

INTERNATIONAL STANDARD



**Service diagnostic interface for consumer electronics products and networks –
Implementation for ECHONET**



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CONTENTS

FOREWORD.....	32
INTRODUCTION.....	34
1 Scope.....	35
2 Normative references	35
3 Terms, definitions and abbreviated terms	35
3.1 Terms and definitions.....	35
3.2 Abbreviated terms.....	36
4 Different types of service diagnostics	37
4.1 Stand-alone products.....	37
4.2 Facilities or household appliances network	37
4.3 Remote diagnosis	37
5 SDI requirements.....	37
5.1 General.....	37
5.2 Hardware	37
5.2.1 Tester hardware	37
5.2.2 Facilities or household appliances network	37
5.2.3 DUT hardware	38
5.3 Software	38
5.3.1 General	38
5.3.2 Tester software.....	38
5.3.3 DUT software requirements for the SDI	38
6 Tester software requirements	39
6.1 Reading the property diagnostic unit.....	39
6.2 General information (product identification).....	39
6.3 Diagnosis information	39
7 Control protocol 1st	39
7.1 General.....	39
7.2 Frame format	39
7.2.1 General	39
7.2.2 ECHONET headers (EHD).....	40
7.2.3 Source/Destination ECHONET address (SEA/DEA)	42
7.2.4 ECHONET byte counter (EBC).....	43
7.2.5 ECHONET data (EDATA).....	43
7.2.6 Object message header (OHD)	44
7.2.7 ECHONET objects (EOJ)	44
7.2.8 ECHONET property (EPC).....	45
7.2.9 ECHONET service (ESV).....	46
7.2.10 ECHONET property value data (EDT)	61
7.2.11 Compound ECHONET Service (CpESV)	61
7.2.12 Processing target property counter (OPC)	67
7.2.13 Property data counter (PDC).....	68
8 Control protocol 2nd	68
8.1 General.....	68
8.2 Frame format	68
8.2.1 General	68
8.2.2 ECHONET Lite Header (ELHD).....	69

8.2.3	Transaction ID (TID)	70
8.2.4	ECHONET Lite Data (ELDATA)	70
8.2.5	ECHONET Objects (EOJ)	70
8.2.6	ECHONET Lite Service (ELSV).....	71
8.2.7	ECHONET property (EPC).....	79
8.2.8	ECHONET Lite Property data counter (ELPDC)	80
9	ECHONET objects: detailed specifications.....	81
9.1	Basic concept	81
9.2	ECHONET properties: basic specifications.....	82
9.2.1	General	82
9.2.2	ECHONET property value data types	82
9.2.3	Property value range	82
9.2.4	Required class properties	83
9.2.5	Array	83
9.3	Device object super class specifications	84
9.3.1	General	84
9.3.2	Overview of device object super class specifications	84
9.3.3	Operation status property	89
9.3.4	Installation location property	89
9.3.5	Standard version information property	90
9.3.6	Identification number property	91
9.3.7	Measured instantaneous power consumption property	91
9.3.8	Measured cumulative energy consumption property.....	91
9.3.9	Manufacturer's fault code property	91
9.3.10	Current limit setting property.....	92
9.3.11	Fault status property	92
9.3.12	Fault description property	92
9.3.13	Manufacturer code property	94
9.3.14	Business facility code property	94
9.3.15	Product code property	95
9.3.16	Production number property.....	95
9.3.17	Production date property	95
9.3.18	Power-saving operation setting property	95
9.3.19	Remote control setting property	95
9.3.20	Current time setting property	97
9.3.21	Current date setting property	97
9.3.22	Power limit setting property	97
9.3.23	Cumulative operating time property	97
9.3.24	Property map property	98
9.4	Temperature sensor class specifications	99
9.4.1	General	99
9.4.2	Operation status property	99
9.4.3	Measured temperature value property.....	99
9.5	Humidity sensor class specifications	99
9.5.1	General	99
9.5.2	Operation status property	100
9.5.3	Measured value of relative humidity property	100
9.6	Illuminance sensor class specifications	100
9.6.1	General	100

9.6.2	Operation status property	100
9.6.3	Measured illuminance value 1 property	100
9.6.4	Measured illuminance value 2 property	101
9.7	Human detection sensor class specifications	101
9.7.1	General	101
9.7.2	Operation status property	101
9.7.3	Detection threshold level property.....	101
9.7.4	Human detection status property	101
9.8	Electric energy sensor class specifications	102
9.8.1	General	102
9.8.2	Operation status property	103
9.8.3	Cumulative amounts of electric energy property.....	103
9.8.4	Small-capacity sensor instantaneous electric power property.....	103
9.8.5	Medium-capacity sensor instantaneous electric power property	103
9.8.6	Large-capacity sensor instantaneous electric power property	103
9.8.7	Cumulative amounts of electric energy measurement log property	103
9.8.8	Effective voltage value property	103
9.9	Open/close sensor class specifications	104
9.9.1	General	104
9.9.2	Operation status property	104
9.9.3	Degree-of-opening detection status 1 property	104
9.9.4	Detection threshold level property.....	105
9.9.5	Degree-of-opening detection status 2 property	105
9.10	Current sensor class specifications	105
9.10.1	General	105
9.10.2	Operation status property	105
9.10.3	Measured current value 1 property	106
9.10.4	Rated voltage property to be measured property.....	106
9.10.5	Measured current value 2 property	106
9.11	Air speed sensor class specifications	106
9.11.1	General	106
9.11.2	Operation status property	106
9.11.3	Measured value of air speed property	107
9.11.4	Air flow direction property	107
9.12	Water flow rate sensor class specifications	107
9.12.1	General	107
9.12.2	Operation status property	107
9.12.3	Cumulative flow rate property	107
9.12.4	Flow rate property	108
9.13	Rain sensor class specifications	108
9.13.1	General	108
9.13.2	Operation status property	108
9.13.3	Detection threshold level property.....	108
9.13.4	Rain detection status property	108
9.14	Home air conditioner class specifications.....	109
9.14.1	General	109
9.14.2	Operation status property	117
9.14.3	Power-saving operation setting property	117
9.14.4	Operation mode setting property.....	118

9.14.5	Automatic temperature control setting property	118
9.14.6	Normal/high-speed/silent operation setting property	118
9.14.7	Set temperature value property	118
9.14.8	Set value of relative humidity in dehumidifying mode property	118
9.14.9	Set temperature value in cooling mode property	119
9.14.10	Set temperature value in heating mode property	119
9.14.11	Set temperature value in dehumidifying mode property	119
9.14.12	Rated power consumption property	120
9.14.13	Measured value of current consumption property	120
9.14.14	Measured value of room relative humidity property	120
9.14.15	Measured value of room temperature property	120
9.14.16	Set temperature value of user remote control property	120
9.14.17	Measured cooled air temperature property	121
9.14.18	Measured outdoor air temperature property	121
9.14.19	Relative temperature setting property	121
9.14.20	Air flow rate setting property	121
9.14.21	Automatic control of air flow direction setting property	121
9.14.22	Automatic swing of air flow setting property	122
9.14.23	Air flow direction (vertical) setting property	122
9.14.24	Air flow direction (horizontal) setting property	123
9.14.25	Special state property	124
9.14.26	Non-priority state property	124
9.14.27	Ventilation function setting property	124
9.14.28	Humidifier function setting property	125
9.14.29	Ventilation air flow rate setting property	125
9.14.30	Degree of humidification setting property	125
9.14.31	Mounted air cleaning method property	125
9.14.32	Air purifier function setting property	126
9.14.33	Mounted air refresh method property	126
9.14.34	Air refresher function setting property	127
9.14.35	Mounted self-cleaning method property	128
9.14.36	Self-cleaning function setting property	128
9.14.37	Special function setting property	129
9.14.38	Operation status of components property	129
9.14.39	Thermostat setting override function property	130
9.14.40	Air purification mode setting property	130
9.14.41	Buzzer property	130
9.14.42	ON timer-based reservation setting property	131
9.14.43	ON timer setting (time) property	131
9.14.44	ON timer setting (relative time)	131
9.14.45	OFF timer-based reservation setting property	131
9.14.46	OFF timer setting (time) property	132
9.14.47	OFF timer setting (relative time) property	132
9.15	Ventilation fan class specifications	132
9.15.1	General	132
9.15.2	Operation status property	132
9.15.3	Ventilation automatic setting property	133
9.15.4	Set value of ventilation air flow rate property	133
9.16	Air purifier class specifications	133

9.16.1	General	133
9.16.2	Operation status property	134
9.16.3	Filter change notice property	134
9.16.4	Air flow rate setting property	134
9.16.5	Smoke (cigarette) detection status property	134
9.16.6	Optical catalyst operation setting property	134
9.16.7	Air pollution detection status property	134
9.17	Humidifier class specifications	134
9.17.1	General	134
9.17.2	Operation status property	136
9.17.3	Humidifying setting 1 property	136
9.17.4	Humidifying setting 2 property	136
9.17.5	Measured value of relative humidity property	136
9.17.6	Reservation setting of OFF timer property	136
9.17.7	Relative time value set of OFF timer property	137
9.17.8	Ion emission setting property	137
9.17.9	Implemented ion emission method property	137
9.17.10	Water amount level property	137
9.18	Package-type commercial air conditioner (indoor unit) class specifications	137
9.18.1	General	137
9.18.2	Operation status property	139
9.18.3	Operation mode setting property	139
9.18.4	Temperature setting property	139
9.18.5	Measured indoor unit temperature property	139
9.18.6	Thermostat state property	140
9.18.7	Current function (automatic operation mode) property	140
9.18.8	Group information property	140
9.18.9	Power consumption range for indoor units property	140
9.19	Package-type commercial air conditioner (outdoor unit) class specifications	140
9.19.1	General	140
9.19.2	Operation status property	142
9.19.3	Rated power consumption of outdoor unit property	142
9.19.4	Measured outdoor unit temperature property	142
9.19.5	Special state property	142
9.19.6	Group information property	142
9.19.7	Measured power consumption of outdoor unit property	142
9.19.8	Possible power savings for outdoor units property	143
9.19.9	Settings restricting power consumption of outdoor units property	143
9.19.10	Minimum power consumption for restricted outdoor unit property	143
9.20	Electric storage heater class specifications	144
9.20.1	General	144
9.20.2	Operation status property	146
9.20.3	Temperature setting property	146
9.20.4	Rated power consumption property	147
9.20.5	Measured indoor temperature property	147
9.20.6	Measured outdoor temperature property	147
9.20.7	Air flow rate setting property	147
9.20.8	Fan operation status property	148
9.20.9	Heat storage operation status property	148

9.20.10	Heat storage temperature setting property	148
9.20.11	Measured stored heat temperature property	148
9.20.12	Daytime heat storage setting property	148
9.20.13	Daytime heat storage ability property	148
9.20.14	Midnight power duration setting property	148
9.20.15	Midnight power start time setting property	148
9.20.16	Radiation method property	149
9.20.17	Child lock setting property	149
9.20.18	Fan timer 1 setting property	149
9.20.19	Fan timer 1 ON time setting property	149
9.20.20	Fan timer 1 OFF time setting property	149
9.20.21	Fan timer 2 setting property	149
9.20.22	Fan timer 2 ON time setting property	149
9.20.23	Fan timer 2 OFF time setting property	150
9.21	Gas heat pump-type commercial air conditioner (indoor unit) class specifications	150
9.21.1	General	150
9.21.2	Operation status property	151
9.21.3	Operation mode setting property	151
9.21.4	Temperature setting value property	151
9.21.5	Measured temperature value of indoor unit property	152
9.21.6	Thermo status property	152
9.21.7	Operation mode status during automatic operation property	152
9.21.8	Group information property	152
9.21.9	Power consumption range for indoor units property	152
9.22	Gas heat pump-type commercial air conditioner (outdoor unit) class specifications	152
9.22.1	General	152
9.22.2	Operation status (inherited from the super class property) property	154
9.22.3	Measured temperature value of outdoor unit property	154
9.22.4	Measured cumulative gas consumption property	154
9.22.5	Group information property	154
9.22.6	Time slot operation factor setting property	155
9.22.7	Allowable operation factor property	155
9.23	Range hood class specifications	156
9.23.1	General	156
9.23.2	Operation status property	158
9.23.3	Range hood automatic setting property	158
9.23.4	Ventilation air flow rate setting property	158
9.23.5	Lighting operation setting property	158
9.23.6	Light source colour setting property	159
9.23.7	Brightness level setting property	159
9.23.8	Lighting mode setting property	159
9.23.9	When in coloured lighting mode RGB setting property	159
9.23.10	Measured value of indoor temperature property	160
9.23.11	Measured value of outdoor temperature property	160
9.23.12	Measured value of supply air temperature property	160
9.23.13	Measured value of cooking temperature property	160
9.23.14	Measured value of indoor relative humidity property	160

9.23.15	Measured value of outdoor air humidity property.....	160
9.23.16	Human detection threshold level setting property.....	160
9.23.17	Human detection status property	161
9.23.18	Measured value of CO ₂ concentration property	161
9.23.19	Gas detection threshold level property.....	161
9.23.20	Gas detection status property	161
9.23.21	Error detection mode property	161
9.24	Electrically operated shade class specifications	162
9.24.1	General	162
9.24.2	Operation status property	164
9.24.3	Fault description property	164
9.24.4	Timer operation setting property	164
9.24.5	Wind detection status property	164
9.24.6	Sunlight detection status property.....	164
9.24.7	Opening (extension) speed setting property.....	164
9.24.8	Closing (retraction) speed setting property	165
9.24.9	Operation time property	165
9.24.10	Automatic operation setting property.....	165
9.24.11	Open/close (extension/retraction) operation setting property	165
9.24.12	Degree-of-opening property	165
9.24.13	Shade angle setting property	165
9.24.14	Open/close (extension/retraction) speed property	165
9.24.15	Electric lock setting property.....	165
9.24.16	Remote operation setting status property.....	166
9.24.17	Selective opening (extension) operation setting property	166
9.24.18	Open/closed (extended/retracted) status property.....	166
9.24.19	One-time opening (extension) speed setting property	166
9.24.20	One-time closing (retraction) speed setting property	166
9.25	Electrically operated rain sliding door/shutter class specifications	166
9.25.1	General	166
9.25.2	Operation status property	168
9.25.3	Fault description property	169
9.25.4	Timer operation setting property	169
9.25.5	Opening speed setting property	169
9.25.6	Closing speed setting property	169
9.25.7	Operation time setting property.....	169
9.25.8	Open/close operation setting property	169
9.25.9	Degree-of-opening setting property.....	169
9.25.10	Blind angle setting property	169
9.25.11	Opening/closing speed setting property	170
9.25.12	Electric lock setting property.....	170
9.25.13	Remote operation setting status property.....	170
9.25.14	Selective degree-of-opening setting property	170
9.25.15	Open/closed status property	170
9.25.16	Slit degree-of-opening property	170
9.25.17	One-time opening speed setting property.....	171
9.25.18	One-time closing speed setting property	171
9.26	Electric water heater class specifications	171
9.26.1	General	171

9.26.2	Operation status property	179
9.26.3	Automatic water heating setting property	179
9.26.4	Automatic water temperature control setting property	179
9.26.5	Water heater status property	179
9.26.6	Water heating temperature setting property	179
9.26.7	Manual water heating stop days setting property	179
9.26.8	Relative time setting value for manual water heating OFF property	180
9.26.9	Tank operation mode setting property	180
9.26.10	Daytime reheating permission setting property	180
9.26.11	Measured temperature of water in water heater property	180
9.26.12	Alarm status property	180
9.26.13	Hot water supply status property	181
9.26.14	Relative time setting for keeping bath temperature property	181
9.26.15	Temperature of supplied water setting property	181
9.26.16	Bath water temperature setting property	181
9.26.17	Hot water volume setting property	181
9.26.18	Measured amount of water remaining in tank property	182
9.26.19	Tank capacity property	182
9.26.20	Automatic bath water heating mode setting property	182
9.26.21	Manual bath reheating operation setting property	182
9.26.22	Manual bath hot water addition function setting property	182
9.26.23	Manual lukewarm water temperature lowering function setting property	182
9.26.24	Bath water volume setting 1 property	182
9.26.25	Bath water volume setting 2 property	183
9.26.26	Bathroom priority setting property	183
9.26.27	Bath operation status monitor property	183
9.26.28	Bath water volume setting 3 property	183
9.26.29	Bath water volume setting 4 property	183
9.26.30	Bath water volume setting 4 – Maximum settable level property	183
9.26.31	Sound volume setting property	184
9.26.32	Mute setting property	184
9.26.33	Remaining hot water volume property	184
9.26.34	Surplus electric energy prediction value property	184
9.26.35	Rated power consumption of HP unit in wintertime property	185
9.26.36	Rated power consumption of HP unit in in-between seasons property	185
9.26.37	Rated power consumption of HP unit in summertime property	185
9.26.38	ON timer reservation setting property	185
9.26.39	ON timer setting property	185
9.26.40	Participation in energy shift property	185
9.26.41	Standard time to start heating property	186
9.26.42	Number of energy shifts property	186
9.26.43	Daytime heating shift time 1 property (D1 of Figure 63 and D1 of Figure 64)	187
9.26.44	Expected electric energy at daytime heating shift time 1 property (C1 of Figure 63 and C1 of Figure 64)	187
9.26.45	Consumption of electric energy per hour 1 property	188
9.26.46	Daytime heating shift time 2 property (D2 of Figure 63 and D2 of Figure 64)	188
9.26.47	Expected electric energy at daytime heating shift time 2 property (C2 of Figure 64)	189

9.26.48	Consumption of electric energy per hour 2 property	189
9.27	Electric toilet seat class (warm-water washing toilet seat, heating toilet seat, etc.) specifications	191
9.27.1	General	191
9.27.2	Operation status property	193
9.27.3	Temperature level of toilet seat property	193
9.27.4	Heater setting of toilet seat property	193
9.27.5	Temporal halt setting of toilet seat heating property	193
9.27.6	Temporal halt start time of toilet seat heating property	193
9.27.7	Temporal halt time duration of toilet seat heating property	193
9.27.8	Temperature level setting of room heating property	194
9.27.9	Room heating setting property	194
9.27.10	Room heating status property	194
9.27.11	Start time of room heating property	194
9.27.12	Duration time of room heating property	194
9.27.13	Special operation mode setting property	194
9.27.14	Human detection status property	194
9.27.15	Seating detection status property	194
9.28	Electric lock class specifications	195
9.28.1	General	195
9.28.2	Operation status property	196
9.28.3	Lock setting 1 property	196
9.28.4	Lock setting 2 property	196
9.28.5	Lock status of door guard property	196
9.28.6	Door open/closed status property	196
9.28.7	Occupant/non-occupant status property	196
9.28.8	Alarm status property	196
9.28.9	Automatic lock mode setting property	196
9.28.10	Battery level property	197
9.29	Instantaneous water heater class specifications	197
9.29.1	General	197
9.29.2	Operation status property	200
9.29.3	Water heating status property	200
9.29.4	Set value of hot water temperature property	200
9.29.5	Hot water warmer setting property	200
9.29.6	Duration of automatic operation setting property	200
9.29.7	Remaining automatic operation time property	201
9.29.8	Set value of bath temperature property	201
9.29.9	Bath water heater status property	201
9.29.10	Bath automatic mode setting property	201
9.29.11	Bath additional boil-up operation setting property	201
9.29.12	Bath hot water adding operation setting property	202
9.29.13	Bath water temperature lowering operation setting property	202
9.29.14	Bath hot water volume setting 1 property	202
9.29.15	Bath hot water volume setting 2 property	202
9.29.16	Bath hot water volume setting 3 property	202
9.29.17	Bath hot water volume setting 4 property	202
9.29.18	Bath hot water volume setting 4 – Maximum settable level property	203
9.29.19	Bathroom priority setting property	203

9.29.20	Shower hot water supply status property	203
9.29.21	Kitchen hot water heating status property	203
9.29.22	Hot water warmer ON timer reservation setting property	203
9.29.23	Bath operation status monitor property	203
9.29.24	Set value of hot water warmer ON timer time property	203
9.29.25	ON timer reservation setting property	204
9.29.26	Set value of ON timer time property	204
9.29.27	Set value of ON timer relative time property	204
9.29.28	Sound volume setting property	204
9.29.29	Mute setting property	204
9.30	Bathroom heater and dryer class specifications	205
9.30.1	General	205
9.30.2	Operation status property	209
9.30.3	Operation setting property	209
9.30.4	Ventilation operation setting property	210
9.30.5	Bathroom pre-warmer operation setting property	210
9.30.6	Bathroom heater operation setting property	210
9.30.7	Bathroom dryer operation setting property	211
9.30.8	Cool air circulation operation setting property	211
9.30.9	Mist sauna operation setting property	212
9.30.10	Water mist operation settings property	212
9.30.11	Measured relative bathroom humidity property	212
9.30.12	Measured bathroom temperature property	213
9.30.13	Human body detection status property	213
9.30.14	Filter cleaning reminder sign setting property	213
9.30.15	Ventilation air flow rate setting property	213
9.30.16	ON timer-based reservation setting 1 property	213
9.30.17	ON timer-based reservation setting 2 property	214
9.30.18	ON timer setting (time) property	214
9.30.19	ON timer setting (relative time) property	214
9.30.20	OFF timer-based reservation setting property	214
9.30.21	OFF timer setting (time) property	215
9.30.22	OFF timer setting (relative time) property	215
9.31	Household solar power generation class specifications	215
9.31.1	General	215
9.31.2	Operation status property	221
9.31.3	Identification number property	221
9.31.4	Current time setting property	221
9.31.5	Current date setting property	222
9.31.6	Output power control setting 1 property	222
9.31.7	Output power control setting 2 property	222
9.31.8	Function to control purchase of excess electricity setting property	222
9.31.9	Output power controlling schedule property	222
9.31.10	Next access date and time property	223
9.31.11	Type for function to control purchase of excess electricity property	223
9.31.12	Output power change time setting value property	223
9.31.13	Upper limit clip setting value property	223
9.31.14	Operation power factor setting value property	223
9.31.15	FIT contract type property	223

9.31.16	Self-consumption type property	223
9.31.17	Capacity approved by equipment property	224
9.31.18	Conversion coefficient property	224
9.31.19	System interconnection status property	224
9.31.20	Output power restraint status property	224
9.31.21	Measured instantaneous amount of electricity generated property	225
9.31.22	Measured cumulative amount of electricity generated property	225
9.31.23	Resetting cumulative amount of electric energy generated property	225
9.31.24	Measured cumulative amount of electric energy sold property	225
9.31.25	Resetting cumulative amount of electric energy sold property	225
9.31.26	Power generation output limit setting 1 property	225
9.31.27	Power generation output limit setting 2 property	225
9.31.28	Limit setting for the amount of electricity sold property	225
9.31.29	Rated power generation output (system interconnected) property	225
9.31.30	Rated power generation output (independent) property	226
9.32	Floor heater class specifications	226
9.32.1	General	226
9.32.2	Operation status property	228
9.32.3	Measured instantaneous power consumption property	228
9.32.4	Measured cumulative energy consumption property	228
9.32.5	Temperature setting 1 property	229
9.32.6	Temperature setting 2 property	229
9.32.7	Temperature setting 2 – Maximum settable level property	229
9.32.8	Measured room temperature property	229
9.32.9	Measured floor temperature property	230
9.32.10	Zone change setting property	230
9.32.11	Special operation setting property	230
9.32.12	Daily timer setting property	230
9.32.13	Daily timer setting 1 property / Daily timer setting 2 property	230
9.32.14	Rated power consumption property	231
9.32.15	Power consumption measurement method property	232
9.32.16	ON timer reservation setting property	232
9.32.17	Time set by ON timer property	232
9.32.18	Relative ON timer setting property	232
9.32.19	OFF timer reservation setting property	232
9.32.20	Time set by OFF timer property	233
9.32.21	Relative OFF timer setting property	233
9.33	Fuel cell class specifications	233
9.33.1	General	233
9.33.2	Operation status property	235
9.33.3	Measured temperature of water in water heater property	236
9.33.4	Rated power generation output property	236
9.33.5	Heating value of hot water storage tank property	236
9.33.6	Measured instantaneous power generation output property	236
9.33.7	Measured cumulative energy generation output property	236
9.33.8	Cumulative energy generation output reset setting property	236
9.33.9	Measured instantaneous gas consumption property	236
9.33.10	Measured cumulative gas consumption property	236
9.33.11	Cumulative gas consumption reset setting property	236

9.33.12	Power generation setting property	237
9.33.13	Power generation status property	237
9.33.14	Measured in-house instantaneous power consumption property	237
9.33.15	Measured in-house cumulative energy consumption property	237
9.33.16	In-house cumulative energy consumption reset property	237
9.33.17	System interconnection status property	237
9.33.18	Power generation request time setting property	237
9.33.19	Designated power generation status property	238
9.33.20	Measured remaining hot water amount property	238
9.33.21	Tank capacity property	238
9.34	Storage battery class specifications	238
9.34.1	General	238
9.34.2	Operation status property	248
9.34.3	Identification number property	248
9.34.4	Current time setting property	249
9.34.5	Current date setting property	249
9.34.6	AC effective capacity (charging) property	249
9.34.7	AC effective capacity (discharging) property	249
9.34.8	AC chargeable capacity property	249
9.34.9	AC dischargeable capacity property	250
9.34.10	AC chargeable electric energy property	250
9.34.11	AC dischargeable electric energy property	250
9.34.12	AC charge upper limit setting property	250
9.34.13	AC discharge lower limit setting property	250
9.34.14	AC cumulative charging electric energy property	250
9.34.15	AC cumulative discharging electric energy property	250
9.34.16	AC charge amount target value property	251
9.34.17	AC discharge amount target value property	251
9.34.18	Charging method property	251
9.34.19	Discharging method property	252
9.34.20	Minimum/maximum charging electric power property	254
9.34.21	Minimum/maximum discharging electric power property	254
9.34.22	Minimum/maximum charging current property	254
9.34.23	Minimum/maximum discharging current property	254
9.34.24	Re-interconnection permission setting property	254
9.34.25	Operation permission setting property	255
9.34.26	Independent operation permission setting property	255
9.34.27	Working operation status property	255
9.34.28	AC rated electric energy property	255
9.34.29	Rated electric energy property	255
9.34.30	Rated capacity property	255
9.34.31	Rated voltage property	255
9.34.32	Measured instantaneous charging/discharging electric power property	255
9.34.33	Measured instantaneous charging/discharging current property	256
9.34.34	Measured instantaneous charging/discharging voltage property	256
9.34.35	Measured cumulative discharging electric energy property	256
9.34.36	Measured cumulative discharging electric energy resetting property	256
9.34.37	Measured cumulative charging electric energy property	256
9.34.38	Measured cumulative charging electric energy reset setting property	256

9.34.39	Operation mode setting property.....	256
9.34.40	System interconnection status property	257
9.34.41	Minimum/maximum charging electric power (independent) property.....	257
9.34.42	Minimum/maximum discharging electric power (independent) property	257
9.34.43	Minimum/maximum charging current (independent) property	257
9.34.44	Minimum/maximum discharging current (independent) property	257
9.34.45	Charging/discharging amount setting 1 property	258
9.34.46	Charging/discharging amount setting 2 property	258
9.34.47	Remaining stored electricity 1 property	258
9.34.48	Remaining stored electricity 2 property	258
9.34.49	Remaining stored electricity 3 property	258
9.34.50	Battery state of health property.....	258
9.34.51	Battery type property	259
9.34.52	Charging amount setting 1 property	259
9.34.53	Discharging amount setting 1 property.....	259
9.34.54	Charging amount setting 2 property	259
9.34.55	Discharging amount setting 2 property.....	259
9.34.56	Charging electric power setting property.....	259
9.34.57	Discharging electric power setting property.....	259
9.34.58	Charging current setting property.....	260
9.34.59	Discharging current setting property	260
9.34.60	Rated voltage (independent) property	260
9.35	Electric vehicle charger/discharger class specifications	260
9.35.1	General	260
9.35.2	Operation status property	269
9.35.3	Dischargeable capacity of vehicle mounted battery 1 property	269
9.35.4	Dischargeable capacity of vehicle mounted battery 2 property	269
9.35.5	Remaining dischargeable capacity of vehicle mounted battery 1 property	269
9.35.6	Remaining dischargeable capacity of vehicle mounted battery 2 property.....	270
9.35.7	Remaining dischargeable capacity of vehicle mounted battery 3 property	270
9.35.8	Rated charge capacity property	270
9.35.9	Rated discharge capacity property	270
9.35.10	Vehicle connection and chargeable/dischargeable status property.....	270
9.35.11	Minimum/maximum charging electric power property	271
9.35.12	Minimum/maximum discharging electric power property.....	271
9.35.13	Minimum/maximum charging current property	271
9.35.14	Minimum/maximum discharging current property	271
9.35.15	Charger/discharger type property.....	271
9.35.16	Vehicle connection confirmation property.....	273
9.35.17	Used capacity of vehicle mounted battery 1 (total battery capacity) property	273
9.35.18	Used capacity of vehicle mounted battery 2 property	273
9.35.19	Rated voltage property	273
9.35.20	Measured instantaneous charging/discharging electric power	273
9.35.21	Measured instantaneous charging/discharging current property.....	273
9.35.22	Measured instantaneous charging/discharging voltage property	274
9.35.23	Measured cumulative amount of discharging electric energy property.....	274

9.35.24	Cumulative amount of discharging electric energy reset setting	274
9.35.25	Measured cumulative amount of charging electric energy property	274
9.35.26	Cumulative amount of charging electric energy reset setting property	274
9.35.27	Operation mode setting property	274
9.35.28	System interconnection status property	274
9.35.29	Remaining stored electricity of vehicle mounted battery 1 property	274
9.35.30	Remaining stored electricity of vehicle mounted battery 2 property	275
9.35.31	Remaining stored electricity of vehicle mounted battery 3 (charging rate) property	275
9.35.32	Charging amount setting 1 property	275
9.35.33	Charging amount setting 2 property	275
9.35.34	Charging electric power setting property	275
9.35.35	Discharging electric power setting property	275
9.35.36	Charging current setting property	275
9.35.37	Discharging current setting property	276
9.35.38	Rated voltage (independent status) property	276
9.35.39	Chargeable capacity of vehicle mounted battery property	276
9.35.40	Remaining chargeable capacity of vehicle mounted battery property	276
9.35.41	Vehicle ID property	276
9.35.42	Discharging amount setting property	277
9.36	Engine cogeneration class specifications	277
9.36.1	General	277
9.36.2	Operation status property	279
9.36.3	Measured hot water temperature of water heater property	279
9.36.4	Rated power generation output property	279
9.36.5	Heating value of hot water storage tank property	279
9.36.6	Measured instantaneous power generation output property	280
9.36.7	Measured cumulative energy generation output property	280
9.36.8	Cumulative energy generation output reset setting property	280
9.36.9	Measured instantaneous gas consumption property	280
9.36.10	Measured cumulative gas consumption property	280
9.36.11	Cumulative gas consumption reset setting property	280
9.36.12	Power generation setting property	280
9.36.13	Power generation status property	280
9.36.14	Measured in-house instantaneous power consumption property	280
9.36.15	Measured in-house cumulative energy consumption property	281
9.36.16	In-house cumulative energy consumption reset property	281
9.36.17	System interconnection status property	281
9.36.18	Measured remaining hot water amount property	281
9.36.19	Tank capacity property	281
9.37	Water flowmeter class specifications	281
9.37.1	General	281
9.37.2	Operation status property	283
9.37.3	Water flowmeter classification property	283
9.37.4	Owner classification property	283
9.37.5	Measured cumulative amount of flowing water property	284
9.37.6	Unit for measured cumulative amounts of flowing water property	284
9.37.7	Historical data of measured cumulative amounts of flowing water property	284

9.37.8	Detection of abnormal value in metering data property	284
9.37.9	Security data information property	284
9.37.10	ID number setting property	285
9.37.11	Verification expiration information property	285
9.38	Power distribution board metering class specifications	285
9.38.1	General	285
9.38.2	Operation status property	301
9.38.3	Measured cumulative amount of electric energy (normal and reverse directions) property	301
9.38.4	Unit for cumulative amounts of electric energy property	302
9.38.5	Historical data of measured cumulative amounts of electric energy (normal and reverse directions) property	302
9.38.6	Day for which the historical data of measured cumulative amounts of electric energy shall be retrieved (normal and reverse directions) property	302
9.38.7	Measured instantaneous electric power property	303
9.38.8	Measured instantaneous currents property	303
9.38.9	Measured instantaneous voltages property	303
9.38.10	Measurement channels 1 to 32 property	303
9.38.11	Master rated capacity property	304
9.38.12	Number of measurement channels (simplex) property	304
9.38.13	Channel range specification for cumulative amount of electric energy consumption measurement (simplex) property	304
9.38.14	Measured cumulative amount of electric energy consumption list (simplex) property	304
9.38.15	Channel range specification for instantaneous current measurement (simplex) property	305
9.38.16	Measured instantaneous current list (simplex) property	305
9.38.17	Channel range specification for instantaneous power consumption measurement (simplex) property	306
9.38.18	Measured instantaneous power consumption list (simplex) property	306
9.38.19	Number of measurement channels (duplex) property	306
9.38.20	Channel range specification for cumulative amount of electric energy consumption measurement (duplex) property	307
9.38.21	Measured cumulative amount of electric energy consumption list (duplex) property	307
9.38.22	Channel range specification for instantaneous current measurement (duplex) property	307
9.38.23	Measured instantaneous current list (duplex) property	308
9.38.24	Channel range specification for instantaneous power consumption measurement (duplex) property	308
9.38.25	Measured instantaneous power consumption list (duplex) property	309
9.39	Low-voltage smart electric meter class specifications	309
9.39.1	General	309
9.39.2	Operation status property	316
9.39.3	Coefficient property	316
9.39.4	Number of effective digits for cumulative amounts of electric energy property	316
9.39.5	Measured cumulative amount of electric energy (normal direction) property	317
9.39.6	Unit for measured cumulative amounts of electric energy (normal and reverse directions) property	317

9.39.7	Historical data of measured cumulative amounts of electric energy 1 (normal direction) property.....	317
9.39.8	Measured cumulative amounts of electric energy (reverse direction) property.....	318
9.39.9	Historical data of measured cumulative amounts of electric energy 1 (reverse direction) property.....	318
9.39.10	Day for which the historical data of measured cumulative amounts of electric energy shall be retrieved 1 property	319
9.39.11	Measured instantaneous electric power property	319
9.39.12	Measured instantaneous currents property	319
9.39.13	Cumulative amounts of electric energy measured at fixed time (normal direction) property	319
9.39.14	Cumulative amounts of electric energy measured at fixed time (reverse direction) property	320
9.39.15	Historical data of measured cumulative amounts of electric energy 2 (normal and reverse directions) property	321
9.39.16	Day for which the historical data of measured cumulative amounts of electric energy shall be retrieved 2 property	321
9.40	Smart gas meter class specifications	322
9.40.1	General	322
9.40.2	Operation status property	326
9.40.3	Gas meter classification setting property	326
9.40.4	Owner classification setting property	326
9.40.5	Measured cumulative gas consumption property.....	327
9.40.6	Unit for measured cumulative gas consumption property	327
9.40.7	Historical data of measured cumulative gas consumption property.....	328
9.40.8	Day setting for which the historical data of measured cumulative gas consumption shall be retrieved property.....	328
9.40.9	Detection of abnormal value in metering data property	328
9.40.10	Security data information property	328
9.40.11	Valve closure by the Centre property	329
9.40.12	Permission from the Centre to reopen the valve closed by the Centre property.....	329
9.40.13	Emergency closure of shutoff valve property.....	329
9.40.14	Shutoff valve status property	329
9.40.15	Historical data of shutoff reasons property.....	329
9.40.16	ID number setting property	329
9.40.17	Verification expiration setting property.....	329
9.40.18	Measured cumulative gas consumption information with date and time property.....	329
9.40.19	Historical information of cumulative gas consumption property	330
9.41	High-voltage smart electric energy meter class specifications	331
9.41.1	General	331
9.41.2	Operation status property	341
9.41.3	Coefficient property	341
9.41.4	Multiplying factor for coefficient property	341
9.41.5	Fixed date property.....	341
9.41.6	Day for which the historical data of measured cumulative amounts of electric energy shall be retrieved property	341
9.41.7	Measured cumulative amount of active electric energy property.....	342
9.41.8	Cumulative amounts of active electric energy at fixed time property	342

9.41.9	Measurement data of cumulative amount of active electric energy for power factor measurement	343
9.41.10	Number of effective digits for cumulative amount of active electric energy property	343
9.41.11	Unit for cumulative amounts of active electric energy property	344
9.41.12	Historical data of measured cumulative amount of active electric energy property	344
9.41.13	Monthly maximum electric power demand property	344
9.41.14	Cumulative maximum electric power demand property	345
9.41.15	Electric power demand at fixed time (30-minute average electric power) property	345
9.41.16	Number of effective digits of electric power demand property	346
9.41.17	Unit of electric power demand property	346
9.41.18	Historical data of measured electric power demand property	347
9.41.19	Unit of cumulative maximum electric power demand property	347
9.41.20	Measurement data of reactive electric energy consumption (lag) for power factor measurement property	347
9.41.21	Measurement data of cumulative amount of reactive electric energy consumption (lag) at fixed time for power factor measurement property	348
9.41.22	Number of effective digits for measurement data of cumulative amount of reactive electric energy consumption (lag) for power factor measurement property	349
9.41.23	Unit of measurement data of cumulative amount of reactive electric energy consumption (lag) property	349
9.41.24	Historical data of measurement data of cumulative amount of reactive electric energy consumption (lag) for power factor measurement property	349
9.42	Kerosene meter class specifications	350
9.42.1	General	350
9.42.2	Operation status property	351
9.42.3	Measured cumulative amount of kerosene consumption property	351
9.42.4	History of measured cumulative amounts of kerosene consumption property	351
9.43	Smart kerosene meter class specifications	351
9.43.1	General	351
9.43.2	Operation status property	354
9.43.3	Owner category setting property	354
9.43.4	Measured cumulative kerosene consumption property	354
9.43.5	Units for measured cumulative kerosene consumption property	355
9.43.6	Historical information of cumulative kerosene consumption property	355
9.43.7	Collection date setting for history of cumulative kerosene consumption property	355
9.43.8	Meter reading data abnormality detection status property	356
9.43.9	Security data information property	356
9.43.10	Residual volume control warning level property	356
9.43.11	Residual volume control warning level 1 property	356
9.43.12	Residual volume control warning level 2 property	356
9.43.13	Residual volume control warning level 3 property	356
9.43.14	Slight leak timer value (kerosene flow rate continuation) property	357
9.43.15	ID number setting property	357
9.43.16	Verification expiration setting property	357

9.43.17	Measured cumulative kerosene consumption information with date and time property	357
9.43.18	Historical information of cumulative kerosene consumption property.....	357
9.44	General light class specifications	358
9.44.1	General	358
9.44.2	Operation status property	361
9.44.3	Illuminance level property	362
9.44.4	Light colour setting property	362
9.44.5	Illuminance level step setting property	362
9.44.6	Light colour step setting property	363
9.44.7	Maximum specifiable values property	363
9.44.8	Maximum value of settable level for night lighting property	363
9.44.9	Lighting mode setting property.....	363
9.44.10	Illuminance level setting for main lighting property.....	364
9.44.11	Illuminance level step setting for main lighting property	364
9.44.12	Illuminance level setting for night lighting property.....	364
9.44.13	Illuminance level step setting for night lighting property	365
9.44.14	Light colour setting for main lighting property.....	365
9.44.15	Light colour level step setting for main lighting property.....	365
9.44.16	Light colour setting for night lighting property	366
9.44.17	Light colour level step setting for night lighting property.....	366
9.44.18	Lighting mode status in automatic mode property	366
9.44.19	RGB setting for colour lighting property	366
9.44.20	ON timer reservation setting property	366
9.44.21	ON timer setting property.....	367
9.44.22	OFF timer reservation setting property.....	367
9.44.23	OFF timer setting property	367
9.45	Mono functional lighting class specifications	367
9.45.1	General	367
9.45.2	Operation status property	368
9.45.3	Illuminance level setting property.....	368
9.46	Lighting for solid light-emitting source class specifications.....	368
9.46.1	General	368
9.46.2	Operation status property	370
9.46.3	Number of light sources property	370
9.46.4	List of the light source operation status property.....	370
9.46.5	List of the light source optical output setting values property	371
9.46.6	List of light source colour temperature setting values property.....	371
9.46.7	ON timer reservation setting property	372
9.46.8	ON timer setting property.....	372
9.46.9	OFF timer reservation setting property.....	373
9.46.10	OFF timer setting property	373
9.47	Electric vehicle charger class specifications.....	373
9.47.1	General	373
9.47.2	Operation status property	377
9.47.3	Rated charge capacity property	378
9.47.4	Vehicle connection and chargeable status property	378
9.47.5	Minimum/maximum charging electric power property	378
9.47.6	Minimum/maximum charging current property	378

9.47.7	Charger type property	378
9.47.8	Vehicle connection confirmation property	379
9.47.9	Used capacity of vehicle-mounted battery 1 property	379
9.47.10	Rated voltage property	380
9.47.11	Measured instantaneous charging electric power property	380
9.47.12	Measured cumulative amount of charging electric energy property	380
9.47.13	Cumulative amount of charging electric energy reset setting property	380
9.47.14	Operating mode setting property	380
9.47.15	Remaining stored electricity of vehicle-mounted battery 1 property	380
9.47.16	Remaining stored electricity of vehicle-mounted battery 3 property	380
9.47.17	Charging electric power setting property	380
9.47.18	Charging current setting property	380
9.47.19	Chargeable capacity of vehicle mounted battery property	381
9.47.20	Remaining chargeable capacity of vehicle mounted battery property	381
9.47.21	Vehicle ID property	381
9.47.22	Charging amount setting property	381
9.48	Household small wind turbine power generation class specifications	382
9.48.1	General	382
9.48.2	Operation status property	383
9.48.3	System interconnection status property	383
9.48.4	Measured instantaneous amount of electricity generated property	384
9.48.5	Measured cumulative amount of electricity generated property	384
9.48.6	Resetting cumulative amount of electricity generated property	384
9.48.7	Measured cumulative amount of electricity sold property	384
9.48.8	Resetting cumulative amount of electricity sold property	384
9.48.9	Power generation output limit setting 1 property	384
9.48.10	Power generation output limit setting 2 property	384
9.48.11	Limit setting for the amount of electricity sold property	384
9.48.12	Rated power property	384
9.48.13	Measured wind speed property	385
9.48.14	Rated wind speed property	385
9.48.15	Cut-in wind speed property	385
9.48.16	Cut-out wind speed property	385
9.48.17	Extreme wind speed property	385
9.48.18	Braking status property	385
9.49	Lighting system class specifications	386
9.49.1	General	386
9.49.2	Operation status property	387
9.49.3	Illuminance level setting property	387
9.49.4	Scene control setting property	387
9.49.5	Number that can assign scene control setting property	387
9.50	Extended lighting system class specifications	388
9.50.1	General	388
9.50.2	Operation status property	390
9.50.3	Illuminance level setting property	390
9.50.4	Scene control setting property	390
9.50.5	Number that can assign scene control setting property	390
9.50.6	Power consumption rate list property	390
9.50.7	Power consumption when fully lit property	391

9.50.8	Possible power savings property.....	391
9.50.9	Power consumption limit setting property.....	391
9.50.10	Automatic operation controlling setting property	392
9.50.11	Fading control change time setting property	392
9.51	Multiple input PCS class specifications	392
9.51.1	General	392
9.51.2	Operation status property	395
9.51.3	Identification number property	395
9.51.4	Current time setting property	395
9.51.5	Current date setting property	395
9.51.6	System interconnection status property	396
9.51.7	Measured cumulative amount of electric energy (normal direction) property	396
9.51.8	Measured cumulative amount of electric energy (reverse direction) property	396
9.51.9	Measured instantaneous electric power property	396
9.51.10	List of connected devices property.....	396
9.52	Hybrid water heater class specifications	396
9.52.1	General	396
9.52.2	Operation status property	399
9.52.3	Automatic water heating setting property	399
9.52.4	Water heating status property.....	399
9.52.5	Heater status property	399
9.52.6	Hot water supply mode setting for auxiliary heat source machine property.....	399
9.52.7	Heater mode setting for auxiliary heat source machine property	400
9.52.8	Linkage mode setting for solar power generation property	400
9.52.9	Solar power generations utilization time property.....	400
9.52.10	Hot water supply status property.....	401
9.52.11	Measured amount of hot water remaining in tank property	401
9.52.12	Tank capacity property	401
9.53	Refrigerator class specifications	401
9.53.1	General	401
9.53.2	Operation status property	407
9.53.3	Door open/close status property	407
9.53.4	Door open warning property.....	407
9.53.5	Refrigerator compartment door status.....	407
9.53.6	Freezer compartment door status property	407
9.53.7	Ice compartment door status property.....	408
9.53.8	Vegetable compartment door status property.....	408
9.53.9	Multi-refrigerating mode compartment door status property	408
9.53.10	Maximum allowable temperature setting level property	408
9.53.11	Refrigerator compartment temperature setting property	408
9.53.12	Freezer compartment temperature setting property.....	408
9.53.13	Ice compartment temperature setting property	409
9.53.14	Vegetable compartment temperature setting property.....	409
9.53.15	Multi-refrigerating mode compartment temperature setting property.....	409
9.53.16	Refrigerator compartment temperature level setting property	409
9.53.17	Freezer compartment temperature level setting property	410
9.53.18	Ice compartment temperature level setting property.....	410

9.53.19	Vegetable compartment temperature level setting property	410
9.53.20	Multi-refrigerating mode compartment temperature level setting property ...	410
9.53.21	Measured refrigerator compartment temperature property	411
9.53.22	Measured freezer compartment temperature property	411
9.53.23	Measured ice compartment temperature property	411
9.53.24	Measured vegetable compartment temperature property	411
9.53.25	Measured multi-refrigerating mode compartment temperature property	411
9.53.26	Compressor rotation speed property	411
9.53.27	Measured electric current consumption property	411
9.53.28	Rated power consumption property	412
9.53.29	Quick freeze function setting property	412
9.53.30	Quick refrigeration function setting property	412
9.53.31	Icemaker setting property	412
9.53.32	Icemaker operation status property	412
9.53.33	Icemaker tank status property	412
9.53.34	Refrigerator compartment humidification function setting property	413
9.53.35	Vegetable compartment humidification function setting property	413
9.53.36	Deodorization function setting property	413
9.54	Microwave oven class specifications	413
9.54.1	General	413
9.54.2	Operation status property	419
9.54.3	Door open/close status property	419
9.54.4	Heating status property	419
9.54.5	Heating setting property	420
9.54.6	Heating mode setting property	420
9.54.7	Automatic heating setting property	421
9.54.8	Automatic heating level setting property	421
9.54.9	Automatic heating menu setting property	421
9.54.10	Oven mode setting property	423
9.54.11	Oven preheating setting property	423
9.54.12	Fermenting mode setting property	423
9.54.13	Chamber temperature setting property	424
9.54.14	Food temperature setting property	424
9.54.15	Heating time setting property	424
9.54.16	Remaining heating time setting property	425
9.54.17	Microwave heating power setting property	425
9.54.18	Prompt message setting property	425
9.54.19	Accessories to combination microwave oven setting property	426
9.54.20	Display character string setting property	428
9.54.21	Two-stage microwave heating setting (duration) property	428
9.54.22	Two-stage microwave heating setting (heating power) property	428
9.55	Washer and dryer class specifications	429
9.55.1	General	429
9.55.2	Operation status property	441
9.55.3	Door/cover open/close status property	441
9.55.4	Washer and dryer setting property	441
9.55.5	Washer and dryer cycle setting 1 property	442
9.55.6	Washer and dryer cycle setting 2 property	445
9.55.7	Drying cycle setting property	446

9.55.8	Washer and dryer cycle option list 1 property	447
9.55.9	Washer and dryer cycle option list 2 property	448
9.55.10	Washer and dryer cycle option list 3 property	448
9.55.11	Water flow rate setting property	449
9.55.12	Rotation speed for spin drying setting property	449
9.55.13	Degree of drying setting property	450
9.55.14	Remaining washing time property	450
9.55.15	Remaining drying time	450
9.55.16	Elapsed time on the ON timer property	450
9.55.17	Pre-soaking time setting property	450
9.55.18	Current stage of washer and dryer cycle property	451
9.55.19	Water volume setting 1 property	452
9.55.20	Water volume setting 2 property	453
9.55.21	Washing time setting property.....	453
9.55.22	Number of times of rinsing property	454
9.55.23	Rinsing process setting property.....	454
9.55.24	Spin drying time setting property	454
9.55.25	Drying time setting property.....	455
9.55.26	Warm water setting property	455
9.55.27	Bathtub water recycle setting property	455
9.55.28	Wrinkling minimization setting property.....	456
9.55.29	Time remaining to complete washer and dryer cycle property	456
9.55.30	Door/cover lock setting property	456
9.55.31	Washer and dryer cycle property	456
9.55.32	ON timer reservation setting property	458
9.55.33	ON timer setting property.....	458
9.55.34	Relative time-based ON timer setting.....	458
9.56	Clothes dryer class specifications	458
9.56.1	General	458
9.56.2	Operation status property	459
9.56.3	Door/cover open/close status property.....	459
9.56.4	Drying setting property	460
9.56.5	Drying status property	460
9.56.6	Remaining drying time property	460
9.56.7	ON timer reservation setting property	460
9.56.8	ON timer setting property.....	460
9.56.9	Relative time-based ON timer setting property.....	460
9.57	Cooking heater class specifications	460
9.57.1	General	460
9.57.2	Operation status property	463
9.57.3	Heating status property.....	463
9.57.4	Heating setting property.....	464
9.57.5	All stop setting property	464
9.57.6	Heating power setting property	465
9.57.7	Heating temperature setting property.....	465
9.57.8	Heating modes of stoves setting property	465
9.57.9	Relative time settings of OFF timers property	466
9.57.10	Child lock setting property	466
9.57.11	Radiant heater lock setting property	466

9.58	Commercial showcase class specifications	467
9.58.1	General	467
9.58.2	Operation status property	469
9.58.3	Operation mode setting property.....	469
9.58.4	Measured value of discharge temperature property.....	469
9.58.5	Internal lighting operation status property	469
9.58.6	External lighting operation status property	470
9.58.7	Compressor operation status property	470
9.58.8	Measured value of internal temperature property	470
9.58.9	Freezing capability value property	470
9.58.10	Defrosting heater power consumption property	470
9.58.11	Fan motor power consumption property	470
9.58.12	Heater mode property	470
9.58.13	Group information property	470
9.58.14	Showcase type information property	470
9.58.15	Door type information property	470
9.58.16	Showcase configuration information property.....	471
9.58.17	Type of lighting inside the showcase property	471
9.58.18	Type of lighting outside the case property.....	471
9.58.19	Illuminance level setting of lighting inside the showcase property	471
9.58.20	Illuminance level setting of lighting outside the case property	471
9.58.21	Temperature setting of inside the case property	471
9.58.22	Showcase shape information property	471
9.58.23	Temperature range information for inside the case property	471
9.59	Commercial showcase outdoor unit class specifications.....	472
9.59.1	General	472
9.59.2	Operation status property	472
9.59.3	Exceptional status property	472
9.59.4	Operation mode setting property.....	473
9.59.5	Measured value of outdoor air temperature property.....	473
9.59.6	Compressor operation status property	473
9.59.7	Group information property	473
9.60	Dishwasher and dryer class specifications	473
9.60.1	General	473
9.60.2	Operation status property	485
9.60.3	ON timer reservation setting property	485
9.60.4	ON timer setting property.....	485
9.60.5	Relative time-based ON timer setting property.....	485
9.60.6	Door/cover open/close setting property.....	485
9.60.7	Door/cover lock setting property	485
9.60.8	Operation status setting property	485
9.60.9	Dish-washing method setting property	486
9.60.10	Drying method setting property	486
9.60.11	Storing method setting property	487
9.60.12	Dish-washing method setting acceptable information property	487
9.60.13	Drying method setting acceptable information property	488
9.60.14	Storing method setting acceptable information property.....	488
9.60.15	Prewashing time setting property	488
9.60.16	Highest water temperature setting for prewashing property.....	489

9.60.17	Washing time setting property.....	489
9.60.18	Highest water temperature setting for washing property.....	489
9.60.19	Number of times of rinsing setting property.....	490
9.60.20	Rinsing mode setting property	490
9.60.21	Highest water temperature setting for hot water rinsing property.....	490
9.60.22	Dish-washing water volume setting property	491
9.60.23	Dish-washing water pressure setting property.....	491
9.60.24	Dish-washing level setting property	491
9.60.25	Drying time setting property.....	492
9.60.26	Highest air temperature setting for hot air drying property.....	492
9.60.27	Drying air flow rate setting property	492
9.60.28	Drying level setting property	493
9.60.29	Storing time setting property.....	493
9.60.30	Operation setting information property	494
9.60.31	Operation transition status property	495
9.60.32	Remaining time on the ON timer property	497
9.60.33	Remaining time of prewashing property	497
9.60.34	Remaining time of washing property	497
9.60.35	Remaining time of rinsing property	498
9.60.36	Remaining time of dish-washing property.....	498
9.60.37	Remaining drying time property	498
9.60.38	Remaining time of dish-washing and drying property	498
9.60.39	Storing elapsed time property	498
9.60.40	Used water volume property	498
9.61	Switch class specifications.....	498
9.61.1	General	498
9.61.2	Operation status property	499
9.61.3	Connected device property	499
9.62	Controller class specifications.....	499
9.62.1	General	499
9.62.2	Operation status property	501
9.62.3	Controller ID property	501
9.62.4	Number of devices controlled property.....	502
9.62.5	Index property	502
9.62.6	Device ID property.....	502
9.62.7	Device type property.....	502
9.62.8	Name property.....	502
9.62.9	Connection status property	503
9.62.10	Business code of the device to be controlled property	503
9.62.11	Product code of the device to be controlled property.....	503
9.62.12	Manufacture date of the device to be controlled property	503
9.62.13	Registered information renewal date of the device to be controlled property	504
9.62.14	Registered information renewal version information of the device to be controlled property.....	504
9.62.15	Place to install device to be controlled property	504
9.62.16	Fault status of device to be controlled property.....	504
9.62.17	Address of installation location property	504
9.62.18	Set property map for device to be controlled property.....	504

9.62.19 Get property map for device to be controlled property..... 504

10 Property map description format 505

Bibliography..... 506

Figure 1 – ECHONET frame for plain data format 40

Figure 2 – EHD detailed specifications 41

Figure 3 – Configuration of SEA and DEA when an individual address is specified 42

Figure 4 – DEA (broadcast-stipulated) address configuration 42

Figure 5 – Broadcast target stipulation code 43

Figure 6 – Node group stipulation bit specifications 43

Figure 7 – OHD detailed specifications 44

Figure 8 – EOJ detailed specifications 44

Figure 9 – EPC detailed specifications 46

Figure 10 – ESV detailed specifications 46

Figure 11 – EDATA configuration in property value write service 51

Figure 12 – EDATA configuration in property value read service 51

Figure 13 – EDATA configuration in property value notification service 52

Figure 14 – EDATA configuration in property value element-stipulated write service 53

Figure 15 – EDATA configuration in property value element-stipulated read service 54

Figure 16 – EDATA configuration in property value element-stipulated notification service 55

Figure 17 – EDATA configuration in property value element-stipulated addition 56

Figure 18 – EDATA configuration in property value element-stipulated deletion 57

Figure 19 – EDATA configuration in property value element-stipulated existence confirmation 58

Figure 20 – EDATA configuration in property value element addition 59

Figure 21 – EDATA configuration in property value notification (response required) 59

Figure 22 – EDATA configuration in property value element-stipulated notification (response required) 60

Figure 23 – CpESV configuration 61

Figure 24 – Relationship between write request (requiring no response) and write "process-not-possible" response 64

Figure 25 – Relationship between write request (requiring a response), write "accepted" response, and write "process-not-possible" response 65

Figure 26 – Relationship between read request (requiring a response), read "accepted" response, and read "process-not-possible" response 66

Figure 27 – Notification message format 67

Figure 28 – Relationship between property value notification (requiring a response) and property value notification response 67

Figure 29 – Processing target property counter for three requests 68

Figure 30 – Property data counter 68

Figure 31 – ECHONET Lite frame format 69

Figure 32 – Detailed specifications of ELHD1 69

Figure 33 – Detailed specifications of ELHD2 70

Figure 34 – Detailed specifications of EOJ code 70

Figure 35 – ELSV code detailed specifications	71
Figure 36 – ELDATA configuration for property value write service (no response required)	74
Figure 37 – ELDATA configuration for property value write service (response required)	75
Figure 38 – ELDATA configuration for property value read service	76
Figure 39 – ELDATA configuration for property value write and read service	77
Figure 40 – ELDATA configuration for property value notification service	78
Figure 41 – ELDATA configuration for property value notification (response required) service	79
Figure 42 – EPC detailed specifications	80
Figure 43 – ECHONET Lite Property data counter	81
Figure 44 – Example of array elements	83
Figure 45 – Example of property value element deletion	84
Figure 46 – Example of property value element addition	84
Figure 47 – Data structure of "identification number" property	91
Figure 48 – Data structure of "manufacturer's fault code" property	92
Figure 49 – Configuration without "control server"	96
Figure 50 – Configuration with "control server"	96
Figure 51 – Air flow direction (vertical) setting	122
Figure 52 – Air flow direction (horizontal) setting	124
Figure 53 – Mounted air cleaning method	125
Figure 54 – Air purifier function setting	126
Figure 55 – Air refresh method	127
Figure 56 – Air refresher function setting	127
Figure 57 – Self-cleaning method	128
Figure 58 – Self-cleaning function setting	129
Figure 59 – Implemented ion emission method	137
Figure 60 – Power restriction control of commercial-use package air conditioner (example)	144
Figure 61 – Value of alarm status	181
Figure 62 – Period that writing request is unacceptable	186
Figure 63 – Time to start accumulating hot water shift (daytime single shift)	190
Figure 64 – Time to start accumulating hot water shift (daytime double shift)	191
Figure 65 – An example of household solar power generation configuration	220
Figure 66 – Function to control purchase of excess electricity	221
Figure 67 – An example of capacity approved by equipment	224
Figure 68 – Daily timer setting	231
Figure 69 – Example of the battery configuration	239
Figure 70 – Image of various properties related to electric energy handled in this class	239
Figure 71 – Overview of charging methods	252
Figure 72 – Overview of discharging methods for storage battery if reverse power flow is not allowed	253
Figure 73 – Overview of discharging methods for storage battery if reverse power flow is allowed	253

Figure 74 – Relationship between the properties related to electric energy handled in this class	261
Figure 75 – Data structure of Vehicle ID in electric vehicle charger/discharger class.....	276
Figure 76 – Current direction in power distribution board	301
Figure 77 – Actual implementation cases from the solid light-emitting source class	369
Figure 78 – Relationship between the properties related to electric energy handled in this class	377
Figure 79 – Data structure of vehicle ID in electric vehicle charger class	381
Figure 80 – Relationship between the properties related to household small wind turbine power generation class	386
Figure 81 – A configuration of lighting system.....	387
Figure 82 – A configuration of extended lighting system.....	389
Figure 83 – Explanation for power consumptions	391
Figure 84 – An example of multiple input PCS configuration	395
Figure 85 – Example of a device that operates a heat pump only when supplying hot water	398
Figure 86 – Example of a device that operates a heat pump when supplying hot water and heating.....	399
Figure 87 – Stove	464
Table 1 – Bit pattern for hop count.....	41
Table 2 – List of class group codes	45
Table 3 – List of ESV codes for requests	48
Table 4 – List of ESV codes for response/notification.....	49
Table 5 – List of ESV codes for "response-not-possible" responses	50
Table 6 – List of CpESV codes for request/notification	63
Table 7 – List of CpESV codes for "accepted" response	63
Table 8 – List of CpESV codes for "process-not-possible" response	63
Table 9 – List of class group codes	71
Table 10 – List of service codes for request.....	73
Table 11 – List of ELSV codes for response/notification.....	73
Table 12 – List of ELSV codes for "response not possible"	74
Table 13 – EPC code allocation table	80
Table 14 – Data types, data sizes, and overflow/underflow codes	83
Table 15 – List of device object super class configuration properties	85
Table 16 – Installation location (space) types and the bit values assigned to them.....	90
Table 17 – Fault-content property value assignments	94
Table 18 – List of temperature sensor properties	99
Table 19 – List of humidity sensor properties	99
Table 20 – List of illuminance sensor properties.....	100
Table 21 – List of human detection sensor properties	101
Table 22 – List of electric energy sensor properties	102
Table 23 – List of open/close sensor properties	104
Table 24 – List of current sensor properties	105
Table 25 – List of air speed sensor properties.....	106

Table 26 – List of water flow rate sensor properties	107
Table 27 – List of rain sensor properties	108
Table 28 – List of home air conditioner properties	109
Table 29 – Air flow direction (horizontal) setting.....	123
Table 30 – List of ventilation fan properties.....	132
Table 31 – List of air purifier properties.....	133
Table 32 – List of humidifier properties	135
Table 33 – List of package-type commercial air conditioner (indoor unit) properties	138
Table 34 – List of package-type commercial air conditioner (outdoor unit) properties	141
Table 35 – List of electric storage heater properties.....	144
Table 36 – List of gas heat pump-type commercial air conditioner (indoor unit) properties	150
Table 37 – List of gas heat pump-type commercial air conditioner (outdoor unit) properties	153
Table 38 – List of range hood properties	156
Table 39 – Range hood-specific errors of EPC = 0x88 "fault status".....	161
Table 40 – List of electrically operated shade properties.....	162
Table 41 – List of electrically operated rain sliding door/shutter properties.....	167
Table 42 – List of electric water heater properties	171
Table 43 – Property change according to both heating automatic setting property and energy shift participation status property.....	186
Table 44 – List of electric toilet seat (warm-water washing toilet seat, heating toilet seat, etc.) properties	192
Table 45 – List of electric lock properties	195
Table 46 – List of household instantaneous water heater properties	197
Table 47 – List of bathroom heater and dryer properties	205
Table 48 – List of household solar power generation properties	216
Table 49 – List of floor heater properties.....	226
Table 50 – List of fuel cell properties	233
Table 51 – List of storage battery properties	240
Table 52 – List of electric vehicle charger/discharger properties	262
Table 53 – List of engine cogeneration properties	277
Table 54 – List of water flowmeter properties	282
Table 55 – List of power distribution board metering properties.....	285
Table 56 – List of low-voltage smart electric meter properties	310
Table 57 – List of smart gas meter properties	322
Table 58 – Security data information property	328
Table 59 – Historical data of measured cumulative gas consumption (example) corresponding to the transition of cumulative gas consumption	330
Table 60 – List of high-voltage smart electric energy meter properties	331
Table 61 – List of kerosene meter properties	350
Table 62 – List of smart kerosene meter properties.....	351
Table 63 – bit assignment for security data	356
Table 64 – Historical data example of measured cumulative kerosene consumption corresponding to the transition of cumulative kerosene consumption	358

Table 65 – List of general light properties	359
Table 66 – List of mono functional lighting properties.....	367
Table 67 – List of lighting for solid light-emitting source properties	368
Table 68 – Examples of the list of the light source operation status when operating Get	370
Table 69 – Examples of the list of the light source operation status when operating Set	370
Table 70 – Examples of the list of the light source optical output setting values when operating Get.....	371
Table 71 – Examples of the list of the light source optical output setting values when operating Set.....	371
Table 72 – Examples of the list of light source colour temperature setting values when operating Get.....	372
Table 73 – Examples of the list of light source colour temperature setting values when operating Set.....	372
Table 74 – List of electric vehicle charger properties.....	373
Table 75 – List of household small wind turbine power generation properties.....	382
Table 76 – List of lighting system properties	386
Table 77 – List of extended lighting system properties	388
Table 78 – An example of scene number set.....	390
Table 79 – List of multiple input PCS properties.....	393
Table 80 – List of hybrid water heater properties	397
Table 81 – List of operations for linkage modes and utilization time	401
Table 82 – List of refrigerator properties	402
Table 83 – List of microwave oven properties	413
Table 84 – Heating status property	420
Table 85 – Automatic heating setting property	421
Table 86 – Automatic heating cycle codes	422
Table 87 – Prompt message codes	426
Table 88 – 2 bytes bitmap definition for each accessory	427
Table 89 – List of washer and dryer properties.....	429
Table 90 – washer and dryer setting property	442
Table 91 – Washer and dryer cycle option list 1 property	448
Table 92 – Washer and dryer cycle option list 2 property	448
Table 93 – Washer and dryer cycle option list 3 property	448
Table 94 – Current stage of washer and dryer cycle property	452
Table 95 – List of clothes dryer properties	459
Table 96 – List of cooking heater properties.....	461
Table 97 – List of commercial showcase properties	467
Table 98 – List of commercial showcase outdoor unit properties	472
Table 99 – List of dishwasher and dryer properties	473
Table 100 – Bitmap definition for dish-washing method setting acceptable information	488
Table 101 – Bitmap definition for drying method setting acceptable information	488
Table 102 – Bitmap definition for storing method setting acceptable information	488
Table 103 – Bitmap definition for each rinsing mode	490
Table 104 – Operation setting information arrangement	495

Table 105 – Pattern of property values 496

Table 106 – Relationship with operation status setting (EPC = 0xB2)..... 497

Table 107 – List of switch properties 499

Table 108 – List of controller properties 499

Table 109 – Property map description format..... 505

INTERNATIONAL ELECTROTECHNICAL COMMISSION

SERVICE DIAGNOSTIC INTERFACE FOR CONSUMER ELECTRONICS PRODUCTS AND NETWORKS – IMPLEMENTATION FOR ECHONET

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IEC 62394 has been prepared by IEC technical committee 100: Audio, video and multimedia systems and equipment¹. It is an International Standard.

This fourth edition cancels and replaces the third edition published in 2017. This edition constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

- a) updates of the device object super class specifications for the property configurations shared by all device objects;
- b) modification and addition of the property configurations defined by each object;
- c) addition of new device objects and their property configurations;

¹ The third edition (2017) was developed by technical area 8: Multimedia home systems and applications for end-user network. However, technical area 8 has been disbanded.

d) updates to Bibliography.

The text of this International Standard is based on the following documents:

Draft	Report on voting
100/3758/FDIS	100/3787/RVD

Full information on the voting for its approval can be found in the report on voting indicated in the above table.

The language used for the development of this International Standard is English.

This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at www.iec.ch/members_experts/refdocs. The main document types developed by IEC are described in greater detail at www.iec.ch/standardsdev/publications.

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under webstore.iec.ch in the data related to the specific document. At this date, the document will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

IMPORTANT – The "colour inside" logo on the cover page of this document indicates that it contains colours which are considered to be useful for the correct understanding of its contents. Users should therefore print this document using a colour printer.

INTRODUCTION

Consumer products are often repaired by service workshops, which service a wide range of products developed by different manufacturers.

For highly complex products, fault diagnosis becomes increasingly difficult and time consuming.

To facilitate diagnosis, manufacturers often develop built-in diagnostic software that communicates with an external diagnostic unit through a service diagnostic interface (SDI).

To avoid the need for a service workshop to purchase several different diagnostic units from different manufacturers for different products, a standardized SDI is proposed for use by all manufacturers of any products requiring a diagnostic interface. The result will be that only one SDI is needed in the service workshops.

The SDI should be suitable for diagnosis in a facilities or household appliances network in which different products from different manufacturers are connected together. The interface should also allow for future developments.

The standard SDI should:

- be usable in future products,
- be easily connectable to a product or a network,
- be inexpensive,
- not limit product design.

SERVICE DIAGNOSTIC INTERFACE FOR CONSUMER ELECTRONICS PRODUCTS AND NETWORKS – IMPLEMENTATION FOR ECHONET

1 Scope

This International Standard specifies requirements for service diagnostic software to be implemented in products that incorporate a digital interface. It does not specify requirements for carrying out remote diagnosis or for manufacturer-dependent software.

The Service Diagnostic Interface (SDI) requires an external controller (exclusive or general-purpose/PC) into which service diagnostic software can be loaded. Parts of the controller software are standardized while other parts are proprietary to the manufacturers.

To reach a common approach in servicing all products from all manufacturers, it is necessary to standardize specific items to be tested in products and certain aspects of controllers' diagnostic software.

The SDI is based upon ECHONET specification version 2.11, ECHONET Lite specification version 1.13, and APPENDIX Detailed Requirements for ECHONET Device objects Release M, because this interface will be used in future products. The use of this connection and existing communication protocols enable implementation in products at a low cost, with maximum flexibility and efficiency.

The SDI consists of

- specific hardware and software requirements of the device under test (DUT);
- specific requirements of the controller:
 - the service software;
 - an ECHONET interface;
- the connection between the controller and the DUT.

This document provides the minimal requirements necessary to carry out computerized diagnosis. It covers the standardized software of the controller as well as the standardized software and provisions in the DUT.

2 Normative references

There are no normative references in this document.

3 Terms, definitions and abbreviated terms

3.1 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at <http://www.electropedia.org/>
- ISO Online browsing platform: available at <http://www.iso.org/obp>