

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1  
Stylesheet Version v1.2

EPAS ID: PAT5507040

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|------------------------------|---|
| <b>SUBMISSION TYPE:</b>      | CORRECTIVE ASSIGNMENT   |
| <b>NATURE OF CONVEYANCE:</b> | Corrective Assignment to correct the LACK OF INCLUSION OF SCHEDULE A AS REFERENCED IN THE ASSIGNMENT. previously recorded on Reel 048737 Frame 0589. Assignor(s) hereby confirms the ASSIGNMENT.. |

## CONVEYING PARTY DATA

| Name              | Execution Date |
|-------------------|----------------|
| JOSEPH R. RIBBICH | 03/12/2019     |

## RECEIVING PARTY DATA

|                        |                                     |
|------------------------|-------------------------------------|
| <b>Name:</b>           | JOHNSON CONTROLS TECHNOLOGY COMPANY |
| <b>Street Address:</b> | 2875 HIGH MEADOW CIRCLE             |
| <b>City:</b>           | AUBURN HILLS                        |
| <b>State/Country:</b>  | MICHIGAN                            |
| <b>Postal Code:</b>    | 48326-2773                          |

## PROPERTY NUMBERS Total: 1

| Property Type       | Number   |
|---------------------|----------|
| Application Number: | 15260301 |

## CORRESPONDENCE DATA

Fax Number: (202)672-5399

*Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.*

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Correspondent Name: FOLEY &amp; LARDNER LLP

Address Line 1: 3000 K STREET N.W., SUITE 600

Address Line 4: WASHINGTON, D.C. 20007-5109

|                                |                       |
|--------------------------------|-----------------------|
| <b>ATTORNEY DOCKET NUMBER:</b> | 111521-0158           |
| <b>NAME OF SUBMITTER:</b>      | CHRISTOPHER M KING    |
| <b>SIGNATURE:</b>              | /Christopher M. King/ |
| <b>DATE SIGNED:</b>            | 05/03/2019            |

## Total Attachments: 9

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| <b>PATENT ASSIGNMENT COVER SHEET</b> |
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Electronic Version v1.1  
 Stylesheet Version v1.2

|   |   |
|---|---|
| <b>SUBMISSION TYPE:</b>   | NEW ASSIGNMENT  |
| <b>NATURE OF CONVEYANCE:</b>  | ASSIGNMENT  |
| <b>CONVEYING PARTY DATA</b>   |   |
| <b>Name</b>   | <b>Execution Date</b>                                     |
| JOSEPH R. RIBBICH   | 03/12/2019  |
| <b>RECEIVING PARTY DATA</b>   |   |
| <b>Name:</b>  | JOHNSON CONTROLS TECHNOLOGY COMPANY                       |
| <b>Street Address:</b>  | 2875 HIGH MEADOW CIRCLE                                   |
| <b>City:</b>  | AUBURN HILLS  |
| <b>State/Country:</b>   | MICHIGAN  |
| <b>Postal Code:</b>   | 48326-2773  |
| <b>PROPERTY NUMBERS Total: 1</b>  |   |
| <b>Property Type</b>  | <b>Number</b>   |
| <b>Application Number:</b>  | 15260301  |
| <b>CORRESPONDENCE DATA</b>  |   |
| <b>Fax Number:</b>  | (202)672-5399   |
| <b>Phone:</b>   | (414) 271-2400  |
| <b>Email:</b>   | IPDocketing@foley.com, nlim@foley.com, blambert@foley.com |
| <i>Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.</i> |   |
| <b>Correspondent Name:</b>  | FOLEY & LARDNER LLP                                       |
| <b>Address Line 1:</b>  | 3000 K STREET N.W., SUITE 600                             |
| <b>Address Line 4:</b>  | WASHINGTON, D.C. 20007-5109                               |
| <b>ATTORNEY DOCKET NUMBER:</b>  | 111521-0158   |
| <b>NAME OF SUBMITTER:</b>   | CHRISTOPHER M. KING                                       |
| <b>Signature:</b>   | /Christopher M King/                                      |
| <b>Date:</b>  | 03/29/2019  |

**PATENT**

**REEL: 049082 FRAME: 0399**

**Total Attachments: 2**

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**RECEIPT INFORMATION**

**EPAS ID:** PAT5447911  
**Receipt Date:** 03/29/2019

**PATENT**

## ASSIGNMENT - WORLDWIDE

For good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, each undersigned inventor (hereinafter referred to singly and collectively as "ASSIGNOR") has sold, assigned, and transferred, and by these presents hereby sells, assigns, and transfers, unto

Johnson Controls Technology Company  
2875 High Meadow Circle  
Auburn Hills, Michigan 48326-2773

(hereinafter referred to as "ASSIGNEE") its successors and assigns, the full and exclusive right, title and interest for the United States, its territories and possessions, and all foreign countries in and to the inventions as set forth in the attached **Schedule A** as well as in and to (a) all improvements and modifications of the inventions set forth in Schedule A, (b) the applications set forth in Schedule A for Letters Patent of the United States and countries foreign thereto for above-identified inventions and all improvements and modifications thereof, (c) all Letters Patent which may issue from said applications in the United States and countries foreign thereto, (d) all divisions, continuations, reissues, and extensions of said applications and Letters Patent, and (e) the right to claim for any of said applications the full benefits and priority rights under the Patent Cooperation Treaty, the Paris Convention and any other international agreement; such right, title, and interest to be held and enjoyed by ASSIGNEE, its successors and assigns, to the full end of the term or terms for which any and all such Letters Patent may be granted as fully and entirely as would have been held and enjoyed by ASSIGNOR had this Assignment not been made.

ASSIGNOR HEREBY AUTHORIZES ASSIGNEE to file patent applications in any or all countries on the above-identified invention or inventions in the name of the undersigned or in the name of ASSIGNEE or otherwise as ASSIGNEE may deem advisable under the International Convention or otherwise.

ASSIGNOR HEREBY AUTHORIZES AND REQUESTS the Commissioner of Patents and Trademarks to issue said Letters Patent to ASSIGNEE as assignee of the entire interest, for the sole use and benefit of ASSIGNEE, its successors and assigns.

ASSIGNOR HEREBY AGREES (a) to communicate to ASSIGNEE, its successors and assigns, or their representative or agents, all facts and information known or available to ASSIGNOR respecting said invention or inventions, improvements, and modifications including evidence for interference, reexamination, reissue, opposition, revocation, extension, or infringement purposes or other legal, judicial, or administrative proceedings, whenever requested by ASSIGNEE; (b) to testify in person or by affidavit as required by ASSIGNEE, its successors and assigns, in any such proceeding in the United States or a country foreign thereto; (c) to execute and deliver, upon request by ASSIGNEE, all lawful papers including, but not limited to, original, divisional, continuation, and reissue applications, renewals, assignments, powers of

attorney, oaths, affidavits, and declarations, depositions; and (d) to provide all reasonable assistance to ASSIGNEE, its successors and assigns, in obtaining and enforcing proper title in and protection for said invention or inventions, improvements, and modifications under the intellectual property laws of the United States and countries foreign thereto.

ASSIGNOR HEREBY REPRESENTS AND WARRANTS that ASSIGNOR has the full and unencumbered right to sell, assign, and transfer the interests sold, assigned, and transferred herein, and that ASSIGNOR has not executed and will not execute any document or instrument in conflict herewith.

ASSIGNOR HEREBY GRANTS to the law firm of **Foley & Lardner LLP** the power and authority to insert in this Assignment any further identification which may be necessary or desirable to comply with the rules of the U.S. Patent and Trademark Office for recordation of this Assignment.

ASSIGNOR UNDERSTANDS AND AGREES that the attorneys and agents of the law firm of **Foley & Lardner LLP** do not personally represent ASSIGNOR OR ASSIGNOR's legal interests, but instead represent the interests of ASSIGNEE; since said attorneys and agents cannot provide legal advice to ASSIGNOR with respect to this Assignment, ASSIGNOR acknowledges its right to seek its own independent legal counsel.

**NAME AND SIGNATURE OF INVENTOR**

Name: JOSEPH R. RIBBICH

SIGNATURE

DATE

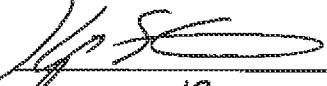
  
\_\_\_\_\_  
03-12-2019

**NAME AND SIGNATURE OF WITNESS**

Name: Kip Stearns

SIGNATURE

DATE

  
\_\_\_\_\_  
3-12-19

## SCHEDULE A

| <b>Country</b>           | <b>Title</b>  | <b>Application Number</b> | <b>Application Date</b> |
|--------------------------|---|---------------------------|-------------------------|
| United States of America | MOUNTABLE TOUCH THERMOSTAT USING TRANSPARENT SCREEN TECHNOLOGY                          | 62/156868                 | 5/4/2015                |
| United States of America | MULTI-FUNCTION THERMOSTAT   | 62/247672                 | 10/28/2015              |
| United States of America | MULTI-FUNCTION USER CONTROL DEVICE WITH CONTROL SYSTEM HUB AND DATA ANALYTICS           | 62/274750                 | 1/4/2016                |
| United States of America | MULTI-FUNCTION USER CONTROL DEVICE WITH MECHANICAL FEATURES                             | 62/275199                 | 1/5/2016                |
| United States of America | MULTI-FUNCTION USER CONTROL DEVICE WITH HOTEL, HEALTHCARE, AND CLASSROOM FEATURES       | 62/275202                 | 1/5/2016                |
| United States of America | MULTI-FUNCTION USER CONTROL DEVICE WITH VEHICLE AND PAYMENT FEATURES                    | 62/275204                 | 1/5/2016                |
| United States of America | MULTI-FUNCTION USER CONTROL DEVICE WITH MOUNTING FEATURES                               | 62/275711                 | 1/6/2016                |
| United States of America | MOUNTABLE TOUCH THERMOSTAT USING TRANSPARENT SCREEN TECHNOLOGY                          | 15/143373                 | 4/29/2016               |
| P.C.T.                   | MOUNTABLE TOUCH THERMOSTAT USING TRANSPARENT SCREEN TECHNOLOGY                          | PCT/US2016/030291         | 4/29/2016               |
| United States of America | MULTI-FUNCTION HOME CONTROL SYSTEM WITH CONTROL SYSTEM HUB AND REMOTE SENSORS           | 15/146134                 | 5/4/2016                |
| United States of America | USER CONTROL DEVICE WITH CASE CONTAINING CIRCUIT BOARD EXTENDING INTO MOUNTING LOCATION | 15/146202                 | 5/4/2016                |

## SCHEDULE A

| <b>Country</b>           | <b>Title</b>  | <b>Application Number</b> | <b>Application Date</b> |
|--------------------------|---|---------------------------|-------------------------|
| United States of America | USER CONTROL DEVICE WITH HOUSING CONTAINING ANGLED CIRCUIT BOARDS                       | 15/146749                 | 5/4/2016                |
| United States of America | USER CONTROL DEVICE AND MULTI-FUNCTION HOME CONTROL SYSTEM                              | 62/331863                 | 5/4/2016                |
| P.C.T.                   | MULTI-FUNCTION HOME CONTROL SYSTEM WITH CONTROL SYSTEM HUB AND REMOTE SENSORS           | PCT/US2016/030829         | 5/4/2016                |
| P.C.T.                   | USER CONTROL DEVICE WITH CASE CONTAINING CIRCUIT BOARD EXTENDING INTO MOUNTING LOCATION | PCT/US2016/030835         | 5/4/2016                |
| P.C.T.                   | USER CONTROL DEVICE WITH HOUSING CONTAINING ANGLED CIRCUIT BOARDS                       | PCT/US2016/030836         | 5/4/2016                |
| P.C.T.                   | USER CONTROL DEVICE WITH HINGED MOUNTING PLATE  | PCT/US2016/030837         | 5/4/2016                |
| United States of America | CELLULAR CONNECTED THERMOSTAT   | 62/352955                 | 6/21/2016               |
| United States of America | THERMOSTAT WITH OCCUPANCY DETECTION BASED ON LOAD OF HVAC EQUIPMENT                     | 15/260294                 | 9/8/2016                |
| United States of America | THERMOSTAT HAVING NETWORK CONNECTED BRANDING FEATURES                                   | 15/260301                 | 9/8/2016                |
| P.C.T.                   | THERMOSTAT WITH OCCUPANCY DETECTION, NFC COMMUNICATION, AND USER INTERFACE FEATURES     | PCT/US2016/051176         | 9/9/2016                |
| United States of America | MULTI-FUNCTION THERMOSTAT WITH HEALTH MONITORING FEATURES                               | 15/336789                 | 10/28/2016              |
| United States of America | MULTI-FUNCTION THERMOSTAT WITH OCCUPANT TRACKING FEATURES                               | 15/336793                 | 10/28/2016              |
| United States of America | MULTI-FUNCTION THERMOSTAT WITH CLASSROOM FEATURES                                       | 15/397722                 | 1/3/2017                |



## SCHEDULE A

| Country                  | Title   | Application Number | Application Date |
|--------------------------|---|--------------------|------------------|
| P.C.T.                   | MULTI-FUNCTION THERMOSTAT WITH CONCIERGE FEATURES   | PCT/US2017/012217  | 1/4/2017         |
| P.C.T.                   | MULTI-FUNCTION THERMOSTAT WITH EMERGENCY DIRECTION FEATURES   | PCT/US2017/012218  | 1/4/2017         |
| P.C.T.                   | MULTI-FUNCTION THERMOSTAT WITH OCCUPANT TRACKING FEATURES   | PCT/US2017/012221  | 1/4/2017         |
| United States of America | MULTI-FUNCTION THERMOSTAT WITH INTELLIGENT SUPPLY FAN CONTROL FOR MAXIMIZING AIR QUALITY AND ENERGY USAGE | 62/485774          | 4/14/2017        |
| United States of America | SYSTEMS AND METHODS FOR HVAC FILTER REPLACEMENT TYPE RECOMMENDATION                                       | 62/485780          | 4/14/2017        |
| United States of America | PREEMPTIVE HEATING, COOLING AND VENTILATION IN RESPONSE TO ELEVATED OCCUPANCY DETECTION VIA PROXY         | 62/485785          | 4/14/2017        |
| United States of America | OCCUPANCY DETECTION VIA PROXY   | 62/485788          | 4/14/2017        |
| United States of America | MULTI-FUNCTION THERMOSTAT WITH AIR QUALITY DISPLAY INCLUDING MITIGATION                                   | 62/485789          | 4/14/2017        |
| United States of America | SYSTEMS AND METHODS FOR MAIL MANAGEMENT VIA A CONTROL DEVICE  | 62/485800          | 4/14/2017        |
| United States of America | USER CONTROL DEVICE AND MULTI-FUNCTION HOME CONTROL SYSTEM  | 15/586045          | 5/3/2017         |
| P.C.T.                   | USER CONTROL DEVICE AND MULTI-FUNCTION HOME CONTROL SYSTEM  | PCT/US2017/030890  | 5/3/2017         |
| United States of America | THERMOSTAT  | 29/610694          | 7/14/2017        |
| United States of America | THERMOSTAT  | 29/617389          | 9/13/2017        |

## SCHEDULE A

| <b>Country</b>           | <b>Title</b>   | <b>Application Number</b> | <b>Application Date</b> |
|--------------------------|--|---------------------------|-------------------------|
| United States of America | DISPLAY SCREEN OR PORTION THEREOF WITH GRAPHICAL USER INTERFACE  | 29/639009                 | 3/2/2018                |
| United States of America | THERMOSTAT WITH AIR QUALITY, SCHEDULING, ENERGY SAVINGS, AND DEVICE CONTROL USER INTERFACE FEATURES                  | 62/640654                 | 3/9/2018                |
| United States of America | THERMOSTAT WITH PREDICTIVE VARIABLE AIR VOLUME (VAV) PERFORMANCE FEATURES  | 15/926314                 | 3/20/2018               |
| P.C.T.                   | THERMOSTAT WITH INTERACTIVE INSTALLATION FEATURES  | PCT/US2018/024833         | 3/28/2018               |
| United States of America | MULTI-FUNCTION THERMOSTAT WITH AIR QUALITY DISPLAY   | 15/951761                 | 4/12/2018               |
| United States of America | SYSTEMS AND METHODS FOR HVAC FILTER REPLACEMENT TYPE RECOMMENDATION  | 15/951842                 | 4/12/2018               |
| P.C.T.                   | MULTI-FUNCTION THERMOSTAT WITH AIR QUALITY DISPLAY   | PCT/US2018/027324         | 4/12/2018               |
| United States of America | THERMOSTAT WITH OCCUPANCY DETECTION VIA PROXY  | 15/953012                 | 4/13/2018               |
| United States of America | MULTI-FUNCTION THERMOSTAT WITH INTELLIGENT SUPPLY FAN CONTROL FOR MAXIMIZING AIR QUALITY AND OPTIMIZING ENERGY USAGE | 15/953162                 | 4/13/2018               |
| United States of America | THERMOSTAT WITH EXHAUST FAN CONTROL FOR AIR QUALITY AND HUMIDITY CONTROL   | 15/953166                 | 4/13/2018               |
| United States of America | THERMOSTAT WITH PREEMPTIVE HEATING, COOLING, AND VENTILATION IN RESPONSE TO ELEVATED OCCUPANCY DETECTION VIA PROXY   | 15/953228                 | 4/13/2018               |

## SCHEDULE A

| Country                  | Title   | Application Number | Application Date |
|--------------------------|---|--------------------|------------------|
| United States of America | MULTI-FUNCTION THERMOSTAT WITH INTELLIGENT VENTILATOR CONTROL FOR FROST/MOLD PROTECTION AND AIR QUALITY CONTROL   | 15/953308          | 4/13/2018        |
| P.C.T.                   | THERMOSTAT WITH OCCUPANCY DETECTION VIA PROXY   | PCT/US2018/027515  | 4/13/2018        |
| P.C.T.                   | THERMOSTAT WITH EXHAUST FAN CONTROL FOR AIR QUALITY AND HUMIDITY CONTROL  | PCT/US2018/027610  | 4/13/2018        |
| P.C.T.                   | MULTI-FUNCTION THERMOSTAT WITH INTELLIGENT SUPPLY FAN CONTROL FOR MAXIMIZING AIR QUALITY AND ENERGY USAGE         | PCT/US2018/027629  | 4/13/2018        |
| P.C.T.                   | THERMOSTAT WITH PREEMTIVE HEATING, COOLING, AND VENTILATION IN RESPONSE TO ELEVATED OCCUPANCY DETECTION VIA PROXY | PCT/US2018/027635  | 4/13/2018        |
| P.C.T.                   | MULTI-FUNCTION THERMOSTAT WITH INTELLIGENT VENTILATOR CONTROL FOR FROST/MOLD PROTECTION AND AIR QUALITY CONTROL   | PCT/US2018/027651  | 4/13/2018        |
| United States of America | TRANSPARENT DISPLAY CONTROL DEVICE  | 62/672155          | 5/16/2018        |
| United States of America | THERMOSTAT WITH DIRECTION HANDOFF FEATURES  | 16/030422          | 7/9/2018         |
| United States of America | THERMOSTAT WITH HALO LIGHT SYSTEM AND EMERGENCY DIRECTIONS  | 62/783580          | 12/21/2018       |
| United States of America | THERMOSTAT WITH HALO LIGHT SYSTEM AND EMERGENCY DIRECTIONS  | 16/246366          | 1/11/2019        |
| United States of America | THERMOSTAT  | 29/677806          | 1/23/2019        |