

Smart Terminal Controller SEC-TE Series

Wireless programmable terminal equipment controllers for HVAC equipment and pulse counting. Includes local memory to store fail safe control sequence.



SEC-TE Smart Terminal Controller Features



Smart Terminal Controllers enable the wireless control of a wide variety of equipment to optimize use, comfort, and power consumption. They are the control arm of MPM devices and part of the SmartStruxure™ Lite solution line of products.

Control features

The SEC-TE is equipped with the smallest control engine in the industry. It supports local scripting and programmability to provide distributed intelligence and enabling redundant control solutions.

Additional features include:

- Programmable to enable local fail safe control sequence (230 characters)
- Real-time response to scripting

Applications

Supports HVAC and pulse counting applications including:

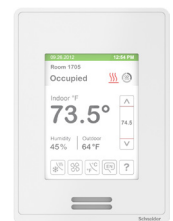
- Fan coils:
 - 2-pipe
 - 4-pipe
- Heat pumps
- Dehumidification units
- Pulse counting (AI3 input)

Communication

The SEC-TE has an internal ZigBee Pro transceiver and antenna (with optional external antenna) enabling it to communicate with wireless ZigBee Pro MPM devices. Up to 10 SEC-TE Controllers can be used with each MPM.

Integration with SER8300 Room Controller

Integration with the SER8300 Series Room Controller is now possible. The SEC-TE Controller, when bound to the SER8300 Room Controller, allows for remote access to I/Os and line switching. Up to three SEC-TE Controllers can be bound with one SER8300 Series Room Controller.



AT A GLANCE

Networking

- 802.15.4 (ZigBee)

Third-party interoperability

- ZigBee Pro (wireless)
- Bind up to 10 SEC-TE Controllers to a single MPM
- Wireless connection to SER8300 Room Controller

Inputs/Outputs

- Inputs: 4 universal (analog: 4-20mA, 0-10V, digital: dry contact, thermistor: 1-100K)
- Outputs: 4 analog, 5 line-power relay

Other

- Local memory
- One input can be used for fast pulse counting

Specifications

Power

Voltage

24VAC; $\pm 15\%$; 50/60HZ; Class 2.
24VDC $\pm 10\%$
115VAC/230VAC

Typical consumption

10VA (115/230 VAC)
5VA (24V)

Enclosure

Material

Rigid ABS

Dimensions

176mm (6.93 in) x 108mm (4.25 in)

Rating

UL94V0-5VB

Mounting

Din-rail, wall or ceiling mount

Environmental

Operating Temperature

0°C (32°F) to 60°C (140°F)

Storage Temperature

-20°C (-4°F) to 60°C (140°F)

Relative Humidity

0 to 90% non-condensing

Inputs

Quantity

4 universal inputs

Voltage

0 to 10 volt

Current

4-20mA with 249 external resistor

Resistance

1k to 100k

Resolution

14-bit

Pulse input

Support for one fast pulse input counting
(up to 1000Hz / 1ms) – AI3

Outputs

Analog (x4)

0-12V, nominal 50 mA max each, 12-bit resolution

Relay (x5) (optional)

Maximum 230VAC, 5A per relay.

First three relays (R1, R2 and R3) are based on input power voltage (24V, 115VAC or 230VAC).

Two relays (R4 and R5) are independent of the input power voltage

Analog (x1)

24VAC, 2VA

(115 VAC and 230 VAC Voltage only models, one additional output) (*20VAC if used with 110V 50Hz)

ZigBee Pro

Frequency

2400 to 2483.5MHz, 16RF channels

Data rate / Mod.type

250Kbps

Receiver Sensitivity

-101dBm/-105dBm (amplified)

Nominal Output Power

8dBm/18dBm (amplified)

Range

Non line of sight to MPM: 50ft/17m

Line of sight to MPM: 100ft/30m

Antenna

Internal

(Optional) External whip, RP SMA 2.5dbi

Integration to Building Expert

Communication with MPM devices

Agency approvals

UL 916 (2007/12/17, rev 2010/06/04)

CSA C22.2 # 205 (1983/06/01, R2009)

IEC 61010-1 (2001/02/01 Corrigendum #2 2003/04)

CENELEC EN 61326-1 (2006/05/01)

FCC 47CFR 15B c1B (2011/04/21)

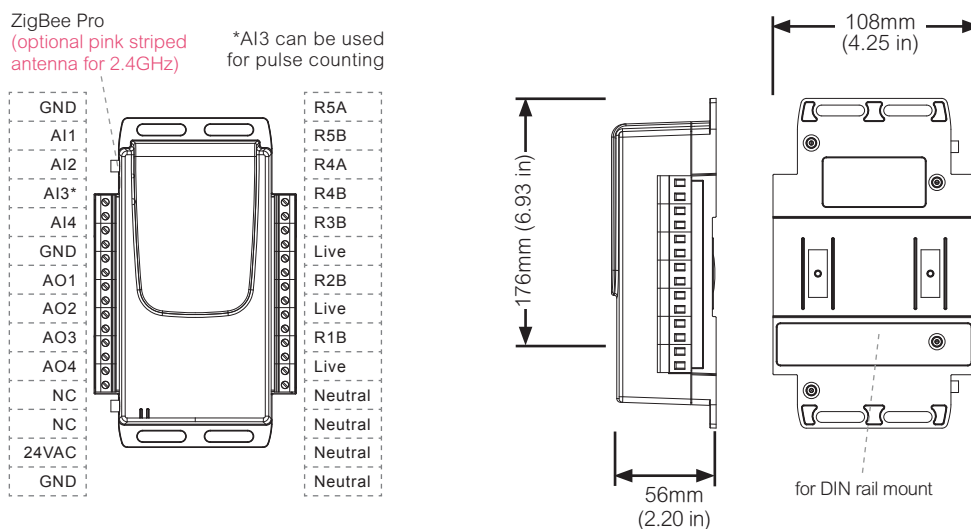
ICES-003 Issue 4 (2004)

CE

Japanese Radio Law

RoHS

Wiring and Dimensions



Ordering information

Part numbers	ZigBee Pro		I/O			Power		
	High power	External antenna	4 universal inputs	4 analog outputs	5 digital outputs	110-120 VAC	220-240 VAC	24 VAC
SEC-TEA-115-5045	x		x	x	x	x		
SEC-TEA-230-5045	x		x	x	x		x	
SEC-TEA-24-5045	x		x	x	x			x
SEC-TEA-R-115-5045	x	x	x	x	x	x		
SEC-TEA-R-230-5045	x	x	x	x	x		x	
SEC-TEA-R-24-5045	x	x	x	x	x			x
SEC-TEB-115-5045	x		x	x		x		
SEC-TEB-230-5045	x		x	x			x	
SEC-TEB-24-5045	x		x	x				x
SEC-TEB-R-115-5045	x	x	x	x		x		
SEC-TEB-R-230-5045	x	x	x	x			x	
SEC-TEB-R-24-5045	x	x	x	x				x

Requirements for Binding SEC-TE Controller to SER8300 Room Controller

The following conditions are required to wirelessly bind the SEC-TE Controller to the SER8300 Series Room Controller:

- SEC-TE Controller must be Version 16 (V16) or later
- VCM8000 Communication Module must be Revision 09 (R09) or later
- SER8300 Room Controller must be running Firmware 1.5.1 or later