

INTERNATIONAL STANDARD



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

(<https://standards.iteh.ai>)

Document Preview

[IEC 62394:2024](https://standards.iteh.ai/catalog/standards/iec/def9c556-1a08-4675-a863-aad1ac55e1f9/iec-62394-2024)

<https://standards.iteh.ai/catalog/standards/iec/def9c556-1a08-4675-a863-aad1ac55e1f9/iec-62394-2024>



THIS PUBLICATION IS COPYRIGHT PROTECTED
Copyright © 2024 IEC, Geneva, Switzerland

All rights reserved. Unless otherwise specified, no part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm, without permission in writing from either IEC or IEC's member National Committee in the country of the requester. If you have any questions about IEC copyright or have an enquiry about obtaining additional rights to this publication, please contact the address below or your local IEC member National Committee for further information.

IEC Secretariat
3, rue de Varembe
CH-1211 Geneva 20
Switzerland

Tel.: +41 22 919 02 11
info@iec.ch
www.iec.ch

About the IEC

The International Electrotechnical Commission (IEC) is the leading global organization that prepares and publishes International Standards for all electrical, electronic and related technologies.

About IEC publications

The technical content of IEC publications is kept under constant review by the IEC. Please make sure that you have the latest edition, a corrigendum or an amendment might have been published.

IEC publications search - webstore.iec.ch/advsearchform

The advanced search enables to find IEC publications by a variety of criteria (reference number, text, technical committee, ...). It also gives information on projects, replaced and withdrawn publications.

IEC Just Published - webstore.iec.ch/justpublished

Stay up to date on all new IEC publications. Just Published details all new publications released. Available online and once a month by email.

IEC Customer Service Centre - webstore.iec.ch/csc

If you wish to give us your feedback on this publication or need further assistance, please contact the Customer Service Centre: sales@iec.ch.

IEC Products & Services Portal - products.iec.ch

Discover our powerful search engine and read freely all the publications previews, graphical symbols and the glossary. With a subscription you will always have access to up to date content tailored to your needs.

Electropedia - www.electropedia.org

The world's leading online dictionary on electrotechnology, containing more than 22 500 terminological entries in English and French, with equivalent terms in 25 additional languages. Also known as the International Electrotechnical Vocabulary (IEV) online.

International
Standards
Document Preview
standards.iteh.ai

[IEC 62394:2024](https://standards.iteh.ai/catalog/standards/iec/def9c556-1a08-4675-a863-aad1ac55e1f9/iec-62394-2024)

<https://standards.iteh.ai/catalog/standards/iec/def9c556-1a08-4675-a863-aad1ac55e1f9/iec-62394-2024>



IEC 62394

Edition 5.0 2024-10

INTERNATIONAL STANDARD



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

<https://standards.iteh.ai>
Document Preview

[IEC 62394:2024](https://standards.iteh.ai/catalog/standards/iec/def9c556-1a08-4675-a863-aad1ac55e1f9/iec-62394-2024)

<https://standards.iteh.ai/catalog/standards/iec/def9c556-1a08-4675-a863-aad1ac55e1f9/iec-62394-2024>

INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

ICS 33.160.99; 35.110

ISBN 978-2-8322-9678-3

Warning! Make sure that you obtained this publication from an authorized distributor.

CONTENTS

FOREWORD.....	33
INTRODUCTION.....	35
1 Scope.....	36
2 Normative references	36
3 Terms, definitions and abbreviated terms	36
3.1 Terms and definitions.....	36
3.2 Abbreviated terms.....	37
4 Different types of service diagnostics	38
4.1 Stand-alone products.....	38
4.2 Facilities or household appliances network	38
4.3 Remote diagnosis	38
5 SDI requirements.....	38
5.1 General.....	38
5.2 Hardware	38
5.2.1 Tester hardware	38
5.2.2 Facilities or household appliances network	38
5.2.3 DUT hardware	38
5.3 Software	39
5.3.1 General	39
5.3.2 Tester software.....	39
5.3.3 DUT software requirements for the SDI	39
6 Tester software requirements	39
6.1 Reading the property diagnostic unit.....	39
6.2 General information (product identification).....	40
6.3 Diagnosis information	40
7 Control protocol 1st	40
7.1 General.....	40
7.2 Frame format	40
7.2.1 General	40
7.2.2 ECHONET headers (EHD).....	41
7.2.3 Source/Destination ECHONET address (SEA/DEA)	43
7.2.4 ECHONET byte counter (EBC).....	44
7.2.5 ECHONET data (EDATA).....	44
7.2.6 Object message header (OHD)	44
7.2.7 ECHONET objects (EOJ)	45
7.2.8 ECHONET property (EPC).....	46
7.2.9 ECHONET service (ESV).....	47
7.2.10 ECHONET property value data (EDT)	62
7.2.11 Compound ECHONET Service (CpESV)	62
7.2.12 Processing target property counter (OPC)	68
7.2.13 Property data counter (PDC).....	69
8 Control protocol 2nd	69
8.1 General.....	69
8.2 Frame format	69
8.2.1 General	69
8.2.2 ECHONET Lite Header (ELHD).....	70

8.2.3	Transaction ID (TID)	71
8.2.4	ECHONET Lite Data (ELDATA)	71
8.2.5	ECHONET Objects (EOJ)	71
8.2.6	ECHONET Lite Service (ELSV).....	72
8.2.7	ECHONET property (EPC).....	80
8.2.8	ECHONET Lite Property data counter (ELPDC)	81
9	ECHONET objects: detailed specifications.....	82
9.1	Basic concept	82
9.2	ECHONET properties: basic specifications.....	83
9.2.1	General	83
9.2.2	ECHONET property value data types	83
9.2.3	Property value range	83
9.2.4	Required class properties	84
9.2.5	Array	84
9.3	Device object super class specifications	85
9.3.1	General	85
9.3.2	Overview of device object super class specifications	85
9.3.3	Operation status property	89
9.3.4	Installation location property	89
9.3.5	Standard version information property	91
9.3.6	Identification number property	91
9.3.7	Measured instantaneous power consumption property	92
9.3.8	Measured cumulative energy consumption property	92
9.3.9	Manufacturer's fault code property	92
9.3.10	Current limit setting property.....	93
9.3.11	Fault status property	93
9.3.12	Fault description property	93
9.3.13	Manufacturer code property	95
9.3.14	Business facility code property	95
9.3.15	Product code property	96
9.3.16	Production number property.....	96
9.3.17	Production date property	96
9.3.18	Power-saving operation setting property	96
9.3.19	Remote control setting property	96
9.3.20	Current time setting property	98
9.3.21	Current date setting property	98
9.3.22	Power limit setting property	98
9.3.23	Cumulative operating time property	98
9.3.24	Property map property	99
9.4	Temperature sensor class specifications	100
9.4.1	General	100
9.4.2	Operation status property	100
9.4.3	Measured temperature value property.....	100
9.5	Humidity sensor class specifications	100
9.5.1	General	100
9.5.2	Operation status property	101
9.5.3	Measured value of relative humidity property	101
9.6	Illuminance sensor class specifications	101
9.6.1	General	101

9.6.2	Operation status property	101
9.6.3	Measured illuminance value 1 property	101
9.6.4	Measured illuminance value 2 property	102
9.7	Human detection sensor class specifications	102
9.7.1	General	102
9.7.2	Operation status property	102
9.7.3	Detection threshold level property.....	102
9.7.4	Human detection status property	102
9.8	Electric energy sensor class specifications	103
9.8.1	General	103
9.8.2	Operation status property	104
9.8.3	Cumulative amounts of electric energy property.....	104
9.8.4	Small-capacity sensor instantaneous electric power property.....	104
9.8.5	Medium-capacity sensor instantaneous electric power property	104
9.8.6	Large-capacity sensor instantaneous electric power property	104
9.8.7	Cumulative amounts of electric energy measurement log property	104
9.8.8	Effective voltage value property	104
9.9	Open/close sensor class specifications	105
9.9.1	General	105
9.9.2	Operation status property	105
9.9.3	Degree-of-opening detection status 1 property	105
9.9.4	Detection threshold level property.....	106
9.9.5	Degree-of-opening detection status 2 property	106
9.10	Current sensor class specifications	106
9.10.1	General	106
9.10.2	Operation status property	106
9.10.3	Measured current value 1 property	107
9.10.4	Rated voltage property to be measured property	107
9.10.5	Measured current value 2 property	107
9.11	Air speed sensor class specifications	107
9.11.1	General	107
9.11.2	Operation status property	107
9.11.3	Measured value of air speed property	108
9.11.4	Air flow direction property	108
9.12	Water flow rate sensor class specifications	108
9.12.1	General	108
9.12.2	Operation status property	108
9.12.3	Cumulative flow rate property	108
9.12.4	Flow rate property	109
9.13	Rain sensor class specifications	109
9.13.1	General	109
9.13.2	Operation status property	109
9.13.3	Detection threshold level property.....	109
9.13.4	Rain detection status property	109
9.14	Home air conditioner class specifications	110
9.14.1	General	110
9.14.2	Operation status property	119
9.14.3	Power-saving operation setting property	120
9.14.4	Operation mode setting property.....	120

9.14.5	Automatic temperature control setting property	120
9.14.6	Normal/high-speed/silent operation setting property	120
9.14.7	Set temperature value property	120
9.14.8	Set value of relative humidity in dehumidifying mode property	121
9.14.9	Set temperature value in cooling mode property	121
9.14.10	Set temperature value in heating mode property	121
9.14.11	Set temperature value in dehumidifying mode property	121
9.14.12	Rated power consumption property	122
9.14.13	Measured value of current consumption property	122
9.14.14	Measured value of room relative humidity property	122
9.14.15	Measured value of room temperature property	122
9.14.16	Set temperature value of user remote control property	122
9.14.17	Measured cooled air temperature property	123
9.14.18	Measured outdoor air temperature property	123
9.14.19	Relative temperature setting property	123
9.14.20	Air flow rate setting property	123
9.14.21	Automatic control of air flow direction setting property	123
9.14.22	Automatic swing of air flow setting property	124
9.14.23	Air flow direction (vertical) setting property	124
9.14.24	Air flow direction (horizontal) setting property	124
9.14.25	Special state property	125
9.14.26	Non-priority state property	126
9.14.27	Ventilation function setting property	126
9.14.28	Humidifier function setting property	126
9.14.29	Ventilation air flow rate setting property	126
9.14.30	Degree of humidification setting property	127
9.14.31	Mounted air cleaning method property	127
9.14.32	Air purifier function setting property	127
9.14.33	Mounted air refresh method property	128
9.14.34	Air refresher function setting property	129
9.14.35	Mounted self-cleaning method property	129
9.14.36	Self-cleaning function setting property	130
9.14.37	Special function setting property	131
9.14.38	Operation status of components property	131
9.14.39	Thermostat setting override function property	132
9.14.40	Air purification mode setting property	132
9.14.41	Buzzer property	132
9.14.42	ON timer-based reservation setting property	132
9.14.43	ON timer setting (time) property	133
9.14.44	ON timer setting (relative time)	133
9.14.45	OFF timer-based reservation setting property	133
9.14.46	OFF timer setting (time) property	133
9.14.47	OFF timer setting (relative time) property	133
9.15	Ventilation fan class specifications	134
9.15.1	General	134
9.15.2	Operation status property	134
9.15.3	Ventilation automatic setting property	134
9.15.4	Set value of ventilation air flow rate property	134
9.16	Air purifier class specifications	135

9.16.1	General	135
9.16.2	Operation status property	135
9.16.3	Filter change notice property	136
9.16.4	Air flow rate setting property	136
9.16.5	Smoke (cigarette) detection status property	136
9.16.6	Optical catalyst operation setting property	136
9.16.7	Air pollution detection status property	136
9.17	Humidifier class specifications	136
9.17.1	General	136
9.17.2	Operation status property	138
9.17.3	Humidifying setting 1 property	138
9.17.4	Humidifying setting 2 property	138
9.17.5	Measured value of relative humidity property	138
9.17.6	Reservation setting of OFF timer property	138
9.17.7	Relative time value set of OFF timer property	139
9.17.8	Ion emission setting property	139
9.17.9	Implemented ion emission method property	139
9.17.10	Special operation mode setting property	139
9.17.11	Water amount level property	139
9.18	Package-type commercial air conditioner (indoor unit) class specifications	140
9.18.1	General	140
9.18.2	Operation status property	141
9.18.3	Operation mode setting property	141
9.18.4	Temperature setting property	142
9.18.5	Measured indoor unit temperature property	142
9.18.6	Thermostat state property	142
9.18.7	Current function (automatic operation mode) property	142
9.18.8	Group information property	142
9.18.9	Power consumption range for indoor units property	143
9.19	Package-type commercial air conditioner (outdoor unit) class specifications	143
9.19.1	General	143
9.19.2	Operation status property	144
9.19.3	Rated power consumption of outdoor unit property	144
9.19.4	Measured outdoor unit temperature property	144
9.19.5	Special state property	145
9.19.6	Group information property	145
9.19.7	Measured power consumption of outdoor unit property	145
9.19.8	Possible power savings for outdoor units property	145
9.19.9	Settings restricting power consumption of outdoor units property	145
9.19.10	Minimum power consumption for restricted outdoor unit property	146
9.20	Electric storage heater class specifications	146
9.20.1	General	146
9.20.2	Operation status property	149
9.20.3	Temperature setting property	149
9.20.4	Rated power consumption property	149
9.20.5	Measured indoor temperature property	149
9.20.6	Measured outdoor temperature property	150
9.20.7	Air flow rate setting property	150
9.20.8	Fan operation status property	150

9.20.9	Heat storage operation status property	150
9.20.10	Heat storage temperature setting property	150
9.20.11	Measured stored heat temperature property	150
9.20.12	Daytime heat storage setting property	151
9.20.13	Daytime heat storage ability property	151
9.20.14	Midnight power duration setting property	151
9.20.15	Midnight power start time setting property	151
9.20.16	Radiation method property	151
9.20.17	Child lock setting property	151
9.20.18	Fan timer 1 setting property	151
9.20.19	Fan timer 1 ON time setting property	152
9.20.20	Fan timer 1 OFF time setting property	152
9.20.21	Fan timer 2 setting property	152
9.20.22	Fan timer 2 ON time setting property	152
9.20.23	Fan timer 2 OFF time setting property	152
9.21	Gas heat pump-type commercial air conditioner (indoor unit) class specifications	152
9.21.1	General	152
9.21.2	Operation status property	154
9.21.3	Operation mode setting property	154
9.21.4	Temperature setting value property	154
9.21.5	Measured temperature value of indoor unit property	154
9.21.6	Thermo status property	154
9.21.7	Operation mode status during automatic operation property	154
9.21.8	Group information property	155
9.21.9	Power consumption range for indoor units property	155
9.22	Gas heat pump-type commercial air conditioner (outdoor unit) class specifications	155
9.22.1	General	155
9.22.2	Operation status (inherited from the super class property) property	157
9.22.3	Measured temperature value of outdoor unit property	157
9.22.4	Measured cumulative gas consumption property	157
9.22.5	Group information property	157
9.22.6	Time slot operation factor setting property	157
9.22.7	Allowable operation factor property	158
9.23	Range hood class specifications	158
9.23.1	General	158
9.23.2	Operation status property	161
9.23.3	Range hood automatic setting property	161
9.23.4	Ventilation air flow rate setting property	161
9.23.5	Lighting operation setting property	161
9.23.6	Light source colour setting property	161
9.23.7	Brightness level setting property	161
9.23.8	Lighting mode setting property	162
9.23.9	When in coloured lighting mode RGB setting property	162
9.23.10	Measured value of indoor temperature property	162
9.23.11	Measured value of outdoor temperature property	162
9.23.12	Measured value of supply air temperature property	162
9.23.13	Measured value of cooking temperature property	163

9.23.14	Measured value of indoor relative humidity property	163
9.23.15	Measured value of outdoor air humidity property	163
9.23.16	Human detection threshold level setting property	163
9.23.17	Human detection status property	163
9.23.18	Measured value of CO ₂ concentration property	163
9.23.19	Gas detection threshold level setting property	163
9.23.20	Gas detection status property	164
9.23.21	Error detection mode property	164
9.24	Electrically operated shade class specifications	164
9.24.1	General	164
9.24.2	Operation status property	167
9.24.3	Fault description property	167
9.24.4	Timer operation setting property	167
9.24.5	Wind detection status property	167
9.24.6	Sunlight detection status property	167
9.24.7	Opening (extension) speed setting property	167
9.24.8	Closing (retraction) speed setting property	167
9.24.9	Operation time property	168
9.24.10	Automatic operation setting property	168
9.24.11	Open/close (extension/retraction) operation setting property	168
9.24.12	Degree-of-opening property	168
9.24.13	Shade angle setting property	168
9.24.14	Open/close (extension/retraction) speed property	168
9.24.15	Electric lock setting property	168
9.24.16	Remote operation setting status property	169
9.24.17	Selective opening (extension) operation setting property	169
9.24.18	Open/closed (extended/retracted) status property	169
9.24.19	One-time opening (extension) speed setting property	169
9.24.20	One-time closing (retraction) speed setting property	169
9.25	Electrically operated rain sliding door/shutter class specifications	169
9.25.1	General	169
9.25.2	Operation status property	172
9.25.3	Fault description property	172
9.25.4	Timer operation setting property	172
9.25.5	Opening speed setting property	172
9.25.6	Closing speed setting property	172
9.25.7	Operation time setting property	172
9.25.8	Open/close operation setting property	172
9.25.9	Degree-of-opening setting property	172
9.25.10	Blind angle setting property	173
9.25.11	Opening/closing speed setting property	173
9.25.12	Electric lock setting property	173
9.25.13	Remote operation setting status property	173
9.25.14	Selective degree-of-opening setting property	173
9.25.15	Open/closed status property	173
9.25.16	Slit degree-of-opening property	173
9.25.17	One-time opening speed setting property	174
9.25.18	One-time closing speed setting property	174
9.26	Electric water heater class specifications	174

9.26.1	General	174
9.26.2	Operation status property	181
9.26.3	Automatic water heating setting property	181
9.26.4	Automatic water temperature control setting property	181
9.26.5	Water heater status property	182
9.26.6	Water heating temperature setting property	182
9.26.7	Manual water heating stop days setting property	182
9.26.8	Relative time setting value for manual water heating OFF property	182
9.26.9	Tank operation mode setting property	182
9.26.10	Daytime reheating permission setting property	182
9.26.11	Measured temperature of water in water heater property	182
9.26.12	Alarm status property	182
9.26.13	Hot water supply status property	183
9.26.14	Relative time setting for keeping bath temperature property	183
9.26.15	Temperature of supplied water setting property	183
9.26.16	Bath water temperature setting property	183
9.26.17	Hot water volume setting property	184
9.26.18	Measured amount of water remaining in tank property	184
9.26.19	Tank capacity property	184
9.26.20	Automatic bath water heating mode setting property	184
9.26.21	Manual bath reheating operation setting property	184
9.26.22	Manual bath hot water addition function setting property	184
9.26.23	Manual lukewarm water temperature lowering function setting property	184
9.26.24	Bath water volume setting 1 property	185
9.26.25	Bath water volume setting 2 property	185
9.26.26	Bathroom priority setting property	185
9.26.27	Bath operation status monitor property	185
9.26.28	Bath water volume setting 3 property	185
9.26.29	Bath water volume setting 4 property	185
9.26.30	Bath water volume setting 4 – Maximum settable level property	186
9.26.31	Sound volume setting property	186
9.26.32	Mute setting property	186
9.26.33	Remaining hot water volume property	186
9.26.34	Surplus electric energy prediction value property	186
9.26.35	Rated power consumption of HP unit in wintertime property	187
9.26.36	Rated power consumption of HP unit in in-between seasons property	187
9.26.37	Rated power consumption of HP unit in summertime property	187
9.26.38	ON timer reservation setting property	187
9.26.39	ON timer setting property	187
9.26.40	Participation in energy shift property	187
9.26.41	Standard time to start heating property	188
9.26.42	Number of energy shifts property	189
9.26.43	Daytime heating shift time 1 property (D1 of Figure 63 and D1 of Figure 64)	189
9.26.44	Expected electric energy at daytime heating shift time 1 property (C1 of Figure 63 and C1 of Figure 64)	189
9.26.45	Consumption of electric energy per hour 1 property	190
9.26.46	Daytime heating shift time 2 property (D2 of Figure 63 and D2 of Figure 64)	190

9.26.47	Expected electric energy at daytime heating shift time 2 property (C2 of Figure 64).....	191
9.26.48	Consumption of electric energy per hour 2 property.....	191
9.27	Electric toilet seat class (warm-water washing toilet seat, heating toilet seat, etc.) specifications.....	193
9.27.1	General.....	193
9.27.2	Operation status property.....	195
9.27.3	Temperature level of toilet seat property.....	195
9.27.4	Heater setting of toilet seat property.....	195
9.27.5	Temporal halt setting of toilet seat heating property.....	195
9.27.6	Temporal halt start time of toilet seat heating property.....	195
9.27.7	Temporal halt time duration of toilet seat heating property.....	195
9.27.8	Temperature level setting of room heating property.....	196
9.27.9	Room heating setting property.....	196
9.27.10	Room heating status property.....	196
9.27.11	Start time of room heating property.....	196
9.27.12	Duration time of room heating property.....	196
9.27.13	Special operation mode setting property.....	196
9.27.14	Human detection status property.....	196
9.27.15	Seating detection status property.....	196
9.28	Electric lock class specifications.....	197
9.28.1	General.....	197
9.28.2	Operation status property.....	198
9.28.3	Lock setting 1 property.....	198
9.28.4	Lock setting 2 property.....	198
9.28.5	Lock status of door guard property.....	198
9.28.6	Door open/closed status property.....	198
9.28.7	Occupant/non-occupant status property.....	198
9.28.8	Alarm status property.....	198
9.28.9	Automatic lock mode setting property.....	198
9.28.10	Battery level property.....	199
9.29	Instantaneous water heater class specifications.....	199
9.29.1	General.....	199
9.29.2	Operation status property.....	202
9.29.3	Water heating status property.....	202
9.29.4	Set value of hot water temperature property.....	202
9.29.5	Hot water warmer setting property.....	202
9.29.6	Duration of automatic operation setting property.....	202
9.29.7	Remaining automatic operation time property.....	203
9.29.8	Set value of bath temperature property.....	203
9.29.9	Bath water heater status property.....	203
9.29.10	Bath automatic mode setting property.....	203
9.29.11	Bath additional boil-up operation setting property.....	203
9.29.12	Bath hot water adding operation setting property.....	204
9.29.13	Bath water temperature lowering operation setting property.....	204
9.29.14	Bath hot water volume setting 1 property.....	204
9.29.15	Bath hot water volume setting 2 property.....	204
9.29.16	Bath hot water volume setting 3 property.....	204
9.29.17	Bath hot water volume setting 4 property.....	204

9.29.18	Bath hot water volume setting 4 – Maximum settable level property	205
9.29.19	Bathroom priority setting property	205
9.29.20	Shower hot water supply status property	205
9.29.21	Kitchen hot water heating status property	205
9.29.22	Hot water warmer ON timer reservation setting property	205
9.29.23	Bath operation status monitor property	205
9.29.24	Set value of hot water warmer ON timer time property	205
9.29.25	ON timer reservation setting property	206
9.29.26	Set value of ON timer time property	206
9.29.27	Set value of ON timer relative time property	206
9.29.28	Sound volume setting property	206
9.29.29	Mute setting property	206
9.30	Bathroom heater and dryer class specifications	207
9.30.1	General	207
9.30.2	Operation status property	211
9.30.3	Operation setting property	211
9.30.4	Ventilation operation setting property	212
9.30.5	Bathroom pre-warmer operation setting property	212
9.30.6	Bathroom heater operation setting property	212
9.30.7	Bathroom dryer operation setting property	213
9.30.8	Cool air circulation operation setting property	213
9.30.9	Mist sauna operation setting property	214
9.30.10	Water mist operation settings property	214
9.30.11	Measured relative bathroom humidity property	214
9.30.12	Measured bathroom temperature property	215
9.30.13	Human body detection status property	215
9.30.14	Filter cleaning reminder sign setting property	215
9.30.15	Ventilation air flow rate setting property	215
9.30.16	ON timer-based reservation setting 1 property	215
9.30.17	ON timer-based reservation setting 2 property	216
9.30.18	ON timer setting (time) property	216
9.30.19	ON timer setting (relative time) property	216
9.30.20	OFF timer-based reservation setting property	216
9.30.21	OFF timer setting (time) property	217
9.30.22	OFF timer setting (relative time) property	217
9.31	Household solar power generation class specifications	217
9.31.1	General	217
9.31.2	Operation status property	224
9.31.3	Identification number property	224
9.31.4	Current time setting property	224
9.31.5	Current date setting property	225
9.31.6	Output power control setting 1 property	225
9.31.7	Output power control setting 2 property	225
9.31.8	Function to control purchase of excess electricity setting property	225
9.31.9	Output power controlling schedule property	225
9.31.10	Next access date and time property	226
9.31.11	Type for function to control purchase of excess electricity property	226
9.31.12	Output power change time setting value property	226
9.31.13	Upper limit clip setting value property	226

9.31.14	Operation power factor setting value property	226
9.31.15	FIT contract type property	226
9.31.16	Self-consumption type property	226
9.31.17	Capacity approved by equipment property	227
9.31.18	Conversion coefficient property	227
9.31.19	System interconnection status property	227
9.31.20	Output power restraint status property	227
9.31.21	Measured instantaneous amount of electricity generated property	228
9.31.22	Measured cumulative amount of electricity generated property	228
9.31.23	Resetting cumulative amount of electric energy generated property	228
9.31.24	Measured cumulative amount of electric energy sold property	228
9.31.25	Resetting cumulative amount of electric energy sold property	228
9.31.26	Power generation output limit setting 1 property	228
9.31.27	Power generation output limit setting 2 property	228
9.31.28	Limit setting for the amount of electricity sold property	228
9.31.29	Rated power generation output (system interconnected) property	228
9.31.30	Rated power generation output (independent) property	229
9.32	Floor heater class specifications	229
9.32.1	General	229
9.32.2	Operation status property	231
9.32.3	Measured instantaneous power consumption property	231
9.32.4	Measured cumulative energy consumption property	231
9.32.5	Temperature setting 1 property	232
9.32.6	Temperature setting 2 property	232
9.32.7	Temperature setting 2 – Maximum settable level property	232
9.32.8	Measured room temperature property	232
9.32.9	Measured floor temperature property	233
9.32.10	Zone change setting property	233
9.32.11	Special operation setting property	233
9.32.12	Daily timer setting property	233
9.32.13	Daily timer setting 1 property / Daily timer setting 2 property	233
9.32.14	Rated power consumption property	234
9.32.15	Power consumption measurement method property	235
9.32.16	ON timer reservation setting property	235
9.32.17	Time set by ON timer property	235
9.32.18	Relative ON timer setting property	235
9.32.19	OFF timer reservation setting property	235
9.32.20	Time set by OFF timer property	236
9.32.21	Relative OFF timer setting property	236
9.33	Fuel cell class specifications	236
9.33.1	General	236
9.33.2	Operation status property	238
9.33.3	Measured temperature of water in water heater property	238
9.33.4	Rated power generation output property	239
9.33.5	Heating value of hot water storage tank property	239
9.33.6	Measured instantaneous power generation output property	239
9.33.7	Measured cumulative energy generation output property	239
9.33.8	Cumulative energy generation output reset setting property	239
9.33.9	Measured instantaneous gas consumption property	239