INPAFAMDB (INternational PAtent FAMily DataBase)

Subject Coverage	All areas of science and technology, i.e., all classes of the International Patent Classification
File Type	Bibliographic
Features	Thesauri: Cooperative Patent Classification (CPC), International Patent Classification (/IPC), F-Term Classification (/FTRM), and FI Classification (/FCL, /JPC) Alerts (SDIs): Weekly or monthly (Weekly is the default) CAS Registry Number® Identifiers: ☐ SLART ☑ Register Links ☑ Keep & Share: ☑ Structures ☐
Record Content	• Family data of patent documents, utility models, and design patents of more than 100 patent-issuing organizations including the European Patent Office (EPO) and the World Intellectual Property Organization (WIPO). • Legal status data of 98 patent-issuing organizations (54 countries + from 44 countries of the national phases PCT/EP). Two classification systems for over 4,300 legal event codes are available. See HELP LEGSTAT for details. • Indexes are based on the patent families, where in INPADOCDB the indexes are based on the patent applications. The accession number AN in INPAFAMDB is the family number FN from INPADOCDB. • Abstracts are provided for more than 67 million records with more than 64 million abstracts in English (05/2025) • Patent status indicator are provided for all patent authorities. See HELP STATUS for details. • Calculated expiration dates are provided for all patent authorities except WO and ID. See HELP XPD for details. • EP unitary patents are searchable in bibliographic and legal status search fields. See HELP UNITARYPATENT for details. • Note: The family number can change due to corrections/updates of patent relevant numbers and codes.
File Size	• More than 87 million records (international families) with about 162 million publications • More than 486 million legal status data in more than 60 million patent families from 1967 to present (05/2025)
Coverage	1782-present
Updates	Weekly with 200,000-1,000,000 records and 400,000-1,000,000 legal status data
Languages	English, French, German, Spanish, Portuguese, Chinese, Japanese, Korean, Russian
Database Producer	European Patent Office Vienna Sub Office P.O. Box 90 Austria Phone: +43 1 52126-0 Fax: +43 1 52126-5491 Email: patentdata@epo.org Copyright Holder FIZ Karlsruhe - Leibniz-Institute for Information Infrastructure Hermann-von-Helmholtz-Platz 1 76344 Eggenstein-Leopoldshafen Germany Phone: +49 7247 808-0 Email: contact@fiz-karlsruhe.de Copyright Holder

Sources	• EPO-Patent Information Resource based on the data supplied by the patent offices (INPADOC/DOCDB Service) • INPADOC Legal Status Service
User Aids	• Online Helps (HELP DIRECTORY lists all help messages available) • STNGUIDE
Clusters	• ALLBIB • AUTHORS • CORPSOURCE • HPATENTS • PATENTS STN Database Cluster information

Search and Display Field Codes

Fields that allow left truncation are indicated by an asterisk (*).

Bibliographic Search Fields

Search Field Name	Search Code	Search Examples	Display Codes
Basic Index* (contains single words from title (TI) and abstract (AB) fields)	None or /BI	S TUBULAR HEAT EXCHANG? S ALUM? (S) COAT? S ?MAGNET? S ?METHYL?(T)?AMINO?	AB, ABDE, ABFR, ABES, ABOL, ABS, TI
Abstract* (ABDE, ABEN, ABES, ABFR, ABOL)	/AB	S (DRILLING(W)PROCESS)/AB	AB, ABDE, ABEN, ABES, ABFR, ABOL, ABO
Abstract (English)	/ABEN	S CATABOLIC/ABEN	ABEN
Abstract (French))	/ABFR	S CATADIOPTRIQUE/ABFR	ABFR
Abstract (German)	/ABDE	S BEARBEITUNGSANLAGE/ABDE	ABDE
Abstract (other language)	/ABOL	S CATODICAMENTE/ABOL	ABOL
Abstract (Spanish)	/ABES	S BEBIDAS/ABES	ABES
Abstract Language (ISO code and text)	/AL	S DUTCH/AL	ALL, ALLO, IMAX, MAX, MAXO
Accession Number (= patent family number FN in INPADOCDB)	/AN	S 12345678/AN	AN
Application Country (WIPO code and text)	/AC	S WO/AC AND (INLAND(W)STEEL)/PA	AI
Application Date **(1)**	/AD	S 19840705/AD	AI
Application ID (EPO)	/DOCID	S 23400004/DOCID	DOCID
Application Kind Code	/AK	S WOW/AK	AI, AIT
Application Kind Code Text	/AIT	S MWA/AIT	AIT
Application Number	/AP	S ZW1981-215/AP	AI
Application Number Count **(1)**	/ACNT (or /APC)	S ACNT=3	FSTAT
Application Number, Original	/APO	S KR6900415/APO	APO
Application Year **(1)**	/AY	S 1988/AY AND SIEMENS/PAS	AI
Calculated Expiration Date **(1)**	/XPD	S XPD=AUG 2023	XPD
Calculated Expiration Year **(1)**	/XPY	S 2025-2026/XPY	XPY
Cooperative Patent Classification	/CPC	S D03D0015-0011/CPC	CPC
Country Number Count **(1)**	/CCNT (or/CYC)	S 5/CCNT	FSTAT
CPC, Action Date **(1)**	/CPC.ACD	S 20130101/CPC.ACD	CPC.TAB
CPC, Codes of a Combination Set	/CPC.CS	S A61K0009/CPC.CS	CPC.TAB
CPC, Keyword Terms	/CPC.KW	S INVENTION/CPC.KW	CPC.TAB
CPC, Version	/CPC.VER	S 20130101/CPC.VER	CPC.TAB
Data Availability	/DAV	S NOT-PRINTED-WITH-GRANT/DAV	DAV
Date in Force **(1,3)**	/DF	S 20000127/DF	DF
Designated States	/DS	S W JP/DS	DS
Document Number (INPADOCDB AN)	/DN	S 98543006/DN	DN
Document Type (code and text)	/DT (or /TC)	S U/DT AND UNILEVER/PAS	DT
Entry Date **(1)**	/ED	S L1 AND ED>2 JAN 2020	ED
Entry Date New Patent Family **(1)**	/EDF	S 20200604/EDF	EDF
Entry Date New Publication and/or New Legal Status **(1)**	/EDLS	S EDLS=20200514	not displayed
Entry Date Patent **(1)**	/EDP	S 20200123/EDP	EDP
Entry Date Priority **(1)**	/EDPR	S 2020 FEB/EDPR	PRAI
Entry Week (INPADOC) **(1)**	/EW	S 200816/EW	EW
Field Availability	/FA	S L7 AND AB/FA	FA
Filing Country for PCT Application (WIPO code and text)	/AC.WO	S FR/AC.WO	AI

Bibliographic Search Fields (cont'd)

Search Field Name	Search Code	Search Examples	Display Codes
Filing Country for PCT Priorities (WIPO code and text)	/PRC.WO	S DE/PRC.WO	PRAI
Filing Details	/FDT	S DED1/FDT	FDT
International Patent Classification, Version 1-8 (IPCI, IPCR, ICM, ICS, ICA, ICI)	/IPC	S H05B0006-36+NT/IPC S H05B0006-36-H05B0006-44/IPC	IC, ICA, ICI, ICM, ICS, IPCI, IPCR
Inventor	/IN (or /AU)	S MILLER/IN	IN
Inventor Address	/INA	S HEIDELBERG/INA	INA
Inventor INPADOC Standard	/INS	S AGARWAL S?/INS	INS
Inventor, Country (WIPO Code and Text)	/IN.CNY	S US/IN.CNY	INS
International Patent Classification, Version 1-7 (ICM, ICS, ICA, ICI)	/IC	S C07H019-16/IC	IC
IPC, Action Date **(1)**	/IPC.ACD	S 13 JAN 2006/IPC.ACD	IPC.TAB
IPC, Additional (supplementary) Version 1-7	/ICA	S H06B006-02/ICA	ICA
IPC, Index (complementary) Version 1-7	/ICI	S C12P019-40/ICI	ICI
IPC, Keyword Terms	/IPC.KW	S INITIAL/IPC.KW	IPC.TAB
IPC, Main, Version 1-7	/ICM	S C23C0001-08/ICM	ICM
IPC, Secondary, Version 1-7	/ICS	S C12P0019-40/ICS	ICS
IPC, Initial	/IPCI	S A61K0000-00/IPCI	IPCI
IPC, Reclassified	/IPCR	S A61N0005-067/IPCR	IPCR
IPC, Version from IPC	/IPC.VER	S 200601/IPC.VER	IPC.TAB
Japanese Patent Classification (FI-Terms)	/FCL (or /JPC)	S A01B0001-24 B/FCL	FCL
Japanese Patent Classification (F-Terms)	/FTRM (or FTERM or /JPCLA)	S 5H030/AA00/FTRM	FTRM
Language (ISO code and text)	/LA	S DE/LA	LA
Language of Filing (ISO code and text)	/LAF	S FR/LAF	LAF
Patent Assignee **(4)**	/PA (or /CS)	S INLAND STEEL/PA S BROWN WILLIAMSON/CS	PA
Patent Assignee Address	/PAA	S US/PAA AND EASTMAN KODAK/PAS	PAA
Patent Assignee INPADOC Standard	/PAS	S INLAND STEEL CO?/PAS S (BROWN(S)TOBACCO)/PAS	PAS
Patent Assignee, Country (WIPO Code and Text)	/PA.CNY	S GB/PA.CNY	PAS
Patent Country (WIPO code and text)	/PC	S DE/PC AND IBM/PAS AND 1988/PY	PI
Patent Country, Basic	/PC.B	S FR/PC.B	PI
Patent Information Publication Type	/PIT	S ARA1/PIT	PIT
Patent Kind Code	/PK	S ZWA1/PK	PI
Patent Kind Code, Basic	/PK.B	S EPA1/PK.B	PI
Patent Number **(2)**	/PN	S FI9902020/PN	PI
Patent Number, Basic **(2)**	/PN.B	S. CA2296922/PN.B	PI
Patent Number Count **(1)**	/PCNT (or /PNC)	S 4/PCNT	FSTAT
Patent Number, Original	/PNO	S KR300392615S/PNO	PNO
Patent Number/Kind Code	/PNK	S WO2009006253A2/PNK	PNK
Patent Number/Kind Code, Basic	/PNK.B	S CA2296922A1/PNK.B	PNK
Patent Stage	/STA	S GRANTED/STA AND LASER/TI	STA
Patent Term Adjustment **(1)**	/PTA	S 10-20/PTA	PTA
Priority Date **(1)**	/PRD	S JP/PRC AND 19880101-19880331/PRD	PRAI
Priority Country (WIPO code and text)	/PRC	S JP/PRC AND 19880101/PRD	PRAI

Bibliographic Search Fields (cont'd)

Search Field Name	Search Code	Search Examples	Display Codes
Priority Country, First	/PRCF	S AU/PRCF	PRAI
Priority Number Count **(1)**	/PRCNT	S 5/PRCNT	FSTAT
Priority Country First	/PRCF	S AU/PRCF	PRAI
Priority Number Count **(1)**	/PRCNT	S 5/PRCNT	FSTAT
Priority Date **(1)**	/PRD	S JP/PRC AND 19880101-19880331/PRD	PRAI
Priority Date First **(1)**	/PRDF	S MARCH 2009/PRDF	PRAI
Priority Number Original	/PRNO	S KRD1997055047/PRNO	PNO
Priority Year **(1)**	/PRY	S 1998/PRY AND US/PRC	PRAI
Priority Year First **(1)**	/PRYF	S GB/PC AND 1998/ PRYF	PRAI
Publication Date **(1)**	/PD	S 19990104/PD	PI
Publication Date, Basic **(1)**	/PD.B	S 20000815/PD.B	PI
Publication ID (EPO)	/PUBID	S 23409/PUBID	PUBID
Publication Year **(1)**	/PY	S 1999/PY	PI
Publication Year, Basic **(1)**	/PY.B	S 2000/PY.B	PI
Simple Family Number (EPO)	/SFN	S 12300006/SFN	SFN
Simple Family Number Count (EPO) **(1)**	/SFCNT	S 5/SFCNT	FSTAT
Patent Status Established Date **(1)**	/STED	S 20210806/STED	STED
Patent Status Indicator	/STI	S DEAD/STI or S D/STI	STI
Title (English)	/TIEN	S CATABOLIC/TIEN	TIEN
Title (French)	/TIFR	S CATADIOPTRIQUE/TIFR	TIFR
Title (German)	/TIDE	S BEARBEITUNGSANLAGE/TIDE	TIDE
Title (other language)	/TIOL	S CATODICAMENTE/TIOL	TIOL
Title (Spanish)	/TIES	S BEBIDAS/TIES	TIES
Title Language (ISO code and text)	/TL	S EN/TL S ENGLISH/TL	TL
Title of Invention (TIDE, TIEN, TIES, TIFR, TIOL)	/TI	S (FILTER? (S) ELECTR? (S) MEMBRAN#)/TI	TI, TIDE, TIEN, TIES, TIFR, TIOL, TIO
Ultimate Owner **(4)**	/UO	S BASF/UO	UO
Ultimate Owner Standardized **(4)**	/UOS	S BASF/UOS	UOS
Update Date **(1)**	/UP	S L1 AND UP>20200102	UP
Update Date All Patent Changes **(1)**	/UPM	S L1 AND 20210702/UPM	not displayed
Update Date Classifications **(1)**	/UPCC	S L1 AND UPCC> 20210702	UPALL
Update Date for combined or split Patent Family **(1)**	/UPFC	S UPFC=OCT 2019	UPALL
Update Date New Patent Family Record **(1)**	/UPFD	S 20210702/UPFD	UPALL
Update Date New Publication and/or Legal Status Changes of the family (all updates in /UPFB, /UPFL) **(1)**	/UPFE	S 20210702/UPFE	UPALL
Update Date of the BIB fields **(1)**	/UPBB	S L1 AND UPBB> 20210702	UPALL
Update Date Patent Family (all updates in /UPFB, /UPFC, /UPFL) **(1)**	/UPFA	S 20210702/UPFA	UPALL
Update Date Patent Family Legal Status **(1)**	/UPFL	S 20210702/UPFL	UPALL
Update Date Patent Family Publication Level **(1)**	/UPFP	S 20210702/UPFP	UPALL
Update Date Patent Family Bibliographic **(1)**	/UPFB	S 20210702/UPFB AND L7	UPALL
Update Week (INPADOC Week) **(1)**	/UW	S UW=202006	UW

(1) Numeric search field that may be searched using numeric operators or ranges.
(2) Either STN format or Derwent format may be used.
(3) For German Utility Models: Advertisement of registration.
(4) Search with implied (S) proximity is available.

Legal Status Search Fields

Search Field Name	Search Code	Search Examples	Display Codes
Entry Date new publication and/or New Legal Status **(1)**	/EDLS	S EDLS=FEB 2019	not displayed
Legal Status Basic Index (legal status agent (LSAG), legal status free format text (LSFT), legal status inventor (LSIN), legal status patent opponent (LSOP), and legal status patent assignee (LSPA) fields)	/LSBI	S LASER?/LSBI S ANACOMP/LSBI S OPPOSITE/LSBI	LS
Legal Status Code (code and text)	/LSC	S EP111L/LSC	LS
Legal Status Code Category	/LSC2	S LAP/LSC2	LS
Legal Status Code Country (WIPO code and text)	/LSCC	S BE/LSCC	LS
Legal Status Country (WIPO code and text)	/LSCY	S UNITED KINGDOM/LSCY	LS
Legal Status Date in Force **(1)**	/LSDF	S LSDF=20050109	LS
Legal Status Date INPADOC GAZETTE **(1)**	/LSD	S LSD=JAN 2020	LS
Legal Status Designated States (WIPO code and text)	/LSDS	S AU/LSDS S AUSTRALIA/LSDS	LS
Legal Status Event Class	/LSEC	S D/LSEC	LS
Legal Status Free Format Text	/LSFT	S TELECOMMUNICATION/LSFT	LS
Legal Status Indicator	/LSCI	S POSITIVE/LSCI	LS
Legal Status IPC	/LSIC	S A01B0001/24/LSIC	LS
Legal Status Licensee	/LSLI	S BAYER/LSLI	LS
Legal Status Number Count **(1)**	/LSCNT	S 30-40/LSCNT	LS
Legal Status Patent Inventor	/LSIN	S MAYER, BERND/LSIN S (MAYER(S)BERND)/LSIN	LS
Legal Status Represen./Agent	/LSAG	S (LORENZ AND PHILIPPS)/LSAG	LS
Legal Status Code Text	/LSTX	S CORRECTION/LSTX	LS
Legal Status Patent Assignee **(2)**	/LSPA	S (MAN CERAMICS)/LSPA	LS
Legal Status Patent Opponent	/LSOP	S SIEMENS AG/LSOP	LS
Legal Status, Payment Year **(1)**	/LSPMY	S 6/LSPMY	LS
Legal Status Publication Country (WIPO code and text)	/LSPC	S CA/LSPC S CANADA/LSPC	LS
Legal Status Publication Date **(1)**	/LSPD	S LSPD=JAN 1998	LS
Legal Status Publication Kind Code	/LSPK	S ESA1/LSPK	LS
Legal Status Publication Number	/LSPN	S EP200212/LSPN	LS
Legal Status Publication Year **(1)**	/LSPY	S 1999-2000/LSPY	LS
Legal Status SPC Number	/LSSPC	S SPC/GB00/007/LSSPC	LS
Legal Status SPC, Expiry Date **(1)**	/LSSPC.XD	S LSSPC.XD>2025	LS
Legal Status SPC, Extension Date **(1)**	/LSSPC.EX	S 20230930/LSSPC.EX	LS
Legal Status SPC, Filing Date **(1)**	/LSSPC.FD	S 20190102- 20190116/LSSPC.FD	LS
Update Date Legal Status **(1)**	/UPLS	S 20200827/UPLS	LS, LSUP

(1) Numeric search field that may be searched using numeric operators or ranges.
(2) Search with implied (S) proximity is available.

Super Search Fields

Enter a super search code to execute a search in one or more fields that may contain the desired information. Super search fields facilitate crossfile and multifile searching. EXPAND may not be used with super search fields. Use EXPAND with the individual field codes instead.

Search Field Name	Search Code	Fields Searched	Search Examples	Display Codes
Application Number Group **(1)**	/APPS	/AP, /APO, /PRN, /PRNO	S DE1984-3400052/APPS S 1984DE-3400052/APPS	AI, APO, PRAI, PRNO
Inventor Group	/INSS	/IN, /INS, /LSIN	S MEIE/INSS	IN, INS, LS
Patent Assignee Group **(2)**	/PASS	/PA, /PAS, /LSPA, /UO, /UOS	S FOOD AUTOMAT?/PASS	PA, PAS, LS, UO, UOS
Patent Number Group **(1)**	/PATS	/PN, /PNO, /LSPN	S WO2019003340/PATS	PI, PNO, LS
Patent Countries	/PCS	/DS, /PC	S DE/PCS	PI, DS

(1) Either STN or Derwent format may be used.
(2) Search with implied (S) proximity is available in this field.

IPC Thesaurus

The classifications, validity and catchwords for the main headings and subheadings from the current (8th) edition of the WIPO International Patent Classification (IPC) manual are available. The classifications from the previous editions (1-7) are also available as separate thesauri. To EXPAND and SEARCH in the thesauri for editions 1-8, use the field code followed by the edition number, e.g., /IPC2 for the 2nd edition. Catchwords are included only in the thesauri for the 8th, 7th, 6th, and 5th editions.

Relationship Code	Content	Examples
ADVANCED (ADV)	Advanced Level Codes for the Core Level IPC Code	E A61K0066-02+ ADVANCED/IPC
ALL	All Associated Terms (BT, SELF, NT, RT)	E C01C003-00+ALL/IPC
BRO (MAN)	Complete Class	E C01C+BRO/IPC
BT	Broader Term (SELF, BT)	E C01F001-00+BT/IPC
BTn	Broader Term (SELF, BT) up to the next n levels (n =1, 2, ...)	E C01F001-21+BT2/IPC
CORE (COR)	Core Codes for the Advanced Level IPC Code	E G08C0019-22+CORE/IPC
ED	Complete title of the SELF term and IPC manual	E C01F001-00+ED/IPC
HIE	Hierarchy Term (Broader and Narrower Term) (BT, SELF, NT)	E C011003-00+HIE/IPC
INDEX	Complete title of the SELF term	E C01F001-00+INDEX/IPC
KT	Keyword Term (catchwords) (SELF, KT)	E CYANOGEN+KT/IPC
NEXT	Next Classification	E C01C001-00+NEXT5/IPC
NT	Narrower Terms (SELF, NT)	E C01C+NT/IPC
NTn	Narrower Terms (SELF, NT) down to the next n levels (n =1, 2, ...)	E C01C+NT3/IPC
PREV	Previous Code within the same class (SELF, PREV)	E C01C001-12+PREV/IPC
PREV(n)	Previous n classifications within the same class	E C01C001-12+PREV10/IPC
RT (SIB)	Related Terms (SELF, RT)	E C01C003-20+RT/IPC
TI	Complete Title of the SELF Term and Broader Terms (BT, SELF)	E C01F001-00+TI/IPC

CPC Thesaurus

The thesaurus is available in the/CPC search field. All relationship codes can be used with both the EXPAND and SEARCH commands.

Relationship Code	Content	Search Examples
ALL	All usually required terms (BT, SELF, CODE, DEF)	E C12M0001-34H2+ALL/CPC
AUTO **(1)**	Automatic relationship (BT, SELF, CODE, DEF)	E G01J003-443+AUTO/CPC
BT	Broader terms (BT, SELF)	E G01J0003-443+BT/CPC
CODE	Classification Code (SELF, CODE)	E SCRAPER BIASING MEANS+CODE/CPC
DEF	Definition (SELF, DEF)	E B65G0045-16+DEF/CPC
HIE	Hierarchy terms (all broader and narrower terms) (BT, SELF, DEF, NT)	E A01B0001+HIE/CPC
KT	Keyword terms (SELF, KT)	E LASER+KT/CPC
MAX	All associated terms	E G01J0003-44B+MAX/CPC
NEXT	Next classification within the same class (SELF, NEXT)	E A01B0001-24+NEXT/CPC
NEXT(n)	Next n classification within the same class	E A01B0001-24+NEXT3/CPC
NT	Narrower terms	E G05B0001-04+NT/CPC
PREV	Previous Code within the same class (SELF, PREV)	E G05B0019-418N1+PREV/CPC
PREV(n)	Previous n classifications within the same class	E G05B0019-418N1+PREV2/CPC
TI	Complete Title of the SELF Term and Broader Terms (BT, SELF)	E G05B0001-03+TI/CPC

(1) Automatic Relationship is SET OFF. In case of SET REL ON the result of EXPAND or SEARCH without any relationship code is the same as described for AUTO.

(2)

F-Term (/FTRM) Thesaurus

This thesaurus is available in the F-term classification field (/FTRM) and synonym fields (/FTRM, /FTCLA, /JPCLA) that contains patent classification from the Japanese Patent Office. All relationship codes can be used with both the EXPAND and SEARCH commands.

Relationship Code	Content	Search Examples
ALL	All associated terms with related FI-terms	E 2B002/AA05+ALL/FTRM
AUTO **(1)**	Automatic relationship (all hierarchy terms)	E 2B002/AA05+BT+AUTO/FTRM
BT	Broader term with related FI-term	E 2B002/AA05+BT/FTRM
DEF	Definition with related FI-term	E 2B002/BA13+DEF/FTRM
HIE	Hierarchy terms (all broader and narrower terms)	E 2B002/AA05+HIE/FTRM
KT	Keyword term	E PLYWOODS+KT/FTRM E E7+KT
NT	Narrower term with related FI-term	E 2B002/AA05+NT/FTRM
RFI	Related FI-term	E 2B002/AA09+RFI/FTRM
TI	Complete title of the SELF term and broader terms with related FI-term	E 2B002/AA09+TI/FTRM

(1) Automatic relationship is SET OFF. In case of SET REL ON the result of EXPAND or SEARCH without any relationship code is the same as described for AUTO.

FI Thesaurus

The following Relationship Codes may be used with the EXPAND and SEARCH commands in the FI Classification (/FCL, /JPC) field:

Relationship Code	Content	Search Examples
ALL	All usually required terms (BT, SELF, CODE, DEF)	E C12M0001-34H2+ALL/FCL
AUTO **(1)**	Automatic relationship (BT, SELF, CODE, DEF)	E G01J003-443+AUTO/FCL
BT	Broader terms (BT, SELF)	E G01J0003-443+BT/FCL
CODE	Classification Code (SELF, CODE)	E SCRAPER BIASING MEANS+CODE/FCL
DEF	Definition (SELF, DEF)	E B65G0045-16+DEF/FCL
HIE	Hierarchy terms (all broader and narrower terms) (BT, SELF, DEF, NT)	E A01B0001+HIE/FCL
NOTE	Scope Notes	E B23D+NOTE/FCL
KT	Keyword terms (SELF, KT)	E LASER+KT/FCL
MAX	All associated terms	E G01J0003-44B+MAX/FCL
NEXT	Next classification within the same class (SELF, NEXT)	E A01B0001-24+NEXT/FCL
NEXT(n)	Next n classification within the same class	E A01B0001-24+NEXT3/FCL
NT	Narrower terms	E G05B0001-04+NT/FCL
TI	Complete Title of the SELF Term and Broader Terms (BT, SELF)	E G05B0001-03+TI/FCL

(1) Automatic Relationship is SET OFF. In case of SET REL ON the result of EXPAND or SEARCH without any relationship code is the same as described for AUTO.

DISPLAY and PRINT Formats

Any combination of display fields and formats may be used to display or print answers. Multiple codes must be separated by commas or spaces, e.g., 'D L1 1-5 FAM MFAM. The fields are displayed or printed in the order requested. The content for some fields and formats is de-duplicated in INPAFAMDB. Depending on the content the de-duplicated display for a single field is charged with the full family price, when the family information for this field is displayed in full.

Hit term highlighting is available for all fields. Highlighting must be ON during SEARCH to use the HIT, KWIC, OCC and .H formats.

You can combine all display fields and formats with suffices (will be charged as a full family display):

.B	shows the earliest publication (basic)
.M	shows the complete family
.H	shows only the publications where a HIT of a search occurs
.P	shows the latest publication(s)
.U	shows the latest updated publication(s)

The default format is the format BRIEF with de-duplicated content of the fields TI, TIO, INS, INO, PAS, PAO, UO, UOS, IPCI, IPCR, CPC, FTRM, FCL, and one selected English abstract (IN, PA when INS, PAS is not available). The English abstract is either from EP, WO, GB, another English equivalent abstract or one original language abstract.

An overview of special family formats (details of the formats see below):

DISPLAY and PRINT Family Formats

Dedup. FAMILY formats	**.B earliest publ.**	**.M (=.M) complete family**	**.H publ. with HIT (1)**	**.P latest publ.**	**.U latest update**
BRIEF (default)					
BIB	BIB.B	BIB.M	BIB.H	BIB.P	BIB.U
IBIB	IBIB.B	IBIB.M	IBIB.H	IBIB.P	IBIB.U
STD	STD.B	STD.M	STD.H	STD.P	STD.U
ALL	ALL.B	ALL.M	ALL.H	ALL.P	ALL.U
ALLO	ALLO.B	ALLO.M	ALLO.H	ALLO.P	ALLO.U
IALL	IALL.B	IALL.M	IALL.H	IALL.P	IALL.U
IND					
	MAX.B		MAX.H	MAX.P	MAX.U
	MAXO.B		MAXO.H	MAXO.P	MAX.U
	IMAX.B		IMAX.H	MAXO.P	IMAX.U
	PI.B		PI.H	PI.P	PI.U
	PI.PDF.B		PI.PDF.H		PI.PDF.U
		TI.M	TI.H		

(1) Displays data of all family members and/or legal status (in MAX formats) with HIT terms.

DISPLAY and PRINT Formats

(DE-DUP= De-duplicated family content)

Family related Display Formats	DE-DUP (D)	Definition	Examples
ABS	-	AN, AL, AS, ABDE, ABEN, ABES, ABFR, ABOL	D ABS
ALL **(1)**	D	BIB, plus AB, IND, FA	D ALL 6
IALL **(1)**	D	ALL, indented with text labels	D IALL L3 7
ALLO	D	ALL, PNO, APO, PRNO, FSTAT, plus data in original characters (UTF-8)	D ALLO
BIB **(1)**	-	AN, EWF, UWF, EDF, UPFB, UPFC, TIDE, TIEN, TIES, TIFR, TIOL, TIO, INS, INO, PAS, UO, UOS, PAO, PI, AI, PRAI, FSTAT deduplicated: AN, EDF, EWF, UPFB, UWF, UPFC, TI, INS, PAS, UOS, PI, AI, PRAI, REC	D BIB
IBIB **(1)**	D	BIB, indented with text labels	D 5 IBIB
BRIEF	D	AN, EWF, UWF, EDF, UPFB, UPFC, TIEN, INS, PAS, UOS, IPCI, IPCR, CPC, FTRM, FCL, FSTAT (IN, PA when INS, PAS not available), one selected English abstract and a patent family table of PI, AI, and PRAI (BRIEF is the default)	D BRIEF
CODE	-	AN, EWF, UWF, EDF, UPFB, UPFC, IND	D CODE
IC	D	AN, ED, EW, UP, UW, IPC, CPC, FCL, FTRM	D L5 IC
IND		International Patent Classification, Version 1-7 (ICM, ICS, ICA, ICI)	D IND
IPC		International Patent Classification, Version 1-8 (ICM, ICS, ICA, ICI, IPCI, IPCR)	D IPC
MAX **(1)**	-	BIB, plus AB, IND, SFN, PUBID, DOCID, FA, LS, for all family members	D MAX
IMAX **(1)**	-	MAX, with indented text labels	D IMAX
MAXO **(1)**	-	MAX, PNO, APO, PRNO plus data in original characters (UTF-8)	D MAX
MAXO2 **(1)**	-	MAXO, plus display of special characters in the abstract	D MAXO2
STD **(1)**	D	BIB, IND	D STD
UPALL	-	Table of update dates (AN, EDF, UPFC, UPFP, UPFB, UPFD, UPFL, DN, UP, ED, EDP, UPBB, UPCC, STED)	D UPALL
TIPI **(1)**	-	TI + PI for all patent family members, FSTAT	D TIPI
PILS **(1,4)**	-	PI + LS for all patent family members, FSTAT	D PILS
BIBLS **(1)**	-	BIB + LS for all patent family members	D BIBLS
CFAM **(1)**	-	Condensed family table with AN, PI, STI, FSTAT	D CFAM
CFAM2 **(1)**		Condensed family table with AN, PI, AI, PRAI, STI, STED, FSTAT	D CFAM2
DFAM **(1)**	-	FAM, delimited for post processing	D DFAM
EFAM **(1)**	-	FAM, but the priority information constitutes the header	D EFAM
FAM **(1)**	-	AN, table of patent family information (PI, AI, PRAI) and relationships, FSTAT	D FAM
FAM2 **(1)**	-	AN, table of patent family information, another order	D FAM2
FAMLS **(1)**		Comprises the family table CFAM2 plus a list of all legal status entries, sorted by legal status date LSD	D FAMLS
FFAM **(1)**	-	STD + LS for each member of the family	D FFAM
FFAM.PC **(1,2)**	-	FFAM for a specified country only	D FFAM.US
FSTAT		All counted numbers: PRCNT, ACNT, PCNT, SFCNT, CCNT, LSCNT	D FSTAT
IFAM **(1)**	-	Combines indented FAM and IMAX, ordered alphabetically by patent offices with the respective country code and name as header	D IFAM
IFAM2		IFAM, without abstract and classification	D IFAM2
LFAM **(1)**	-	AN, DN, PI, STI plus legal status information for all members of a patent family	D LFAM
MFAM **(1)**	-	MAX for each family member	D MFAM
MFAM.PC **(1,2)**	-	MAX for each family member for a specific country only	D MFAM.EP
PI.PDF **(1)**		Patent family PI information plus hyperlinks to the original documents (pdf) in Espacenet	D PI.PDF
SFAM **(1)**		Display of the EPO 'simple patent family' (SFN) within the INPADOC patent family table	D SFAM
SCAN **(3)**	-	TI latest publication (random display without answer number)	D SCAN

DISPLAY and PRINT Formats (cont'd)

(DE-DUP= De-duplicated family content)

Family related Display Formats	DE-DUP (D)	Definition	Examples
TRIAL (TRI, FREE, SAMPLE, SAM)	D	one TI (TIEN), IPCI, IPCR, CPC, FTRM, FCL, FA	D TRIAL 5

(1) Application, patent, and priority number are available in STN and Derwent format. The format for DISPLAY, PRINT, SELECT, and SORT is set using the SET PATENT command. STN is the default format. Enter SET PAT DERWENT to change to the Derwent format. To reset to the STN format, enter SET PAT STN.
(2) PC = all patent countries.
(3) SCAN must be specified on the command line, i.e., D SCAN or DISPLAY SCAN.
(4) In format PILS legal status is displayed without the information PRI, APP, and PUB.

DISPLAY Fields

If a single field name is entered, either the de-duplicated content or the full family information for this field will be displayed (and in this latter case the field will be charged with the full family price)

Display Fields	DE-DUP	Definition	Examples
AB	D	Abstract	D AB
ABDE	D	Abstract German	D ABDE
ABEN	D	Abstract English	D ABEN
ABES	D	Abstract Spanish	D ABES
ABFR	D	Abstract French	D ABFR
ABO	D	Abstract, Original	D ABO
ABOL	D	Abstract (other language)	D ABOL
AI (AP) **(1)**	-	Application Information	D AI
AIT	D	Application Kind Code Text	D AIT
AN	-	Accession Number	D AN
APO	-	Application Number Original	D APO
APPS **(1)**	-	Application Number Group	D APPS
CPC	D	Cooperative Patent Classification	D CPC
DAV	-	Data Availability	D DAV
DF	-	Date in Force	D DF
DN	-	Document Number (INPADOCDB AN)	D DN
DOCID	-	Application ID	D DOCID
DS	-	Designated States	D DS
DT (TC)	-	Document Type	D DT
ED	D	Entry Date	D 1-5 ED UP
EDF	D	Entry Date new Patent Family	D EDF
EDP	-	Entry Date Patent	D EDP
EDPR	D	Entry Date Priority	D EDPR
EW	D	Entry Week	D EW
FA	D	Field Availability	D FA
FCL (JPC)	D	Japanese Patent Classifications (FI-Terms)	D FCL
FDT	D	Filing Details	D FDT
FSTAT	D	Filing Statistics (PRCNT, ACNT, PCNT, SFCNT, CCNT, LSCNT)	D FSTAT
FTRM	D	Japanese Patent Classifications (F-Terms)	D FTRM
IC		International Patent Classification	D IC
ICA	D	IPC, Additional (supplementary)	D ICA
ICI	D	IPC, Index (complementary)	D ICI
ICM	D	IPC, Main	D ICM L7
ICS	D	IPC, Secondary	D ICS
IN (AU)	D	Inventor	D IN
IN.CNY	-	Inventor, Country	D INS
INA	D	Inventor Address	D INA
INO	-	Inventor, Original	D INO, D ALLO
INS	D	Inventor INPADOC Standard	D INS
IPCI	D	IPC, Initial	D IPCI

DISPLAY Fields (cont'd)

Display Fields	DE-DUP	Definition	Examples
IPCR	D	IPC, Reclassified	D IPCR
LA	D	Language	D LA
LAF	D	Language of Filing	D LAF
PA (CS)	D	Patent Assignee	D PA TI 1-10
PAA	-	Patent Assignee Address	D PAA
PA.CNY	-	Patent Assignee, Country	D PA.CNY
PAO	-	Patent Assignee, Original	D PAO, D ALLO
PAS	D	Patent Assignee INPADOC Standard	D PAS
PI (PN) (1)	-	Patent Information	D PI
PIT	-	Patent Information Publication Type	D PIT 1-5
PNK	-	Patent Number/Kind Code	D PNK
PNO	-	Patent Number Original	D PNO
PRAI (PRN) **(1)**	D	Priority Information	D PRAI
PRAIT	D	Priority Kind Text	D PRAIT
PRNO	-	Priority Application Number, Original	D ALLO
PTA	-	Patent Term Adjustment	D PTA
PUBID	-	Publication ID	D PUBID
SFN	-	Simple Family Number (EPO)	D SFN
STA	-	Patent Stage	D STA
STED	-	Patent Status Established Date	D STED
STI	-	Patent Status Indicator	D STI
TI	D	Title	D TI
TIDE	D	Title (German)	D TIDE
TIEN	D	Title (English)	D TIEN
TIES	D	Title (Spanish)	D TIES
TIFR	D	Title (French)	D TIFR
TIO	D	Title, Original	D TIO
TIOL	D	Title (other language)	D TIOL
TL	D	Title Language	D TL
UO	D	Ultimate Owner	D UO
UOS	D	Ultimate Owner Standardized	D UOS
UP	D	Update Date	D UP
UW	D	Update Week (INPADOC Week)	D UW
XPD	-	Calculated Expiration Date	D XPD
XPY	-	Calculated Expiration Year	D XPY
HIT	-	Hit term(s) and field(s)	D HIT
KWIC	-	Up to 50 words before and after hit term(s) (KeyWord-In-Context)	D KWIC
OCC	-	Number of occurrences of hit term(s) and field(s) in which they occur	D OCC

(1) Application, patent, and priority number are available in STN and Derwent format. The format for DISPLAY, PRINT, SELECT, and SORT is set using the SET PATENT command. STN is the default format. Enter SET PAT DERWENT to change to the Derwent format. To reset to the STN format, enter SET PAT STN.

Default sorting within the Patent Family Display Formats

Format	Default sorted by
FAM	PRN (Priority Number)
DFAM	PRN (Priority Number)
EFAM	PRN (Priority Number)
FFAM	PN (Patent Number) of the highest level
LFAM	PN (Patent Number) of the highest level
CFAM	AP (Application Number)

UPDATE and SDI

Update Codes (for SDI also)

Update codes or entry dates associated with records

Field Name	Search Code	Search Examples	Display Code
Entry Date	/ED	S L1 AND ED>DEC 2019	ED
Entry Date + Legal Status Update	/EDLS	S 20200924/EDLS	not displayed
Entry Date Patent	/EDP	S 20200109/EDP	EDP, UPALL
Entry Date Priority	/EDPR	S 20200924/EDPR	PRAI
Update Date	/UP	S 20200102 /UP	LS
Update Date of the BIB fields	/UPBB	S L1 AND UPBB> 20200102	UPALL
Update Date Classifications	/UPCC	S L1 AND UPCC> 20200102	UPALL
Update Legal Status	/UPLS	S 20200102/UPLS	LS
All updates of a record	/UPM	S 20200102/UPM	not displayed
Entry Date new patent family	/EDF	S L1 AND EDF>21 MAR 2020	UPALL
All changes in a patent family	/UPFA	S L1 AND 20200102/UPFA	not displayed
Any change of a bibliographic element in a patent family	/UPFB	S L1 AND 20200102/UPFB	UPALL
Update Date for combined or split Patent Family **(1)**	/UPFC	S L1 AND UPFC=OCT 2019	UPFC
Entry of a new database record document) into a patent family (level 1)	/UPFD	S L1 AND 20200102UPFD	UPALL
Entry of a new publication and changes in legal status	/UPFE	S L1 AND 20200102/UPFE	not displayed
Any change of a legal status in a patent family	/UPFL	S L1 AND 20200102/UPFL	UPALL
Entry of a new publication level into a patent family	/UPFP	S L1 AND 20200102/UPFP	UPALL

Family Display and Print Formats – Weekly SDI

Format	Definition	Examples
FFAMED	STD for new publications and/or LSUP for each updated family	D FFAMED
IFAMED	Indented FFAMED plus patent family table	D IFAMED
FFAMED.PC	FFAMED for a specific country only	D FFAMED.US
FFAMUP	STD + LS for each updated family	D FFAMUP
IFAMUP	Indented FFAMUP plus patent family table	D IFAMUP
FFAMUP.PC	FFAMUP for a specific country only	D FFAMUP.WO
LFAMUP	AN, PI, LSUP for all updated members of a patent family	D LFAMUP
LFAMUP.PC	LFAMUP for a specific country only	D LFAMUP.EP

Family Display and Print Formats – Monthly SDI

Format	Definition	Examples
FFAMED4	STD for new publications and/or LSUP for each updated family	D FFAMED4
IFAMED4	Indented FFAMED4 plus patent family table	D IFAMED4
FFAMUP4	STD + LS for each updated family	D FFAMUP4
IFAMUP4	Indented FFAMUP4 plus patent family table	D IFAMED4
LFAMUP4	AN, PI, LSUP for all updated members of a patent family	D LFAMUP4

SELECT, ANALYZE, and SORT Fields

The SELECT command is used to create E-numbers containing terms taken from the specified field in an answer set.
The ANALYZE command is used to create an L-number containing terms taken from the specified field in an answer set.
The SORT command is used to rearrange the search results in either alphabetic or numeric order of the specified field(s).

Field Name	Field Code	ANALYZE/ SELECT (1)	SORT
Abstract	AB	Y	N
Abstract (English)	ABEN	Y	N
Abstract (French)	ABFR	Y	N
Abstract (German)	ABDE	Y	N
Abstract (other language)	ABOL	Y	N
Abstract (Spanish)	ABES	Y	N
Abstract Language	AL	Y	Y
Accession Number	AN	Y	Y
Application Country	AC	Y	N
Application Date	AD	Y	N
Application Kind Code	AK	Y	N
Application Kind Code Text	AIT	Y	N
Application Number	AP (AI)	Y **(2)**	N
Application Number Count	ACNT	Y	Y
Application Number Group	APPS	Y **(2,3)**	N
Application Number, Original	APO	Y	N
Application Year	AY	Y	N
Calculated Expiration Date	XPD	Y	N
Calculated Expiration Year	XPY	Y	N
Cooperative Patent Classification	CPC	Y	N
Country Number Count	CCNT	Y	Y
Date in Force	DF	Y	N
Designated State	DS	Y	N
Document Type	DT (TC)	Y	N
Entry Date	ED	Y	N
Entry Date new Patent Family	EDF	Y	N
Entry Date Patent	EDP	Y	N
Entry Date Priority	EDPR	Y	N
Entry Week	EW	Y	N
EPO Simple Family Member Count	SFCNT	Y	Y
Filing Details	FDT	Y	N
INPADOCDB Document Number	DN	Y	N
International Patent Classification	IC	Y	N
International Patent Classification	IPC	Y	N
Inventor	IN (AU)	Y	N
Inventor, Country	IN.CNY	Y	N
Inventor Address	INA	Y	N
Inventor INPADOC Standard	INS	Y	N
IPC, Additional (supplementary)	ICA	Y	N
IPC, First	IPCF	Y	N
IPC, Index (complementary)	ICI	Y	N
IPC, Initial	IPCI	Y **(4)**	N
IPC, Main	ICM	Y	N
IPC, Reclassified	IPCR	Y **(4)**	N
IPC, Secondary	ICS	Y	N
Japanese Patent Classification (FI-Terms)	FCL	Y	N
Japanese Patent Classification (F-Terms)	FTRM	Y	N
Language	LA	Y	N
Language of Filing	LAF	Y	N
Legal Status Code	LSC	Y	N
Legal Status Code Category	LSC2	Y	N
Legal Status Code Country	LSCC	Y	N
Legal Status Count	LSCNT	Y	Y

SELECT, ANALYZE, and SORT Fields (cont'd)

Field Name	Field Code	ANALYZE/ SELECT (1)	SORT
Legal Status Date INPADOC GAZETTE	LSD	Y	N
Legal Status Event Class	LSEC	Y	N
Legal Status Free Format Text	LSFT	Y	N
Legal Status IPC	LSIC	Y	N
Legal Status Patent Assignee	LSPA	Y	N
Legal Status Patent Inventor	LSIN	Y	N
Legal Status Patent Opponent	LSOP	Y	N
Legal Status, Payment Year	LSPMY	Y	N
Legal Status Publication Country	LSPC	Y	N
Legal Status Publication Date	LSPD	Y	N
Legal Status Publication Number	LSPN	Y	N
Legal Status Representative/Agent	LSAG	Y	N
Legal Status SPC Number	LSSPC	Y	N
Legal Status SPC, Expiry Date	LSSPC.XD	Y	N
Legal Status SPC, Extension Date	LSSPC.EX	Y	N
Legal Status SPC, Filing Date	LSSPC.FD	Y	N
Occurrence Count of Hit Terms	OCC	N	Y
Patent Assignee	PA (CS)	Y	N
Patent Assignee Address	PAA	Y	N
Patent Assignee, Country	PA.CNY	Y	N
Patent Assignee INPADOC Standard	PAS	Y	N
Patent Number Group	PATS	Y **(2,5)**	N
Patent Country	PC	Y	N
Patent Country, Basic	PC.B	Y	Y
Patent Date, Basic	PD.B	Y	Y
Patent Information Type	PIT	Y	N
Patent Kind Code	PK	Y	N
Patent Kind Code, Basic	PK.B	Y	Y
Patent Number	PN (PI)	Y **(2)**	N
Patent Number, Basic	PN.B	Y	Y
Patent Number/Kind Code	PNK	Y	Y
Patent Number/Kind Code, Basic	PNK.B	Y	Y
Patent Number, Original	PNO	Y	N
Patent Stage	STA	Y	N
Patent Status Established Date	STED	Y	N
Patent Status Indicator	STI	Y	N
Patent Term Adjustment	PTA	Y	N
Priority Country	PRC	Y	N
Priority Country First	PRCF	Y	Y
Priority Country, First of PCT Priorities	PRCF.WO	Y	N
Priority Number Count	PRCNT	Y	Y
Priority Date	PRD	Y	N
Priority Date First	PRDF	Y	Y
Priority Kind Code	PRK	Y	N
Priority Kind Text	PRAIT	Y	N
Priority Number	PRN (PRAI)	Y **(2)**	N
Priority Number Original	PRNO	Y	N
Priority Year	PRY	Y	N
Priority Year First	PRYF	Y **(6)**	Y
Publication Date	PD	Y	N
Publication Number Count	PCNT	Y	Y
Publication Year	PY	Y	N
Publication Year, Basic	PY.B	Y	Y
Patent Status Established Date	STED	Y	N
Patent Status Indicator	STI	Y	N
Title	TI	Y (default)	N
Title (English)	TIEN	Y	N
Title (French)	TIFR	Y	N
Title (German)	TIDE	Y	N
Title (Spanish)	TIES	Y	N

SELECT, ANALYZE, and SORT Fields (cont'd)

Field Name	Field Code	ANALYZE/ SELECT (1)	SORT
Title (other language)	TIOL	Y	N
Title Language	TL	Y	N
Ultimate Owner	UO	Y	N
Ultimate Owner Standardized	UOS	Y	N
Update Date	UP	Y	N
Update Week	UW	Y	N

(1) HIT may be used to restrict terms extracted to terms that match the search expression used to create the answer set, e.g., SEL HIT TI.
(2) SELECTed and SORTed application, priority and patent numbers are in the format set by the Messenger SET PATENT command, either DERWENT or STN.
(3) Selects or analyzes AP, APO, PRN, PRNO, and appends /APPS to the terms created by SELECT.
(4) Appends /IPC to the terms created by SELECT.
(5) Selects or analyzes PN, PNO, LSPN with /PATS appended to the terms created by SELECT.
(6) SELECT or ANALYZE HIT are not valid with this field.

Sample Records

DISPLAY BRIEF (default)

```
AN    65149450 INPAFAMDB EWF 201947 UWF 202218 EDF 20191121 UPFB 20201224
TI    POSITION SENSING DEVICE.
INS   MUNDER GUNNAR, DE; TEICHMANN PETER, DE
PAS   MELEXIS TECHNOLOGIES NV, BE
UOS   XPEQT
IPCI  G01B0007-00; G01D0001-16; G01D0005-20
CPC   G01B0007-003; G01D0001-16; G01D0005-204; G01D0005-2013; G01D0005-2053
AB    The present invention relates to a device for position sensing comprising
      sensing means arranged for producing at least two sensor signals (INO,
      IN1, IN2), and a signal construction unit (40) arranged for obtaining
      from said at least two sensor signals at least two time-synchronous
      signals, said signal construction unit comprising- selection means (21)
      for selecting in a serial way one of the at least two time-synchronous
      signals,- sampling means (15) for sampling the selected time-synchronous
      signal at given sampling instants,- storage means (34) for storing
      sampled data representing the selected time-synchronous signal and timing
      information indicating which of the given sampling instants were used to
      obtain the sampled data,- processing means (33) for determining at one of
      the given sampling instants a value for at least one of said
      time-synchronous signals that was not sampled at the one given sampling
      instant by performing an interpolation using data values of the at least
      one time synchronous signal stored in the storage means and obtained at
      another point in time than the one given sampling instant. (EP3569986
      A1).

PATENT FAMILY INFORMATION

 +-------- Publications ---------+  +-------- Applications ---------+ +- STI -+
 CN 110487304          A  20191122  CN 2019-10211238      A  20190320     A
 CN 110487304          B  20200414
 EP 3569986            A1 20191120  EP 2018-172083        A  20180514     I
 EP 3569986            B1 20200408
 US 20190346249        A1 20191114  US 2019-16411351      A  20190514     A
 US 10866079           B2 20201215

 +--------- Priorities ----------+
 EP 2018-172083        A  20180514

FSTAT 1 priority, 3 applications, 6 publications  (1 EPO simple family)
      3 countries, 87 legal status events
```

DISPLAY FAM

```
AN    65149450 INPAFAMDB

PATENT FAMILY INFORMATION

 +-------------PRAI--------------+      +--------------AI---------------+
 EP 2018-172083        A  20180514      CN 2019-10211238      A  20190320
                                        EP 2018-172083        A  20180514
                                        US 2019-16411351      A  20190514

 +--------------AI---------------+      +--------------PI---------------+
 CN 2019-10211238      A  20190320      CN 110487304          A  20191122
                                        CN 110487304          B  20200414
 EP 2018-172083        A  20180514      EP 3569986            A1 20191120
                                        EP 3569986            B1 20200408
 US 2019-16411351      A  20190514      US 20190346249        A1 20191114
                                        US 10866079           B2 20201215

FSTAT 1 priority, 3 applications, 6 publications  (1 EPO simple family)
      3 countries, 87 legal status events
```

DISPLAY CFAM

```
AN    65149450 INPAFAMDB

PATENT FAMILY INFORMATION

 +-------- Publications ---------+     +-- Status --+    +-- Status Date --+
 CN 110487304          A  20191122     ALIVE                20201121
 CN 110487304          B  20200414     ALIVE                20201121
 EP 3569986            A1 20191120     INDETERMINATE        20201106
 EP 3569986            B1 20200408     INDETERMINATE        20201106
 US 20190346249        A1 20191114     ALIVE                20201121
 US 10866079           B2 20201215     ALIVE                20201121

FSTAT 1 priority, 3 applications, 6 publications  (1 EPO simple family)
      3 countries, 87 legal status events
```

DISPLAY LFAM

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MEMBER 1
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AN    65149450 INPAFAMDB ED 20191205 EW 201949 UP 20200528 UW 202052
DN    98159413
PI    CN 110487304          A  20191122
STI   ALIVE

AN    65149450 INPAFAMDB ED 20200423 EW 202017 UP 20200528 UW 202052
DN    98159413
PI    CN 110487304          B  20200414
STI   ALIVE

LEGAL STATUS
20191122 CNPB01       PUBLICATION
                  PUB New or Withdrawn Publication
                  Q DOCUMENT PUBLICATION
                      .....................................20191212
20200306 CNSE01       ENTRY INTO FORCE OF REQUEST FOR SUBSTANTIVE EXAMINATION
                  EXA Examination, Search Report
                  D SEARCH AND EXAMINATION
                      .....................................20200326
20200414 CNGR01     + PATENT GRANT
                  MIS Miscellaneous or Ambiguous
                  F IP RIGHT GRANT
                      .....................................20200507
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MEMBER 2
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AN    65149450 INPAFAMDB ED 20191121 EW 201947 UP 20200528 UW 202135
DN    97947441
PI    EP 3569986           A1 20191120
STI   INDETERMINATE

AN    65149450 INPAFAMDB ED 20200409 EW 202015 UP 20200528 UW 202218
DN    97947441
PI    EP 3569986           B1 20200408
STI   INDETERMINATE
LEGAL STATUS
20191018 EPSTAA       INFORMATION ON THE STATUS OF AN EP PATENT APPLICATION OR
                      GRANTED EP PATENT
                      STATUS: REQUEST FOR EXAMINATION WAS MADE
                  MIS Miscellaneous or Ambiguous
                  W OTHER
                      ....................................20210506
. . .
-----------
MEMBER 3
-----------

AN    65149450 INPAFAMDB ED 20191121 EW 201947 UP 20200528 UW 202052
DN    98031197
PI    US 20190346249       A1 20191114
STI   ALIVE

AN    65149450 INPAFAMDB ED 20201224 EW 202052 UP 20201224 UW 202052
DN    98031197
PI    US 10866079          B2 20201215
STI   ALIVE

LEGAL STATUS
20190514 USFEPP       FEE PAYMENT PROCEDURE
                      ENTITY STATUS SET TO UNDISCOUNTED (ORIGINAL EVENT CODE:
                      BIG.); ENTITY STATUS OF PATENT OWNER: LARGE ENTITY
                  FEE Fee Payment
                  U PAYMENT
                      ....................................20210121

20190514 USAS         ASSIGNMENT
                      MELEXIS TECHNOLOGIES NV, BELGIUM
                      ASSIGNMENT OF ASSIGNORS INTEREST;ASSIGNORS:MUNDER,
                      GUNNAR;TEICHMANN, PETER;SIGNING DATES FROM 20190222 TO
                      20190304;REEL/FRAME:049170/0031
                  CHG Change of Owner, Inventor, Applicant
                  R PARTY DATA CHANGE
                      ....................................20191128
20190701 USSTPP       INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING
                      PROCEDURE IN GENERAL
                      DOCKETED NEW CASE - READY FOR EXAMINATION
                  EXA Examination, Search Report
                  Z CLASSIFICATION PENDING
                      ....................................20191219
20200720 USSTPP       INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING
                      PROCEDURE IN GENERAL
                      RESPONSE TO EX PARTE QUAYLE ACTION ENTERED AND FORWARDED
                      TO EXAMINER
                  EXA Examination, Search Report
                  Z CLASSIFICATION PENDING
                      ....................................20200806
20200910 USSTPP       INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING
                      PROCEDURE IN GENERAL
                      NOTICE OF ALLOWANCE MAILED -- APPLICATION RECEIVED IN
```

```
                    OFFICE OF PUBLICATIONS
                EXA Examination, Search Report
                Z CLASSIFICATION PENDING
                    .....................................20201001
20201112 USSTPP     INFORMATION ON STATUS: PATENT APPLICATION AND GRANTING
                    PROCEDURE IN GENERAL
                    PUBLICATIONS -- ISSUE FEE PAYMENT VERIFIED
                EXA Examination, Search Report
                Z CLASSIFICATION PENDING
                    .....................................20201203
20201124 USSTCF     INFORMATION ON STATUS: PATENT GRANT
                    PATENTED CASE
                MIS Miscellaneous or Ambiguous
                F IP RIGHT GRANT
                    .....................................20210401

20240522 USMAFP   + MAINTENANCE FEE PAYMENT
                    PAYMENT OF MAINTENANCE FEE, 4TH YEAR, LARGE ENTITY
                    (ORIGINAL EVENT CODE: M1551); ENTITY STATUS OF PATENT
                    OWNER: LARGE ENTITY
                    PAYMENT YEAR: 4
                FEE Fee Payment
                U PAYMENT
                    .....................................20240606

FSTAT 1 priority, 3 applications, 6 publications  (1 EPO simple family)
      3 countries, 87 legal status events
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AN    65149450 INPAFAMDB ED 20191121 EW 201947 UP 20200528 UW 202135
DN    97947441
TIDE  POSITIONSERFASSUNGSVORRICHTUNG.
TL    German
TIEN  POSITION SENSING DEVICE.
TL    English
TIFR  DISPOSITIF DE DETECTION DE POSITION.
TL    French
IN    MUNDER, Gunnar; TEICHMANN, Peter
INS   MUNDER GUNNAR, DE; TEICHMANN PETER, DE
PA    Melexis Technologies NV
PAS   MELEXIS TECHNOLOGIES NV, BE
UO    STICHTING ADMINISTRATIEKANTOOR XPEQT
UOS   XPEQT
DT    Patent
PI    EP 3569986            A1 20191120  English
DS    R:            AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT
                    LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR
      XS:           BA ME
PIT   EPA1 PUBLICATION OF APPLICATION WITH SEARCH REPORT
DAV   20191120 examined-printed-without-grant
STA   PRE-GRANT PUBLICATION
XPD   20380514
STI   INDETERMINATE
AI    EP 2018-172083        A  20180514  EPA Patent application
PRAI  EP 2018-172083        A  20180514  EPA Patent application (Y,20191121)
IPCI  G01D0005-20; G01D0001-16
CPC   G01D0005-204; G01D0001-16; G01D0005-2013; G01B0007-003; G01D0005-2053
ABEN  The present invention relates to a device for position sensing comprising
      sensing means arranged for producing at least two sensor signals (INO,
      IN1, IN2), and a signal construction unit (40) arranged for obtaining
      from said at least two sensor signals at least two time-synchronous
      signals, said signal construction unit comprising- selection means (21)
      for selecting in a serial way one of the at least two time-synchronous
      signals,- sampling means (15) for sampling the selected time-synchronous
      signal at given sampling instants,- storage means (34) for storing
      sampled data representing the selected time-synchronous signal and timing
      information indicating which of the given sampling instants were used to
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      obtain the sampled data,- processing means (33) for determining at one of
      the given sampling instants a value for at least one of said
      time-synchronous signals that was not sampled at the one given sampling
      instant by performing an interpolation using data values of the at least
      one time synchronous signal stored in the storage means and obtained at
      another point in time than the one given sampling instant.
AL    English
FA    ABEN; CPC; DAV; DS; DT; IN; INS; INO; IPCI; LA; LSDF; LSFT; LSIC; LSPI;
      LSPMY; PA; PAS; PI; STI; TIEN; TIFR; TIDE; UO; UOS; XPD

AN    65149450 INPAFAMDB ED 20200409 EW 202015 UP 20200528 UW 202218
DN    97947441
TIDE  POSITIONSERFASSUNGSVORRICHTUNG.
TL    German
TIEN  POSITION SENSING DEVICE.
TL    English
TIFR  DISPOSITIF DE DETECTION DE POSITION.
TL    French
IN    MUNDER, Gunnar; TEICHMANN, Peter
INS   MUNDER GUNNAR, DE; TEICHMANN PETER, DE
PA    Melexis Technologies NV
PAS   MELEXIS TECHNOLOGIES NV, BE
UO    STICHTING ADMINISTRATIEKANTOOR XPEQT
UOS   XPEQT
DT    Patent
PI    EP 3569986            B1 20200408  English
DS    R:            AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT
                    LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR
PIT   EPB1 GRANTED PATENT
DAV   20200408 printed-with-grant
STA   GRANTED
XPD   20380514
STI   INDETERMINATE
AI    EP 2018-172083        A  20180514  EPA Patent application
PRAI  EP 2018-172083        A  20180514  EPA Patent application (Y,20191121)
IPCI  G01D0005-20; G01D0001-16
CPC   G01D0005-204; G01D0001-16; G01D0005-2013; G01B0007-003; G01D0005-2053
FA    CPC; DAV; DS; DT; IN; INS; INO; IPCI; LA; PA; PAS; PI; STI; TIEN; TIFR;
      TIDE; UO; UOS; XPD

LEGAL STATUS
20191018 EPSTAA       INFORMATION ON THE STATUS OF AN EP PATENT APPLICATION OR
                      GRANTED EP PATENT
                      STATUS: REQUEST FOR EXAMINATION WAS MADE
                  MIS Miscellaneous or Ambiguous
                  W OTHER
                      .....................................20210506
20191018 EPPUAI       PUBLIC REFERENCE MADE UNDER ARTICLE 153(3) EPC TO A
                      PUBLISHED INTERNATIONAL APPLICATION THAT HAS ENTERED THE
                      EUROPEAN PHASE
                      ORIGINAL CODE: 0009012
                  PUB New or Withdrawn Publication
                  Q DOCUMENT PUBLICATION
                      .....................................20210506
20191120 EPAX       + REQUEST FOR EXTENSION OF THE EUROPEAN PATENT
                      BA ME
                  MIS Miscellaneous or Ambiguous
                  W OTHER
                      .....................................20191128
20191120 EPAK       + DESIGNATED CONTRACTING STATES
                      EP                  A1
                      AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS
                      IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR
                  MIS Miscellaneous or Ambiguous
                  W OTHER
                      .....................................20191128
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