

CODE	TITLE	IPCS	SCOPE NOTES	SEARCH TERMS	PREVIOUS CODE
X11-C15	Microturbine plant		NOTE: Small machines are in V06.		
X11-H20	Starter-generator/motor-generator	(H02K)			
X11-J07X1	Connectors; terminal boxes				
X11-J15	Materials				
X11-J15A	Conductive				
X11-J15B	Magnetic				
X11-J15C	Insulative				
X11-U01M	Microturbine generator				
X12-C01B2A	Using cables as windings	(H01B-009)			
X12-C01D7	Maintenance		Includes all aspects of repairs and maintenance, e.g. oil change, polychlorinated biphenyl disposal (see also X12-E02A).		previous_code (X12-C09)
X12-D03M	Wire harness		Includes harnesses per se, and is used in conjunction with other X12-D03 codes as appropriate.		previous code (X12-D03,X12-D03X)
X12-D07E	Non-insulated conductor or conductive part of insulated cable				previous code (X12-D02X)
X12-H01A2C	Compensation implemented by series capacitors and shunt reactors		Also includes series/parallel capacitor banks, and synchronous capacitors. This code is used in conjunction with X12-H01A2A or X12-H01A2B whenever possible.	Saturable reactor, synchronous compensator, shunt capacitor	

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X12-H01A2D	Static VAR compensation		Includes compensation obtained by the use of capacitors and reactors, respectively, to generate and absorb vars with at least one of them being variable. The variable capacitor or reactor may involve the use of, respectively, thyristor-switched capacitor compensator or thyristor-controlled reactor compensator. This code is used in conjunction with X12-H01A2A or X12-H01A2B whenever possible.	SVC, TCR, TSC	
X13-A01C	Manufacture	(H01H-011/04)			
X13-D10	Solid state circuit breakers	(H03K-017)		contactless	
X13-D11	Miniature circuit breakers	(H01H)			
X13-D20	Circuit breakers characterised by novel mechanism				
X13-D20A	Sensing mechanism				
X13-D20B	Trigger mechanism				
X13-D20C	Latching and release mechanism				
X13-D20D	Operating mechanism				
X13-G02T6	Microturbine generator				
X13-G15	Remote motor control	(H02P)			
X13-G20	Starter-generator/motor-generator control	(H02P)			

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X14-C05C	Measurements relating to plant		For in-situ reactor-related measurements, see X14-C02. Includes arrangements, for example, to check the integrity of welded joints. See also the relevant instrumentation codes in Section S.		previous code (X14-C05X)
X14-F04	For propulsion		Covers plasma propulsion techniques for ordnance, space vehicles, etc. See also W06-B03 and W07 codes.		
X15-A02C	Solar panel details		Covers solar panels and tiles only when solar cell(s) and their interconnections are incorporated. Interconnections between panels are also included. Mechanical details of roof structures are not included. Single cells and assemblies of cells are coded in X15-A02A/B.	Solar cell modules	
X15-A02D	Photoelectrochemical cells		See also X16-A04 and other X16 codes for more detailed breakdown of the details of such cells, and U12-A02 codes.		previous code (X15-A02A)
X15-A02E	Thermophotovoltaic cells		Includes cells where IR rays are converted to electricity. See also U12-A02 codes.		
X15-A04	Small scale solar power generation		Covers generation of electricity, for example, to power watches, calculators, etc. This code is used in conjunction with the above relevant codes.		
X15-A05	Large scale solar power generation		Covers high power systems, for example, for powering space crafts, vehicles, etc. This code is used in conjunction with the above relevant codes.		

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X16-G02B	Using another battery				
X16-G02C	Using generator	(H02J-007/14-30)	Includes dynamoelectric generators driven by any prime mover e.g. IC engine.	Wind turbine generator	
X16-H03	Voltage/current		See also S01-D and S01-G06 codes.		
X16-H04	Battery classification		Includes testing to classify battery into different types.		
X16-H09	Smart battery		This code is used where a battery provides power to an equipment and also stores status data and/or has the facility to transfer this data to the equipment.		
X16-M	Battery materials recovery				
X21-A01D1	Parallel hybrid vehicle		Includes vehicle whose wheels are driven by both electric motor and e.g. internal combustion engine. Also see X22-P04 and other relevant X22 codes.		
X21-A01D3	Series hybrid vehicle		Includes vehicle with electric traction motor and battery that is charged e.g. by IC engine driven generator. See also X21-B04C for on-board IC engine driven generator. Previously coded as electric vehicle in X21-A01F and X21-B04C rather than X21-A01D since only electric traction is present.		
X21-A01G	Electric scooter/motorcycle				
X21-A01H	Electric bus/lorry				
X21-A01M	Other electric vehicles				

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X21-A02A	Transmission system and its control	B60K-017,-020,023	Includes control of clutch, gear ratio and general transmission details.	Gearing	
X21-B01B	On-board power supply systems; power supply control		Includes general control/regulation of on-board power. See U24/X12 codes for further power supply details.		
X21-B04C1	IC engine control	F02D	Control of internal combustion engine driving generator in series hybrid vehicle.	Fuel injection control, ignition timing control, pollution control	
X21-H	Steering systems	(B62D)	Includes electric steering arrangements and automatic steering.	Power steering, automatic steering	
X22-A16	Vehicle engine servicing equipment	F16N-033/00	Includes electrical aspects of oil change/reconditioning apparatus. Includes on-board systems that burn dirty oil in combustion chamber and replenish engine with clean oil.	Oil change	
X22-B01F	Headlight control circuitry	B60Q-001/04-20, F21S	Includes control of headlamp or front fog/driving lamp illumination and automatic dimming.		
X22-B02A2	Indicating level of braking intensity	B60Q-001/44	Includes selective illumination of array of LEDs.		
X22-C02C7	Brake-by-wire	B60T			
X22-C02D4	Cruise control		Includes brake activation to maintain distance between vehicles.	Automatic distance regulation, ADR, cruise control	
X22-C05A3	Steer-by-wire	B62D-005			
X22-E06F	Navigation information updating system	G08G-001	Includes system for updating map information e.g. for area in which vehicle travels, using information from offboard centre.		
X22-E13A	Image recognition	G06K-009	Includes video image recognition of obstacles or road signs e.g. to identify change of speed limits or hazards, road edges.		

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X22-E14	Warning of approaching emergency vehicle		Includes detection of siren and activation of dashboard light or muting vehicle radio.	Ambulance, police car, fire engine	
X22-F04	Vehicle power supply control systems		Includes prioritisation of supply of power to specific or essential vehicle systems.		
X22-F05	Use of cigar lighter socket as power supply, e.g. for vehicle accessories		Includes kettle, perfume dispenser, portable light and other devices that are powered from cigar lighter socket. Used in conjunction with other X22 and cross-reference codes as appropriate.		
X22-J03A3	Headrest	B60N-002/48	Includes automatic adjustment of vehicle headrest according to driver. See X22-J11 also if headrest is automatically adjusted during vehicle collision to prevent whiplash.		
X22-J11	Passenger safety systems		Includes anti-submarining seats, active head restraints (see X22-J03A also) and flip up roll over bars. For airbags and seat belt pretensioners see X22-J07 and X22-J03B1 only.		
X22-J11A	Automated emergency signalling		Includes automatic mayday signalling and automatic activation of locating beacon after vehicle accident (also see W06-A01C for vehicle borne locating beacon). Automatically illuminated 'assistance required' sign (also see X22-B05).		
X22-J11B	Pedestrian protection systems		Includes vehicle mounted apparatus such as exterior bonnet airbag to protect other road users in event of collision.		

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X22-J12	In-car office equipment		Includes e-mail, facsimile equipment powered by vehicle supply, and reception of e.g. Internet information.		
X22-J13	In-car entertainment systems	Includes television and games machine powered from vehicle supply. Includes monitors e.g. mounted in rear of headrest (see X22-J03A3 also).	VTR, DVD, TV, MP3, game		
X22-P05A	Bus/coach				
X22-P05B	Lorry/truck		Includes articulated trucks/heavy goods vehicles.		
X22-P05C	Taxi				
X22-P05X	Other commercial vehicles		Includes snow plough and commercial vans.		
X22-P11	Towed trailers		Includes electrical aspects, e.g. lights on rear of trailer towed by vehicle (see X22-B02 codes also) or trailer of heavy goods vehicle (see X22-P05B also).		
X22-X06M	Submergence sensing arrangement		For detecting submergence of vehicle in water, e.g. for control of vehicle windows to allow escape from sinking vehicle.	Sinking detection	
X22-X11	Agricultural implements and their control		Includes electrical aspects of implements attached to tractor and driven by power take-off.		

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X22-X12	Pedal position adjustment arrangements		Includes pedals that are electrically positioned according to driver's requirement. Note: Also includes non-electric traction railways with substantial electrical content in the disclosure.	Reach adjustment	
X23-A02G	On-board monitoring systems		Includes on-board radio communication, e.g. between head and end of train, and general on-board system monitoring.		
X23-A03A	Power supply lines; off-board supply	(B60M-001-007)	Includes all power supply aspects i.e. track side poles, insulators, (see also X12-G codes) etc.; supply protection (see also X13-C codes); substations for feeding power to the railway network (see also X13-E codes).	Electric overhead supply, power rails	
X23-A03C	On-board power supply systems; power supply control		Includes on-board generators, power supply conversion etc.		
X23-A09A	Off-board railway systems	B61B	Includes major electric railway track laying equipment.		
X23-A13	On-board train accessories		Includes electrically adjustable seats.		
X23-B04E1	Signalling to portable alarm unit		Includes transmission of on-coming train warning to portable unit carried by track maintenance personnel. Also see W05 codes.		
X25-A03B1	Boring, drilling	(B23B)	Centre-point		
X25-A03B2	Cutting	(B23)	Includes cutters, saws, trimming, grooving. See also T06-D07 for control apparatus.		
X25-F07	Automated warehousing	(B65G)	Includes shelving and retrieving arrangements. See also T06-D08 for control. See X25-F01 for conveyors, and X25-F05A for conveying trucks.		

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X25-H09A	Ultrasonic cleaning	(B06,B08B-007)	Includes ultrasonic bath.		
X25-H09C	Car washer	(B60S-003)	Includes electrical aspects of vehicle washing equipment.	Car wash	
X25-P01A	Industrial cooking / baking equipment	(A23, A47)	Includes ovens and dough kneading equipment.		
X25-P01B	Industrial beer brewing equipment	(C12C)	See X27-X02 also for small scale domestic brewing.		
X25-P01C	Milk processing	(A01J)	Includes pasteurization. See X25-N02B also for milking control, metering and monitoring for livestock.		
X25-P01X	General food processing	(A23L)	Includes meat slicing, food packing/canning. See X25-F03A also for food packing/tinning.		
X25-T09A	Paper manufacture	(B31, D21)			
X25-T09B	Cardboard manufacture	(B31, D21)			
X25-T09C	Paper shredding/cutting		See X27-A02C also for domestic size shredder and business equipment.		
X25-T09G	Other paper industry aspects		See X25-W04 for paper recycling. See X25-A02A for paper press also, and X25-F02A for paper and envelope handling, and T06-D03A for control details.		
X25-W01A	Incinerators	(F23G-007)			
X25-W04	Recycling processes/systems	(B65F-001/014)	Includes recycling processes for plastics, paper and aluminium, as well as retrieval and sorting of waste of recycling. See also X25-F06 for sorting, and X25-T09 for paper industry.		
X25-X01	Timber industry	(B27B)	Includes tree felling and transporting equipment, wood drying (see X25-G also), sawing.		

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X25-X02	Vermin/insect extermination	(A01M)	See X27-X for domestic insecticide dispenser, and X25-N01 for arable insecticide spraying.		
X25-X03	Killing and stunning of animals		Includes abattoirs. See X25-N02 for livestock animals.	Abattoir, stun	
X25-X04	Ozone manufacture	(C25B-001/13)	Also see X27-E01B2 for air-conditioning, and X12-F03.		
X25-X05	Fire fighting equipment	(A62C)			
X25-X06	Swimming pools	(E04H-004)	Includes electrically operated covers, lights, heaters, etc. See X25-B for water heating.		
X25-X07	Leather working/cutting	(C14B)	See X27-A02B1B also for footwear manufacture.		
X25-X08	Stirling engines		Includes engines used in refrigeration systems. See X27-F for refrigeration.		
X25-X09	Lubricating systems	(F16N)			
X25-X10	Engraving systems	(B44B)	Includes stamping. See X25-A02D for punching/stamping.		
X25-X11	Electric fence		See also X25-N02C for livestock fencing.		
X25-X12	General industrial safety systems		Used in conjunction with other X25 codes as appropriate.		
X26-A01D	High pressure discharge lamps	(H01J-061/82-90)	Covers metal halide, sodium vapour, etc lamps.	HID, high intensity discharge	
X26-A01E	Low pressure discharge lamps	(H01J-061/70-80)	Covers mercury, sodium, etc lamps operating at fractional pressures. Low pressure electrodeless and fluorescent lamps are in X26-A01B and X26-A01E1, respectively.		
X26-A01E1	Fluorescent lamps	(H01J-061)			
X26-A02A2A	Inner envelope				
X26-A02A2B	Outer envelope				

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X26-A02E	Inductor or hf coil	(H01F-017) (X26-A02X)	Includes coil and toroidal core for operating electrodeless lamp. Coil arrangements, e.g. for impedance matching, are also covered by the relevant V02-F and U25 codes.		
X26-C01B4	For high pressure discharge lamps	(H05B-041/231)	This lamp-type code is used with the above 'ballast' codes, as appropriate.		
X26-C01B5	For low pressure discharge lamps	(H05B-041/232-234)	This lamp-type code is used with the above 'ballast' codes, as appropriate.		
X26-D01A	Reflectors	(F21V-007/00-22)			
X26-D01B	Refractors	(F21V-005/00-08)		Lens	
X26-D01C	Filters	(F21V-009/00-16)			
X26-D01D	Screens	(F21V-011/00-18)			
X26-D01E	Diffuser		A diffuser in the form of a cover for a light fitting is also coded in X26-D03.		
X26-D01E1	For display		Includes back-lighting arrangements for displays. See also W05-E and U14-K codes, respectively, for general and LC display back-lighting.		
X26-D01F	Light guide		Includes guiding of light along a plate, for example, in an LCD display. The plate is meant to confine the light within it for uniform illumination. A reflector at the non-viewing surface deflects light upwards towards the viewing surface where a diffuser may be used to provide uniformity at all angles. See also W05-E and U14-K codes, respectively, for general and LC display back-lighting.		
X26-D01G	Polariser				

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X26-D03	Housing or case for light fitting	(F21V-003/00-04, -015/00-06)	Includes protective fittings such as a cage, etc. Also includes cover glasses, globes and bowls as part of the housing for the light fitting. This code is used in conjunction with other codes as appropriate, e.g. X26-D01E for a globe with diffusing property.		
X26-L	Beam aiming arrangement	(F21V-014/00-08)	Includes motorised movement of, for example, a reflector to vary beam direction. See X22-B01E also for vehicle applications. Also includes movement of the light, per se, as in stage lights, etc.	Searchlight positioning	previous code (X26-X)
X26-M	Decorative or special-effects lighting	Includes lighting for Christmas decorations, etc. See also W04-X03C for novelties and ornamental lights.	Light strings	previous code (X26-X)	
X26-N	Laser		Includes arrangement of lasers for illumination. See V08 codes for claimed details of lasers.		previous code (X26-X)
X26-P	Shades	(F21V-001/00-26)			previous code(X26-X)
X27-A02B1A	Garments	A41-42	Includes electrical aspects of e.g. shirts, buttons, protective helmets, heated gloves, life jackets.		
X27-A02B1B	Footwear and its manufacture	A43	Includes safety boots and shoes (see X25-X07 for electrical aspects of leather cutting).		
X27-C02C	Fan assisted electric oven	F24C-007			

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X27-D04C	Dual-cyclone type	A47L-009, B04C			
X27-D05	Floor polisher	A47L-011,-013		Sweeper	
X27-D06	Clothes line	A47L, D06F-053	Includes motorised arrangements for raising and lowering line or for rotating rotary washing line.		
X27-X01	Baby equipment	A47, B62B	Includes baby monitoring alarms, babies prams, nappy wetting alarm, baby chamber pot (see X25-Y01 also)		
X27-X02	Domestic beer brewing and associated equipment	C12C-013	Includes beer brewing plant (domestic scale), beer mat, beer dispenser (see also X25-F03B1).		