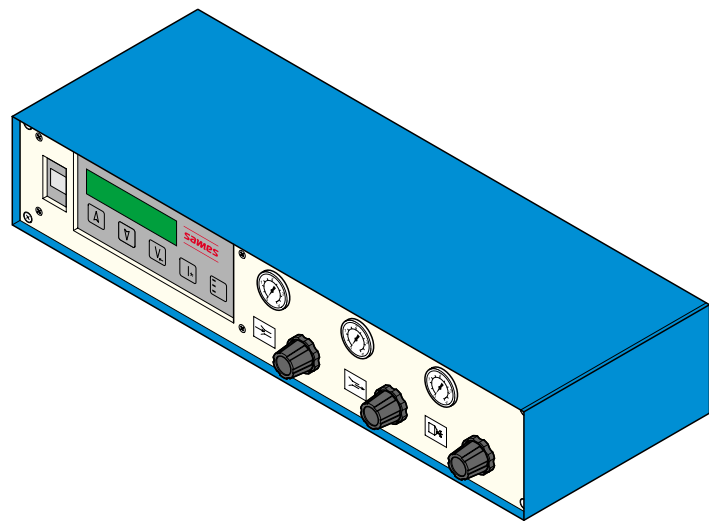




From February 1st, 2017 SAMES Technologies SAS becomes SAMES KREMLIN SAS
A partir du 1/02/17, SAMES Technologies SAS devient SAMES KREMLIN SAS



DES00320

User manual

Control module CRN 456

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Control module

CRN 456

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1. Warning



WARNING : This manual contains links to the following user manuals

- [see RT Nr 6209](#) for the GNM 100 module (220 V).
- [see RT Nr 6210](#) for the GNM 100 module (110 V).

1.1. Safety Rules

This equipment may become a safety hazard if it is not operated in accordance with the instructions given in this manual.

- The electropneumatic control module containing the GNM 100 generator must always be placed outside any explosive areas.
- The electrostatic spraying equipment must only be used by trained personnel thoroughly familiar with rules 1 to 8 below:

- 1 A warning notice written in a language understood by the operator and summarizing safety rules 2 to 8 of Paragraph 1.1 of this manual, must be placed in a clearly visible position close to the powder spraying station.
- 2 Shoes worn by the operators must be antistatic and conform to the publication ISO 2251. If gloves are used, only antistatic gloves or gloves providing a ground connection for the operator must be worn.
- 3 The floor inside the operator's working station must be antistatic (ordinary bare concrete floors are antistatic).
- 4 Powder spraying must be carried out in front of a ventilated station designed for this purpose. Ventilation must start up automatically when the CRN 456 is switched on.
- 5 All conducting surfaces such as floors, spray booth walls, ceilings, gates, parts to be painted, powder distributor tanks placed inside or close to the work station and also the ground terminal of the electropneumatic control module must have an electrical connection to the power supply grounding system.
- 6 The resistance between the parts to be painted and the ground must be less than or equal to 1 MΩ.
- 7 The powder spraying equipment must be regularly serviced in accordance with the constructor's instructions. During repair work these instructions must be strictly observed.
- 8 Before starting to clean the spray gun or carrying out any other work at the spraying station, the high voltage power supply must be switched off and its reactivation via the spray gun trigger made impossible.
- 9 The operating safety of the equipment can only be guaranteed if spare parts distributed by SAMES are used.
- 10 The ambient temperature must not exceed 40° C.



WARNING : This equipment is only designed for spraying powder paint.

1.2. Standards and Approval

The CRN 456 must be used in accordance with the requirements of European standard EN 50053-2.

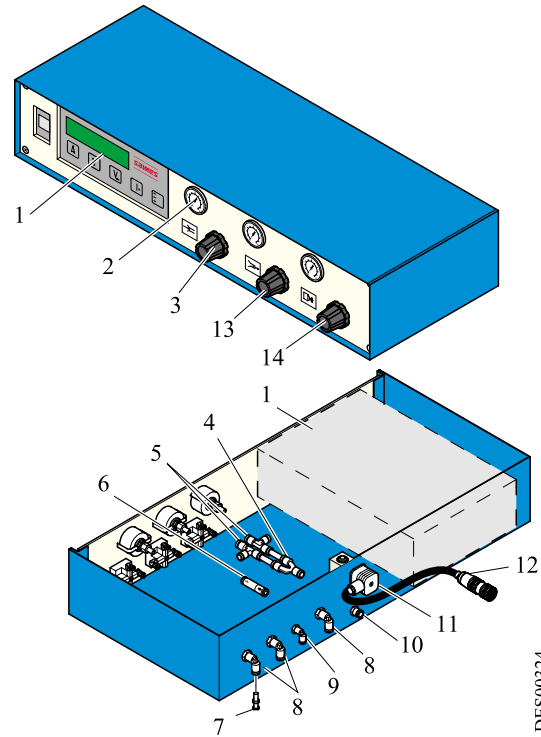
The equipment is approved under standard EN 50050 with the following spray guns and sprayers:

- Spray gun JRN 406 (negative) ref. 511633
- Spray gun JRN 406 (positive) ref. 1507531
- Spayer SRV 416 (negative) ref. 1501828
- Sprayer SRV 416 positive ref. 1507682

2. Description

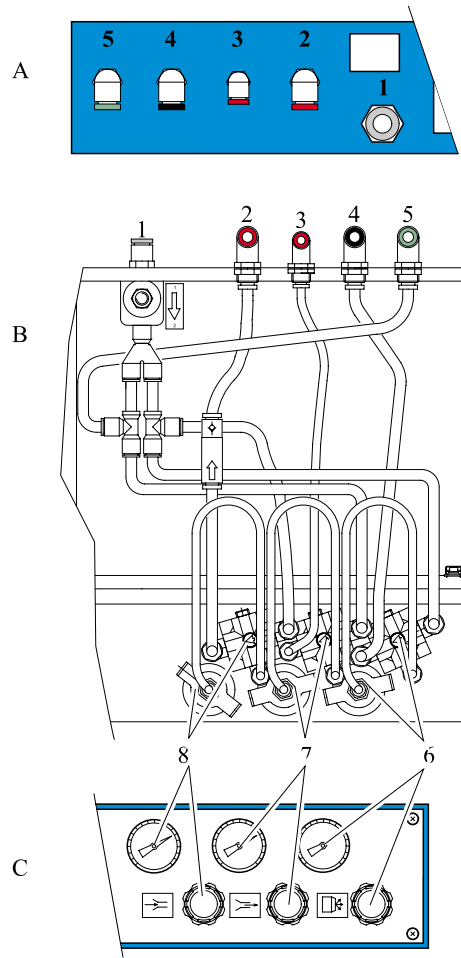
Electropneumatic module CRN 456 is designed to control a powder spray gun or sprayer. It comprises a GNM 100 generator and a set of pneumatic components designed to get the best performance from the powder spray gun or sprayer.

1	GNM 100 generator
2	Injection air 0 to 4 bar pressure gage
3	Injection air regulator
4	Dilution air 0 to 4 bar pressure gage
5	Dilution air regulator
6	Vortex air 0 to 4 bar pressure gage
7	Vortex air regulator
8	"Y" union
9	"T" union
10	Non-return valve
11	Solenoid valve
12	Cable connecting the solenoid valve to the GNM 100



DES00324

A	Rear view of CRN 456
B	Inside view of the CRN 456
C	Front panel of the CRN 456
1	General air supply, dia. 10
2	Supply to plunger CS 126 (dilution), dia. 8
3	Supply to plunger CS 126 (injection), dia. 6
4	Vortex air supply, dia. 8
5	Pressurized air outlet, dia. 8
6	Vortex air pressure gage and pressure reducer
7	Dilution air pressure gage and pressure reducer
8	Injection air pressure gage and pressure reducer



DES00333

3. Technical Data

3.1. Pneumatic Data

Maximum inlet pressure	150 psi (10 bar)
Minimum inlet pressure	60 psi (4 bar)
Maximum compressed air consumption	17 m ₀ ³ /h
Maximum ambient temperature	40 ° C - (104° F)

3.2. Electrical Characteristics of the GNM 100

- [see RT Nr 6209](#) for the GNM 100 module (220 V)
- [see RT Nr 6210](#) for the GNM 100 module (110 V)

3.3. Compressed Air Quality

Characteristics of the compressed air supply as per standard NF ISO 8573-1:

Maximum dew point at 6 bar (90 psi)	class 4, i.e. +3°C (38°F)
Maximum grain size of solid foreign matter	class 3, i.e. 5 µm.
Maximum oil concentration	class 1, i.e. 0.01 mg/m ₀ ^{3*}
Maximum concentration of solid foreign matter	class 3, i.e. 5 mg/m ₀ ^{3*}

* : the values are given for a temperature of 0° C (32 °F) and atmospheric pressure.

4. Diagrams

Not applicable.

5. Operating Principle

Refer to manuals for sprayers, spray guns and GNM 100

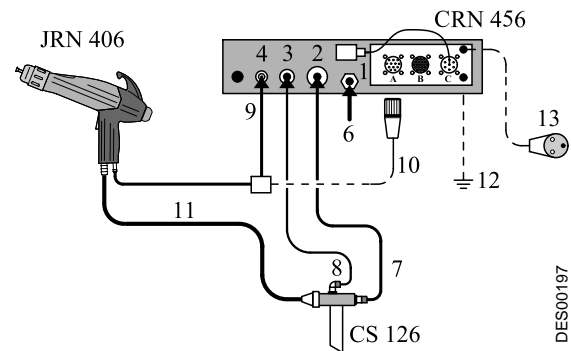
6. Tools

Not specific tools required.

7. Installation of the CRN 456

Example of installation with a JRN 406 (similar to installation with an SRV 416)

1-2-3-4-5	References on CRN 456
6	General air supply
7	Injection air supply hose of CS 126
8	Dilution air supply hose of CS 126
9	Spray gun vortex air supply
10	Electropneumatic connection
11	Powder supply hose
12	Ground cable
13	Mains supply cable
14	GNM 100 module



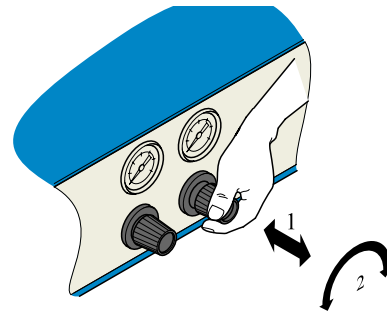
DES00197

8. Adjustments

8.1. Pressure Reducer Adjustments

All control buttons of control module CRN 456 pressure reducers are fitted with a locking system. To unlock them, pull the knurled buttons forwards (1).

Tighten the screw to increase pressure, loosen the screw to decrease it (2).



DES00322

8.2. Adjusting Electrical Functions

- [see RT Nr 6209](#) for the GNM 100 module (220 V)
- [see RT Nr 6210](#) for the GNM 100 module (110 V)

9. Maintenance and Checks

This device requires no special servicing.

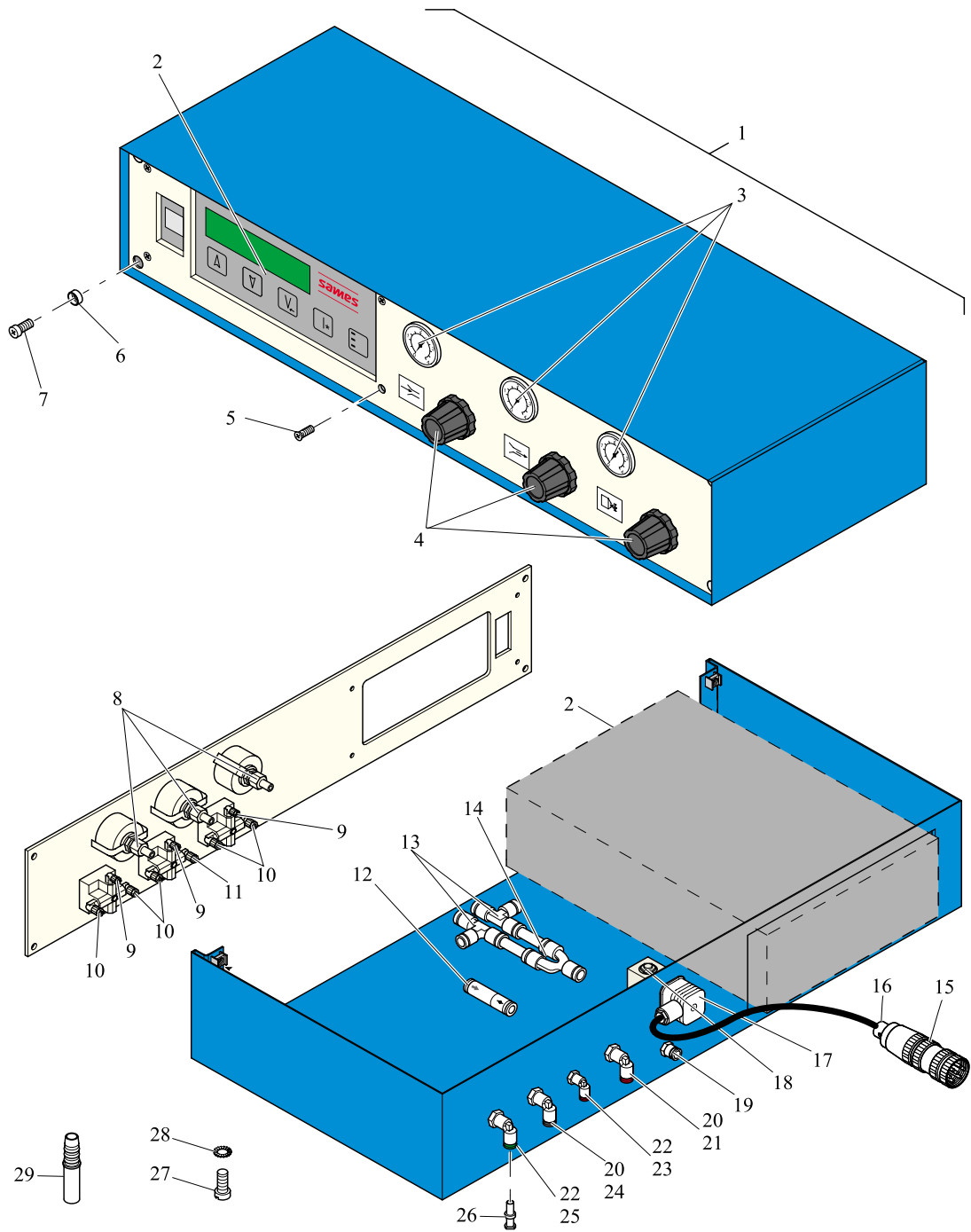


WARNING : Do not use solvent to clean the CRN 456.

10. Troubleshooting

Refer to the spray gun or atomizer manual.

11. Spare Parts



DES00323

Item	Part number	Description	Qty	Unit of sale
1	1500050	CRN 456 module (220 V)	1	1
	1503099	CRN 456 module (110 V)	1	1
2	see RT Nr 6209	GNM 100 generator (220 V)	1	1
	see RT Nr 6210	GNM 100 generator (110 V)	1	1
3	R7MCAD061	Pressure gage, dia. 40, 0 to 6 bar	3	1
4	R4DREG029	Regulator, 0 to 3.5 bar	3	1
5	X2BVKB119	Screw, FB/90 M 4 / 12	4	1
6	X9PDSP032	Black dished washer, M 5	4	1
7	X2BVKY184	Screw, CB M 5 / 16	4	1
8	F6RLUS457	Female union, dia. 6 -1/8"	3	1
9	F6RPDK300	Male union, dia. 6 -1/8"	3	1
10	F6RPDK303	Male elbow, dia. 8 -1/4"	5	1
11	F6RPDK301	Male elbow, dia. 6 -1/4"	1	1
12	F6RRAF043	Non-return union, dia. 8 mm	1	1
13	F6RLTS416	T union, dia. 8 mm	2	1
14	F6RLYS450	Y union, dia. 8 mm	1	1
15	E4PTFS316	7-contact male connector	1	1
16	E4PTFA323	Cable clamp	1	1
17	R3VELM228	Solenoid valve, 2 / 2 - 1 / 4" NF	1	1
	F6RLZX417	Gasket	2	1
18	R3VBQB305	Coil, 220 V (for item 17)	1	1
19	F6RLUS208	Straight union, 1/4"	1	1
20	F6RLGS199	Bulkhead union, dia. 8 mm	3	1
21	F6RLZB403	Red ring, dia. 8 mm	1	10
22	F6RLGS198	Bulkhead union	1	1
23	F6RLZB402	Red ring, dia. 6 mm	1	10
24	F6RLZB406	Black ring, dia. 8 mm	1	10
25	F6RLZB404	Green ring, dia. 8 mm	1	10
26	F6RLZX397	Clip-in plug, dia. 8 mm	1	1
27	X2BVHA223	Screw, H M 6 x 16, zinc-plated steel	1	1
28	X2BDZU006	Steel washer, dia. 6 mm	1	1
29	F6RLJF311	Grooved socket	1	1