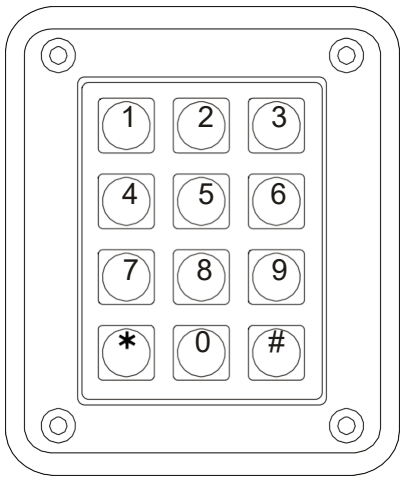
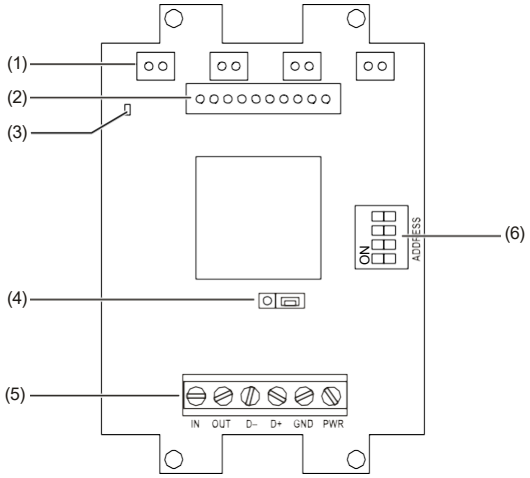
TS0006 Heavy Duty Four-LED Arming Station Installation Sheet

Figure 1: TS0006 kit features

TS0006 keypad (not to scale)



TS0006 PCB



(1) Connectors to system status LEDs (if needed)
(2) Connector to remote keypad
(3) Tx LED for checking LAN communication
(4) Term link
(5) Connection block
(6) Address DIP switch

Description

The TS0006 Heavy Duty Four-LED Arming Station (RAS) provides a user interface to the Challenger intrusion detection and access control system.

The metal construction of the 12-key keypad provides strength, durability, and resistance to vandalism. The keypad can be mounted on brick, metalwork, or in a custom enclosure and is supplied in kit form to accommodate various mounting options.

Four LEDs are provided to indicate access, alarm, ready, and secure. The use of the LEDs is optional (custom mounting required).

The separate PCB assembly is mounted via self-adhesive standoffs (supplied) to the inside of the enclosure or to the interior of the wall cavity. The four LEDs are mounted near the keypad via bezels into the wall of the enclosure or into a custom face plate (not supplied). The LEDs may be omitted, if desired.

The keypad is typically used to enter a PIN to gain access to a single area, or to turn security off and on in assigned areas.

A remote arming station (RAS) can be installed up to 1500 m (cabling distance) from its control panel or Intelligent Access Controller to provide remote operation.

Additional features include:

- Operates from 10.5 to 13.8 VDC
- An open collector output is available to power an LED or a small relay (50 mA max)
- One input for Request To Exit (Egress) control

Product contents

Quantity	Item
1	“Storm” heavy-duty 12-key keypad
1	PCB assembly
4	PCB standoffs, self-adhesive
2	Red LED with bezel, bezel nut, cable, connectors
1	Green LED with bezel, bezel nut, cable, connectors
1	Yellow LED with bezel, bezel nut, cable, connectors
1	Cable, keypad to PCB
1	Installation Sheet

Inspect the package and contents for visible damage. If any components are damaged or missing, do not use the unit; contact the supplier immediately. If you need to return the unit, you must ship it in the original box.

P/N MAINST-TS0006 • REV 4.1 • ISS 17JAN25

Installation

Note: A qualified service person, complying with all applicable codes, should perform all required hardware installation.

Configuring the RAS

Configure the RAS for the local environment.

To configure the RAS:

1. Determine the RAS's address on the LAN.
2. Set the LAN address via the four-segment Address DIP switch (see Figure 1 on page 1, item 6) according to Table 1 below.
3. If required, terminate the LAN by placing the jumper onto J3 (see Figure 1 on page 1, item 4).

   If the RAS is the last device on the RS-485 LAN the LAN termination should be ON. In a star wiring configuration, the RS-485 LAN may consist of a number of cable runs (branches). LAN termination should be set to ON only at the devices at the far ends of the two longest branches. A star LAN that has multiple branches in excess of 100 m may need to use TS0893 Isolated RS-485 to RS-485 Interface modules to isolate the LAN segments that do not have LAN termination set to ON.

Table 1: Address DIP switch settings

Address	SW1	SW2	SW3	SW4
01	O	O	O	O
02	I	O	O	O
03	O	I	O	O
04	I	I	O	O
05	O	O	I	O
06	I	O	I	O
07	O	I	I	O
08	I	I	I	O
09	O	O	O	I
10	I	O	O	I
11	O	I	O	I
12	I	I	O	I
13	O	O	I	I
14	I	O	I	I
15	O	I	I	I
16	I	I	I	I

Legend: I = ON, O = OFF

Preparing the mounting location

The keypad will be mounted on a metal enclosure or a cavity wall using fasteners to suit the installation (not supplied). An opening must be provided for the keypad's rear connector (Figure 2 below, item 14). If the LEDs are required, then openings must be provided for the bezels. The enclosure or cavity wall must have access to the RS-485 LAN data, power, and optionally connections for an egress button and a small relay.

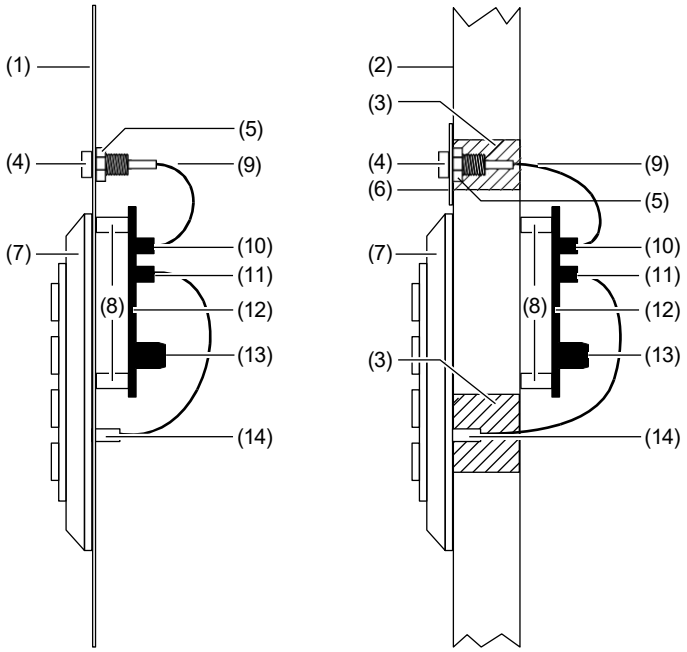
Mount the RAS at a height and location such that all users can operate the keypad. If LEDs are used, we recommend that the green LED is at the left (when you're facing the keypad).

To mount LEDs in a metal enclosure, drill 6 mm diameter holes for the bezels.

To mount LEDs in a wall, you may need to make a faceplate with 6 mm diameter holes to accommodate the bezels, and to mount over an opening in the wall.

The LEDs with their cables attached are inserted into the bezels from the rear.

Figure 2: Details of mounting alternatives



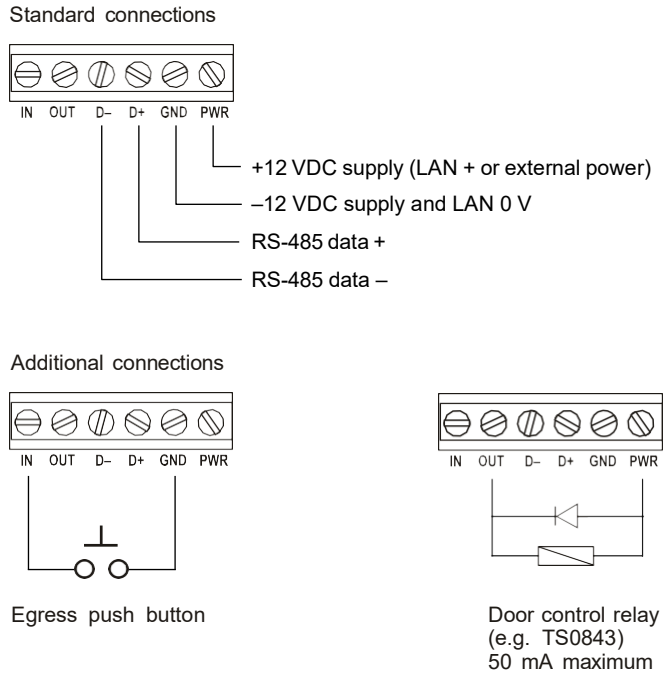
(1) Metal enclosure (alternative A)
(2) Wall of building (alternative B)
(3) Removed wall section (for alternative B)
(4) Row of four LED bezels (optional)
(5) Bezel nut (optional)
(6) LED faceplate (for alternative B, not supplied)
(7) Keypad
(8) PCB standoffs, self-adhesive
(9) LEDs inserted into bezels (optional)
(10) LED connectors
(11) PCB to keypad connector
(12) TS0006 PCB
(13) Connection block to LAN (cable not shown)
(14) Connector at rear of keypad

Connecting the RAS

Remove power to the control panel or Intelligent Access Controller, as applicable.

Connect the RAS to other equipment according to Figure 3 on page 3.

Figure 3: RAS wiring



LAN cable recommendation. We recommend that you use 2-pair twisted shielded data cable (such as Belden 8723) for the RS-485 LAN.

The length of the LAN cable run must not exceed 1.5 km unless LAN Isolation Interfaces are used to extend the distance.

LAN cable shield. In each segment of the LAN cable, connect one end only of the cable shield to a LAN earth terminal (typically at the panel or DGP). A device (such as TS0006 RAS) that does not have an earth point and is not at the end of the LAN will have in and out LAN segments. Join the LAN cable shields for the in and out segments to make, in effect, one continuous shield that is connected at one end only to a LAN earth terminal.

Powering the RAS. The Challenger panel or Intelligent Access Controller may be used to power the RAS in the following circumstances:

- The LAN cabling distance to the RAS is no more than 100 m (if using Belden 8723).
- Electrical isolation is not required.

If powering the module from the Challenger panel or Intelligent Access Controller is not practicable, then you must use an external power supply (such as TS0073).

Optional connections. The optional IN and OUT terminals may be used as follows:

- **IN.** An Egress button (normally open, momentary pushbutton switch) may be connected across the IN and GND terminals. When pressed, this button will control the egress function.
- **OUT.** Open collector output, 50 mA maximum. The OUT output is activated when a certain relay number is activated. The relay number is the first relay of the relay control group assigned to the RAS. For example, assign relay control group 1 to use relay 1, assign relay control group 2 to use relay 9, and so on. Refer to *Challenger V8 & V9 Programming Manual* for details.

Installing the RAS

After configuring the RAS and connecting the necessary wiring, apply power to check the operation of the RAS.

To install the RAS:

1. Program the Challenger panel or Intelligent Access Controller to poll the RAS address.
2. Check the Tx LED to verify that the TS0006 is replying to polling from the control panel (see Figure 1 on page 1, item 3).
3. Refer to Figure 4 on page 4 or use the keypad as a template to drill mounting holes and openings for cabling (and for LED bezels, if required).
4. Mount the keypad on a flat surface and secure with countersunk fixing screws (not supplied).
5. Mount the PCB assembly inside the enclosure or in the wall cavity via the self-adhesive PCB standoffs.
6. Connect the keypad to the PCB assembly via the 8-way cable and connectors (supplied).

Operation

Keypad

The keypad (see Figure 1 on page 1) has numbered keys for entering codes and selecting numerical menu options, plus two additional keys. These additional keys work as follows:

- **#** — Enter your PIN using the numbered keys, and then press [#] to arm the area(s) assigned to the RAS.
- ***** — Enter your PIN using the numbered keys, and then press [*] to disarm the area(s) assigned to the RAS.

Front LEDs

The RAS has four optional LEDs that may be mounted in bezels (supplied) to indicate system status. From left to right, the LEDs should be mounted to indicate the following:

- Access (green) — 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.
- Alarm (red) — Lit when any area assigned to the RAS is in alarm state.
- Ready (yellow) — 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 (red) — 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

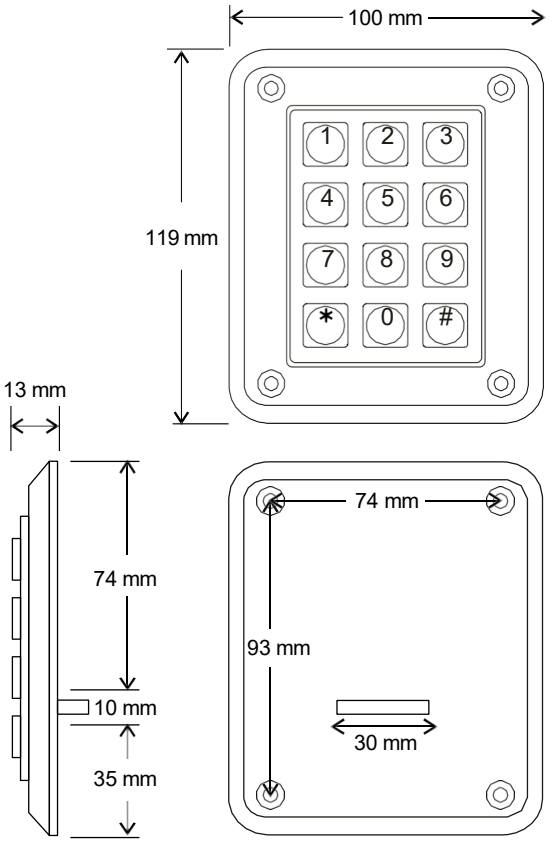
A Tx LED is located on the PCB in the back of the RAS (see Figure 1 on page 1, item 3) to assist in fault diagnosis. The Tx LED flashes to indicate the RAS is replying to polling from the control panel.

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.

Dimensions

Figure 4: Dimensions of keypad



Specifications

Voltage	10.5 to 13.8 VDC
Maximum operating current	75 mA @ 13.5 V
Dimensions (W × H × D)	
Keypad	100 × 119 × 13 mm
Operating environment	
Operating temperature	0 to 50°C
Relative humidity	0 to 95% noncondensing

Note: Units should only be used in a clean environment and not in humid air.

Regulatory information

Manufacturer	KGS Fire and Security Australia Pty Ltd Suite 4.01, 2 Ferntree Place, Notting Hill VIC, 3168, Australia
Year of manufacture	The first two digits of the product serial number (located on the product identification label) are the year of manufacture.
Compliance	N4131

NOTICE! 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.

Disclaimer

The customer is responsible for testing and determining the suitability of this product for specific applications. In no event is KGS Fire and Security Australia Pty Ltd (trading as Aritech) responsible or liable for any damages incurred by the buyer or any third party arising from its use, or their inability to use the product.

Contact information

For contact information, see www.aritech.com.au