

Cloudivue

Mobile Access Control



Reference Guide v1.3
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Content

Notice	03
Introduction	03
Prerequisites	03
Supported Hardware	03
Customer Accounts	03
Cloudvue Mobile Access Deployment	04
Deployment Sequence for Partners	04
Add & Configure Mobile Access Devices	04
Appendix – Application Notes	06
ioSmart Reader Firmware Upgrades	06
ioSmart Reader Force Factory Default.....	07
ioSmart Panelless Installation	07
Cloudvue Customer Account Onboarding.....	08
Legal Information	09
Copyright Notice.....	09
Trademark Notice.....	09
Warranty Notice	09
License Agreement	09
Terms of Service	12
Limited Warranty; Disclaimer.....	15
Third Party Claims.....	16
Confidentiality	17
Proprietary Rights	18

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The information in this document was accurate when published as of the Cloudvue v20.6.0 release. Product features and specifications are subject to change without notice.

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Introduction

Cloudvue and ioSmart readers offer choice of cloud managed mobile access control solutions that simplify security and reduce cost. With ioSmart fully integrated Bluetooth low energy (BLE) technology, authorized personnel can access facilities using their smartphones.

From Cloudvue, ioSmart readers can be remotely registered and deployed to support two distinctly different mobile access control application installations:

- 1. ioSmart panel based installations for mobile credential applications** – install as a traditional multi-technology reader on most any access control panel managed system, allowing customers to complement or transition from physical cards and key tags to mobile based credentials.
- 2. ioSmart panelless installations for mobile smart key applications** – install as an autonomous local door controller for mobile-only access to off-network doors or almost any opening with a powered lock. Mobile smart keys provide a completely cloud managed keyless entry solution where panel-based access control systems are cost prohibitive.

Once ioSmart readers have been registered in Cloudvue to a customer account, smartphone users can be enrolled through automated email and SMS text invitations to download and securely register their go Pass mobile app.

From Cloudvue, companies can instantly issue and revoke mobile credentials and/or smart keys to their registered go Pass mobile app users for doors they are authorized to access.

Prerequisites

Supported Hardware

The Kantech ioSmart reader models listed below are supported and require a minimum firmware v1.06 or higher for Cloudvue mobile access compatibility.

1. KT-MUL-MT-KP mullion multi-tech cards with keypad
2. KT-SG-MT-KP single gang multi-tech cards with keypad
3. KT-MUL-MT mullion multi-tech cards
4. KT-SG-MT single gang multi-tech cards
5. KT-MUL-SC mullion smart cards only
6. KT-SG-SC single gang smart cards only

Any ioSmart readers with a manufacturing date code starting at 0720 and shipped from the factory as of July 31st, 2020 have upgraded firmware v1.06 and labeling for Cloudvue mobile access compatibility. The new product labels include the device specific serial number and confirmation code for simplified cloud registration.

All ioSmart readers produced and shipped from the factory prior to July 31st, 2020 can be firmware upgraded to v1.06 over RS485 as per standard Kantech supported methods. Refer to the Appendix section for specific guidance on how to perform in-field firmware upgrades and/or force factory default settings that may be required.

Customer Accounts

Cloudvue partners must first create and setup a customer specific account under their designated partner code structure for proper customer account onboarding.

Only Cloudvue users with a role of Administrator or Enterprise that have been assigned to customer account(s) will be able to add, configure, and manage mobile access devices for an account. If users have been assigned to more than one account, when they initially login to Cloudvue they will be presented with their account list to specifically select and continue login.

When a customer account is created, each account automatically includes two mobile access pre-subscription startup seats for credential enrollment to facilitate initial system installation and commissioning for handover to customer. Additional mobile access subscription seats can be added to any customer account at any time.

Refer to the Appendix section for specific guidance on customer account onboarding and user role management.

Cloudvue Mobile Access Deployment

Deployment sequence for partners

With all pre-requisites out of the way, the below steps summarize the typical sequence partners should follow for each customer deployment.

1. Login to the customer account via the Cloudvue web portal. (<https://www.cloudvue.com/login>)
2. Add and enroll a credential record for mobile access to register and validate the go Pass mobile app for receiving mobile credentials and/or smart keys from the account.
3. Add and configure ioSmart mobile access devices on the account.
4. Edit the previously created credential record and assign access privileges for all ioSmart mobile access devices that have been added to the account.
5. Launch or refresh the go Pass mobile app to receive mobile credentials and/or smart keys for all ioSmart mobile access devices assigned to the credential record.
6. Use the go Pass mobile app to initiate access requests for each reader/door to complete the commissioning process.
7. Prepare for customer handover:
 - Create additional Cloudvue users with proper roles, add them to the account and the corresponding mobile access devices they will be authorized to manage.
 - Add the appropriate subscriptions for mobile access user seats based on customer's credential quantity requirements.
 - Create any Schedules and/or Templates as needed for the assignment of access to credentials.
 - Start adding credentials for mobile enrollment and assigning access as needed.

Add & Configure Mobile Access Devices

Mobile access devices are ioSmart readers that will be specifically registered to a customer account and deployed for either Panel or Panelless installation.

1. Navigate to the Views tab on the left and select the Account name at the top of the list.
2. Once in the Account view, select the Settings icon on the right menu bar to access the Account settings.
3. Select the + to Add New Device displayed in the upper right of the main window bar.
4. Select the Add Mobile Access Device option.
 - Enter the Device Name (This is the name of the reader or door as it will appear in all Cloudvue interfaces and the go Pass mobile app).
 - Enter the Serial Number (This is the ioSmart 8-digit serial number with the additional 4-digit confirmation code as printed on the product label).
 - i. The data entry format of the serial number and confirmation code are case sensitive and separated by a hyphen, e.g. 902069B-C342.
 - ii. Additionally, one can use the Tyco Cloudvue mobile app to scan and capture the complete number broadcasted by the reader's BLE signal.
 - Select the Function Mode (This determines how the ioSmart reader will be registered in Cloudvue and programmed to function for either a Panel or Panelless installation).
 - Assign a Location (Each device must be assigned an address-based location which is time zone sensitive. Locations can be created in advance to appear in the pick list or can be newly created using the "ADD NEW" option at time of adding a new device. If no Locations exist when adding the first device, the default Account information is displayed for convenience and can be modified prior to saving. Locations will appear as Sites in the go Pass mobile app for logically grouping assigned access to readers and/or doors).

- Device Configuration Settings (Based on the Function Mode selected for the device, you can review and edit the default settings as needed prior to saving. You can always return an edit the configuration settings at any time after deployment).
- Click SAVE to register the ioSmart device. To complete the programming and commissioning process, each device will initially require receiving its first access request from any mobile user with an issued credential or smart key for the ioSmart device. After the first access request has been initiated, any subsequent access requests from any mobile users will be processed accordingly.

Add & Enroll Credentials for Mobile Access

Credentials are individual credential holders (people) that are access controlled based on the readers or doors assigned to their credential record.

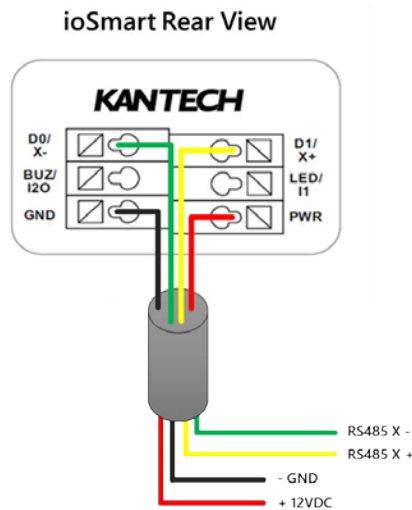
1. Select the Account icon on the right menu bar and go to the CREDENTIALS tab, click on ADD CREDENTIAL.
 - Enter First & Last Name of the credential holder.
 - Assign a Primary Location (This is a data reference field to help group and identify credential holders by location).
 - Select Mobile Access (This enables the credential record to be enrolled as a mobile access user for receiving mobile credentials and/or smart keys).
 - Select the Country of the mobile phone number.
 - Enter the mobile phone number (the country code prefix is not required for US or Canada but is required for all other countries).
 - Enter the email address of the credential holder.
 - Activation Date (The default is always the current day of issuance and can be changed to a future date if the credential is to be pending and not made immediately active).
 - Expiration Date (The default is blank which means the credential never expires but can be assigned a future date for scheduled expiration).
 - Assign Access
 - i. Access can be assigned at any time and is not required to create and enroll a credential record for mobile access.
 - ii. ioSmart devices configured as panel-based readers automatically use the system default "Always Valid 24/7" schedule for mobile credential validity.
 - iii. ioSmart devices configured as Panelless doors must be assigned a schedule for mobile smart key validity, allowing uniquely scheduled access privileges to be issued and managed per mobile user.
 - iv. If Schedules & Templates have not been created in advance for use with Panelless doors for Smart Key assignment, the system default schedule "Always Valid 24/7" can be used.
 - v. Access Templates can be used to easily load a credential record with a preconfigured list of readers and/or doors and their respective schedules.
 - vi. Assign Custom can be used to individually add readers and/or doors with their respective schedules.
 - Click SAVE, the credential holder will automatically receive an email and SMS text invitation from the account name, with instructions to download the go Pass mobile app and follow a secure registration process.

Appendix – Application Notes

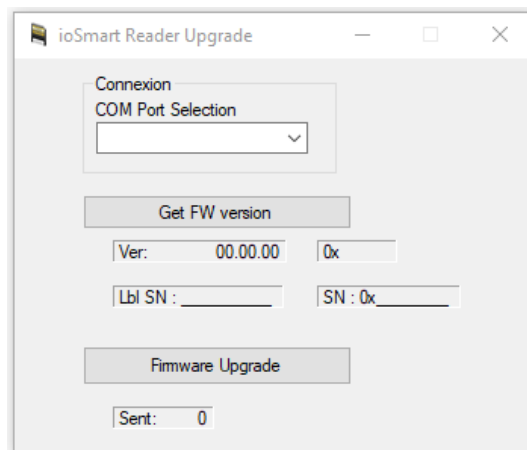
ioSmart Reader Firmware Upgrades

ioSmart readers require a minimum firmware v1.06.20 or higher, available for download from the Kantech Support section of the website: <https://www.kantech.com/Support/SoftwareDownloads.aspx>

Firmware upgrades are supported over the ioSmart reader RS485 communications port and can be performed via the following options:



1. For Kantech system installations that have ioSmart readers connected over RS485 to a KT-1 or KT-400, firmware can be remotely upgraded from the EntraPass software or the KT-Standalone Web interface based on the customer specific system deployment.
 - To verify the ioSmart reader has been properly upgraded and is broadcasting its BLE signal, use the Tyco Cloudvue mobile app to SCAN and identify the reader serial number with confirmation code required for device registration. The serial number and confirmation code should appear in the Tyco Cloudvue mobile app as a 13-character string.
 - If the ioSmart reader is not broadcasting its BLE signal, it may be necessary to force factory default the ioSmart reader after a firmware upgrade based on its prior configuration.
2. For ioSmart readers not on a Kantech system installation as stated above, firmware can be upgraded via a Windows PC or laptop with a USB to RS485 converter and the ioSmart reader upgrade.exe utility.
 - Launch the ioSmart reader upgrade.exe and you will be able to select the COM port for the discovered USB to RS485 converter if it has been successfully configured and recognized by the Windows operating system.
 - With an ioSmart reader properly connected to the RS485 converter and powered, click on "Get FW version" to confirm communications and verify current reader firmware.
 - Click on "Firmware Upgrade" and select the new firmware (.bin) file. Upon a successful upgrade the reader will reboot with an LED color cycle and beep sequence confirmation.
 - Click on "Get FW version" to verify the new firmware version.

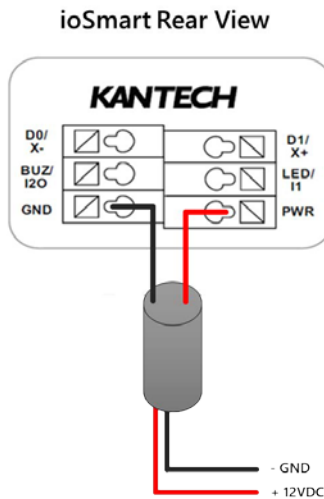


- To verify the ioSmart reader has been properly upgraded and is broadcasting its BLE signal, use the Tyco Cloudvue mobile app to SCAN and identify the reader serial number with confirmation code required for device registration. The serial number and confirmation code should appear in the Tyco Cloudvue mobile app as a 13-character string.
- If the ioSmart reader is not broadcasting its BLE signal, it may be necessary to force factory default the ioSmart reader after a firmware upgrade based on its prior configuration.

ioSmart Reader Force Factory Default

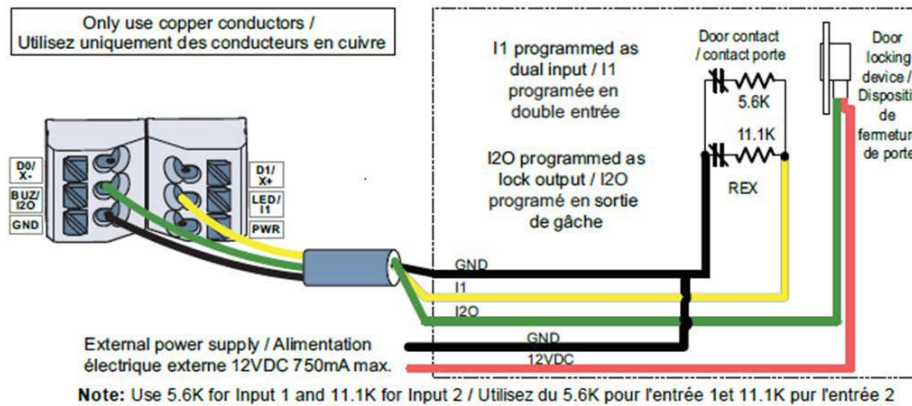
Under certain conditions it may be necessary to force factory default an ioSmart reader after a firmware upgrade if its BLE signal is not being broadcast due to a prior configuration. Forcing a factory default will delete all custom settings from the reader.

1. Place a jumper wire to short DO and BUZ terminals.
2. Place a jumper wire to short D1 and LED terminals.
3. Apply power to the reader.
4. A simultaneous sequence of four beeps and flashes, four times is a signal of a successful factory default. A sequence of rapid beeps and flashes for four seconds is the signal of an unsuccessful factory default.
5. Remove jumper wires and re-apply power.



ioSmart Panelless Installation

All ioSmart readers are packaged with installation instructions and resistors to support a panelless installation, refer to the diagram for dual input with optional lock output wiring. In this configuration, the ioSmart reader is intended to be installed in a secure/protected area to prevent against any potential security risk of circuit tampering.



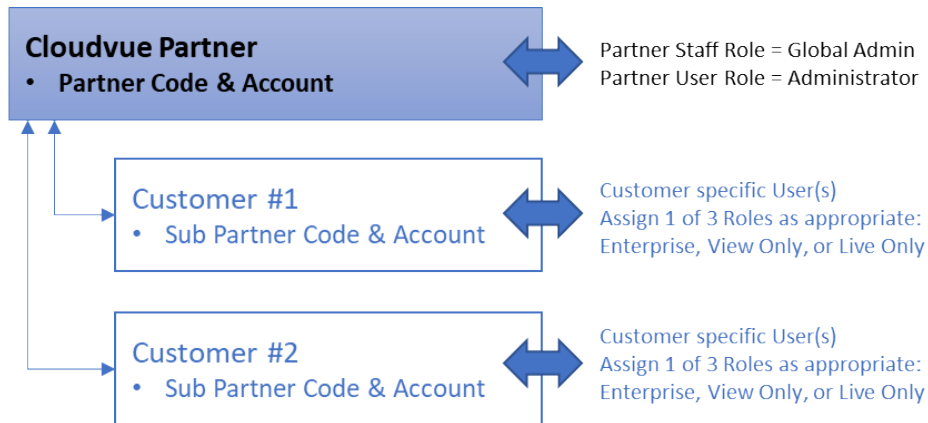
CloudVue Customer Account Onboarding

With an authorized Cloudvue partner code and established staff role of Global Admin, partners can login to the Cloudvue Enterprise Manager web portal to create accounts for each customer, including for their own business as partners to satisfy any testing, training, and/or demonstration needs. (<https://dashboard.cloudvue.com/login>)

The recommended structure for partners is to always create a sub partner code and corresponding account for each unique customer environment to properly facilitate all aspects of cloud service management and reporting.

All customer specific devices should be assigned to the sub partner code and account of the customer. Users can then be assigned and limited to specific accounts and devices, allowing for proper user role management between the partner and their respective customers.

Below is a simple representation of the typical partner and customer relationship hierarchy.



The typical account setup process requires partners to login to Cloudvue Enterprise Manager with a staff role of Global Admin and perform the following steps:

1. Navigate to upper right to + Add Partner
 - Parent Partner (Enter or select the Cloudvue partner code)
 - Company Name (Enter the customer reference name to create a sub partner code under the parent partner)
 - SUBMIT to save
2. Navigate to upper right to + Add Account
 - Partner (Enter or select the customer sub partner code created above)
 - Name (Enter the customer reference name for the account, for simplicity it can be the same reference name used for the sub partner code)
 - Enter all additional customer account specific information
 - SUBMIT to save
3. Add the newly created customer account to partner or customer specific Cloudvue users so they can manage accordingly based on their roles and the devices they have been added to within the account.

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By using the Tyco Software and Tyco Software Updates, you represent and warrant that you are not located in any such country or on any such list. You also agree that you will not use the Tyco Software or the Tyco Software Updates for any purposes prohibited by United States law, including, without limitation, the development, design, manufacture or production of missiles, nuclear, chemical or biological weapons. 9. Government End Users: The Tyco Software, Tyco Software Updates, and related documentation are "Commercial Items", as that term is defined at 48 C.F.R. §2.101, consisting of "Commercial Computer Software" and "Commercial Computer Software Documentation", as such terms are used in 48 C.F.R. §12.212 or 48 C.F.R. §227.7202, as applicable. Consistent with 48 C.F.R. §12.212 or 48 C.F.R. §227.7202 -1 through 227.7202-4, as applicable, the Commercial Computer Software and Commercial Computer Software Documentation are being licensed to U.S. Government end users (a) only as Commercial Items and (b) with only those rights as are granted to all other end users pursuant to the terms and conditions herein. Unpublished-rights reserved under the copyright laws of the United States. 10. Controlling Law and Severability: This License will be

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14. H.264/AVC Notice: To the extent that the Tyco Software and Tyco Software Updates contain AVC encoding and/or decoding functionality, commercial use of H.264/AVC requires additional licensing and the following provision applies: THE AVC FUNCTIONALITY IN THE TYCO SOFTWARE AND TYCO SOFTWARE UPDATES ARE LICENSED HEREIN ONLY FOR THE PERSONAL AND NON-COMMERCIAL USE OF A CONSUMER TO (i) ENCODE VIDEO IN COMPLIANCE WITH THE AVC STANDARD ("AVC VIDEO") AND/OR (ii) DECODE AVC VIDEO THAT WAS ENCODED BY A CONSUMER ENGAGED IN A PERSONAL AND NON-COMMERCIAL ACTIVITY AND/OR AVC VIDEO THAT WAS OBTAINED FROM A VIDEO PROVIDER LICENSED TO PROVIDE AVC VIDEO. INFORMATION REGARDING OTHER USES AND LICENSES MAY BE OBTAINED FROM MPEG LA L.L.C. SEE [HTTP://WWW.MPEGLA.COM](http://www.mpegla.com).

16. Use of Tyco Cloud: Your use of the Tyco Cloud service and purchases made through it are subject to subject additional terms available at <https://www.tyco.com>.

Terms of Service

These Johnson Controls Terms of Service (this "Agreement") govern your use of the JCI platform as a service, software as a service, or other hosted offering (the "Services") and any software offered in conjunction with or required to use with the Services (the "Software") made available to you under this Agreement. This Agreement is a binding legal contract between you or the entity on whose behalf you accept this Agreement ("you" and "your") and the Johnson Controls affiliate identified in Section 19 as offering the applicable Service ("JCI", "we", or "us"). This Agreement includes the Supplemental Terms set forth in Section 13.

By entering into an Order or by accessing or using the Services or the Software, you agree that you have read, understand, and agree to be bound by this Agreement, as amended from time to time. If you do not or cannot agree to be bound by this Agreement and JCI's Privacy Notice you may not access or use the Services or Software. If you are accessing or using the Services and Software on behalf of a person or an organization, you are agreeing to this Agreement for that person or organization and representing to JCI that you have the authority to bind that person or organization to this Agreement. This Agreement requires the use of binding arbitration to resolve disputes rather than jury trials or class actions. Please see Section 18 for details, including instructions to follow in order to opt out of binding arbitration and the class action waiver.

Services. Subject to your continuing compliance with the terms of this Agreement, you may access and use the Services for your internal business or personal use only, subject to the Documentation. The Service includes access to JCI's then-current generally available documentation for use and operation of the Service (the "Documentation"). "Order" means each ordering document that references this Agreement or the Services and is between you and JCI (or one of JCI's authorized distributors or resellers) pursuant to which you purchase a term-based right to use to the Services.

Authorized Users; Your Account. You will only permit the maximum number of individuals ("Authorized Users") identified on the Order, if any, to utilize a username and password ("Account Information"). You will ensure the security and confidentiality of your Account Information, and you are responsible for all activities performed in the Service with your Account Information. To use the Services, you must register for a user account by providing accurate and complete registration information. You will not permit any other person to use your account. By creating an account, you represent and warrant that you are an Authorized User. If you are an employer, you will ensure that all of your Authorized Users comply with the terms of this Agreement, and you will be jointly and severally liable for all actions of Authorized Users related to their access or use of the Service, and any failure by such Authorized Users to comply with the terms of this Agreement will constitute a breach by you; further, you will promptly notify JCI if you discover any possible misuse, loss, or disclosure of your or your Authorized Users' Account Information. JCI reserves the right to restrict who is eligible for an account.

Updates; Availability of Features and Functions. JCI may, at any time and in its sole discretion, modify, deprecate, discontinue, upgrade, or release a new version of the Service, or any portion of its features and functions. Unless otherwise expressly and separately agreed to by JCI, any modification or new version of the Service will be subject to the terms of this Agreement. You may be required to pay additional fees to access new features or functions. Certain features and functions of the Service may be made available based on specific configuration of products and may not be available to you without payment of additional fees. JCI will use commercially reasonable efforts to notify you of any material detrimental change to or discontinuation of the Service. If you establish that a change made by us pursuant to this Section has a materially adverse effect on your authorized use of the Service, you may notify us in writing, and we may propose resolutions or workarounds. If we are unable to provide you with a resolution or workaround reasonably satisfactory to you, then notwithstanding anything to the contrary, you may terminate this Agreement upon written notice to us. JCI may change, discontinue, or deprecate any APIs utilized for the Service, if any, from time to time but will use commercially reasonable efforts to continue supporting the previous version of any API changed, discontinued, or deprecated for twelve (12) months after the change, discontinuation, or deprecation unless supporting the previous version: (a) would pose a security or intellectual property issue; (b) is economically or technically burdensome; or (c) is rendered impossible or impractical as a result of a requirement of law or request from governmental entities. You agree that JCI will not be liable to you or to any third party for any modification, suspension, or discontinuance of the Services or any part of the Services, other than to refund any pre-paid, unused fees for the discontinued Services.

Availability Service Level. Unless a different Services availability level is set forth in the Order or the Supplemental Terms, JCI shall use commercially reasonable efforts to make the Services available twenty four (24) hours a day, seven (7) days a week, except for unavailability of Trial Services and unavailability due to (i) system maintenance and planned downtime (of which JCI shall use reasonable efforts to give prior notice) and (ii) any unavailability caused by: [a] your software or hardware or Third Party Software or hardware; [b] circumstances beyond JCI's reasonable control, including but not limited to internet service provider and mobile carrier service availability; and [c] misuse of the Services or other violations of this Agreement by you.

Restrictions. You will not (and will not allow others to): (a) access or use the Services in any manner or for any purpose, other than as expressly permitted by this Agreement; (b) publish, distribute, license, sell, rent, lease, host or otherwise commercially exploit the Service; (c) modify, alter, tamper with, copy, or create derivative works of the Service; (d) decompile, disassemble, reverse engineer, or otherwise attempt to derive the source code of any software included in the Services or the trade secrets embodied in the Service, except to the extent the foregoing restrictions are prohibited by applicable law or by the licensing terms governing the use of open-source components that may be included with the Services; (e) use the Service for purposes of developing a similar or competing product or service or other commercial offering; (f) remove any copyright, trademark, proprietary rights, disclaimer, or warning notice included on or embedded in any part of the Documentation or Service; (g) use the Service to store or transmit any Customer Data (as defined in Section 16) that contains or is used to initiate a denial of service attack, software viruses or other harmful or deleterious computer code, files or programs such as Trojan horses, worms, time bombs, cancelbots, or spyware; (h) jeopardize the security of your Service account or anyone else's account (such as allowing someone else to log in to the Service as you); (i) interfere with the proper working of the Service (including by placing an unreasonable load on the Service infrastructure); (j) work around any technical or security restrictions or limitations in the Services; (k) access or attempt to access any of the Services by means other than an interface provided by JCI; or (l) use any Internet-based features in any way that could interfere with others' use of them or to try to gain access to or use any service, data, account, or network in an unauthorized manner.

Software. Software provided to you as part of the Service (e.g. Software embedded in our equipment at your location or on your equipment or systems, mobile applications, etc.) is provided under these terms. Your use of the Software shall be solely for the purpose of enabling you to use and enjoy the benefit of the Services as permitted under this Agreement. The Software may periodically check for updates that will be automatically installed on your equipment or systems without providing any additional notice or requiring any additional consent from you. By accepting this Agreement, you agree to receive these types of automatic updates without any additional notice, and you consent to these automatic updates. If you do not want updates, you must stop using the Services and Software and terminate your account; otherwise, you will receive these updates automatically. You acknowledge that installing updates may be required for continued use of the Services and the Software, and you agree to promptly install any updates provided by JCI.

Grant of License. During the term of this Agreement, JCI grants you and your individual employees a revocable, non-transferable, non-sublicensable, nonexclusive license to use the object code version of the Software and any Documentation for your internal use only, subject to all Scope Restrictions. The order document under which you have licensed the Software may contain additional terms limiting the scope your license, including, but not limited to, a specified number of users or specific systems, licensed facilities, geographic areas, etc. (collectively, "Scope Restrictions"). In the event the Software is furnished for use in connection with a particular JCI system or hardware product, it may only be used in conjunction with that JCI system or hardware product. If the Software is furnished embedded in a JCI system or hardware product, the Software may not be extracted or used separately from that system or product. "Documentation" means JCI then current generally available documentation for use and operation of the Software. Documentation is deemed included in the definition of Software. The term "Software" will be deemed to include any updates, bug fixes, and versions (collectively, "Enhancements") that JCI may, in its discretion, make available to you. You are responsible for ensuring your employees comply with all relevant terms of this Agreement and any failure to comply will constitute a breach by you.

Restrictions. Your use of the Software must be in accordance with the Documentation. You will be solely responsible for ensuring your use of the Software is in compliance with all applicable foreign, federal, state and local laws, rules and regulations. You may not (i) copy or distribute the Software except to the extent that copying is necessary to use the Software for purposes set forth herein; provided you may make a single copy of the Software for backup and archival purposes; (ii) modify or create derivative works of the Software; (iii) decompile, disassemble, reverse engineer, or otherwise attempt to derive the trade secrets embodied in the Software, except and only to the extent that such activity may be expressly permitted, notwithstanding this limitation or another limitation contained in this agreement, either by applicable law or, in the case of open source software, the applicable open source license; (iv) use the Software for purposes of developing a competing product or service; (v) remove any copyright, trademark, proprietary rights, disclaimer, or warning notice included on or embedded in any part of the Documentation and Software; (v) assign, sublicense, rent, timeshare, loan, lease or otherwise transfer the Software, or directly or indirectly permit any third party to use or copy the Software. Under no circumstances will JCI be liable or responsible for any use, or any results obtained by the use, of the services in conjunction with any services, software, or hardware that are not provided by JCI. All such use will be at your sole risk and liability.

Metering Devices. The Software may contain technology-based metering devices and passive restraints to regulate usage. For example, the Software may contain a license file limiting use to the licensed number of concurrent users or named users or may temporarily restrict usage until license and other fees have been paid in full. You acknowledge that such restraints and metering devices are a reasonable method to ensure compliance with the license and have been factored into the license and other fees and the Agreement as a whole. You agree that You will not circumvent, override, or otherwise bypass such metering devices and restraints that regulate the use of the Software.

Compliance. The use of the Services and any associated Software may require your compliance with local, national and foreign laws and regulations, including without limitation, those pertaining to personal data protection, privacy and security, any laws relating to the collection and sharing of video or audio with third parties, or any laws requiring notice to or consent of persons with respect to the use of video or audio. You are solely responsible for compliance with all applicable laws and regulations relating to the installation, servicing or use of the Service and Software, including but not limited to those laws and regulations pertaining to personal data protection, privacy and security, any laws relating to the collection and sharing of video or audio with third parties, or any laws requiring notice to or consent of persons with respect to the use of video or audio. By accessing or using the Services and Software, you warrant that you have all necessary rights and permissions to enter into this Agreement and your doing so does not violate any foreign, federal, state and local laws, rules, and regulations applicable to your access or use of the Services and Software. You will ensure that you have all necessary rights and permissions to use any Customer Data that you submit to or otherwise use in connection with the Services and Software.

Evaluation Offerings. From time to time, we may offer you access to certain Services and Software, and certain pre-release versions, features and functions of the Services and Software, to you on a beta, trial, or evaluation basis (the "Trial Products"). Such Trial Products are provided to you free of charge, except as otherwise specified by us or as otherwise specified in your Order, and may only be used for your

own internal testing and evaluation of such Trial. We may limit, suspend, or terminate your access to any portion of the Trial Products for any reason in our sole discretion. All restrictions, limitations, and obligations related to your access to and use of the Services and Software set forth in this Agreement shall apply to your access and use of the Trial Products. Any Trial Services are subject to change without notice and may differ substantially upon commercial release. Trial Services are provided "as-is" and without warranty of any kind.

Third Party Software, Products and Services. To the extent any software licensed from third parties ("Third Party Software") is provided with or incorporated into the Service or Software, you will comply with, and agree to be bound to, the terms and conditions of the applicable third party licenses associated with the Third Party Software, in addition to the terms and restrictions contained in this Agreement. All relevant licenses for the Third Party Software are provided at www.johnsoncontrols.com/techterms or within the Services or Software. By using the Services or Software you are also agreeing to be bound to the terms of such third-party licenses. If provided for in the applicable third party license, you may have a right to reverse engineer such open source software or receive open source code for such open source software for use and distribution in any program that you create, so long as you in turn agree to be bound to the terms of the applicable third party license, and your programs are distributed under the terms of that license. If applicable, a copy of such open source code may be obtained free of charge by contacting your Johnson Controls representative.

Term and Termination. This Agreement will commence on the earlier of: (a) the date you enter into an Order; or (b) the date you first access or use the Service (the "Effective Date") and will remain in effect so long as you continue to access or use the Services, or until terminated in accordance with the provisions of this Agreement (the "Term"). Either party may terminate this Agreement on written notice to the other party if the other party is in material breach of its obligations hereunder and fails to cure the breach within thirty (30) days of such written notice. In addition, either party may, in its sole discretion, terminate this Agreement on written notice to the other party upon the bankruptcy or insolvency of the other party or upon the commencement of any voluntary or involuntary winding up, or upon the filing of any petition seeking the winding up of the other party. Upon any termination or expiration of this Agreement, the use and access rights granted to you under this Agreement will automatically terminate, and you will have no further right to use or access the Services.

Suspensions. JCI may suspend your access to or use of the Service, in whole or in part, immediately without notice to you, if JCI determines that: (a) you are in breach of this Agreement; (b) any amounts owed by you remain past due; (c) it is reasonably necessary to prevent unauthorized access to the Service; or (d) your or your Authorized Users' access or use of the Service: (i) poses a security risk to the Service or any third party; (ii) may adversely impact the Service or the systems related thereto; (iii) may subject us or a third party to any liability; or (iv) may be fraudulent or prohibited by applicable law, rule, or regulation. You will remain responsible for all Fees for the use of the portions of the Services not suspended.

Fees; Taxes. You will pay JCI (or its distributor or reseller) all fees identified on or referenced in the Order(s) ("Fees") within thirty (30) days of the invoice date, unless a different period is specified in the applicable Order, and payments not made within such time period shall be subject to late charges equal to the lesser of: (a) one and one-half percent (1.5%) per month of the overdue amount; or (b) the maximum amount permitted under applicable law. All taxes, duties, fees and other governmental charges of any kind (including sales and use taxes, but excluding taxes based on the gross revenues or net income of JCI) that are imposed by or under the authority of any government or any political subdivision thereof on the fees for the Service shall be borne solely by you, unless you can evidence tax exemption and shall not be considered a part of a deduction from or an offset against such fees. If you lose tax exempt status, you will pay any taxes due as part of any renewal or payment. You will promptly notify JCI if your tax status changes. You will pay all court costs, fees, expenses, and reasonable attorneys' fees incurred by JCI in collecting delinquent Fees.

Service-Specific and Supplemental Terms. The terms before and after this Section 9 (the "Base Terms") apply generally to all Services and Software. Applicable service-specific supplemental terms are located at www.johnsoncontrols.com/techterms (the "Supplemental Terms"). The Supplemental Terms supplement the Base Terms and are a part of the Agreement. If there is a conflict between such Supplemental Terms and the Base Terms, the Supplemental Terms will control. The privacy policy is available here: <https://www.johnsoncontrols.com/legal/privacy>

Limited Warranty; Disclaimer.

Software. JCI warrants that (i) for a period of thirty (30) days from delivery initial delivery to you (the "Software Warranty Period"), the Software will operate in substantial conformity with its Documentation; and (ii) it shall use screening software to scan the Software prior to delivery for viruses, Trojan horses, and other malicious code. If, during the Software Warranty Period, you notify JCI of any non-compliance with the foregoing warranties, JCI will, in its discretion: (a) use commercially reasonable efforts to provide the programming services necessary to correct any verifiable non-compliance with the foregoing warranties; or (b) replace any non-conforming Software; or if neither of foregoing options is reasonably available to JCI, (c) terminate this Agreement in whole or in part, and refund to You the fees, if any, paid for the non-conforming Software (less depreciation calculated on a three (3)-year straight-line basis commencing on the date of initial

delivery to you). JCI shall not be liable for failures caused by third party hardware and software (including your own systems), misuse of the Software, or your negligence or willful misconduct.

Service. JCI warrants that the Service will perform substantially in conformance with its Documentation throughout the Term. Except to the extent prohibited by applicable law, JCI's sole obligation and your sole and exclusive remedy for breach of the foregoing warranty shall be that JCI will use commercially reasonable efforts to correct the non-conforming Service functionality without charge.

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Third Party Claims.

You will indemnify, defend, and hold the JCI Parties harmless from any claims, damages, losses, liabilities, costs and expenses (including reasonable attorney's fees) arising out of or related to a Claim arising out of or related to: (a) your use of the Services and Software; (b) any breach of this Agreement by you, your authorized users or representatives; or (c) any allegation that the materials or content that you submit or otherwise make available under the Agreement, including the Customer Data, infringe, misappropriate or violate the intellectual property rights of a third party. JCI must promptly notify you in writing of any such claim, permit you sole authority to control the defense or settlement of the claim, and provide you reasonable assistance in connection therewith.

User Limitations. In addition to any applicable Supplemental Terms, the following limitations apply to the Services:

The Services are intended to be accessed and used for non-time-critical information, not as a primary and real-time alarm and/or life safety monitoring platform. THE SERVICES ARE NOT INTENDED TO PROVIDE ANY EMERGENCY, EMERGENCY NOTIFICATION, MISSION CRITICAL, OR SAFETY RELATED FUNCTIONALITY, AND YOU WILL NOT USE THE SERVICES IN SUCH MANNER. The Services are subject to sporadic interruptions and failures for a variety of reasons beyond JCI's control, including cellular, Wi-Fi and other communications intermittency, service provider uptime, mobile carriers, among others, as well as routine system maintenance. You acknowledge these limitations and agree that JCI is not responsible for any damages allegedly caused by any interruption, failure, or delay of the Services. If you use the Services in any of the prohibited applications identified in this Section: (i) you acknowledge that such use is at your sole risk; (ii) you agree JCI are not liable, in whole or in part, for any claim or damage arising from such use; and (iii) you will indemnify, defend and hold JCI harmless from and against any and all claims, damages, fines, sanctions, losses, costs, expenses, and liabilities arising out of or in connection with such use.

Under no circumstances will JCI be liable or responsible for any use, or any results obtained by the use of, the Services or Software in conjunction with any services, software, or hardware that are not provided by JCI. All such use will be at your sole risk and liability.

Limitation of Liability. TO THE MAXIMUM EXTENT PERMITTED BY LAW, IN NO EVENT SHALL THE JCI PARTIES BE LIABLE TO YOU OR ANY THIRD PARTY, UNDER ANY CAUSE OF ACTION OR THEORY OF LIABILITY EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGES, FOR ANY: (A) SPECIAL, INCIDENTAL, CONSEQUENTIAL, PUNITIVE, OR INDIRECT DAMAGES; (B) LOST PROFITS, REVENUES, DATA, CUSTOMER

OPPORTUNITIES, BUSINESS, ANTICIPATED SAVINGS, OR GOODWILL; AND (C) BUSINESS INTERRUPTION. IN ANY CASE, THE ENTIRE AGGREGATE LIABILITY OF THE JCI PARTIES UNDER THIS AGREEMENT FOR ALL DAMAGES, LOSSES, AND CAUSES OF ACTION (WHETHER IN CONTRACT, TORT (INCLUDING NEGLIGENCE), OR OTHERWISE) SHALL BE LIMITED TO THE FEES PAID BY YOU FOR THE SERVICE DURING THE TWELVE (12) MONTHS IMMEDIATELY PRECEDING THE FIRST EVENT GIVING RISE TO THE LIABILITY. THE LIMITATIONS AND EXCLUSIONS ALSO APPLY IF THIS REMEDY DOES NOT FULLY COMPENSATE YOU FOR ANY LOSSES OR FAILS OF ITS ESSENTIAL PURPOSE. SOME JURISDICTIONS DO NOT ALLOW THE LIMITATION OF INCIDENTAL, CONSEQUENTIAL, OR OTHER DAMAGES. IN SUCH AN EVENT, THIS LIMITATION WILL NOT APPLY TO YOU TO THE EXTENT PROHIBITED BY LAW.

Confidentiality

You acknowledge that all information disclosed by JCI to you, whether orally or in writing, that is designated as confidential or that reasonably should be understood to be confidential given the nature of the information and the circumstances of disclosure, including the Service, the Software and the ideas, methods, techniques, and expressions thereof contained in the Service and the Software, business and marketing plans, technology and technical information, product plans and designs, and business processes disclosed by JCI (collectively, "JCI Confidential Information") constitute confidential and proprietary information of JCI, the unauthorized use or disclosure of which would be damaging to JCI. However, JCI Confidential Information does not include any information that: (i) is or becomes generally known to the public without breach of any obligation owed to JCI; (ii) was known to you prior to its disclosure by JCI without breach of any obligation owed to JCI; (iii) is received from a third party without breach of any obligation owed to JCI; or (iv) was independently developed by you.

You agree to: (i) protect the JCI Confidential Information using the same degree of care that you use to protect the confidentiality of your own confidential information of like kind (but not less than reasonable care); (ii) not use any JCI Confidential Information for any purpose outside the scope of this Agreement; and (iii) except as otherwise expressly provided in this Agreement or authorized by JCI in writing, limit access to JCI Confidential Information to those of your employees and contractors who need that access for purposes consistent with this Agreement and who have signed confidentiality agreements with you containing protections not materially less protective of the JCI Confidential Information than those herein. You may disclose JCI Confidential Information to the extent compelled by law to do so, provided you give JCI prior notice of the compelled disclosure (to the extent legally permitted) and reasonable assistance, at JCI's cost, if JCI wishes to contest the disclosure.

Equitable Remedy. You recognize and agree that a remedy at law for damages will not be adequate to fully compensate JCI for the breach of Sections 1 (Services), 2 (Software) or 14 (Confidentiality). Therefore, JCI will be entitled to temporary injunctive relief against you without the necessity of proving actual damages and without posting bond or other security. Injunctive relief will in no way limit any other remedies JCI may have as a result of breach by you of the foregoing Sections or any other provision of this Agreement.

Data. You acknowledge and consent to our collection, processing, and use of the Customer Data as described in this Section.

Data Security. We are committed to protecting the security and integrity of the Customer Data. We will maintain an information security program that is proportionate to the multiple and diverse risks associated with networked technologies.

Customer Data. As between you and us, you own all right, title and interest in and to the Customer Data. You grant to us and our affiliates a non-exclusive, worldwide, sublicensable, perpetual, paid-up right and license to use the Customer Data to provide, maintain, protect, and improve the Service and to improve and develop our products and services. You will secure and maintain all legally required consents and rights and have provided all legally required notices to provide the Customer Data to us. You are solely responsible for all Customer Data including the creation or maintaining of backups and copies of all Customer Data and the accuracy, integrity, quality, legality, and appropriateness of the Customer Data. JCI does not make any representations and warranties with respect to the Customer Data. "Customer Data" means data you or anyone acting on your behalf runs on the Service, causes to interface with the Service or submits to the Service.

De-Identified Data. Notwithstanding the other terms in this Agreement, we may use or disclose De-Identified Data for any purpose. "De-Identified Data" means Customer Data that does not identify you directly or by inference.

Location of Data. Customer Data may be transferred to or stored and/or processed in the United States or other countries in which we or our affiliates or subcontractors operate. We will act in accordance with the requirements of this Agreement regardless of where we store or process the Customer Data.

Legal Purpose Disclosure. Notwithstanding the other terms of this Section, we may use or disclose Customer Data as we believe in good faith to be necessary or appropriate: (i) under applicable law, including laws outside your country of residence; (ii) to comply with legal process; (iii) to respond to lawful requests from public or government authorities; and (iv) to enforce this Agreement or allow us to pursue available remedies or limit the damages that we may sustain.

Personal Information. We are dedicated to safeguarding personal information and processing it in a manner consistent with user expectations. Please review the Johnson Controls Privacy Notice <http://www.johnsoncontrols.com/legal/privacy> for information about how JCI handles personal information collected through the Services.

Proprietary Rights.

Service and Software. Except for the limited license rights and other terms expressly set forth in this Agreement, JCI and its licensors reserve all right, title, and interest (including all intellectual property rights) in and to the Services and Software. The Software is licensed, not sold. All trademarks, logos, and service marks ("Marks") displayed on the Services are the property of JCI or of their respective owners. You are not permitted to use any of the Marks without the applicable prior written consent of JCI or such respective owners.

Feedback. Any suggestions, information, comments, or other feedback provided by you to JCI regarding the Services or any other products or services provided by JCI (including, without limitation, with respect to modifications, enhancements, improvements, and other changes to the Services or other products or services provided by JCI) (collectively, "Feedback") is voluntary, and you hereby grant to JCI an irrevocable, non-exclusive, perpetual, world-wide, royalty-free, transferrable license to use (and authorize others to use) any Feedback without restriction.

Governing Law and Arbitration, Class-Action Waiver and Jury Waiver.

Governing Law. You agree that this Agreement, and any claim, dispute, action, or issue arising out of or relating to this Agreement or your use of the Services is governed by the Federal Arbitration Act, applicable federal law, and the laws of the State of Wisconsin without reference to conflict of laws principles. Unless a dispute would be governed by an applicable arbitration clause, you agree to submit to the personal jurisdiction of the state and federal courts in or for Milwaukee County, Wisconsin for the purpose of litigating all such claims or disputes. Notwithstanding the foregoing, JCI may seek injunctive or other equitable relief to protect its (or its licensors or service providers') confidential information and intellectual property rights or to prevent loss of data or damage to its servers in any court of competent jurisdiction. In the event it is determined by a court of competent jurisdiction that the Federal Arbitration Act, applicable federal law, and the laws of the State of Wisconsin are inapplicable to an action or proceeding brought by either party relating to or under this Agreement, the parties agree to the application of the laws of the country in which you entered into this Agreement to govern, interpret, and enforce all of your and JCI's respective rights, duties, and obligations arising from, or relating in any manner to, the subject matter of this Agreement, without regard to conflict of law principles. The United Nations Convention on Contracts for the International Sale of Goods does not apply to any such action or proceeding.

Arbitration. Any dispute or claim relating in any way to this Agreement or your access or use of any Services will be resolved by binding arbitration, rather than in court, except that you may assert claims in small claims court if your claims qualify. Arbitration will take place in Milwaukee, Wisconsin, U.S.A. The Federal Arbitration Act and federal arbitration law apply to this Agreement. There is no judge or jury in arbitration, and court review of an arbitration award is limited. An arbitrator can award on an individual basis the same damages and relief as a court, including injunctive and declaratory relief or statutory damages, and must follow the provisions of this Agreement as a court would.

Initiation of Arbitration. To begin an arbitration proceeding, you must send a letter requesting arbitration and describing your claim to Johnson Controls, Inc., Attention: Legal Department at 507 E. Michigan Street, Milwaukee, Wisconsin 53202, United States. Your notice to JCI must: (i) provide your name, mailing address, and email address; (ii) describe the dispute; and (iii) state the relief you are requesting. The arbitration will be conducted by the American Arbitration Association ("AAA") under its rules. The AAA's rules are available at www.adr.org or by calling 1-800-778-7879. Payment of all filing, administration, and arbitrator fees will be governed by the AAA's rules.

WAIVER OF CLASS ACTIONS. You and JCI each agree that any dispute resolution proceedings will be conducted only on an individual basis and not in a class, consolidated, or representative action. If, for any reason, a claim proceeds in court rather than in arbitration. You and JCI each waive any right to a jury trial. You and JCI both agree either you or JCI may bring suit in a state or federal court in Milwaukee County, Wisconsin, United States to enjoin infringement or other misuse of intellectual property rights.

OPTION TO OPT-OUT. To opt out of the arbitration and class-action waiver terms in this Section 18, you must notify JCI in writing within thirty (30) days of the date that you first accept this Agreement (unless a longer period is required by applicable law). You must mail your written notification to JCI, Attention: Legal Department to the address in Section 18(c). Subject to Section 18(f), if you do not notify JCI as outlined in this Section 18(e),

You may reject any change JCI makes to Section 18 (except address changes) by sending JCI written notice within thirty (30) days of the change by mail to the address in Section 18(c). If you do, the most recent version of Section 18 before the change you rejected will apply. It is not necessary to send JCI a rejection of a future change to this Section 18 if you had properly opted out of the arbitration and class-action waiver provisions in this Section 18 within the first thirty (30) days after you first accepted this Agreement.

Contracting Entity. The JCI affiliate you are contracting with depends on your geographic location and choice of Service. The applicable JCI affiliate you are contracting with for your Service is set forth here.

General. This Agreement (including the Supplemental Terms) and all Orders constitutes the entire understanding and agreement between the parties with respect to the transactions contemplated in this Agreement and supersedes all prior or contemporaneous oral or written communications with respect to the subject matter of this Agreement, all of which are merged in this Agreement. In the event of a conflict between this Agreement and an Order, the terms of this Agreement will control. In the event that any provision of this Agreement is found invalid or unenforceable pursuant to judicial decree, the remainder of this Agreement shall remain valid and enforceable according to its terms. Any failure by JCI to strictly enforce any provision of this Agreement will not operate as a waiver of that provision or any subsequent breach of that provision. The official language of this Agreement is English. If there is a conflict between versions of this Agreement in any other language, the English language version controls. The following provisions shall survive any termination or expiration of this Agreement: Section 1(c) (Services Restrictions), Section 2(b) (Software Restrictions); 3 (Compliance), 8 (Fees; Taxes) (to the extent of any fees accrued prior to the date of termination), 9 (Supplemental Terms, as applicable), 10 (Limited Warranty; Disclaimer), 11 (Third Party Claims), 13 (Limitation of Liability), 14 (Confidentiality), 16 (Data), 17 (Proprietary Rights), 18 (Governing Law and Arbitration; Class- Action Waiver and Jury Waiver), 20 (General), 21 (Export/Import), and 22 (U.S. Government Rights). This Agreement and any associated rights or obligations, may not be assigned or otherwise transferred by you without JCI's prior written consent. This Agreement may be assigned by JCI without restriction. This Agreement is binding upon any permitted assignee.

Export/Import. The Software and Services are licensed for use in the specific country authorized by JCI. You may not export or import the Software or Services to another country without JCI's written permission and payment of any applicable country specific surcharges. You will fully comply with all relevant and applicable export and import laws and regulations of the United States and foreign nations in which the Services will be used ("Export/Import Laws") to ensure that the Software, the Services or any direct product thereof are not exported or imported, directly or indirectly, in violation of any Export/Import Laws; or are intended to be used for any purposes prohibited by the Export/Import Law. These laws include restrictions on destinations, end users, and end uses. You represent and warrant that you: (a) are not a citizen, national or resident of, nor under the control of, the government of Cuba, Iran, North Korea, Syria, Sudan, or any other country to which the United States or the European Union has prohibited export; (b) are not listed on the United States Department of Treasury lists of Specially Designated Nationals, Specially Designated Terrorists, and Specially Designated Narcotic Traffickers, nor listed on the United States Department of Commerce Table of Denial Orders, nor any other United States Government exclusion lists; (c) are not under the control of or an agent for anyone on such lists or the entities listed above; (d) will not export or re-export any portion of the Services, directly, or indirectly, to the above-mentioned countries or to citizens, nationals, or residents of those countries or to persons on the above mentioned lists; and (e) will not use the Services for, and will not allow the Services to be used for, any purposes prohibited by United States or European Union law, including for the development, design, manufacture, or production of nuclear, chemical, or biological weapons of mass destruction.

U.S. Government Rights. The Software and Services are each a "commercial item" as that term is defined at 48 CFR 2.101 (October 1995), consisting of "commercial computer software" and "commercial computer software documentation," as such terms are used in 48 CFR 12.212 (September 1995), and is provided to the U.S. Government only as a commercial end item. Consistent with 48 CFR 12.212 and 48 CFR 227.7202-1 through 227.7202-4 (June 1995), all U.S. Government End Users acquire the Service with only those rights set forth herein Electronic Acceptance. This Agreement may be accepted in electronic form (e.g., by an electronic or other means of demonstrating assent), and your acceptance will be deemed binding between the parties. Neither party may contest the validity or enforceability of this Agreement, including under any applicable statute of frauds, because it was accepted or signed in electronic form. Electronically maintained records, when produced in hard copy form, shall constitute business records and shall have the same validity as any other generally recognized business records.

Notice. JCI may need to communicate with you from time to time regarding this Agreement. JCI may provide such notice to you via email to the email address you provided to JCI, or through the user interface for the Services or Software, or on our site on which this Agreement is posted. If you have questions regarding this Agreement or need to contact JCI, including to send legal notices, please see <https://www.johnsoncontrols.com/contact-us> for JCI's contact information in the jurisdiction in which you are located. Copies of any legal notices should be sent to Johnson Controls, Inc., Attn: Legal Department at 507 E. Michigan Street, Milwaukee, Wisconsin 53202, United States.

Changes to this Agreement. Except to the extent prohibited by applicable laws, we may modify this Agreement (including the Supplemental Terms) by posting a revised version on our site on which the applicable Agreement terms are posted, via the Services, by email to the email address associated with your Account, or any means permitted under Section 24. Any changes to this Agreement will be effective upon posting (or such later effective date as may be indicated at the top of the revised Agreement terms). You should ensure that you have

read and agree with our most recent Agreement when you use the Service. If you do not agree to the Agreement as amended, you must stop using the Services and cancel your account. Your continued use of the Services after the date the amended Agreement is posted will constitute your acceptance of the amended Agreement.

Copyright Infringement. If you believe that information or any other material has been used on the Services or Software in a manner that constitutes copyright infringement, please provide notice of such infringement at Johnson Controls, Inc., Attn: Legal Department, 507 E. Michigan Street, Milwaukee WI, 53202, USA. Only inquiries relevant to this copyright infringement procedure will receive a response. Your notice should include the following information:

an electronic or physical signature of a person authorized to act on behalf of the owner of the exclusive right that is allegedly infringed; identification of the copyrighted work claimed to have been infringed; a description of where the material is located on the Services; your address, telephone number, and e-mail address; a statement of your good faith belief that the disputed use is not authorized by the copyright owner, its agent, or the law; and, a statement by you, under penalty of perjury, that the information in your notice is accurate and that you are the copyright owner or authorized to act on the copyright owner's behalf.