Product Data Sheet

Wireless Comm Interface (WCI)

Part Number: X13790901010

Trane Wireless Comm replaces the BACnet communication link and sensor wire on Tracer™ building automation systems for faster, easier, lower-risk installation and life-cycle savings.

Features and Benefits

Features	Benefits
Reduced project complexity and labor	Reduces installation time and risks for on-time project completion while increasing return on investment.
Life-cycle savings	By avoiding (re)wiring, savings are incurred both for the initial installation and whenever the spaces are reconfigured or expanded.
Reliability and safety	The WCI is based on the IEEE 802.15.4 standard. The Institute of Electrical and Electronics Engineers (IEEE) is an international non-profit, professional organization, in which coexistence is a fundamental requirement.
Security	ZigBee™ Building Automation includes methods for network key establishment, network key transport, frame protection, and device management. Trane wireless networks are extremely secure, allowing building automation to efficiently maintain comfortable, productive environments.
Available factory or field installed	Factory installation, testing, and addressing increases installed quality and further reduces installation labor. Field installation is available when factory installation is not practical or for field installation of a Tracer SC or as a repeater (if needed).
ZigBee Building Automation Certified	Wireless Comm runs BACnet® protocol over ZigBee® Building Automation standards. Adding unit controllers, zone sensors and other devices down the road will be easy and affordable.

Specifications and Agency Compliance

Specifications	
Operating temperature	-40 to 158ºF (-40 to 70ºC)
Storage temperature	-40 to 185ºF (-40 to 85°C)
Storage and operating humidity range	5% to 95% relative humidity (RH), non-condensing
Voltage	24 Vac/Vdc nominal ± 10% If using 24 Vac, polarity must be maintained.
Receiver power consumption	<2.5 VA
Housing material	Polycarbonate/ABS (suitable for plenum mounting), UV protected, UL 94: 5 VA flammability rating
Mounting	3.2 in (83 mm) with 2 supplied mounting screws
Range[(a)]	Open range: 2,500 ft (762 m) with packet error rate of 2%. Indoor: Typical range is 200 ft (61 mm); actual range is dependent on the environment. See BAS-SVX55 for more detail.
Output power	North America: 100 mW
Radio frequency	2.4 GHz (IEEE Std 802.15.4-2003 compliant) (2405–2480 MHz, 5 MHz spacing)
Radio channels	16

Specifications	
Mounting	Fits a standard 2 in. by 4 in. junction box (vertical mount only). Mounting holes are spaced 3.2 in. (83 mm) apart on vertical center line. Includes mounting screws for junction box or wall anchors for sheet-rock walls. Overall dimensions: 2.9 in. (74 mm) by 4.7 in. (119 mm)
Wireless protocol	ZigBee PRO—ZigBee Building Automation Profile, ANSI/ASHRAE Standard 135-2008 Addendum q (BACnet™/ ZigBee)
Agency compliance	
United States	UL listed: UL 94, 5 VA flammability rating and UL916. Energy Management Equipment FCC CFR47, Sec. 15.247 & subpart E, Digital Modulation Transmission with no SAR (FCC ID: TPF-251701). This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation. Changes or modifications not expressly approved by the manufacturer for compliance could void the user's authority to operate the equipment. **Note:** This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures: • Reorient or relocate the receiving antenna. • Increase the separation between the equipment and receiver. • Connect the equipment into an outlet on a circuit different from that to which the receiver is connected. • Consult the dealer or an experienced radio/TV technician for help.
Canada	CSA-C22.2 No. 205-M1983 Signal Equipment Industry Canada (IC: 6178A-251701) Cet appareil est conforme à la partie 15 du règlement du FCC. Son fonctionnement fait l'objet des deux conditions suivantes : (1) Cet appareil ne produit pas de brouillages nuisibles, et (2) cet appareil doit pouvoir recevoir n'importe quel type d'interférence, y compris les brouillages pouvant occasionner un fonctionnement non désiré. Les changements et les modifications n'ayant pas été approuvés expressément par le fabricant comme étant conformes, pourraient rendre nulle le droit de l'utilisateur à faire fonctionner cet équipement. **Remarque:** Cet équipement a été testé et reconnu comme étant conforme aux limites des appareils numériques de classe B, tel qu'indiqué dans la partie 15 du règlement du FCC. Ces limites ont été établies afin de fournir un niveau de protection raisonnable contre le brouillage nuisible dans les installations résidentielles. Cet appareil produit, utilise, et peut aussi émettre des fréquences radioélectriques. Si celui-ci n'est pas installé et utilisé conformément aux instructions, il peut provoquer des brouillages nuisibles dans les communications radioélectriques. L'absence d'interférence n'est cependant pas garantie dans toutes les installations. Si cet équipement provoque des brouillages nuisibles dans la réception des communications radioélectriques ou de télévision (ceci pouvant être déterminé en allumant et en éteignant l'équipement), l'utilisateur est encouragé à essayer de corriger l'interférence en utilisant un ou plusieurs des moyens suivants : • Réorienter ou changer l'emplacement de l'antenne réceptrice. • Éloigner l'équipement et le récepteur l'un de l'autre. • Brancher l'équipement à une prise de courant se trouvant sur un circuit différent de celui sur lequel le récepteur est branché. • Faire appel aux services du fournisseur ou d'un technicien radio/TV qualifié.
IEEE/radio frequency range	IEEE 802.15.4-2003, IEEE Standard for Information Technology—Telecommunications and information exchange between systems—Local and metropolitan area networks—Specific requirements, Part 15.4: Wireless Medium Access Control (MAC) and Physical Layer (PHY) Specifications for Low Rate Wireless Personal Area Networks (LR-WPANs)

(a) Range values are estimated transmission distances for satisfactory operation. Actual distance is job specific and must be determined during site evaluation. Placement of the WCI is critical to proper system operation. In most general office space installations, distance is not the limiting factor for proper signal quality. Signal quality is more greatly affected by walls, barriers, and general clutter. Note that sheetrock walls and ceiling tiles offer little restriction to the propagation of the radio signal throughout the building as opposed to concrete or metal barriers. More detailed information, including wiring schematics, are available at http://www.trane.com.

TRANE

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Building

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