



## SUPPLEMENTARY EUROPEAN SEARCH REPORT

Application number:  
EP 18 87 21 28

**Classification of the application (IPC):**  
H02M 1/12, H02M 7/06, H02M 1/08, F25B 49/02, H02M 1/00

**Technical fields searched (IPC):**  
H02M

DOCUMENTS CONSIDERED TO BE RELEVANT		
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim
X	EP 1022844 A2 (MATSUSHITA DENKI SANGYO KK) 26 July 2000 (2000-07-26) * the whole document *	1-15
X	US 2016190955 A1 (HATAKEYAMA KAZUNORI [JP] ET AL) 30 June 2016 (2016-06-30) * the whole document *	1-15
A	WO 2017056298 A1 (MITSUBISHI ELECTRIC CORP [JP]) 06 April 2017 (2017-04-06) * paragraph [0023] - paragraph [0027]; figure 2 *	1-15

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

Place of search The Hague	Date of completion of the search 10 September 2020	Examiner van der Weiden, Ad
------------------------------	---	--------------------------------

### 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

Disclaimer: this document has been automatically generated using data structured in accordance with WIPO standard ST.36 from the database of search reports of the European Patent Office. For technical reasons, its content and layout may differ from that of the original publication. Only the original published information is legally binding.



## ANNEX TO SUPPLEMENTARY EUROPEAN SEARCH REPORT

Application number:  
EP 18 87 21 28

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 10-09-2020  
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
EP 1022844 A2	26-07-2000	CN 1263377 A	16-08-2000
		EP 1022844 A2	26-07-2000
		MY 130199 A	29-06-2007
		US RE39060 E	11-04-2006
		US 6181583 B1	30-01-2001
US 2016190955 A1	30-06-2016	CN 105493390 A	13-04-2016
		JP 6072924 B2	01-02-2017
		JP WO2015033437 A1	02-03-2017
		US 2016190955 A1	30-06-2016
		WO 2015033437 A1	12-03-2015
WO2017056298 A1	06-04-2017	CN 108028601 A	11-05-2018
		EP 3358732 A1	08-08-2018
		JP 6430028 B2	28-11-2018
		JP WO2017056298 A1	08-02-2018
		US 2018287490 A1	04-10-2018
		WO 2017056298 A1	06-04-2017