

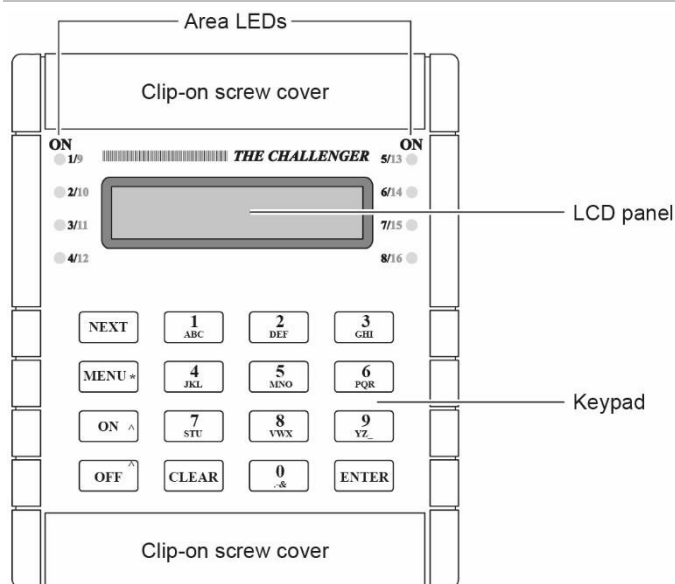
Eight-Area LCD Arming Station Installation Sheet

Description

TS0801 and TS0802 Eight-Area LCD Arming Stations provide a user and programmer interface to the Challenger intrusion detection and access control system.

The TS0802 model has terminals on the PCB for connecting a magnetic card reader (such as model TS0861C) to create a combined keypad/magnetic card reader LCD arming station. The TS0802 is effectively redundant, so this installation sheet will focus on the TS0801.

Figure 1: Eight-Area LCD Arming Station



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

Eight backlit LEDs indicate the status of areas 1 to 8 or areas 9 to 16, while the backlit LCD screen displays messages about the state of the security system or about menu navigation (subject to user permissions).

An area LED flashes when its area is in alarm, is off when its area is disarmed, and is constantly on when its area is armed.

An open collector output is available to power an LED or a small relay (50 mA max).

Product content

Quantity	Item
1	Eight-Area LCD Arming Station
2	3-way plug-on screw terminals
1	Installation Sheet
2	Clip-on screw covers
2	M4 x 20 mm recessed screws

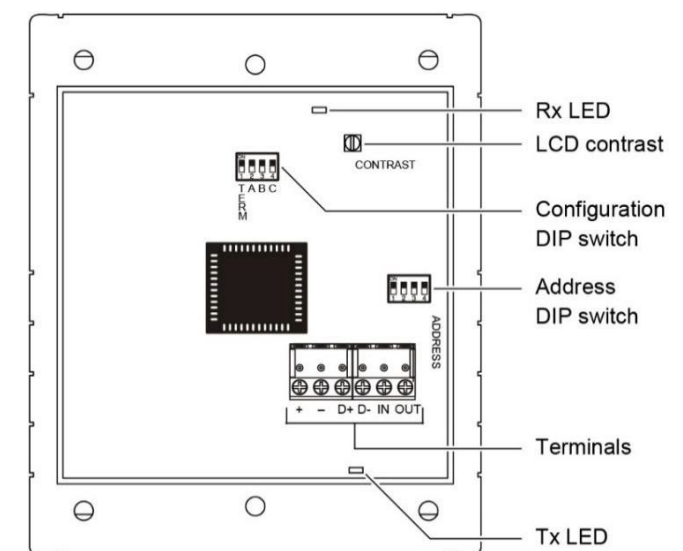
Inspect the package and contents for visible damage. If any components are damaged or missing, do not use the unit; contact the supplier immediately. If you need to return the unit, you must ship it in the original box.

Installation

The RAS can be flush mounted, or it can be surface mounted by using the mounting box (supplied).

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

Figure 2: Configuration details at rear of TS0801 faceplate



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 2 on page 1) according to Table 1 below.
3. If required, terminate the LAN by setting the Configuration DIP switch SW1 (TERM) to ON (see Figure 2 on page 1).
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.
5. If required, configure the RAS area LEDs to display the status of areas 9 to 16 by setting the Configuration DIP switch SW2 (A) to ON.
6. If required, configure the RAS keypad backlight to time out (turn off) by setting the four-segment Configuration DIP switch SW3 (B) 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 RAS will be mounted on a wall that has a cable entry for the RS-485 LAN data, power, and optionally connections for an egress button and a small relay.

Surface mount. Use the mounting box as a template to mark the cable entry location, and then cut a cable entry hole. Attach the mounting box to the wall with four screws (not supplied).

Flush mount. Flush mounting requires a 98 mm high x 95 mm wide cut-out. You can use the rear of the face plate as a template to mark the location of the cut-out.

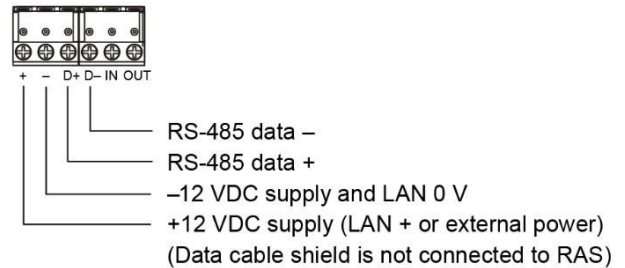
Mount the RAS at a height and location such that all users can see the LCD panel and operate the keypad.

Connecting the RAS

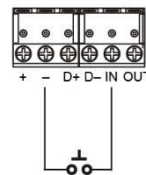
Connect the RAS to other equipment according to Figure 3 below.

Figure 3: RAS wiring

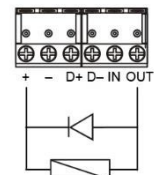
Standard connections



Additional optional connections



Egress push button



Door control relay
(e.g. TS0843)
50 mA maximum

LAN cable recommendation. Use four-wire, twisted-pair, shielded data cable (such as Belden 8723) to connect the RAS to the Control panel or Intelligent Access Controller 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 TS0801 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 -

terminals. When pressed, this button will control the egress function Electrical isolation is not required.

- **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.

Additional considerations for model TS0802

The TS0802 RAS has a J2 terminal block on its PCB (not shown in Figure 2 on page 1) for connecting a magnetic card reader.

Table 2: Address DIP switch settings

Terminal	Application
J2-1	RDP (Read Data Pulse)
J2-2	RCP (Read Clock Pulse)
J2-3	CLS (Card Loading Signal)
J2-4	+5 VDC
J2-5	GND (0 V)

Installing the RAS

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

To install the RAS:

1. Program the Challenger panel or Intelligent Access Controller to poll the RAS address (address 1 is polled by default).
2. Check the LCD screen for contrast. If necessary, use a small screwdriver to turn the LCD contrast screw (see Figure 2 on page 1) clockwise to make characters and background darker, or counterclockwise to make them lighter.
3. Check the Rx and Tx LEDs for correct indications (see “LED indications” below).
4. Use two screws (supplied) to install the face plate onto the wall or mounting box, as required.
5. Press the clip-on screw covers (see Figure 1 on page 1) into place to hide the screw holes.

LED indications

Refer to Figure 2 on page 1 for the locations of the Rx and Tx LEDs.

Rx LED. Flashing indicates polling data being received on the LAN from the Challenger panel or Intelligent Access Controller. No flashing indicates a LAN fault (usually cabling), or the Challenger panel or Intelligent Access Controller not operational.

Tx LED. Flashing indicates RAS is replying to polling from the Challenger panel or Intelligent Access Controller. Rx LED flashing but no Tx LED indicates RAS is not programmed to be polled or is addressed incorrectly.

Specifications

Voltage	10.5 to 13.8 VDC
Dimensions (W × H × D)	108 × 130 × 28 mm
Operating environment	
Storage Temperature	-20 to +80°C
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	Made in China by KGS Safety System (Hebei) Co., Ltd. No. 80, Changjiang East Road, QETDZ, Qinhuangdao, Hebei, P. R. China 066004
	KGS Fire and Security Australia Pty Ltd Suite 4.01, 2 Ferntree Place, Notting Hill, Victoria, 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.
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Product warnings and disclaimers	THESE PRODUCTS ARE INTENDED FOR SALE TO AND INSTALLATION BY QUALIFIED PROFESSIONALS. KGS FIRE AND SECURITY AUSTRALIA PTY. LTD. CANNOT PROVIDE ANY ASSURANCE THAT ANY PERSON OR ENTITY BUYING ITS PRODUCTS, INCLUDING ANY “AUTHORIZED DEALER” OR “AUTHORIZED RESELLER”, IS PROPERLY TRAINED OR EXPERIENCED TO CORRECTLY INSTALL FIRE AND SECURITY RELATED PRODUCTS.
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