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*Residential Controls—ClimateTalk 2.1 Command Reference*

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## Foreword

ClimateTalk is a universal language for innovative, cost-effective solutions that optimize performance, efficiency, and home comfort. The ClimateTalk Open Standards define a set of messages and commands to enable interoperability, enhanced user interface, and machine-to-machine control independent of the physical layer connecting the devices.

This document provides a single repository for all control commands and messages in the ClimateTalk Common Information Model that enable interoperable applications over any physical medium. ClimateTalk applications are fully defined at Layer 7 of the OSI model by a combination of a device-specific application profile, the Generic Application Specification, and this document.

These standards are periodically reviewed by the Residential Controls Section of NEMA for any revisions necessary to keep them up-to-date with advancing technology. Proposed or recommended revisions should be submitted to:

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## CONTENTS

|                                      | Page |
|--------------------------------------|------|
| Foreword .....                       | i    |
| History of Standards .....           | viii |
| 1 General .....                      | 1    |
| 1.1 Scope .....                      | 1    |
| 1.2 References .....                 | 2    |
| 1.3 Definitions .....                | 3    |
| 1.4 Acronyms .....                   | 3    |
| 1.5 Number Notation .....            | 3    |
| 1.6 Word Usage .....                 | 3    |
| 2 Message Rules .....                | 4    |
| 2.1 CIM Format .....                 | 4    |
| 2.2 Routing .....                    | 4    |
| 2.3 Data Payload .....               | 5    |
| 3 Command Reference .....            | 5    |
| 3.1 Get Configuration .....          | 5    |
| 3.1.1 GetConfiguration .....         | 5    |
| 3.1.2 GiveConfiguration .....        | 6    |
| 3.2 Get Status .....                 | 6    |
| 3.2.1 GetStatus .....                | 6    |
| 3.2.2 GiveStatus .....               | 7    |
| 3.3 Set Control Command .....        | 7    |
| 3.3.1 SetControlCommand .....        | 7    |
| 3.3.2 ConfirmControlCommand .....    | 8    |
| 3.4 Set Display Message .....        | 9    |
| 3.4.1 SetDisplayMessage .....        | 9    |
| 3.4.2 ConfirmDisplayMessage .....    | 9    |
| 3.5 Set Diagnostics .....            | 10   |
| 3.5.1 SetDiagnosticMessage .....     | 10   |
| 3.5.2 ConfirmDiagnosticMessage ..... | 11   |
| 3.6 Get Diagnostics .....            | 12   |
| 3.6.1 GetDiagnostics .....           | 12   |
| 3.6.2 GiveDiagnostics .....          | 12   |
| 3.6.3 Diagnostics Example .....      | 13   |
| 3.7 Get Sensor Data .....            | 14   |
| 3.7.1 GetSensor .....                | 14   |
| 3.7.2 GiveSensor .....               | 14   |
| 3.8 Set Identification .....         | 15   |
| 3.8.1 SetIdent .....                 | 15   |

|        |   |    |
|--------|---|----|
| 3.8.2  | ConfirmIdent.....                             | 15 |
| 3.9    | Get Identification.....                       | 16 |
| 3.9.1  | GetIdent.....                                 | 16 |
| 3.9.2  | GiveIdent.....                                | 17 |
| 3.10   | Set Application Shared Data to Network.....   | 17 |
| 3.10.1 | SetAppNetSharedData.....                      | 17 |
| 3.10.2 | ConfirmAppNetSharedData.....                  | 19 |
| 3.11   | Get Application Shared Data from Network..... | 19 |
| 3.11.1 | GetAppNetSD.....                              | 19 |
| 3.11.2 | GiveAppNetSD.....                             | 20 |
| 3.12   | Set Manufacturer Device Data.....             | 20 |
| 3.12.1 | SetMfgDeviceData.....                         | 21 |
| 3.12.2 | ConfirmMfgDeviceData.....                     | 21 |
| 3.13   | Get Manufacturer Device Data.....             | 22 |
| 3.13.1 | GetMfgDeviceData.....                         | 22 |
| 3.13.2 | GiveMfgDeviceData.....                        | 22 |
| 3.14   | Set Network Node List.....                    | 23 |
| 3.14.1 | SetNetworkNodeList.....                       | 23 |
| 3.14.2 | ConfirmNetworkNodeList.....                   | 24 |
| 3.15   | Get Direct Memory Access (DMA) Read.....      | 24 |
| 3.15.1 | GetDMARead.....                               | 25 |
| 3.15.2 | GiveDMARead.....                              | 26 |
| 3.16   | Set Direct Memory Access (DMA) Write.....     | 27 |
| 3.16.1 | SetDMAWrite.....                              | 27 |
| 3.16.2 | ConfirmDMAWrite.....                          | 28 |
| 3.17   | Set Manufacturer Generic Data.....            | 29 |
| 3.17.1 | SetMfgGenericData.....                        | 29 |
| 3.17.2 | ConfirmMfgGenericData.....                    | 29 |
| 3.18   | Get Manufacturer Generic Data.....            | 30 |
| 3.18.1 | GetMfgGenericData.....                        | 30 |
| 3.18.2 | GiveMfgGenericData.....                       | 31 |
| 3.19   | Get User Menu.....                            | 31 |
| 3.19.1 | GetUserMenu.....                              | 31 |
| 3.19.2 | GiveUserMenu.....                             | 33 |
| 3.20   | Set User Menu Update.....                     | 34 |
| 3.20.1 | SetUMUpdateData.....                          | 34 |
| 3.20.2 | ConfirmUMUpdateData.....                      | 35 |
| 3.21   | Set Factory Shared Data to Application.....   | 36 |
| 3.21.1 | SetFactoryAppSharedData.....                  | 36 |
| 3.21.2 | ConfirmFactoryAppSharedData.....              | 37 |
| 3.22   | Get Shared Data from Application.....         | 38 |
| 3.22.1 | GetSDfromApp.....                             | 38 |
| 3.22.2 | GiveAppSD.....                                | 38 |
| 3.23   | Set Echo Data.....                            | 39 |

|        |   |    |
|--------|---|----|
| 3.23.1 | SetEchoData .....   | 39 |
| 3.23.2 | ConfirmEchoData .....   | 39 |
| 4      | Control Command Optional Data .....                                     | 40 |
| 4.1    | General .....   | 40 |
| 4.2    | Control Command Codes Table .....                                       | 40 |
| 4.2.1  | HVAC Profile Control Command Codes .....                                | 40 |
| 4.2.2  | Zone Profile Control Command Codes .....                                | 42 |
| 4.2.3  | Motor Profile Control Command Codes .....                               | 43 |
| 4.2.4  | Water Heater Control Command Codes .....                                | 44 |
| 4.2.5  | Generic Profile Control Command Codes .....                             | 44 |
| 4.3    | HVAC Control Command Refresh Timers .....                               | 44 |
| 4.4    | Heat Set Point Temperature Modify—Command Code 0x01 .....               | 44 |
| 4.5    | Cool Set Point Temperature Modify—Command Code 0x02 .....               | 44 |
| 4.6    | Heat Profile Change—Command Code 0x03 .....                             | 45 |
| 4.7    | Cool Profile Change—Command Code 0x04 .....                             | 46 |
| 4.8    | System Switch Modify—Command Code 0x05 .....                            | 47 |
| 4.9    | Permanent Set Point Temperature and Hold Modify—Command Code 0x06 ..... | 47 |
| 4.10   | Fan Key Selection—Command Code 0x07 .....                               | 48 |
| 4.11   | Hold Override—Command Code 0x08 .....                                   | 48 |
| 4.12   | Beeper Enable—Command Code 0x09 .....                                   | 49 |
| 4.13   | Fahrenheit/Celsius Display—Command Code 0x0C .....                      | 49 |
| 4.14   | Comfort Recovery (EMR) Modify—Command Code 0x0E .....                   | 50 |
| 4.15   | Real Time/Day Override—Command Code 0x0F .....                          | 50 |
| 4.16   | Change Filter Time Remaining—Command Code 0x14 .....                    | 51 |
| 4.17   | Vacation Mode—Command Code 0x15 .....                                   | 52 |
| 4.18   | High Alarm Limit Change—Command Code 0x16 .....                         | 52 |
| 4.19   | Low Alarm Limit Change—Command Code 0x17 .....                          | 53 |
| 4.20   | High Outdoor Alarm Limit Change—Command Code 0x18 .....                 | 53 |
| 4.21   | Low Outdoor Alarm Limit Change—Command Code 0x19 .....                  | 53 |
| 4.22   | Temp Display Adj Factor Change—Command Code 0x1A .....                  | 54 |
| 4.23   | Clear Compressor Run Time—Command Code 0x2D .....                       | 54 |
| 4.24   | Reset Control—Command Code 0x31 .....                                   | 54 |
| 4.25   | Compressor Lockout—Command Code 0x33 .....                              | 54 |
| 4.26   | Hold Release—Command Code 0x3D .....                                    | 55 |
| 4.27   | Program Interval Type Modification—Command Code 0x3E .....              | 55 |
| 4.28   | Communications Receiver On/Off—Command Code 0x3F .....                  | 55 |
| 4.29   | Force Phone Number Display—Command Code 0x40 .....                      | 56 |
| 4.30   | Restore Factory Defaults—Command Code 0x45 .....                        | 56 |
| 4.31   | Custom Message Area Display Data—Command Code 0x46 .....                | 57 |
| 4.31.1 | Custom Message Area Request .....                                       | 58 |
| 4.32   | Set Point Temperature and Temporary Hold—Command Code 0x47 .....        | 59 |
| 4.33   | Continuous Display Light—Command Code 0x48 .....                        | 59 |
| 4.34   | Advance Real Time/Day Override—Command Code 0x4E .....                  | 60 |
| 4.35   | Keypad Lockout—Command Code 0x4F .....                                  | 62 |

|      |  |    |
|------|--|----|
| 4.36 | Test Mode—Command Code 0x50                                      | 62 |
| 4.37 | Subsystem Installation Test—Command Code 0x51                    | 63 |
| 4.38 | Set Point Temperature and Temporary Timed Hold—Command Code 0x53 | 63 |
| 4.39 | Comfort Mode Modification—Command Code 0x55                      | 64 |
| 4.40 | Limited Heat and Cool Range—Command Code 0x56                    | 64 |
| 4.41 | Auto-Pairing Request—Command Code 0x57                           | 65 |
| 4.42 | Pairing Ownership Request—Command Code 0x58                      | 66 |
| 4.43 | Reversing Valve Configuration—Command Code 0x59                  | 66 |
| 4.44 | DEHUM/HUM Configuration—Command Code 0x5A                        | 66 |
| 4.45 | Change Filter / Light Maintenance Timer—Command Code 0x5B        | 67 |
| 4.46 | Change Humid Pad Maintenance Timer—Command Code 0x5C             | 68 |
| 4.47 | Damper Closure Position Demand—Command Code 0x60                 | 70 |
| 4.48 | Subsystem Busy Status—Command Code 0x61                          | 70 |
| 4.49 | Dehumidification Demand—Command Code 0x62                        | 72 |
| 4.50 | Humidification Demand—Command Code 0x63                          | 72 |
| 4.51 | Heat Demand—Command Code 0x64                                    | 73 |
| 4.52 | Cool Demand—Command Code 0x65                                    | 74 |
| 4.53 | Fan Demand—Command Code 0x66                                     | 74 |
| 4.54 | Back-Up Heat Demand—Command Code 0x67                            | 75 |
| 4.55 | Defrost Heat Demand—Command Code 0x68                            | 76 |
| 4.56 | Aux / Alt Heat Demand—Command Code 0x69                          | 77 |
| 4.57 | Set Motor Speed—Command Code 0x6A                                | 77 |
| 4.58 | Set Motor Torque—Command Code 0x6B                               | 78 |
| 4.59 | Set Airflow Demand—Command Code 0x6C                             | 78 |
| 4.60 | Set Control Mode—Command Code 0x6D                               | 79 |
| 4.61 | Set Demand Ramp Rate—Command Code 0x6E                           | 79 |
| 4.62 | Set Motor Direction—Command Code 0x6F                            | 80 |
| 4.63 | Set Motor Torque in Percent—Command Code 0x70                    | 80 |
| 4.64 | Set Motor Position Demand—Command Code 0x71                      | 81 |
| 4.65 | Set Blower Coefficient 1-5—Command Codes 0x72 - 0x76             | 81 |
| 4.66 | Set Blower Identification 0-5—Command Codes 0x77-0x7C            | 82 |
| 4.67 | Set Speed Limit—Command Code 0x7F                                | 82 |
| 4.68 | Set Torque Limit—Command Code 0x80                               | 83 |
| 4.69 | Set Airflow Limit—Command Code 0x81                              | 83 |
| 4.70 | Set Power Output Limit—Command Code 0x82                         | 84 |
| 4.71 | Set Device Temperature Limit—Command Code 0x83                   | 84 |
| 4.72 | STOP Motor by Braking—Command Code 0x85                          | 85 |
| 4.73 | RUN/STOP Motor—Command Code 0x86                                 | 85 |
| 4.74 | Set Demand Ramp Time—Command Code 0x88                           | 85 |
| 4.75 | Set Inducer Ramp Rate—Command Code 0x89                          | 86 |
| 4.76 | Set Blower Coefficient 6-10—Command Codes 0x8A - 0x8E            | 86 |
| 4.77 | Publish Price—Command Code 0xE0                                  | 87 |
| 4.78 | Water Heater Modify—Command Code 0xF0                            | 87 |
| 4.79 | Electronic Expansion Valve Command—Command Code 0xF1             | 87 |

|        |   |     |
|--------|---|-----|
| 4.80   | Capacity Boost—Command Code 0xF2 .....              | 89  |
| 5      | Message Data Interfaces .....                       | 90  |
| 5.1    | General .....                                       | 90  |
| 5.1.1  | MDI Size Requirements .....                         | 90  |
| 5.1.2  | ASCII String Requirements .....                     | 90  |
| 5.1.3  | Mandatory Fields .....                              | 91  |
| 5.1.4  | Optional Fields .....                               | 91  |
| 5.1.5  | Updating of MDIs .....                              | 91  |
| 5.2    | Identification Message Data Interface (MDI) .....   | 91  |
| 5.2.1  | Get Identification Data .....                       | 91  |
| 5.2.2  | Set Identification Data .....                       | 93  |
| 5.3    | Configuration Message Data Interface .....          | 93  |
| 5.3.1  | Thermostat Configuration Data .....                 | 93  |
| 5.3.2  | Furnace Configuration Data .....                    | 104 |
| 5.3.3  | Air Handler Configuration Data .....                | 108 |
| 5.3.4  | Heat Pump Configuration Data .....                  | 115 |
| 5.3.5  | Crossover Configuration Data .....                  | 118 |
| 5.3.6  | Zone Controller Configuration Data .....            | 120 |
| 5.3.7  | Zone User Interface Configuration Data .....        | 121 |
| 5.3.8  | Water Heater Configuration Data .....               | 127 |
| 5.3.9  | Electronic Expansion Valve Configuration Data ..... | 128 |
| 5.4    | Status Message Data Interface (MDI) .....           | 130 |
| 5.4.1  | Thermostat Status Data .....                        | 130 |
| 5.4.2  | Furnace Status Data .....                           | 132 |
| 5.4.3  | Air Handler Status Data .....                       | 141 |
| 5.4.4  | Air Conditioner Status Data .....                   | 148 |
| 5.4.5  | Heat Pump Status Data .....                         | 153 |
| 5.4.6  | Crossover Status Data .....                         | 159 |
| 5.4.7  | Zone Controller Status Data .....                   | 161 |
| 5.4.8  | Zone User Interface Status Data .....               | 162 |
| 5.4.9  | Zone Temperature Controller Status Data .....       | 164 |
| 5.4.10 | Zone Damper Status Data .....                       | 166 |
| 5.4.11 | Occupancy Sensor Status Data .....                  | 166 |
| 5.4.12 | Water Heater Status Data .....                      | 166 |
| 5.4.13 | Electronic Expansion Valve Status Data .....        | 167 |
| 5.5    | Sensor Message Data Interface (MDI) .....           | 172 |
| 5.5.1  | Furnace Sensor Data .....                           | 172 |
| 5.5.2  | Air Handler Sensor Data .....                       | 175 |
| 5.5.3  | Air Conditioner Sensor Data .....                   | 178 |
| 5.5.4  | Heat Pump Sensor Data .....                         | 181 |
| 5.5.5  | Crossover Sensor Data .....                         | 185 |
| 5.5.6  | Zone User Interface Sensor Data .....               | 186 |
| 5.5.7  | Zone Temperature Controller Sensor Data .....       | 186 |
| 5.5.8  | Supply Air Temperature (SAT) Sensor Data .....      | 187 |

5.5.9 Return Air Temperature (RAT) Sensor Data..... 187

5.5.10 Outside Air Temperature (OAT) Sensor Data..... 188

5.5.11 Remote Temperature Sensor Data ..... 188

5.5.12 Electronic Expansion Valve Sensor Data ..... 188

6 Annex A—Message Utilization ..... 192

6.1 Command Reference Utilization..... 192

6.1.1 Generic Application Message Utilization..... 192

6.1.2 HVAC Profile Message Utilization..... 193

6.1.3 Zoning Profile Message Utilization..... 195

6.1.4 Motor Profile Message Utilization..... 198

6.1.5 Water Heater Profile Message Utilization ..... 198

7 Annex B—Node Type Table ..... 199

8 Annex C—Bibliography..... 200

## History of Standards

The Residential Controls Section of NEMA was formed in 1940 to promote the standardization of products within the scope of the section. NEMA standards are voluntary and are designed to eliminate misunderstandings between the purchaser and the manufacturer.

This publication is one of a series sponsored by the Residential Controls Section. Other publications in this series are identified as Pub. No. NEMA BS XX (followed by the year of issue).

The present publication, NEMA BS 31019-2024, is published in accordance with NEMA's policy of periodic review and revision to keep NEMA Standards contemporary with industry needs and technological advancement.

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## 1 General

### 1.1 Scope

ClimateTalk is an open standard that defines a set of messages and commands to enable interoperability, enhanced user interface, and machine-to-machine control independent of the physical layer connecting the devices.

The messages and commands defined by the ClimateTalk Information Model (CIM) are the presentation and application layers as defined by the OSI Model<sup>1</sup>. ClimateTalk applications are fully defined at Layer 7 of the OSI model by a combination of a device-specific application profile, the Generic Application Specification, and the command reference.

ClimateTalk messages can be carried over any physical medium following the OSI model. The ClimateTalk presentation layer defines how messages are executed over the various physical mediums in use.

CT-485 and CT-LWP are wired serial physical and network layers designed to support the formation of ClimateTalk networks and transport ClimateTalk messages, but other OSI based protocols, including wireless transports, can be used, as well.

This document provides a single repository for all control commands and messages in the ClimateTalk Common Information Model. ClimateTalk applications are fully defined at Layer 7 of the OSI model by a combination of a device-specific application profile, the Generic Application Specification, and this document.

The ClimateTalk Open Standards package shown in Figure 1 prescribes the mandatory requirements to ensure proper network formation of interoperable devices. Membership in the ClimateTalk Alliance, as well as successful completion of mandatory conformance testing, is required for listing a product as a ClimateTalk certified device.

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<sup>1</sup> [http://www.iso.org/iso/iso\\_catalogue/catalogue\\_tc/catalogue\\_detail.htm?csnumber=20269](http://www.iso.org/iso/iso_catalogue/catalogue_tc/catalogue_detail.htm?csnumber=20269)