



## SUPPLEMENTARY EUROPEAN SEARCH REPORT

Application number:  
EP 19 78 85 35

**Classification of the application (IPC):**  
H02J 50/20, H04Q 9/00

**Technical fields searched (IPC):**  
H02J, H04Q, B60J

| DOCUMENTS CONSIDERED TO BE RELEVANT |  |                   |
|-------------------------------------|--|-------------------|
| Category                            | Citation of document with indication, where appropriate, of relevant passages                          | Relevant to claim |
| X                                   | US 2011248846 A1 (BELOV NICKOLAI [US] ET AL)<br>13 October 2011 (2011-10-13)<br>* the whole document * | 1-15              |
| X                                   | DE 202017106905 U1 (ANALOG DEVICE GLOBAL)<br>02 February 2018 (2018-02-02)<br>* the whole document *   | 1-15              |
| A                                   | US 2003199778 A1 (MICKLE MARLIN [US] ET AL)<br>23 October 2003 (2003-10-23)<br>* the whole document *  | 1-15              |
| A                                   | US 2007079490 A1 (DIMARIO JOSEPH [US] ET AL)<br>12 April 2007 (2007-04-12)<br>* the whole document *   | 1-15              |

The supplementary search report has been based on the last set of claims valid and available at the start of the search.

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|---------------------------|--|----------------------------|
| Place of search<br>Munich | Date of completion of the search<br>20 November 2021 | Examiner<br>Hunckler, José |
|---------------------------|--|----------------------------|

### CATEGORY OF CITED DOCUMENTS

|   |  |
|---|--|
| X: particularly relevant if taken alone   | P: intermediate document   |
| Y: particularly relevant if combined with another document of the same category | T: theory or principle underlying the invention                        |
| A: technological background   | E: earlier patent document, but published on, or after the filing date |
| O: non-written disclosure   | D: document cited in the application                                   |
| & : member of the same patent family, corresponding document                    | L: document cited for other reasons                                    |

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## ANNEX TO SUPPLEMENTARY EUROPEAN SEARCH REPORT

Application number:  
EP 19 78 85 35

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on 20-11-2021  
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| Patent document cited<br>in search report | Publication<br>date | Patent family<br>member(s)  | Publication<br>date  |
|---|---------------------|---|--|
| US 2011248846 A1                          | 13-10-2011          | NONE  |  |
| DE 202017106905 U1                        | 02-02-2018          | CN 208158901 U<br>DE 202017106905 U1<br>US 2018139698 A1<br>US 2021153128 A1                                    | 27-11-2018<br>02-02-2018<br>17-05-2018<br>20-05-2021                             |
| US 2003199778 A1                          | 23-10-2003          | AU 2002332698 A1<br>EP 1455644 A2<br>US 2003032993 A1<br>US 2003199778 A1<br>WO 03023979 A2                     | 24-03-2003<br>15-09-2004<br>13-02-2003<br>23-10-2003<br>20-03-2003               |
| US 2007079490 A1                          | 12-04-2007          | CN 101291822 A<br>TN SN08105 A1<br>US 2007056231 A1<br>US 2007079490 A1<br>US 2007079564 A1<br>US 2007089375 A1 | 22-10-2008<br>14-07-2009<br>15-03-2007<br>12-04-2007<br>12-04-2007<br>26-04-2007 |