spirax sarco

TI-P046-01
CH Issue 11

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

CHRYSSAFIDIS

Cert. No. LRQ 0963008
ISO 9001

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, BXRA, BM, BMRA, BMF, BMFRA, NS, 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. A glass option is also available for the SA122 and SA123 only.

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

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	Mild steel — BS 980 CEW2
		Copper — BS 2871 C106
		Stainless steel — BS 3605 CFS 316S 18
		Glass
10	Liquid fill	Kerosene

* Items **5**, **8** and **9** are shown overleaf.

SA121, SA1219 and SA128

SA123

SA122

Dial adjustment option
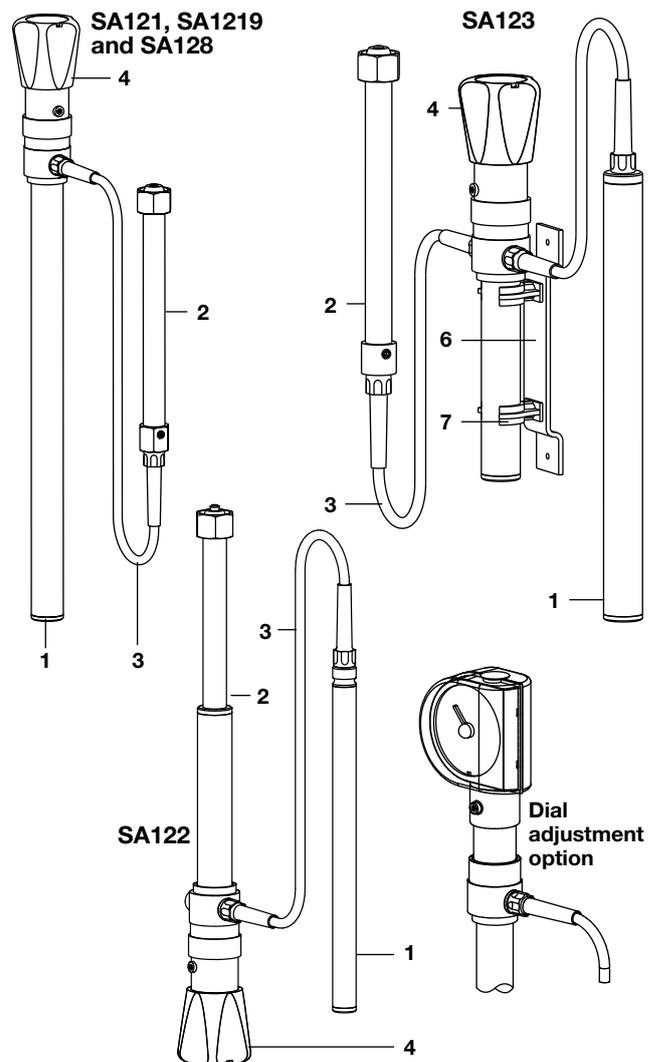
Temperature ranges

SA121,	Range 1	-15°C to 50°C
SA1219 and	Range 2	40°C to 105°C
SA123	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 20 m.

SA121, SA1219 and SA128   **SA122TP   SA122**   **SA123TP   SA123**   **Pockets**

(optional)
For a wall mounted sensor

6 (Included)
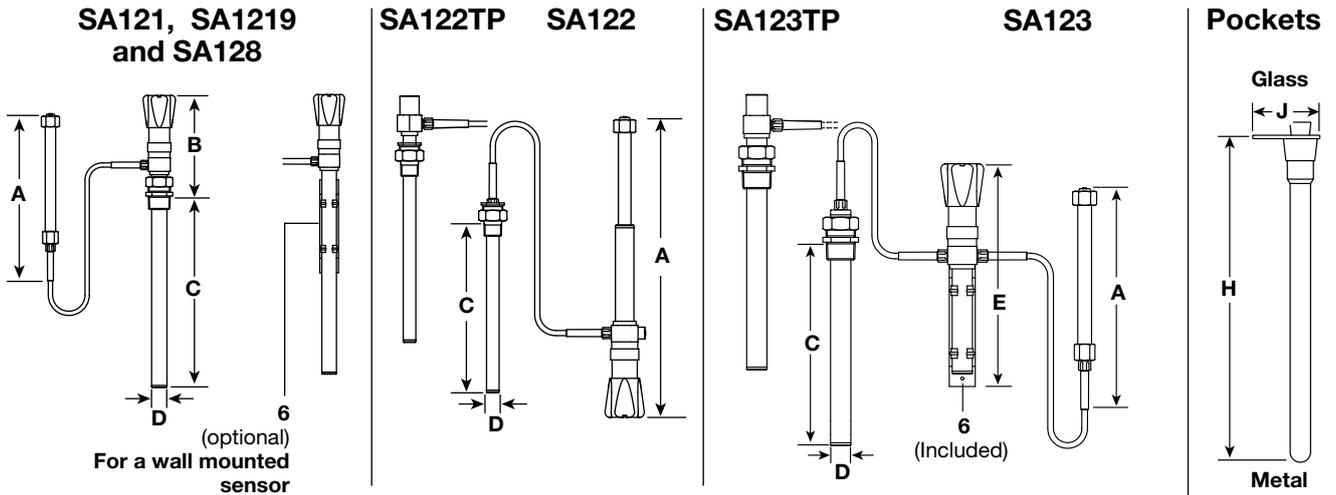
Glass

Metal

Dimensions / weights (approximate) in mm and kg

Model	Control system					Metal pockets		Glass pockets		Weight excluding pocket
	A	B	C	D	E	F	G	H	J	
SA121	275	185	310	25	-	333	28	-	-	2.0
SA1219	350	185	310	25	-	333	28	-	-	2.3
SA122	415	-	240	17	-	271	20	575	117	1.8
SA122TP	415	-	255	17	-	271	20	-	-	2.0
SA123	275	-	248	25	270	276	28	575	117	2.5
SA123TP	275	-	255	25	270	276	28	-	-	2.7
SA128	275	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

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

Glass pockets (SA122 and SA123 only)
To special order only.
Includes pocket, bracket and rubber bung

SA122 and SA123	Items R, O and P

Wall mounting bracket (Item 6)

SA121, SA1219, SA122, SA123 and SA128	Optional

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.

Union kit

1" BSP or NPT   ¾" BSP or NPT

Pocket (metal)

T — SA121, SA1219, SA123 and SA128
S — SA122

Pocket (glass)

P
O
R

Duct fixing adaptor

112 mm × 112 mm
8
X Y Z

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