

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference CSEM-57-PCT	FOR FURTHER ACTION see Form PCT/ISA/220 as well as, where applicable, item 5 below.	
International application No. PCT/IB2017/056263	International filing date (<i>day/month/year</i>) 10 October 2017 (10-10-2017)	(Earliest) Priority Date (<i>day/month/year</i>)
Applicant CSEM CENTRE SUISSE D'ELECTRONIQUE ET DE		

This international search report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This international search report consists of a total of 4 sheets.

It is also accompanied by a copy of each prior art document cited in this report.

1. **Basis of the report**

a. With regard to the **language**, the international search was carried out on the basis of:

- the international application in the language in which it was filed
 a translation of the international application into _____, which is the language of a translation furnished for the purposes of international search (Rules 12.3(a) and 23.1(b))

b. This international search report has been established taking into account the **rectification of an obvious mistake** authorized by or notified to this Authority under Rule 91 (Rule 43.6*bis*(a)).

c. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, see Box No. I.

2. **Certain claims were found unsearchable** (See Box No. II)

3. **Unity of invention is lacking** (see Box No III)

4. With regard to the **title**,

- the text is approved as submitted by the applicant
 the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

- the text is approved as submitted by the applicant
 the text has been established, according to Rule 38.2, by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority

6. With regard to the **drawings**,

a. the figure of the **drawings** to be published with the abstract is Figure No. 1

- as suggested by the applicant
 as selected by this Authority, because the applicant failed to suggest a figure
 as selected by this Authority, because this figure better characterizes the invention

b. none of the figures is to be published with the abstract

INTERNATIONAL SEARCH REPORT

International application No
PCT/IB2017/056263

A. CLASSIFICATION OF SUBJECT MATTER
INV. A61B7/04 G16H40/67
ADD. A61B5/00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
A61B G16H G06F

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
EPO-Internal, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2017/071565 A1 (KAHYA ZEYNEP YASEMIN [TR] ET AL) 16 March 2017 (2017-03-16) abstract; figures 1,5 paragraphs [0035], [0038], [0056], [0063], [0092]	1-5, 7-26, 28-31
X	US 2017/112439 A1 (DUBIN URI [IL] ET AL) 27 April 2017 (2017-04-27) abstract; figures 1,3 paragraphs [0069], [0071], [0078] - [0081], [0091] - [0099], [0118], [0120] - [0123], [0127], [0128], [0136]	1-6,10, 11, 14-27,31

Further documents are listed in the continuation of Box C.

See patent family annex.

* Special categories of cited documents :

"A" document defining the general state of the art which is not considered to be of particular relevance

"E" earlier application or patent but published on or after the international filing date

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"O" document referring to an oral disclosure, use, exhibition or other means

"P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search 29 May 2018	Date of mailing of the international search report 07/06/2018
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Name and mailing address of the ISA/ European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Fax: (+31-70) 340-3016	Authorized officer Medeiros Gaspar, Ana
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INTERNATIONAL SEARCH REPORT

International application No
PCT/IB2017/056263

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 2011/073879 A2 (KONINKL PHILIPS ELECTRONICS NV [NL]; KUMAR PRASHANT [IN]; SANJAYA KUMA) 23 June 2011 (2011-06-23) cited in the application abstract; figures 1,8 page 11, line 1 - page 12, line 16 -----	1,19,31
X	US 2004/092846 A1 (WATROUS RAYMOND L [US]) 13 May 2004 (2004-05-13) abstract; figures 1,2 paragraphs [0022], [0023], [0029], [0030], [0039], [0040] -----	1,19,31

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No PCT/IB2017/056263

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 2017071565 A1	16-03-2017	EP 2945084 A1 EP 3143536 A1 US 2017071565 A1 WO 2015174944 A1	18-11-2015 22-03-2017 16-03-2017 19-11-2015
US 2017112439 A1	27-04-2017	US 2017112439 A1 WO 2017068573 A1	27-04-2017 27-04-2017
WO 2011073879 A2	23-06-2011	CN 102655814 A EP 2512347 A2 JP 5785187 B2 JP 2013514122 A RU 2012130372 A US 2012289849 A1 WO 2011073879 A2	05-09-2012 24-10-2012 24-09-2015 25-04-2013 27-01-2014 15-11-2012 23-06-2011
US 2004092846 A1	13-05-2004	NONE	