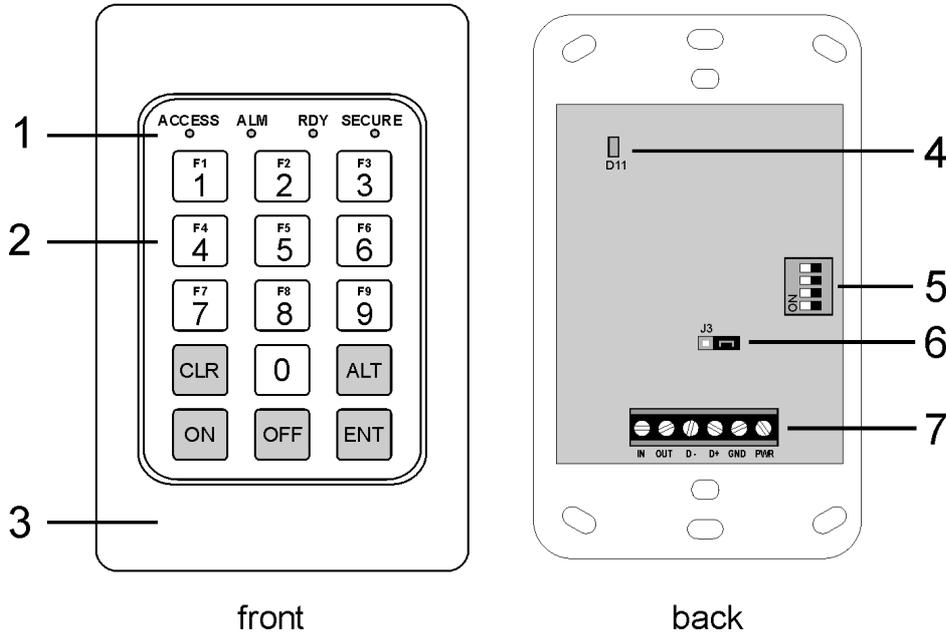


The TS0003 4-LED remote arming station (RAS) is used with Challenger or Alliance alarm panels or Intelligent access controllers to provide alarm system and access control.

Figure 1: External features of TS0003 RAS



Key features

- Four system status LEDs
- 15-key keypad for personal identity number (PIN) entry
- Front cover (snaps in place over keypad)
- TX LED for checking LAN communication
- DIP switches to set LAN address
- TERM link
- Connection block
- May be connected directly to the Alliance or Challenger RS485 LAN, up to 1.5 km from the control panel or intelligent four-door controller
- Operates from 10.5V to 13.8 V DC
- One open collector output to drive a small relay, LED, etc.
- One input for Request To Exit (Egress) control
- Soft timezone control (Alliance systems only)

Before you begin

You must have some means to program polling to the new RAS, such as by using an LCD RAS on the LAN or by using the system's management software (TITAN, ARES, or Alliance).

You also need to know the LAN address in order to set the DIP switches; and the system layout, in order to set the TERM link.

NOTE: Check the latest installation instructions for the control panel or 4-door controller to ensure that the RAS is installed in compliance with Australian ACA wiring and earthing requirements.

Installation kit

The following items are packed with the RAS.

Item	Quantity
Surface mounting block.....	1
This document.....	1



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Mounting

The RAS may be mounted in two ways:

- Flush mounting, where the RAS is recessed into a wall so that the base is flush to the wall surface (the mounting block is not used).
- Surface mounting, where the surface mounting block (enclosed) is first secured to a wall and then the RAS is secured to the mounting block.

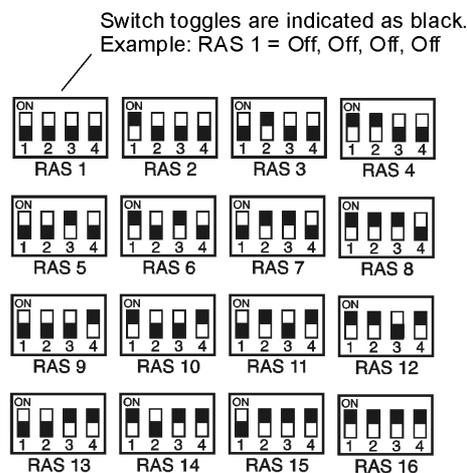
The following procedure assumes that the RAS is flush mounted. Use the surface mounting block if required.

1. Set the LAN address DIP switches on the RAS printed circuit board (PCB). Refer to Figure 2 below.
2. If required, set the TERM link to 'on' by placing the jumper onto J3 on the PCB. See TERM link setting below for details.
3. Prise the top corners of the RAS away from the keypad to remove the cover from the RAS body and to expose the mounting holes and screws. Remove the two mounting screws and retain for later use.
4. If required, use the RAS body as a template for drilling mounting holes and for cutting cabling access.
5. Remove power to the Alliance or Challenger panel, or 4-door controller, as applicable.
6. Terminate the cable, as required (see TERM link setting below). For direct LAN terminations, Beldon 8723 2-pair shielded cable is recommended.
7. Apply power to the Alliance or Challenger panel, or the 4-door controller.
8. Use an LCD RAS on the LAN (or the system's management software) to program polling for the new RAS.
9. Check the TX LED to verify that the TS0003 is replying to polling from the control panel. See TX LED Indications on page 5.
10. Mount the RAS body on a flat surface using the screws provided.
11. Mount the cover onto the RAS body by engaging the top, and then gently pressing the cover over the body until the cover snaps into place.

DIP SWITCH SETTINGS

A block of four DIP switches is located on the RAS PCB (see Figure 1). Use Figure 2 as a guide to setting the address.

Figure 2: TS0003 DIP switch settings



TERM LINK SETTING

The TERM link (J3) must be on if the RAS is either the first or the last device on the LAN.

In a star wiring configuration the TERM switches or links must be set to 'on' for only the devices at the ends of the two longest LAN cable runs. There must be only two TERM switches or links set to 'on' on any one LAN segment.

CONNECTIONS

The RAS has a block of six terminals on the PCB for connection to LAN and other devices (see Figure 1 on page 1). The connection block terminals are described in Table 1.

Table 1: RAS connector block terminals

IN	RTE input may be connected to a simple push button for operation in RTE Only mode. RTE input may be connected to a TS0064 Expanded Button Interface for use in RTE + Arm/Disarm mode.
OUT	Open collector output, configurable as door relay. Note: This is a low current output and must not be used to directly energize high current door openers. Absolute maximum, 14 V @ 50 mA
D-	RS485 data negative
D+	RS485 data positive
GND	0V (DC supply ground)
PWR	+12V nominal (10.5V to 13.8 V DC)

LAN CONNECTION (D+ AND D-)

The RAS is connected to the Challenger or Alliance panel via the RS485 LAN, up to 1.5 km from the control panel or the four-door controller DGP. It is recommended to use 2-pair twisted, shielded data cable (Beldon 8723).

The shield of any LAN cable must be connected to system ground at one end only. The RAS is not provided with an Earth connection for this purpose. If the LAN is 'daisy-chained' to the RAS, ensure that the shield of the cable is jointed to provide continuity of data cable shield.

Figure 3: LAN power, data, and earthing connections to Alliance or Challenger panel from a single RAS (a number of RASs would typically be connected to the control panel).

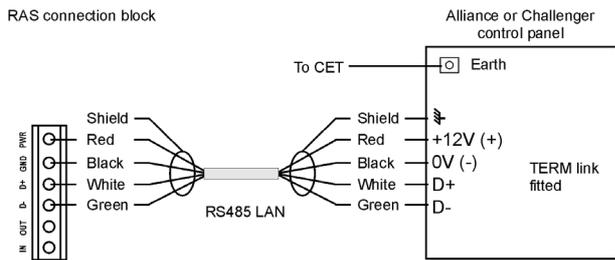
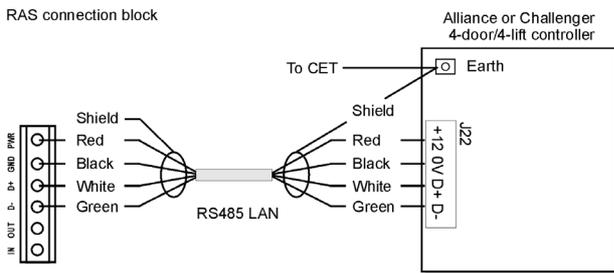


Figure 4: LAN connection to Intelligent 4-Door or 4-Lift controller



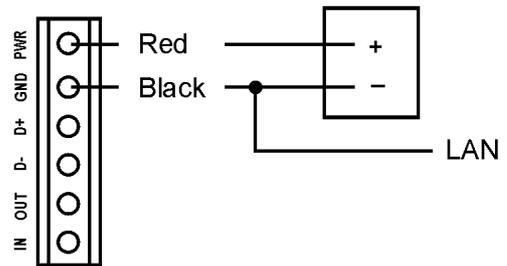
POWER SUPPLY (+12 AND 0V)

The RAS can be powered using the LAN + and - power from the control panel, if the distance between the RAS and the control panel does not exceed 100 m (328 feet). Alternatively, the RAS can be powered by AUX PWR from a DGP, or by an auxiliary power supply (see Figure 5 below).

When using an auxiliary power supply:

- Connect the '+' of the local power supply to the red wire of the RAS. Do not connect the + power of the LAN to the RAS.
- Connect the '-' of the local power supply to the black wire of the RAS and to the - power of the LAN.
- For optimal performance, adjust the power supply to 13.8 VDC.

Figure 5: Powering the RAS from a separate power supply



RTE (EGRESS) CONTROL

The IN terminal is optionally used for egress control.

An Egress button (normally open, momentary push-button switch) can be connected across the IN GND terminals (see Figure 6). When pressed, the button controls the request to exit function to the panel. Alternatively, a TS0064 Expanded Button Interface connected to the IN terminal may be used to arm or disarm areas (see Figure 7).

OPEN COLLECTOR

The OUT terminal is optionally used for egress door relay operation. Open collector output must be assigned with a number according to type of control panel (Challenger V8 or Alliance). Refer to the appropriate control panel programming manual for details.

- Challenger V8 – use the first relay number of the relay control group assigned to the RAS.
- Alliance – use the first output number of the output controller assigned to the RAS.

Figure 6: Optional door relay and simple push button connections

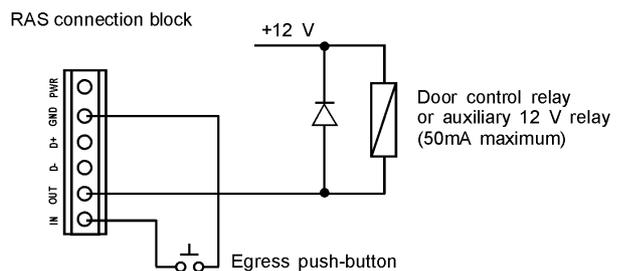
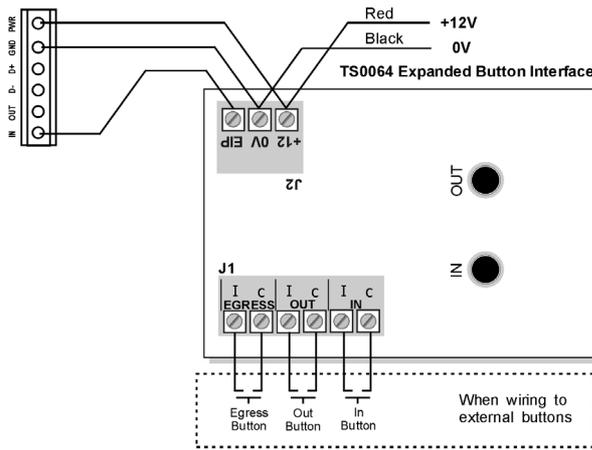


Figure 7: RAS used with TS0064 Expanded Button Interface

RAS connection block



Operation

KEYPAD

Refer to Figure 1. The keypad has numbered keys for entering codes and selecting numerical menu options, plus five additional keys. These additional keys work as follows:

- ON — Enter your PIN using the numbered keys, and then press [ON] to arm the area(s) assigned to the RAS.
- OFF — Enter your PIN using the numbered keys, and then press [OFF] to disarm the area(s) assigned to the RAS.
- ENT — Select numerical menu options (or other data entry), and then press [ENT] when data entry is required.
- CLR — Press [CLR] to cancel the current keystrokes.
- ALT (Alliance panels only) — Press the [ALT] key and then press one of the function keys F1 through F4 (same keys as the corresponding numbered keys, e.g. the 1 button is also the F1 button). The operation of the function keys F1 through F4 is described in *Soft Timezone Control (Alliance panels only)* below.

SOFT TIMEZONE CONTROL (ALLIANCE PANELS ONLY)

Press the [ALT] key and then press a function key (F1 through F4) to activate a soft timezone for approximately four seconds (longer durations can be achieved by use of macros). The soft timezone can be used to activate a relay (which can then be used as an input to a macro).

This functionality applies only to RAS addresses 1 through 5 (RASs with an address of 6 or higher are not affected).

The soft timezone applied by the key combination depends on the RAS address. Refer to Table 2 for details.

Table 2: Function keys assigned to soft timezones

RAS	ALT+	Timezone
1	F1	42
	F2	43
	F3	44
	F4	45
2	F1	46
	F2	47
	F3	48
	F4	49
3	F1	50
	F2	51
	F3	52
	F4	53
4	F1	54
	F2	55
	F3	56
	F4	57
5	F1	58
	F2	59
	F3	60
	F4	61

FRONT LEDs

The RAS has four LEDs on the front to indicate system status (refer to Figure 1 on page 1) and one LED on the PCB. The operation of the back LED is described in *TX LED Indications* on page 5.

- ACCESS — Lit when an area assigned to the RAS's alarm group is disarmed. If the area is disarmed and the door is unlocked, the LED flashes for the access time.
- ALM — Lit when any area assigned to the RAS is in alarm state.
- RDY — Lit when all inputs in areas assigned to the RAS are sealed. If used on a 4-door controller LAN, the LED is on when a PIN is required.
- SECURE — Lit when any area assigned to the RAS is in armed state.

All front LEDs flashing indicates that the RAS is not being polled.

TX LED INDICATIONS

A TX LED is located on the PCB in the back of the RAS to assist in fault diagnosis, and is visible when the RAS is removed from the wall. The TX LED flashes to indicate the RAS is replying to polling from the control panel.

If the TX LED does not flash, possible causes include:

- The RAS DIP switches may be set to the wrong address.
- Polling to the RAS address may not be enabled in the control panel.
- Connection fault or other fault in the LAN cabling.

Specifications

- Supply voltage: 10.5 V to 13.8 VDC
- Typical operating current: 60 mA @ 13.5 V
- Dimensions (W x H x D) :
76 mm (3.0") x 116 mm (4.6") x 14 mm (0.6")
- Dimensions with mounting block (W x H x D) :
80 mm (3.1") x 122 mm (4.8") x 48 mm (1.9")
- Operating temperature: 0° to 50°C (32° to 122°F)
- Humidity: 95% non-condensing

Dimensions

Figure 8: Dimensions of TS0003 alone

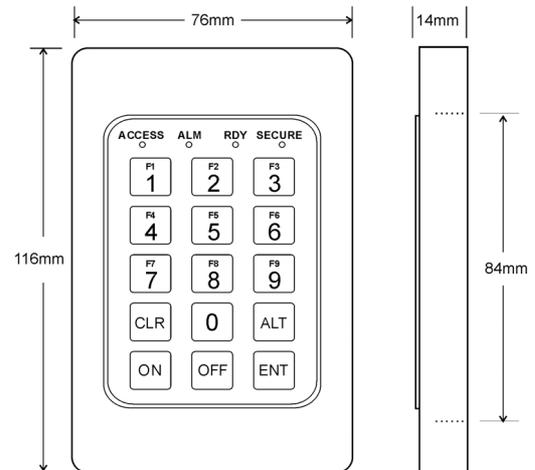
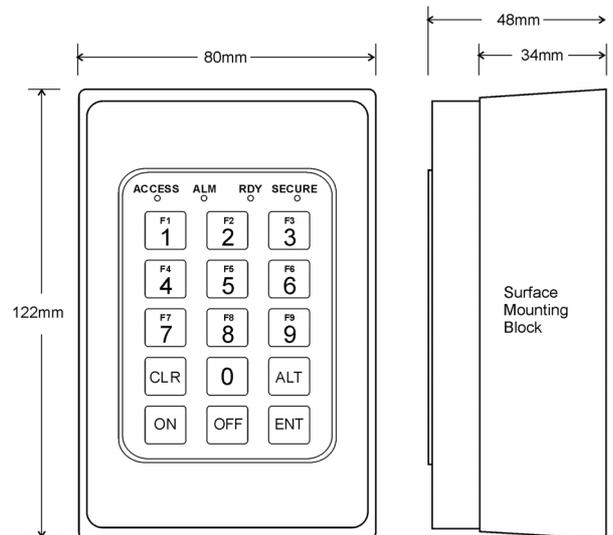


Figure 9: Dimensions of TS0003 with surface mounting block



Statements



N4131

When installed as directed, this product conforms to the standards set by Standards Australia on behalf of the Australian Communications Authority (ACA).

WARNING

This is a Class A product. In a domestic environment this product may cause radio interference, in which case the user may be required to take adequate measures.

FCC COMPLIANCE

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.
2. This device must accept any interference received, including interferences that may cause undesired operation.

TECHNICAL SUPPORT

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