



Demonstration
of Falcon 4G-S
06.10.2016 Slovakia

Report

about field demonstration of
stand-off detector FALCON 4G-S

Date	06.10.2016	
Time	10:45 – 11:15	
Weather	Temperature:	5°C
	Wind:	NE 1-5m/s (temporary up to 10 m/s)
	Humidity:	60-65%
Position		
Detector [UTM]:	34U 400437 5434208	
Target [UTM]:	34U 401810 5438620	
Distance to target:	4621m	
Agent to detection:	SF6 (gas)	

Summary

On 06.10.2016, SEC Technologies has hosted a public demonstration of **stand-off detector FALCON 4G-S**. The weather conditions were bad (snow, fog). The measurement path was located in realistic conditions of an urban area (other gases present in atmosphere, various objects such as high voltage power lines in proximity).

FALCON 4G-S has **proven its detection capabilities at distance of 4 621** meters during 3 releases of SF6 even in though weather conditions.



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Results of detection obtained during field demonstration

No.	Date	Time	Range [m]	Concentr. [g/l]	RI	Detection result	EC	Agent released
1	06.10.16	10:58:55	4627	-2.16E-09	1	Agent not detected	0	
2	06.10.16	11:01:03	4629	-2.73E-09	1	Agent not detected	0	
3	06.10.16	11:02:47	4623	-2.52E-09	1	Agent not detected	0	
4	06.10.16	11:03:08	4631	-3.39E-09	1	Agent not detected	0	
5	06.10.16	11:04:07	4602	-2.79E-09	1	Agent not detected	0	
6	06.10.16	11:04:20	0	0	0	Release of agent	0	850 g
7	06.10.16	11:04:24	4632	10.10E-09	2	Agent detected	0	
8	06.10.16	11:04:48	4632	10.30E-09	2	Agent detected	0	
9	06.10.16	11:04:55	4628	8.10E-09	2	Agent detected	0	
10	06.10.16	11:05:01	4626	15.00E-09	2	Agent detected	0	
11	06.10.16	11:05:07	4621	19.30E-09	2	Agent detected	0	
12	06.10.16	11:05:11	4640	14.30E-09	2	Agent detected	0	
13	06.10.16	11:05:15	4626	3.66E-09	2	Agent detected	0	
14	06.10.16	11:05:19	4623	1.35E-08	3	Invalid measurement	0	
15	06.10.16	11:05:24	4621	-0.372E-9	1	Agent not detected	0	
16	06.10.16	11:05:58	4626	1.11E-08	3	Invalid measurement	0	
17	06.10.16	11:06:02	4621	0.110E-9	1	Agent not detected	0	
18	06.10.16	11:06:17	4618	-1.28E-09	1	Agent not detected	0	
19	06.10.16	11:07:08	4628	-2.57E-09	1	Agent not detected	0	
20	06.10.16	11:07:21	4631	-1.44E-09	1	Agent not detected	0	
21	06.10.16	11:07:46	0	0	0	Release of agent	0	550 g
22	06.10.16	11:07:48	4624	-2.90E-09	1	Agent not detected	0	
23	06.10.16	11:07:52	4628	-1.87E-09	1	Agent not detected	0	
24	06.10.16	11:08:00	4629	20.00E-09	2	Agent detected	0	
25	06.10.16	11:08:06	4543	9.14E-09	2	Agent detected	0	
26	06.10.16	11:08:12	4638	16.70E-09	2	Agent detected	0	
27	06.10.16	11:08:19	4631	13.00E-09	3	Invalid measurement	0	
28	06.10.16	11:08:23	4618	4.75E-09	2	Agent detected	0	
29	06.10.16	11:08:27	4623	3.12E-09	2	Agent detected	0	
30	06.10.16	11:08:59	4626	-26.10E-09	4	Probably other agent	0	
31	06.10.16	11:09:03	4621	-1.56E-09	1	Agent not detected	0	
32	06.10.16	11:09:07	4625	-1.71E-09	1	Agent not detected	0	

33	06.10.16	11:10:29	0	0	0	Release of agent	0	150 g
34	06.10.16	11:10:38	4617	17.40E-09	2	Agent detected	0	
35	06.10.16	11:10:45	4629	18.00E-09	2	Agent detected	0	
36	06.10.16	11:10:50	4635	9.36E-09	2	Agent detected	0	
37	06.10.16	11:10:53	4631	7.30E-09	2	Agent detected	0	
38	06.10.16	11:10:58	4629	11.70E-09	2	Agent detected	0	
39	06.10.16	11:11:12	4610	-1.78E-09	1	Agent not detected	0	
40	06.10.16	11:11:37	4632	-2.26E-09	1	Agent not detected	0	

Where:

No.	Number of (data) record in database	
Date	Date of record	
Time	Time of record	
Range	Measured range (distance) to target (reflective object)	
Concentration	While positive and agent detected (RI=2) – calculated concentration. While negative or agent not detected (RI<>2) – value which is recorded only to experimental purposes (to post-processing and data analysis in relation with non-zero error code (EC)).	
RI (result index):	0	Release of agent (this is special record used to record time of agent release and has been added into database by PC operator based on command from target side via handheld radio)
	1	Agent not detected
	2	Agent detected
	3	Invalid measurement
	4	Probably other agent
Detection result	Verbal interpretation of RI	
EC	Error code (0 - none error)	

Test site and line-of-sight depicted in Google Earth

