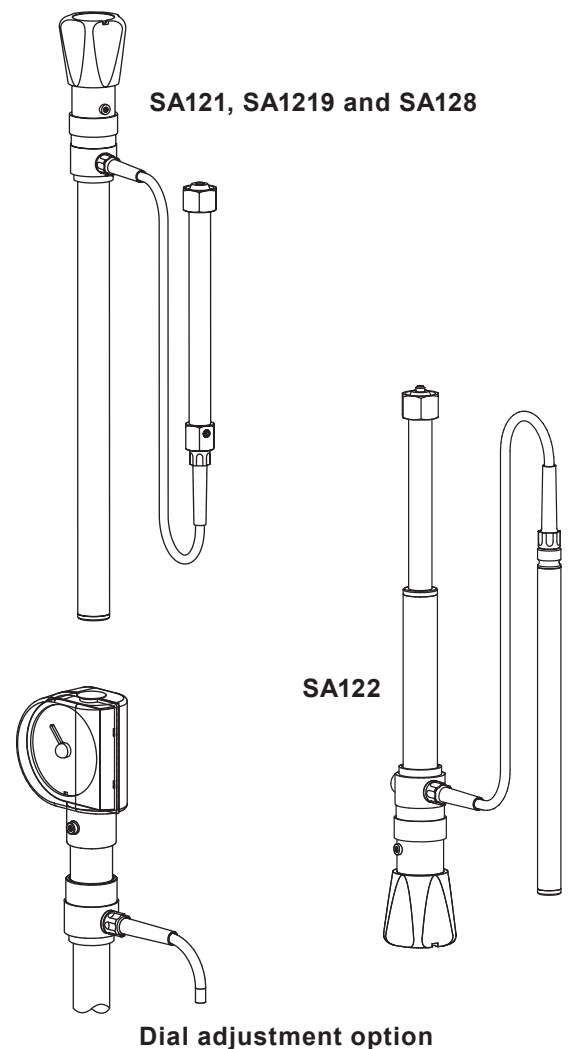
Wall bracket

Duct adaptor Duct mounting

Nickel plating

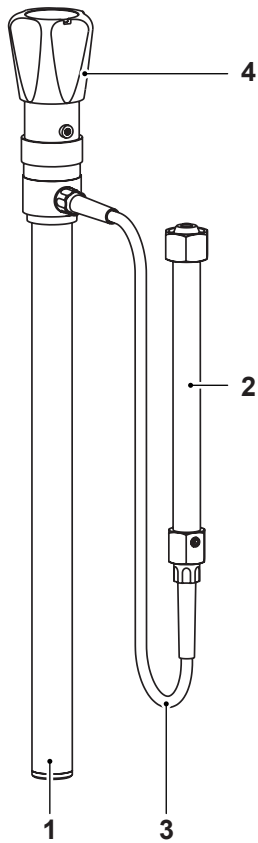
Dial type set point adjuster

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

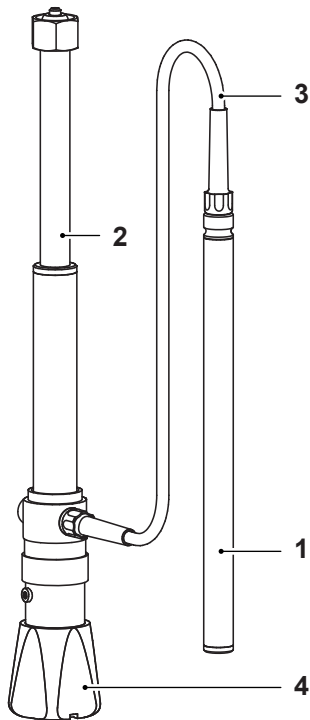


Materials

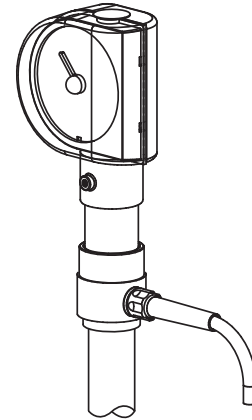
SA121, SA1219 and SA128



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	BS 2871 C106
		Stainless steel	BS 3605 CFS 316S 18
10	Liquid fill	Kerosene	

* Items 5, 8 and 9 are shown on page 4

Temperature ranges

SA121 and SA1219	Range 1	-15 °C to 50 °C	(5 °F to 122 °F)
	Range 2	40 °C to 105 °C	(104 °F to 221 °F)
	Range 3	95 °C to 160 °C	(203 °F to 320 °F)
Over temperature protection		55 °C (131 °F) over set value to 190 °C (374 °F) maximum	
SA122	Range 1	-20 °C to 120 °C	(-4 °F to 248 °F)
	Range 2	40 °C to 170 °C	(104 °F to 338 °F)
Over temperature protection		55 °C (131 °F) over set value	
SA128	Range 1	-20 °C to 110 °C	(-4 °F to 230 °F)
	Range 2	40 °C to 170 °C	(104 °F to 338 °F)
Over temperature protection		55 °C (131 °F) over set value to 190 °C (374 °F) maximum	
Note - Ambient design temperature	Minimum	-35 °C	(-31 °F)
	Maximum	+50 °C	(122 °F)

Capillary tube

Standard length 2 m, 4 m, 8 m and maximum special length is 16m. (6.5 ft, 13.1 ft, 26.2 ft and 52.5 ft)

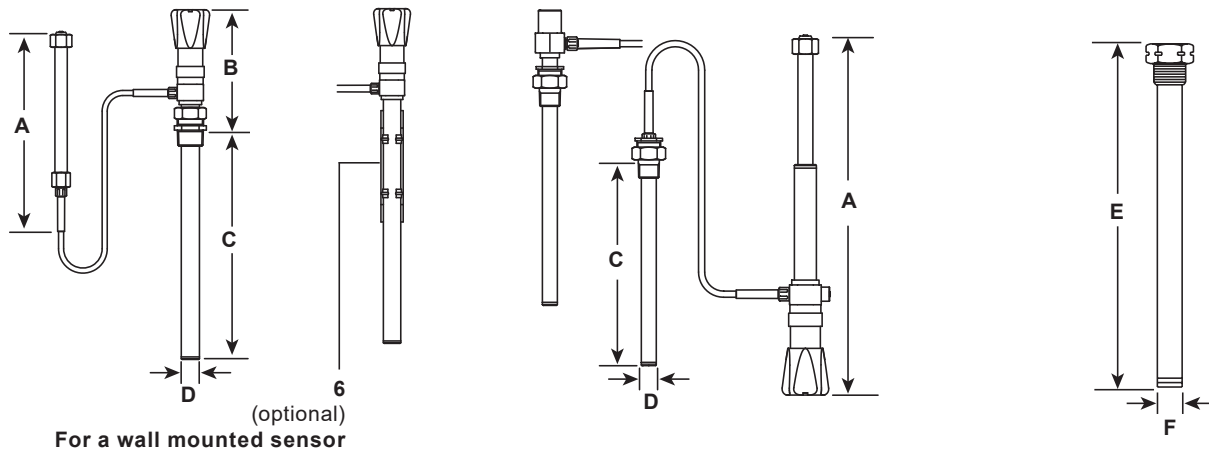
Dimensions/weights (approximate) in mm and kg (in and lb)

SA121, SA1219 and SA128

SA122TP

SA122

Pockets

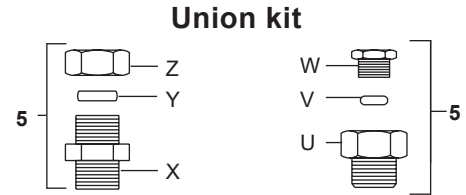


Model	Control system				Metal pockets				Weight	
	A	B	C	D	E	F	excluding pocket			
SA121	252 (9.9)	185 (7.2)	310 (12.2)	25 (0.9)	333 (13.1)	28 (1.1)	2.0 (4.4)			
SA1219	350 (13.7)	185 (7.2)	310 (12.2)	25 (0.9)	333 (13.1)	28 (1.1)	2.3 (5)			
SA122	441 (17.3)	-	240 (9.4)	17 (0.6)	271 (10.6)	20 (0.7)	1.8 (3.9)			
SA122TP	441 (17.3)	-	255 (10)	17 (0.6)	271 (10.6)	20 (0.7)	2.0 (4.4)			
SA128	252 (9.9)	185 (7.2)	178 (7)	25 (0.9)	196 (7.7)	28 (1.1)	1.8 (3.9)			

Union kit (for sensor immersion without pocket)

Includes gland nut, compression ring and union nipple.

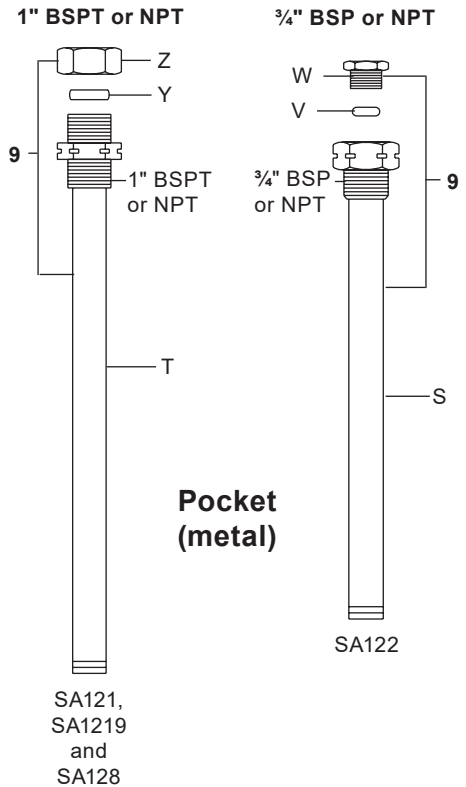
SA121, SA1219 and SA128	Items Z, Y and X
SA122	Items W, V and U



Pockets (for indirect immersion)

Includes pocket, gland nut and compression ring.

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



Long pockets (SA122 only)

To special order only.
Having a minimum length 0.5 m, maximum length to order.
Includes pocket, bracket and rubber bung

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

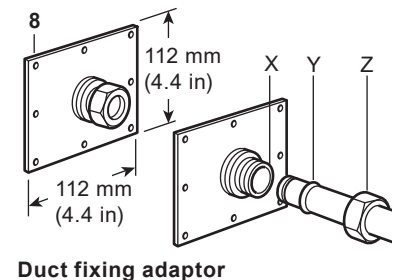
Wall mounting bracket (Item 6)

SA121, SA1219, SA122 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 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 (7.2 ft) capillary and stainless steel pocket.