

Box ID	OPL ID	CAS AFFID	GIM ID
1	17 93 05 09	72-0000 11 (old)	51 airpublocky
2	176 ⁹³ 93 0507	72-0000 30	59 A2
3	176390807	" 39	58 A3
4	176930503	" 35	56 AP11
5	176930504	" 28	55 AP22
6	176930505	" 37	54 AP33
7	17620020	" " 29	53 AP44
8	176390808	" " 33	57 AP55
9	176390805	" " 26	510 AP66
10	176930506	" " 32	52 AP77



Alphasense A4 (2-way) Air Quality Sensor Module
Calibration Certificate

Customer	Digital Kinematics
Order No	
Zero Cal Date	24/01/2017
AFE Serial No	12-000030
Test PSU voltage	
AFE Type	810-0021-xx (2xA4)

Circuit Type			SN1	SN2
	<input type="checkbox"/>	-00	NO ₂ /O ₃	NO ₂ /O ₃
	<input type="checkbox"/>	-01	NO ₂ /O ₃	NO
	<input checked="" type="checkbox"/>	-02	NO ₂ /O ₃	CO/SO ₂ /H ₂ S
	<input type="checkbox"/>	-03	NO	CO/SO ₂ /H ₂ S
	<input type="checkbox"/>	-04	CO/SO ₂ /H ₂ S	CO/SO ₂ /H ₂ S

	SN1	SN2
Sensor Type	NO2 A43F	CO A4
Serial Number	212930022	132950286
WE Electronic Zero (mV)	293	293
WE Sensor Zero (mV)*	8	121
TOTAL WE Zero (mV)	301	414
AE Electronic Zero (mV)	298	285
AE Sensor Zero (mV)*	0	-12
TOTAL AE Zero (mV)	298	273
Sensitivity (nA/ppb)*	-0.279	0.296
Sensitivity NO ₂ (nA/ppb)*	-0.279	—
PCB gain (mV/nA)	-0.73	0.8
Sensitivity (mV/ppb)	0.203	0.236
Sensitivity NO ₂ (mV/ppb)	0.203	—

* at 101kPa, 23 (±2)°C, 40 (±15) %RH



Alphasense A4 (2-way) Air Quality Sensor Module Calibration Certificate

Customer	Digital Kinematics
Order No	
Zero Cal Date	24/01/2017
AFE Serial No	12-0000 31
Test PSU voltage	
AFE Type	810-0021-xx (2xA4)

Circuit Type			SN1	SN2
	<input type="checkbox"/>	-00	NO ₂ /O ₃	NO ₂ /O ₃
	<input type="checkbox"/>	-01	NO ₂ /O ₃	NO
	<input checked="" type="checkbox"/>	-02	NO ₂ /O ₃	CO/SO ₂ /H ₂ S
	<input type="checkbox"/>	-03	NO	CO/SO ₂ /H ₂ S
	<input type="checkbox"/>	-04	CO/SO ₂ /H ₂ S	CO/SO ₂ /H ₂ S

	SN1	SN2
Sensor Type	NO2 A43F	CO A4
Serial Number	212930019	132950253
WE Electronic Zero (mV)	304	291
WE Sensor Zero (mV)*	6	117
TOTAL WE Zero (mV)	310	408
AE Electronic Zero (mV)	294	275
AE Sensor Zero (mV)*	1	-13
TOTAL AE Zero (mV)	295	262
Sensitivity (nA/ppb)*	-0.275	0.313
Sensitivity NO ₂ (nA/ppb)*	-0.275	
PCB gain (mV/nA)	-0.73	0.8
Sensitivity (mV/ppb)	0.200	0.250
Sensitivity NO ₂ (mV/ppb)	0.200	

* at 101kPa, 23 (±2)°C, 40 (±15) %RH



Alphasense A4 (2-way) Air Quality Sensor Module
Calibration Certificate

Customer	Digital Kinematics
Order No	
Zero Cal Date	24/01/2017
AFE Serial No	12-000032
Test PSU voltage	
AFE Type	810-0021-xx (2xA4)

Circuit Type			SN1	SN2
	<input type="checkbox"/>	-00	NO ₂ /O ₃	NO ₂ /O ₃
	<input type="checkbox"/>	-01	NO ₂ /O ₃	NO
	<input checked="" type="checkbox"/>	-02	NO ₂ /O ₃	CO/SO ₂ /H ₂ S
	<input type="checkbox"/>	-03	NO	CO/SO ₂ /H ₂ S
	<input type="checkbox"/>	-04	CO/SO ₂ /H ₂ S	CO/SO ₂ /H ₂ S

	SN1	SN2
Sensor Type	NO2 A43F	CO A4
Serial Number	212930020	132950251
WE Electronic Zero (mV)	302	272
WE Sensor Zero (mV)*	6	140
TOTAL WE Zero (mV)	308	412
AE Electronic Zero (mV)	295	279
AE Sensor Zero (mV)*	2	0
TOTAL AE Zero (mV)	297	279
Sensitivity (nA/ppb)*	-0.268	-0.275
Sensitivity NO ₂ (nA/ppb)*	-0.268	
PCB gain (mV/nA)	-0.73	0.8
Sensitivity (mV/ppb)	-0.195	-0.220
Sensitivity NO ₂ (mV/ppb)	-0.195	

* at 101kPa, 23 (±2)°C, 40 (±15) %RH



Alphasense A4 (2-way) Air Quality Sensor Module
Calibration Certificate

Customer	Digital Kinematics
Order No	
Zero Cal Date	24/01/2017
AFE Serial No	12-000033
Test PSU voltage	
AFE Type	810-0021-xx (2xA4)

Circuit Type			SN1	SN2
	<input type="checkbox"/>	-00	NO ₂ /O ₃	NO ₂ /O ₃
	<input type="checkbox"/>	-01	NO ₂ /O ₃	NO
	<input checked="" type="checkbox"/>	-02	NO ₂ /O ₃	CO/SO ₂ /H ₂ S
	<input type="checkbox"/>	-03	NO	CO/SO ₂ /H ₂ S
	<input type="checkbox"/>	-04	CO/SO ₂ /H ₂ S	CO/SO ₂ /H ₂ S

	SN1	SN2
Sensor Type	NO2 A43F	CO A4
Serial Number	212930021	132950254
WE Electronic Zero (mV)	285	284
WE Sensor Zero (mV)*	10	130
TOTAL WE Zero (mV)	295	414
AE Electronic Zero (mV)	306	268
AE Sensor Zero (mV)*	2	0
TOTAL AE Zero (mV)	308	268
Sensitivity (nA/ppb)*	-0.291	-0.219
Sensitivity NO ₂ (nA/ppb)*	-0.291	
PCB gain (mV/nA)	-0.73	0.8
Sensitivity (mV/ppb)	-0.212	-0.223
Sensitivity NO ₂ (mV/ppb)	-0.212	

* at 101kPa, 23 (±2)°C, 40 (±15) %RH



Alphasense A4 (2-way) Air Quality Sensor Module
Calibration Certificate

Customer	Digital Kinematics
Order No	
Zero Cal Date	24/01/2017
AFE Serial No	12-000034
Test PSU voltage	
AFE Type	810-0021-xx (2xA4)

Circuit Type			SN1	SN2
	<input type="checkbox"/>	-00	NO ₂ /O ₃	NO ₂ /O ₃
	<input type="checkbox"/>	-01	NO ₂ /O ₃	NO
	<input checked="" type="checkbox"/>	-02	NO ₂ /O ₃	CO/SO ₂ /H ₂ S
	<input type="checkbox"/>	-03	NO	CO/SO ₂ /H ₂ S
	<input type="checkbox"/>	-04	CO/SO ₂ /H ₂ S	CO/SO ₂ /H ₂ S

	SN1	SN2
Sensor Type	NO2 A43F	CO A4
Serial Number	212930017	132950255
WE Electronic Zero (mV)	291	265
WE Sensor Zero (mV)*	1	143
TOTAL WE Zero (mV)	292	408
AE Electronic Zero (mV)	292	266
AE Sensor Zero (mV)*	0	-13
TOTAL AE Zero (mV)	292	253
Sensitivity (nA/ppb)*	-0.267	0.289
Sensitivity NO ₂ (nA/ppb)*	-0.267	
PCB gain (mV/nA)	-0.73	0.8
Sensitivity (mV/ppb)	0.194	0.231
Sensitivity NO₂ (mV/ppb)	0.194	

* at 101kPa, 23 (±2)°C, 40 (±15) %RH



Alphasense A4 (2-way) Air Quality Sensor Module
Calibration Certificate

Customer	Digital Kinematics
Order No	
Zero Cal Date	24/01/2017
AFE Serial No	12-000035
Test PSU voltage	
AFE Type	810-0021-xx (2xA4)

Circuit Type			SN1	SN2
	<input type="checkbox"/>	-00	NO ₂ /O ₃	NO ₂ /O ₃
	<input type="checkbox"/>	-01	NO ₂ /O ₃	NO
	<input checked="" type="checkbox"/>	-02	NO ₂ /O ₃	CO/SO ₂ /H ₂ S
	<input type="checkbox"/>	-03	NO	CO/SO ₂ /H ₂ S
	<input type="checkbox"/>	-04	CO/SO ₂ /H ₂ S	CO/SO ₂ /H ₂ S

	SN1	SN2
Sensor Type	NO2 A43F	CO A4
Serial Number	212930018	132950252
WE Electronic Zero (mV)	302	277
WE Sensor Zero (mV)*	6	132
TOTAL WE Zero (mV)	308	409
AE Electronic Zero (mV)	289	268
AE Sensor Zero (mV)*	2	-9
TOTAL AE Zero (mV)	291	259
Sensitivity (nA/ppb)*	-0.266	-0.296
Sensitivity NO ₂ (nA/ppb)*	-0.266	
PCB gain (mV/nA)	-0.73	0.8
Sensitivity (mV/ppb)	-0.194	-0.236
Sensitivity NO ₂ (mV/ppb)	-0.194	

* at 101kPa, 23 (±2)°C, 40 (±15) %RH



Alphasense A4 (2-way) Air Quality Sensor Module Calibration Certificate

Customer	<u>DIGITAL KINEMATICS</u>
Order No	_____
Zero Cal Date	<u>11-10-16</u>
AFE Serial No	<u>12-000029</u>
Test PSU voltage	_____
AFE Type	<input checked="" type="checkbox"/> 810-0021-xx (2xA4)

Circuit Type			SN1	SN2
	<input type="checkbox"/>	-00	NO ₂ /O ₃	NO ₂ /O ₃
	<input type="checkbox"/>	-01	NO ₂ /O ₃	NO
	<input checked="" type="checkbox"/>	-02	NO ₂ /O ₃	CO/SO ₂ /H ₂ S
	<input type="checkbox"/>	-03	NO	CO/SO ₂ /H ₂ S
	<input type="checkbox"/>	-04	CO/SO ₂ /H ₂ S	CO/SO ₂ /H ₂ S

	SN1	SN2
Sensor Type	<u>NO2 A43F</u>	<u>CO A4</u>
Serial Number	<u>212060332</u>	<u>132950241</u>

WE Electronic Zero (mV)	<u>299</u>	<u>282</u>
WE Sensor Zero (mV)*	<u>-1</u>	<u>43</u>
TOTAL WE Zero (mV)	<u>298</u>	<u>325</u>
AE Electronic Zero (mV)	<u>297</u>	<u>287</u>
AE Sensor Zero (mV)*		<u>7</u>
TOTAL AE Zero (mV)	<u>296</u>	<u>294</u>

Sensitivity (nA/ppb)*	<u>-0.251</u>	<u>0.267</u>
Sensitivity NO ₂ (nA/ppb)*	<u>-0.251</u>	<u>—</u>
PCB gain (mV/nA)	<u>-0.73</u>	<u>0.80</u>
Sensitivity (mV/ppb)	<u>0.183</u>	<u>0.213</u>
Sensitivity NO ₂ (mV/ppb)	<u>0.183</u>	<u>—</u>

* at 101kPa, 23 (±2)°C, 40 (±15) %RH



Alphasense A4 (2-way) Air Quality Sensor Module Calibration Certificate

Customer	<u>DIGITAL KINEMATICS</u>
Order No	_____
Zero Cal Date	<u>11-10-16</u>
AFE Serial No	<u>12-000028</u>
Test PSU voltage	_____
AFE Type	<input checked="" type="checkbox"/> 810-0021-xx (2xA4)

Circuit Type			SN1	SN2
	<input type="checkbox"/>	-00	NO ₂ /O ₃	NO ₂ /O ₃
	<input type="checkbox"/>	-01	NO ₂ /O ₃	NO
	<input checked="" type="checkbox"/>	-02	NO ₂ /O ₃	CO/SO ₂ /H ₂ S
	<input type="checkbox"/>	-03	NO	CO/SO ₂ /H ₂ S
	<input type="checkbox"/>	-04	CO/SO ₂ /H ₂ S	CO/SO ₂ /H ₂ S

	SN1	SN2
Sensor Type	<u>NO2 A43F</u>	<u>CO A4</u>
Serial Number	<u>212060338</u>	<u>132950239</u>

WE Electronic Zero (mV)	<u>297</u>	<u>268</u>
WE Sensor Zero (mV)*	<u>0</u>	<u>43</u>
TOTAL WE Zero (mV)	<u>297</u>	<u>311</u>
AE Electronic Zero (mV)	<u>309</u>	<u>272</u>
AE Sensor Zero (mV)*	<u>0</u>	<u>7</u>
TOTAL AE Zero (mV)	<u>309</u>	<u>279</u>

Sensitivity (nA/ppb)*	<u>-0.257</u>	<u>0.283</u>
Sensitivity NO ₂ (nA/ppb)*	<u>-0.257</u>	<u>—</u>
PCB gain (mV/nA)	<u>-0.73</u>	<u>0.80</u>
Sensitivity (mV/ppb)	<u>0.187</u>	<u>0.226</u>
Sensitivity NO ₂ (mV/ppb)	<u>0.187</u>	<u>—</u>

* at 101kPa, 23 (±2)°C, 40 (±15) %RH



AlphaSense A4 (2-way) Air Quality Sensor Module Calibration Certificate

Customer	<u>DIGITAL KINEMATICS</u>
Order No	_____
Zero Cal Date	<u>11-10-16</u>
AFE Serial No	<u>17-000027</u>
Test PSU voltage	_____
AFE Type	<input checked="" type="checkbox"/> 810-0021-xx (2xA4)

Circuit Type			SN1	SN2
	<input type="checkbox"/>	-00	NO ₂ /O ₃	NO ₂ /O ₃
	<input type="checkbox"/>	-01	NO ₂ /O ₃	NO
	<input checked="" type="checkbox"/>	-02	NO ₂ /O ₃	CO/SO ₂ /H ₂ S
	<input type="checkbox"/>	-03	NO	CO/SO ₂ /H ₂ S
	<input type="checkbox"/>	-04	CO/SO ₂ /H ₂ S	CO/SO ₂ /H ₂ S

	SN1	SN2
Sensor Type	NO ₂ A4BF	CO A4
Serial Number	212060336	132950238
WE Electronic Zero (mV)	295	268
WE Sensor Zero (mV)*	2	42
TOTAL WE Zero (mV)	297	310
AE Electronic Zero (mV)	295	262
AE Sensor Zero (mV)*	0	10
TOTAL AE Zero (mV)	295	272
Sensitivity (nA/ppb)*	-0.271	-0.285
Sensitivity NO ₂ (nA/ppb)*	-0.271	—
PCB gain (mV/nA)	-0.73	0.80
Sensitivity (mV/ppb)	0.197	0.228
Sensitivity NO ₂ (mV/ppb)	0.197	—

* at 101kPa, 23 (±2)°C, 40 (±15) %RH



AlphaSense A4 (2-way) Air Quality Sensor Module Calibration Certificate

Customer	<u>DIGITAL KINEMATICS</u>
Order No	_____
Zero Cal Date	<u>11-10-16</u>
AFE Serial No	<u>12-000026</u>
Test PSU voltage	_____
AFE Type	<input checked="" type="checkbox"/> 810-0021-XX (2xA4)

Circuit Type			SN1	SN2
	<input type="checkbox"/>	-00	NO ₂ /O ₃	NO ₂ /O ₃
	<input type="checkbox"/>	-01	NO ₂ /O ₃	NO
	<input checked="" type="checkbox"/>	-02	NO ₂ /O ₃	CO/SO ₂ /H ₂ S
	<input type="checkbox"/>	-03	NO	CO/SO ₂ /H ₂ S
	<input type="checkbox"/>	-04	CO/SO ₂ /H ₂ S	CO/SO ₂ /H ₂ S

	SN1	SN2
Sensor Type	NO ₂ A43F	CO A4
Serial Number	212060337	132950240
WE Electronic Zero (mV)	302	283
WE Sensor Zero (mV)*	6	37
TOTAL WE Zero (mV)	308	320
AE Electronic Zero (mV)	303	270
AE Sensor Zero (mV)*	1	-2
TOTAL AE Zero (mV)	304	268
Sensitivity (nA/ppb)*	- .310	.303
Sensitivity NO ₂ (nA/ppb)*	- .310	—
PCB gain (mV/nA)	- .73	-.80
Sensitivity (mV/ppb)	.226	.242
Sensitivity NO ₂ (mV/ppb)	.226	—

* at 101kPa, 23 (±2)°C, 40 (±15) %RH