

Sensor - Checks SAL-SC Precise Humidity Standards



Overview:

The Novasina SAL-SC humidity standards are ready to use upon delivery, just shake them slightly before use.

After usage close the lid and store in their original package at room temperature (avoid direct sunlight). With proper care the SAL-SC have a shelf life of 3 – 5 years.

Scope of use:

This user guide applies to all Sensor –Checks SAL-SC from Novasina AG

SAL-SC products	Sal-SC with UKAS certificate	SAL-SC set & Certificate
260 0978 -> SAL-SC 6 111 0885 -> SAL-SC 11 111 0855 -> SAL-SC 33 111 0857 -> SAL-SC 53 260 0219 -> SAL-SC 58 111 0859 -> SAL-SC 75 251 8965 -> SAL-SC 84 111 0896 -> SAL-SC 90 251 8966 -> SAL-SC 97	111 1044 -> SAL-SC 11 C 111 1037 -> SAL-SC 33 C 111 1040 -> SAL-SC 53 C 111 1035 -> SAL-SC 75 C 260 1272 -> SAL-SC 84 C 111 1032 -> SAL-SC 90 C 260 1275 -> SAL-SC 97 C	111 7847 Set in case with SAL-SC 11/33/53/75/90 260 1774 Factory certificate ISO9001

1. Introduction

Novasina humidity standards are used for calibration and adjustment for all brands of humidity sensors with a diameter <20mm. The SAL-SC consists of special, saturated solution to provide long term humidity within their containment with an accuracy of 0.3%.

Sensor Checks SAL-SC can be used immediately without additional preparation. If stored properly shelf life is 3-5 years.

2. Storage

Close the lid after use and put it back in their original packaging (plastic tube). Storage at room temperature, avoid direct sunlight.

3. How to use

- Shake Sal-SC properly (and carefully) before usage
- Visual check: Solid crystals and liquid must be visible.
 - If only crystal or liquid is visible the SAL-SC must be replaced.
 - SAL-SC 6% and 11% consist of a rather dry sludge already. Replace when only liquid can be seen.
- Insert humidity probe on SAL-SC.
- Use appropriate sealing adapter for precise measurement.
 - For nSens: Adapter SAL-SC / nSens (Art-No 260 1143)
 - For any sensor <18mm: Adapter variable 9-17mm (Art-No 260 1271)



4. Time for stabilization

Required waiting time for stabilisation depends on humidity probe (brand, age etc) and possible temperature changes. Temperature differences between sensor and SAL-SC must be equalised before the value becomes stable and reliable.

The air inside the SAL-SC is not in motion, therefore it takes some time for the sensor to achieve equilibrium.

Important: SAL-SC reacts slow to temperature change. It is advised to keep SAL-SC stored at calibration temperature levels.

Using SAL-SC as quick check with approx 5% accuracy

Shake SAL-SC, insert humidity probe.

Wait 5-10 Minutes.

Humidity measurement should have reach +/-5% if the SAL-SC value.

If not wait another 10 minutes.

Using SAL-SC for adjustment with high accuracy 0.3%

Shake SAL-SC, insert humidity probe. Use proper sealing around humidity sensor to avoid contact with surrounding outside air.

Make sure room temperature is stable, avoid direct sunlight or heat exhaust nearby (e.g. Laptop or similar).

Using an isolation box is strongly recommended (Art-No 111 1302).



Wait at least 3 hours. Depending on type and age wait 6 hours or more.

Sensor values should reach the designated value of the SAL-SC with 0.5% accuracy or less, depending on your humidity probe. If in doubt shake SAL-SC again and wait another 1-3 hours.

Target value: The humidity values depends on ambient temperature. For adjustment take room temperature into account and check target value against SAL-SC table on next page.

Instructions for sensor calibration and adjustment refer to the appropriate manuals from your supplier.

5. Humidity values at different temperature (ideal 15- 30°C)

TEMP/SC	4	6	11	33	53	75	84	90	97	98
[°C]	[%rF]	[%rF]	[%rF]	[%rF]	[%rF]	[%rF]	[%rF]	[%rF]	[%rF]	[%rF]
0.00		7.75	11.23	33.66	60.35	75.51	88.61		98.77	
1.00		7.69	11.24	33.65	60.05	75.54	88.42		98.71	
2.00		7.62	11.24	33.64	59.75	75.57	88.23		98.65	
3.00		7.56	11.25	33.62	59.46	75.59	88.05		98.60	
4.00		7.49	11.25	33.61	59.16	75.62	87.86		98.54	
5.00	5.52	7.43	11.26	33.60	58.86	75.65	87.67		98.48	
6.00	5.39	7.37	11.27	33.57	58.56	75.65	87.49		98.42	
7.00	5.27	7.31	11.27	33.55	58.26	75.66	87.31		98.36	
8.00	5.14	7.26	11.28	33.52	57.96	75.66	87.13		98.30	
9.00	5.02	7.20	11.28	33.50	57.66	75.67	86.95		98.24	
10.00	4.89	7.14	11.29	33.47	57.36	75.67	86.77		98.18	
11.00	4.78	7.08	11.29	33.44	57.06	75.66	86.60		98.12	
12.00	4.67	7.03	11.29	33.40	56.76	75.65	86.43		98.06	
13.00	4.55	6.97	11.30	33.37	56.47	75.63	86.26		98.01	
14.00	4.44	6.92	11.30	33.33	56.17	75.62	86.09		97.95	
15.00	4.33	6.86	11.30	33.30	55.87	75.61	85.92	90.90	97.89	
16.00	4.23	6.81	11.30	33.25	55.57	75.58	85.76	90.82	97.83	
17.00	4.13	6.76	11.30	33.21	55.27	75.55	85.60	90.74	97.77	
18.00	4.03	6.71	11.31	33.16	54.98	75.53	85.43	90.66	97.71	
19.00	3.93	6.66	11.31	33.12	54.68	75.50	85.27	90.58	97.65	
20.00	3.83	6.61	11.31	33.07	54.38	75.47	85.11	90.50	97.59	98.20
21.00	3.74	6.56	11.31	33.01	54.08	75.43	84.96	90.42	97.53	98.16
22.00	3.65	6.51	11.31	32.95	53.78	75.40	84.80	90.34	97.47	98.12
23.00	3.57	6.47	11.30	32.90	53.49	75.36	84.65	90.26	97.42	98.08
24.00	3.48	6.42	11.30	32.84	53.19	75.33	84.49	90.18	97.36	98.04
25.00	3.39	6.37	11.30	32.78	52.89	75.29	84.34	90.10	97.30	98.00
26.00	3.31	6.33	11.30	32.71	52.59	75.25	84.20	90.06	97.24	98.00
27.00	3.24	6.29	11.29	32.64	52.29	75.21	84.05	90.02	97.18	98.00
28.00	3.16	6.24	11.29	32.58	52.00	75.17	83.91	89.98	97.12	98.00
29.00	3.09	6.20	11.28	32.51	51.70	75.13	83.76	89.94	97.06	98.00
30.00	3.01	6.16	11.28	32.44	51.40	75.09	83.62	89.90	97.00	98.00
31.00	2.95	6.12	11.27	32.36	51.10	75.05	83.49		96.94	
32.00	2.88	6.08	11.27	32.28	50.80	75.00	83.35		96.88	
33.00	2.82	6.05	11.26	32.21	50.51	74.96	83.22		96.83	
34.00	2.75	6.01	11.26	32.13	50.21	74.91	83.08		96.77	
35.00	2.69	5.97	11.25	32.05	49.91	74.87	82.95		96.71	
36.00	2.64	5.94	11.24	31.96	49.61	74.83	82.82		96.65	
37.00	2.59	5.90	11.23	31.87	49.31	74.79	82.70		96.59	
38.00	2.54	5.87	11.23	31.78	49.02	74.76	82.57		96.53	
39.00	2.49	5.83	11.22	31.69	48.72	74.72	82.45		96.47	
40.00	2.44	5.80	11.21	31.60	48.42	74.68	82.32		96.41	
41.00	2.40	5.77	11.20	31.50	48.12	74.65	82.20		96.35	
42.00	2.36	5.74	11.19	31.40	47.82	74.62	82.09		96.29	
43.00	2.32	5.71	11.18	31.30	47.53	74.58	81.97		96.24	
44.00	2.28	5.68	11.17	31.20	47.23	74.55	81.86		96.18	
45.00	2.24	5.65	11.16	31.10	46.93	74.52	81.74		96.12	
46.00	2.21	5.63	11.15	30.99	46.63	74.50	81.63		96.06	
47.00	2.19	5.60	11.14	30.88	46.33	74.48	81.52		96.00	
48.00	2.16	5.58	11.12	30.76	46.04	74.47	81.42		95.94	
49.00	2.14	5.55	11.11	30.65	45.74	74.45	81.31		95.88	
50.00	2.11	5.53	11.10	30.54	45.44	74.43	81.20		95.82	