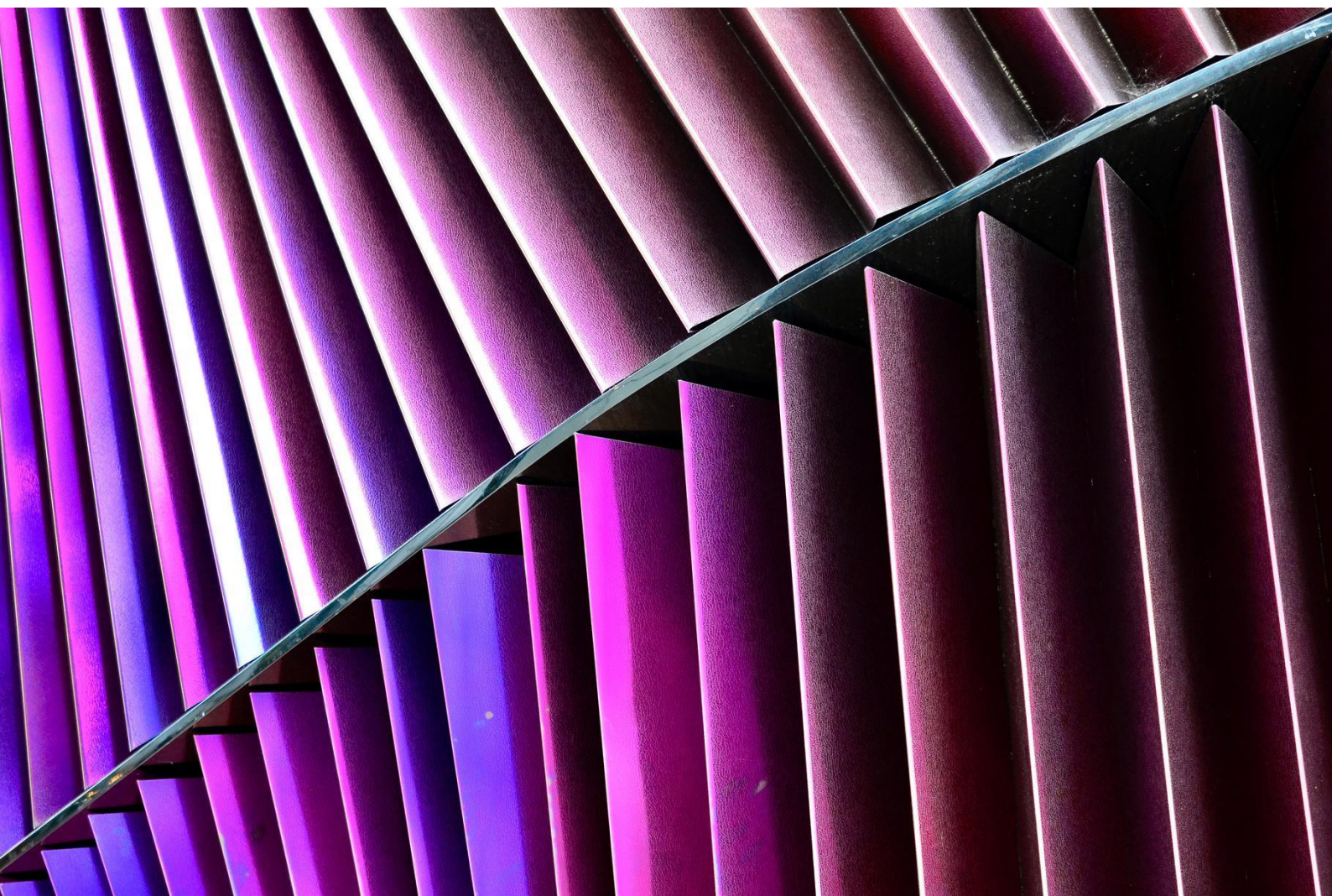


Derwent World Patents Index®

# MCR 2024 CPI, GMPI and EPI Changes

December 2023



DWPI Manual Code Revision 2024 - CPI Codes					
New/Changed/Retired	Code	Date Range	Title	Scope Notes	Search Terms
<b>SECTION A</b>					
New	A04-A06	(2024- )	Monomers containing sulfur group	E.g. acrylamide methylpropanesulfonic acid (with A04-D04+), styrene sulfonate (with A04-C).	
New	A04-A07	(2024- )	Monomers containing silicon group	E.g. vinyltriethoxysilane.	
New	A12-V05	(2024- )	Tissue engineering, stem cell culture		Cell culture, tissue repair, tissue
<b>SECTION B</b>					
Changed Scope Notes	B04-B03F	(2018- )	Modified oligonucleotides	Compounds where the only modification is one or more deoxyribose sugars are searched as oligonucleotides. For the most general references only.	
New	B04-B03F1	(2024- )	Capped modified oligonucleotides	Oligonucleotide must be composed of 7 or fewer nucleobases, see B04-E+ for associated capped codes when 8 bases or longer. Includes trinucleotide cap and trinucleotide mRNA cap, particularly those based on m7G (7-methylated guanine) and analogs.	
New	B04-B03F2	(2024- )	Other modified oligonucleotides	Oligonucleotide must be composed of 7 or fewer nucleobases.	
New	B04-E01X	(2024- )	Capped nucleic acids	Includes trinucleotide capped sequences, particularly those based around m7G (7-methylated guanine) and analogs. To be searched alongside all other applicable codes from B04-E: relating to the nucleic acid.	
New	B04-G27X	(2024- )	Immunoglobulin X	May be searched in conjunction with additional codes from B04-G. Not coded where X is stated in the document to represent an undefined or general immunoglobulin.	Immunoglobulin X, IgX
New	B04-G27X0E	(2024- )	Immunoglobulin X (genetically engineered)	May be searched in conjunction with additional codes from B04-G. Not coded where X is stated in the document to represent an undefined or general immunoglobulin.	Immunoglobulin X, IgX
New	B04-H05D	(2024- )	Interferon Delta		Interferon Delta, IFN- $\delta$
New	B04-H05D0E	(2024- )	Interferon Delta (genetically engineered)		Interferon Delta, IFN- $\delta$
New	B04-H05K	(2024- )	Interferon Kappa		Interferon Kappa, IFN- $\kappa$
New	B04-H05K0E	(2024- )	Interferon Kappa (genetically engineered)		Interferon Kappa, IFN- $\kappa$

SECTION B (continued)					
New	B11-C08N1K	(2024- )	Kompetitive allele specific PCR (KASP)	Includes Allele-specific polymerase chain reaction (ASP-PCR). Code additionally fluorescence (B11-C07B3) for PCR.	KASP, Kompetitive Allele specific PCR, Allele specific PCR, ASP-PCR
Changed Scope Notes + Search Terms	B12-Q01	(2006- )	Targeted therapies	Includes pharmacogenomics, precision medicine, personalised medicine and theranostics.	Pharmacogenomics, precision medicine, personalized medicine, personalised medicine, theranostics
SECTION C					
Changed Scope Notes	C04-B03F	(2018- )	Modified oligonucleotides	Compounds where the only modification is one or more deoxyribose sugars are searched as oligonucleotides. For the most general references only.	
New	C04-B03F1	(2024- )	Capped modified oligonucleotides	Oligonucleotide must be composed of 7 or fewer nucleobases, see C04-E+ for associated capped codes when 8 bases or longer. Includes trinucleotide cap and trinucleotide mRNA cap, particularly those based on m7G (7-methylated guanine) and analogs.	
New	C04-B03F2	(2024- )	Other modified oligonucleotides	Oligonucleotide must be composed of 7 or fewer nucleobases.	
New	C04-E01X	(2024- )	Capped nucleic acids	Includes trinucleotide capped sequences, particularly those based around m7G (7-methylated guanine) and analogs. To be searched alongside all other applicable codes from C04-E: relating to the nucleic acid.	
New	C04-G27X	(2024- )	Immunoglobulin X	May be searched in conjunction with additional codes from C04-G. Not coded where X is stated in the document to represent an undefined or general immunoglobulin.	Immunoglobulin X, IgX
New	C04-G27X0E	(2024- )	Immunoglobulin X (genetically engineered)	May be searched in conjunction with additional codes from C04-G. Not coded where X is stated in the document to represent an undefined or general immunoglobulin.	Immunoglobulin X, IgX
New	C04-H05D	(2024- )	Interferon Delta		Interferon Delta, IFN-δ
New	C04-H05D0E	(2024- )	Interferon Delta (genetically engineered)		Interferon Delta, IFN-δ
New	C04-H05K	(2024- )	Interferon Kappa		Interferon Kappa, IFN-κ
New	C04-H05K0E	(2024- )	Interferon Kappa (genetically engineered)		Interferon Kappa, IFN-κ

SECTION C (continued)					
New	C11-C08N1K	(2024- )	Kompetitive allele specific PCR (KASP)	Includes allele-specific polymerase chain reaction (ASP-PCR). Code additionally with fluorescence (C11-C07B3) for PCR.	KASP, Kompetitive Allele specific PCR, Allele specific PCR, ASP-PCR
Changed Scope Notes + Search Terms	C12-Q01	(2006- )	Targeted therapies	Includes pharmacogenomics, precision medicine, personalised medicine and theranostics.	Pharmacogenomics, precision medicine, personalized medicine, personalised medicine, theranostics
SECTION D					
New	D05-H12H	(2024- )	Capped nucleic acid sequences	Includes sequences with trinucleotide cap and trinucleotide mRNA cap. To be searched alongside all other applicable codes from D05-H: relating to the nucleic acid.	
Changed Scope Notes + Search Terms	D09-C01D	(1986- )	Artificial joints and limbs, artificial bone, tendons	Includes bone adhesive, bone cement.	Bone adhesive, bone cement
SECTION E					
Changed Scope Notes	E11-A01B	(2022- )	Forming heterocyclic rings	Includes formation of cyclic carbonates from epoxide and CO2 when applied alongside E11-F02B.	
SECTION N					
New	N06-C12	(2023- )	Heterogeneous catalyst		Heterogeneous catalyst
New	N06-C13	(2024- )	Heteropolyacid catalyst		Heteropoly acid catalyst, heteropolyacid catalyst
New	N07-F06C	(2024- )	Dealkoxylation	Removal of alkoxy groups.	Dealkoxylation

DWPI Manual Code Revision 2024 - GMPI & EPI Codes					
New/Change d/Retired	Code	Date Range	Title	Scope Notes	Search Terms
<b>SECTION P</b>					
Change Scope Notes	P11-E03	(2015- )	Cereals and grasses	Includes sugar cane, bamboo, rice, turf, lawn, etc.	
Change Scope Notes	P12-E03	(2015- )	Cereals and grasses	Includes sugar cane, bamboo, rice, turf, lawn, etc.	
Changed Title + Scope Notes	P13-A01	(2015- )	Greenhouse cultivation, Cultivation rooms	P13-A01 is a general code for greenhouses or greenhouse cultivation, used when specific codes below are not applied. P13-A01 is also used when novel greenhouse is claimed as a whole. Electrical details of greenhouses are coded under X25-N01. Also includes cultivation rooms to grow e.g. mushrooms.	
Change Scope Notes	P13-A02A	(2016- )	Pots, tubs and trays	Includes all plant containers, including cultivation bags and cultivation bottles.	
Change Scope Notes	P13-B01	(2015 - )	Propagation of vegetative material	Includes propagation from seeds, cuttings, bulbs, artificial or natural dispersal of plants. Also includes propagation by scions, tissue culture, grafting, extraction, germination of material from plant buds, creating "artificial seed material", preparation of culture medium, etc. For regular seed planting, see P11 class.	
Change Scope Notes	P13-E03	(2015- )	Cereals and grasses	Includes sugar cane, bamboo, rice, turf, lawn, etc.	
Changed Search Terms	P25-C02A	(2015 - )	Feet and casing		Carcass, partition wall, upright, strut, wheel
Change Scope Notes	P25-L	(2015- )	Convertible/stackable furniture; multipurpose furniture	Includes furniture that can be converted into other types of furniture. This code can be used in conjunction with other P25 codes to highlight the different functions. Also includes dual-purpose furniture, e.g. a table combined with a seat. Reconfigurable furniture for vehicle cabins are coded under Q14-T only.	Combination



SECTION P (continued)					
Changed Title + Scope Notes + Search Terms	P26-E	(2015- )	Furniture for children; Child-proofing arrangements	This code can be used in conjunction with P25 or other P26 codes to highlight the piece of furniture, e.g. chair, bed, etc. Includes high chairs, cradles, cots, but also other nursery accessories such as baby carriers, playpens, safety harnesses, etc. Electrical details of baby equipment are coded under X27-X01. Includes general child-proofing arrangements, such as corner protectors, window restrictors, anti-tip straps for heavy furniture, etc. This code is to be used in conjunction with other P codes to specify the type of furniture the child-proofing item is connected to, e.g. P25-C01B for kitchen and bathroom cabinets, X27-F01 for fridges, etc.	Dressing table, changing table, rocking chair, carrycot, baby gate, baby proofing kit
Changed Title + Scope Notes	P27-A01	(2015- )	Racks and cabinets for displaying/storing merchandise	Includes dispensers for granulated materials, vending jars, display stands, dummies, etc. Refrigerated cabinets are also coded under X27-F. Also includes shelving units in warehouses or storage facilities.	Showcase, bust, wire figure, shop window display
Changed Title	P32-A	(2015- )	Dentistry, veterinary, prosthesis apparatus and dressings		
Change Scope Notes	P32-A60	(2015- )	Bandages, dressings and first aid kits	Includes dispensers and auxiliary items. Also includes absorbent/antiseptic pads and swabs such as nappies, sanitary towels, diapers and tampons. Disposal of used dressings and bandages is coded by a combination of P34-W (medical waste disposal) and P34-A60.	
New	P34-W	(2024- )	Medical waste disposal	Includes receptacles for clinical waste, such as used dressings, bandages, needles, sharps, etc. This code is to be used in conjunction with other P34 codes or P32 codes to specify the items to be disposed of, e.g. P34-A02 for needles, or P32-A60 for bandages. Constructional details of refuse receptacles are also coded under Q35-A01	Needle disposing box
Change Scope Notes	P86-A01A9	(2015- )	Other wind instruments	Whistles are coded under P86-E01C5 only.	
SECTION Q					
Change Search Terms	Q13-A24	(2007- )	Gearing	Includes mechanical aspects of transmission gearing and gearboxes. Also covers gear locking or disabling mechanisms, e.g. for parking (also see Q18-A01P for parking brakes). See Q64-C for details of gearing in general.	Parking gear arrangements
Change Scope Notes + Search Terms	Q14-F01	(2006- )	Interior compartments/fittings	Includes door pockets, cubby holes, cup holders etc. For kitchen cabinets etc, see Q14-X instead.	AC Vent cup holder, fold-down tray

SECTION Q (continued)					
New	Q14-T	(2024- )	Vehicle cabin equipment / furniture	Includes furniture such as desks, tables, stands etc. See Q14-A and Q14-B respectively for chairs and beds. Includes furniture that is reconfigurable for different uses such as office work or entertainment. See X22-J12 and X22-J13 for electrical office and entertainment devices per se. For kitchen and sanitation equipment see Q14-X.	Laptop stand
Change Scope Notes + Search Terms	Q17-A04	(2006- )	Cycle frames	Includes frames and forks used in cycles and motorcycles. Also See Q19-A for cycles, Q19-B for motorcycles and Q12 codes for novel details of suspension forks or rear suspension units. Also includes foldable bicycle frames.	Electric bike
Change Scope Notes	Q17-E	(2006- )	Propulsion arrangements	This code can be applied to highlight motor vehicle engine/motor application, especially novel internal details of internal combustion engines such as pistons (Q51-A03B), crankshafts (Q51-A03E) etc., though Q51 codes are the primary codes used to highlight novel internal combustion engines details per se. For novel engine parts that bolt onto the engine such as exhaust systems and intake manifolds see Q17-E15 instead. For electrical aspects of vehicle engines see X22-A codes only. For mechanical details of electric vehicles also see Q19-P and for electric motors used to propel electric/hybrid vehicles see X21-A07.	
Change Title + Scope Notes	Q17-E01	(2006- )	Engine / motor mounting arrangements	Includes mechanical engine mountings (see also Q51-X) or motor mountings (see also X11-J07*). Mechanical vibration reduction mountings can also be coded in Q17-N. For electrically controlled vibration reducing engine mountings see X22-A12 only.	Bush
Change Title + Scope Notes	Q17-E02	(2006- )	Engine / motor cooling arrangements	Includes radiators per se. For electrical aspects of engine cooling, such as electric water pumps, see X22-A10 only. For electric motor cooling see X11-J06* as well as X21-A07 for electric vehicle motors per se.	Water, cooling, anti-freeze
Change Title + Scope Notes	Q17-E03	(2006- )	Engine / motor lubricating arrangements	Includes e.g. sumps and oil pick up pipes. See X22-A09 for electrical IC engine oil pumps etc. See X11-J07A for lubricating motor	Oil

SECTION Q (continued)					
Change Search Terms	Q34-M02	(2012- )	Electronic goods	Includes packaging of musical instruments, toys and sport equipment with electrical content e.g. keyboards, battery operated toys, and electronic cigarettes. Packaging of musical instruments, toys and sport equipment are also coded under Q34-T.	LCD, television, display, game console
Change Scope Notes + Search Terms	Q34-M99	(2012- )	Other electrical/electronic equipment/parts	Includes packaging of electrical beauty products (electric razors, massagers, etc.), batteries, solar/photovoltaic panels/cells, lightbulbs and tubes, gas/electricity/water meters, etc.	Smart meter
Change Scope Notes + Search Terms	Q35-A01	(2012- )	Refuse receptacles	Includes cleaning/sterilizing equipment integrated with the refuse receptacle. Details of cleaning/sterilizing equipment including electrical details are coded under X25-H09. Receptacles for medical/clinical waste disposal, e.g. for used needles or bandages, are also coded under P34-W.	Bin bag, dustbin, wheelie bin, dumpster, needle disposal bin
Change Scope Notes + Search Terms	Q36-A	(2012- )	Handling of piles	Includes supports and trays containing the piles of articles, device for feeding, separating, moving and orientating articles from piles, e.g. conveyor belts, grippers.	Feeder, gauge pin, feed table
Change Search Terms	Q47-B10	(2015- )	Fasteners	See Q61 for general fasteners.	Bolt
Change Title + Scope Notes	Q48-M	(2015- )	Manufacture of blinds, shutters, doors and windows	Includes manufacturing methods and apparatus.	
Change Scope Notes	Q49	(2015- )	Mining	From 2015 manual codes have been assigned for all mechanical details of mining and quarrying apparatus. Electrical details of mining are covered by X25-D02 codes.	
Change Scope Notes	Q49-A01	(2015- )	Extraction equipment	Includes details of conveyors for extracting mined materials, e.g. coal, from the mines. Non-electrical details of conveyors are coded under Q35-B, and electrical details of conveyors are covered by X25-F01 codes.	
New	Q75-G	(2024- )	Maintenance and repair of refrigeration and liquefaction components	Includes manufacturing methods and apparatus.	
Change Search Terms	Q77-A99	(2015- )	Other type of furnaces, kilns, ovens or retorts	Includes bell-type furnaces, furnaces with stationary charge but moving kiln sections, open/uncovered sintering apparatus, crucible/pot furnaces and tank furnaces.	Vacuum furnace



SECTION S					
Change Scope Notes	S02-J09	( - )	Other testing of machines, structures or appts	Includes testing during production, performance testing, and model-based simulation testing. See also T01-J15H for simulation of non-electronic systems.	
Change Search Terms	S03-E09F	(2005- )	Immunoassay techniques and biological indicators	Includes all novel reagents and techniques. See also S03-E04D and S03-E04E for fluorescence detection and observation techniques. For radiopharmaceutical immunoassay indicators, see also S03-G02B9. For microarray and biochip techniques, see also S03-H01 codes. Prior to 2005 coded in S03-E14H4. From 2022, see also B11-C08N codes to highlight different biological testing methodologies. See also B11-C08E3, B11-C08N, C11-C08E3, C11-C08N and D05-H18B codes.	Antibody, assay, antigen, binding, ligand, fluorophore, monoclonal, conjugate, PCR testing, polymerase chain reaction testing, drug screening
New	S05-F10	(2024- )	Design of prosthetic devices	Includes details for designing a prosthesis tailored to the patient's physical needs and lifestyle. See also T01-J15X for computer/software-based design, and T01-J06A for medical applications. This code is to be used with other S05-F codes to specify the type of prostheses designed, e.g. S05-F03 for arm/leg prostheses. Manufacturing details of prostheses are coded under P32-M.	Custom prosthetics
Change Search Terms	S05-G02G	(1992- )	Medical IT systems	See also relevant T01 codes for computing aspects.	Hospital asset management, inventory
Change Scope Notes	S05-P	(1997- )	Medical simulation systems	For medical education using training and simulation aids, i.e. for training in medical procedures e.g. surgical, therapeutic, analysis, nursing etc. See W04-W07 for simulator systems, training and demonstration, T01-J15H for simulation of non-electronic systems, and T01-J06A for data processing in medicine. See also P85-A codes, in particular P85-A01G, for non-electrical aspects.	Medical education, medical simulation, medical training
SECTION T					
New	T01-J05A2N	(2024- )	Business processes related to the transportation industry	Includes vehicle sharing, ride hailing, etc. Details of vehicle rental, hiring and sharing systems are also coded under X22-U for motor vehicles and X21-U for electric vehicles.	
New	T01-J05A4	(2024- )	Information processing for Agriculture, Fishing, Forestry and Mining	Includes information analysis or data storage related aspects of analysis on agriculture, fishing, forestry, mining.	

SECTION T (continued)					
Change Scope Notes	T01-J10B1	(1992- )	Image enhancement	Includes use of histogram, deblurring, noise filtering, edge detection, scratch removal and geometric correction.	
Change Scope Notes	T04-H	( - )	Visual display units	Includes displays for computer related equipment such as for laptops and PDA's (personal digital assistants) and portable game consoles (e.g. Nintendo DS™, Nintendo Switch™, Sony PSP™). For signal processing aspects e.g. contrast control, white balance control etc, see also W03 codes.	Screen, video, cursor, terminal, processor, VDU, graphic, line, monitor
Change Scope Notes	T04-H04	(2005- )	Construction, manufacturing and testing details of display	Covers display housings, casings, stands, supports, wiring components, etc. previously coded in T04-L. Does not include details of the display elements per se which are covered by the relevant class (e.g. U14 for LCD). Search with other T04-H codes for display types. Packaging of computer displays is coded under Q34-M02.	
Change Scope Notes	T04-L09	(1987- )	Other peripheral accessories etc.	Includes details of mouse mat, arm rest, theft alarm (see also W05 codes) or document stand. Packaging of peripheral equipment is coded under Q34-M02.	Filter, screen, antistatic, theft alarm, mouse mats, arm rest, attachments, protective cover
SECTION V					
New	V01-A02J	(2024- )	Piezoresistor		
New	V01-A04G2	(2024- )	Winding	Includes winding of resistors.	
Change Search Terms	V01-A04H1	( 1992 - )	Testing and sorting resistors	See S01-D05B1 and S01-G12A for electrical testing of resistors.	Aging test
Change Scope Notes + Search Terms	V01-B01D5	(2002- )	Super-capacitor	See T01-H01/T01-L01 codes for computer memory module and power supply systems, e.g. memory back-up; and for high power applications e.g. electric/hybrid vehicles, see X12-B, and X21-B codes. Includes electrostatic double layer capacitors, electrochemical pseudocapacitors and hybrid capacitors such as lithium ion capacitors.	Ultracapacitor, electrochemical double layer, EDLC, high capacitance, pseudocapacitor, hybrid lithium ion, LiC, LIC
Change Title	V04-S22	(2005- )	Fire-proof and explosion-proof casing		
Change Scope Notes	V06-N	(1983- )	Controlling small electric machines	Includes control of low power motors, actuators and generators. Protective circuits for low power motors are coded by U24-F codes.	

SECTION W					
Change Scope Notes	W01-A06E1	(1992- )	Access and routing	From 2024, network addressing is coded under W01-A06E1N. Network addressing as opposed to routing (i.e. for determining destination of packets, and not the route that they will travel) is covered in T01-N02A1A. From 2006, all aspects of routing are covered by W01-A06E1J and since 2002, routers per se have been covered by W01-A06G5E.	
New	W01-A06E1N	(2024- )	Network addressing	Includes all addressing details in a network, like address mapping, address translation etc.	Media Access Control, MAC
New	W01-A06E1P	(2024- )	Network proxy	This code covers the use of proxy servers for accessing a website.	
Change Scope Notes + Search Terms	W01-B05A1D	(1997- )	Direct mode connection between telephones	Search with other W01-B codes for dual mode operation, e.g. W01-B05A1A or W01-B05A1B for switching between cellular or cordless call point systems and direct mode. Also includes Sidelink communications (connection between the devices without requiring the base station) used in 4G and 5G systems. Search with W02-C03R2 for resource selection by the terminal.	Digital short range radio system (DSRRS), Sidelink communication
Change Scope Notes	W02-C03E3	(1992- )	Power control		
New	W02-C03E3B	(2024- )	Terminal power control	Includes power saving at the user equipment side e.g. by means of discontinuous reception (DRX).	
New	W02-C03E3C	(2024- )	System power control	Includes 'systems' aspects of power control e.g. based on signal transmitted from base station to mobile unit. Transmitter power control circuits per se are covered by W02-G01C codes.	
Change Title	W02-C03R	(2023- )	Resource/Traffic Management	This code covers more precise details of resource allocation and prior 2023 the same is covered under W02-C03G1A. This is a broad level code and general resource allocation are covered under W02-C03R1.	
Change Search Terms	W02-K07E	(1997- )	Orthogonal multiplexing	Search with W02-C03B1 codes, especially W02-C03B1D, for satellite communication aspects of orthogonal multiplexing.	OTFM
New	W06-B15P	(2024- )	Personal flying aids	Includes jet packs and flying suits worn by user. Use with other codes as appropriate such as W06-B15G for VTOL. Also see Q25-X01 for flying suits.	Flying hoverboard

SECTION X					
Change Search Terms	X15-B05	(2006- )	Control, monitoring and testing	Includes electrical aspects only. Includes blade pitch control, control of blade angle, noise emission monitoring, etc.	Speed control, simulation, speed prediction
Change Title	X16-B01C		Sodium-sulphur cells		
Change Title	X16-B01C1		High-temperature sodium-sulphur cells		
New	X16-B01C2	(2024- )	Low-temperature / Room-temperature sodium-sulphur cells		RT-Na-S
Change Title + Scope Notes + Search Terms	X16-B01F1A	(2005-)	Lithium-based cells with liquid electrolytes	Includes lithium-sulphur batteries.	Li-S battery
Change Title + Scope Notes + Search Terms	X16-B01F1C	(2005-)	Lithium-based cells with solid electrolytes	Includes lithium based solid state batteries. See X16-B01S for solid state batteries in general.	SSB
Change Scope Notes + Search Terms	X16-B01S	(2023-)	Solid State batteries	Includes batteries with solid electrolyte. Also see X16-B01F1C for lithium based solid state batteries. See also X16-J01 for solid electrolytes per se. For quasi solid-state electrolytes see X16-J01G instead.	SSB
Change Search Terms	X16-J01G	(2005- )	Gel	To be used in conjunction with other appropriate X16-J codes.	Quasi solid state
Change Scope Notes	X21-A03	( - )	Electrodynamic and (electro)mechanical brake systems	Includes electrical details of thermal management of electric braking systems. See also Q18-A05 for mechanical details and X11-J06 codes for cooling of motors used in electromechanical/electrodynamic brake systems.	
Change Scope Notes	X21-A05A5	(2022- )	Anti-collision and parking systems	Includes radar, sonar and LIDAR. Also see W06-A04 for radar details, W06-A05 for sonar details and W06-A06 for LIDAR details.	
Change Scope Notes	X21-A05E	(2013- )	Monitoring; Instrumentation	Includes general instrumentation, e.g. for vehicle dashboard. Use in conjunction with X21-A06 codes to indicate the variable being monitored such as X21-A06D for monitoring remaining battery capacity.	
New	X21-A05E6	(2024- )	Navigational aids	Includes general navigation systems and information processing aspects of vehicle guidance systems.	GPS, GNSS, dead reckoning, beacons, inertial navigation
New	X21-A05E7	(2024- )	Collision-imminence warning/alarm	Includes lane deviation or crossing alarms, and distance to obstacle indicator. For control of systems to prevent collision, see X21-A05A5.	Road marking sensor, lane marking sensor, deviation, collision warning display

SECTION X (continued)					
New	X21-A05E9	(2024- )	Service-need/ vehicle system malfunction displays	Includes lights and alarms for indicating faults/problems with any onboard systems.	Fault, failure
Change Scope Notes	X21-A06D	(2021- )	Current and voltage sensors	Includes remaining battery capacity measurement, and other electrical apparatus parameters measurement. See also X16-H codes and S01-G06A.	
Change Scope Notes	X21-A07	(1997- )	Electric traction motor; Motor-generator	Includes details of the traction motor per se. See also V06-M and X11 codes for further detailed breakdown of motor details. Also includes motor-generator. See X11-H20 for motor-generators per se. See X11-J06 for motor cooling details.	
Change Title + Scope notes + Search Terms	X21-B01B	(2002- )	Battery / fuel cell management system	Includes battery/fuel cell control, charging control, on-board power supply systems, over-voltage and short-circuit protection. See U24 / X12 codes for further power supply details.	Power control, voltage, current, power conversion
Change Scope Notes	X21-U	(2005- )	Electric vehicle rental, hiring and sharing systems	Includes overall system associated with electric vehicle hiring and rental with some on-board vehicle aspect, e.g. enabling user to book vehicle on-line (see T01-N and T01-J05 codes) while central controller provides authorisation and remote access to allocated vehicle. Also includes car pooling arrangements with some on-board vehicle aspect. Also see T01-J05A2N for business processes related to the transportation industry.	
New	X21-X05	(2024- )	Electrical aspects of doors, boots, windows	Includes electrical door opening/closing devices. Also includes electrical aspects of streamlining devices such as spoilers.	Roof spoiler, boot spoiler aerodynamic, sliding door, remote control tailgate opening, electrochromic glass, privacy glass
Change Title + Scope Notes	X22-E04	(2014- )	Driver / passenger alertness alarms; driving behaviour sensing/warning	From 2014 this code has been expanded to include all driver/driving behaviour/condition analysis and warning. Includes driver reflexes/breath tester up to 201382.	
Change Title + Scope Notes + Search Terms	X22-E04A	(2014- )	Driver / passenger alertness alarms/tester	Includes driver reflexes/breath tester, e.g. for preventing driver from driving if drunk or under the influence of drugs. Includes alerting driver through vibration alert through steering wheel or seat (also see W05-A01A1 for vibration based annunciation). Also includes vital sign monitoring for driver or passengers to check on condition of health of vehicle occupants.	Intoxication detector, drowsiness detector, haptic indication, vital signs, remote monitoring

SECTION X (continued)					
Change Scope Notes	X22-U	(2005- )	Motor vehicle rental, hiring and sharing systems	Includes overall system associated with motor vehicle hiring and rental with some on-board vehicle aspect, e.g. enabling user to book vehicle on-line (see T01-N and T01-J05 codes) while central controller provides authorisation and remote access to allocated vehicle. Also includes car pooling arrangements with some on-board vehicle aspect. See also T01-J05A2N for business processes related to the transportation industry.	Hiring, leasing, rental, car-pool, car sharing, internet booking
Change Scope Notes	X27-D01A3E	(2007- )	Liquid management systems	Includes water supply/discharge pipes, valves, pumps, pump seals, water heaters, water recirculation/recovery and spray systems. Details of steam generating arrangements are also included under X27-D07E.	
Change Scope Notes	X27-D01A3X	(2007- )	Other component parts	Includes packaging such as boxes and transit bolts. Also see Q32-A08 and Q32-T for boxes and transit packaging per se.	
Change Scope Notes	X27-D07E	(2007- )	Using steam/vapour	Includes steam generation arrangements and vapour generation from a liquid/solid. Includes use of steam in refresh cycles to deodorise and remove creases from unwashed clothes.	Anti-wrinkle, de-crease, non-iron, refresher
New	X27-D11	(2024- )	Eco features of cleaning appliances	This code can be used in conjunction with other X27-D codes to highlight the type of cleaning appliances, e.g. X27-D02 for tumble dryers, X27-D01B for dishwashers. Details of water recovery in washing machines are also coded under X27-D01A3E. Also includes energy recovery systems that improve operating efficiency. Also see U24-K for power supply unit power-saving mode/operation.	Green, power reduction



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