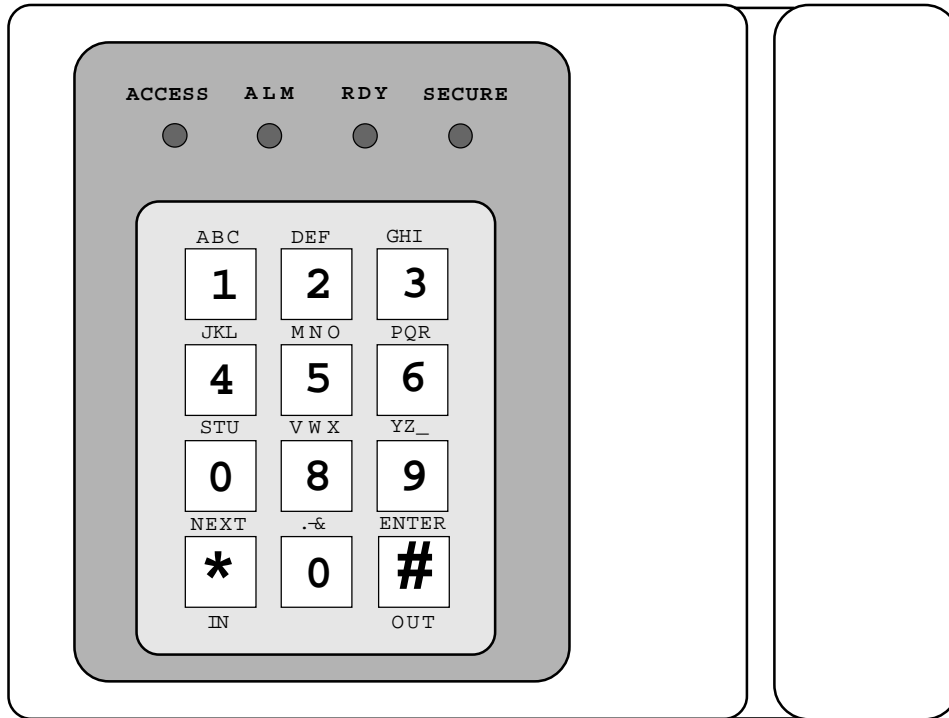




Challenger Magnetic Card Readers
Models TS0007 & TS0008 — Installation Guide

Revised! — see *Protective Earthing Addendum*



TS0007 - supplied with keypad
TS0008 - supplied without keypad

The Magnetic Card Readers can be used with *The Challenger* panel and Intelligent Door and Lift Controllers, TS0067 and TS0069.

The TS0007 has a keypad for performing system functions. All units have 4 LEDs to provide an indication of the status of the areas assigned to the Reader.



Challenger Magnetic Card Readers
Models TS0007 & TS0008 — Installation Guide

Mounting:

The rear plate of the unit is removed and mounted on the wall. The unit is then refitted on to the rear plate using the two M3 bolts and star washers provided. The star washers must be used to ensure an electrical connection between the case and the rear plate.

Dimensions:- TS0007 and TS0008 are 100mm high, 130mm wide and 35mm deep.

Mechanical & Environmental Specifications:

Enclosure dimensions:	100mm high and 130mm wide & 35mm deep.
Storage temperature:	-20 degrees C to +80 degrees C.
Operating temperature:	0 degrees C to +50 degrees C.
Humidity:	95% Non condensing

Note: Units should only be used in a clean environment and not in humid air.
If possible, the reader should be mounted in a location where it will not be exposed to dust, as this will result in excessive wear of the cards and reader head.

Programming:

The reader must be programmed appropriately. For polling and programming the reader is treated as an arming station. Refer to: *The Challenger Programming Guide*

Program Arming Stations

- Record the arming station number in *Arming Stations to be polled*.
- Program an *Alarm group* for the arming station.
- Select the appropriate arming station type.



Challenger Magnetic Card Readers
Models TS0007 & TS0008 — Installation Guide

Connections: - 5mm Screw Terminals.

- J1: + Positive connection of the 12V DC supply. (10.5 -13.8 Volts @75mA maximum.
- Negative connection of the 12V DC supply and Common 0 Volt connection of the RS485 LAN.
D+ Data positive and Data negative connection of the RS485 LAN.
D- Remote units can be up to 1.5 kms from The Challenger control panel.
IN An Egress button (normally open, momentary pushbutton switch) may be connected across "IN" and "-".
OUT Open Collector Output. 50mA maximum. This output controls the first relay of the relay control group which is assigned to this arming station.

Links:

GND: Must remain fitted.

TERM: The termination jumper link must be in if the RAS is the first or last device on the LAN. If the system LAN is wired in a "star" configuration, the TERM link is only fitted on the devices at the end of the two longest LAN cable runs. i.e. In a Challenger system only two devices connected to the LAN can have the TERM link fitted.

Addressing the Card Reader:

Each Arming Station/Reader must be set to an individual address. This is done using the dipswitches. DIP switch settings are as follows:

Table with 5 columns: RAS No., 1, 2, 3, 4. Rows 1-12 showing switch settings (ON/OFF).



Challenger Magnetic Card Readers
Models TS0007 & TS0008 — Installation Guide

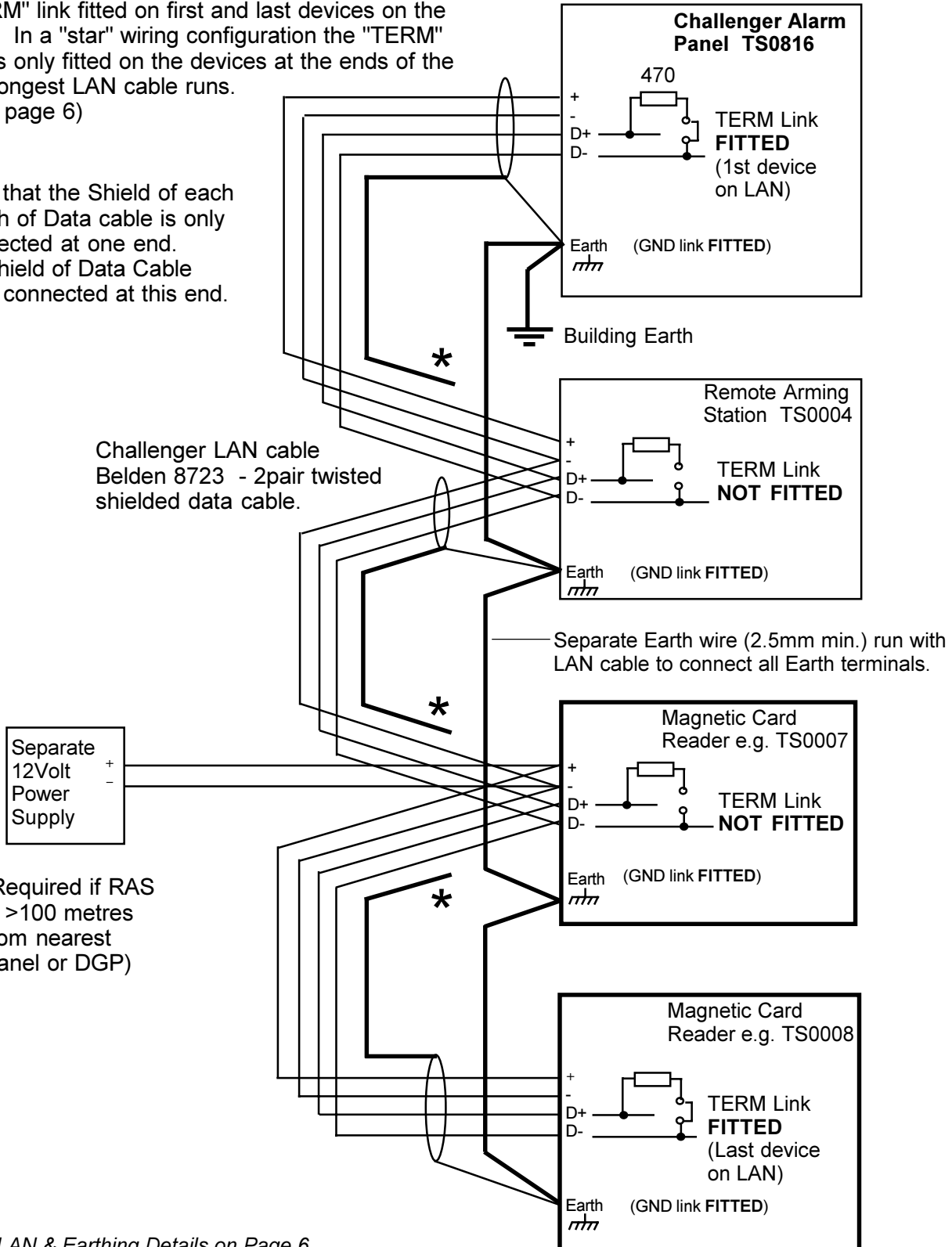
Revised! — see Protective Earthing Addendum

LAN system & Earth Connection Block Diagram

"TERM" link fitted on first and last devices on the LAN. In a "star" wiring configuration the "TERM" link is only fitted on the devices at the ends of the two longest LAN cable runs. (See page 6)

Note that the Shield of each length of Data cable is only connected at one end.

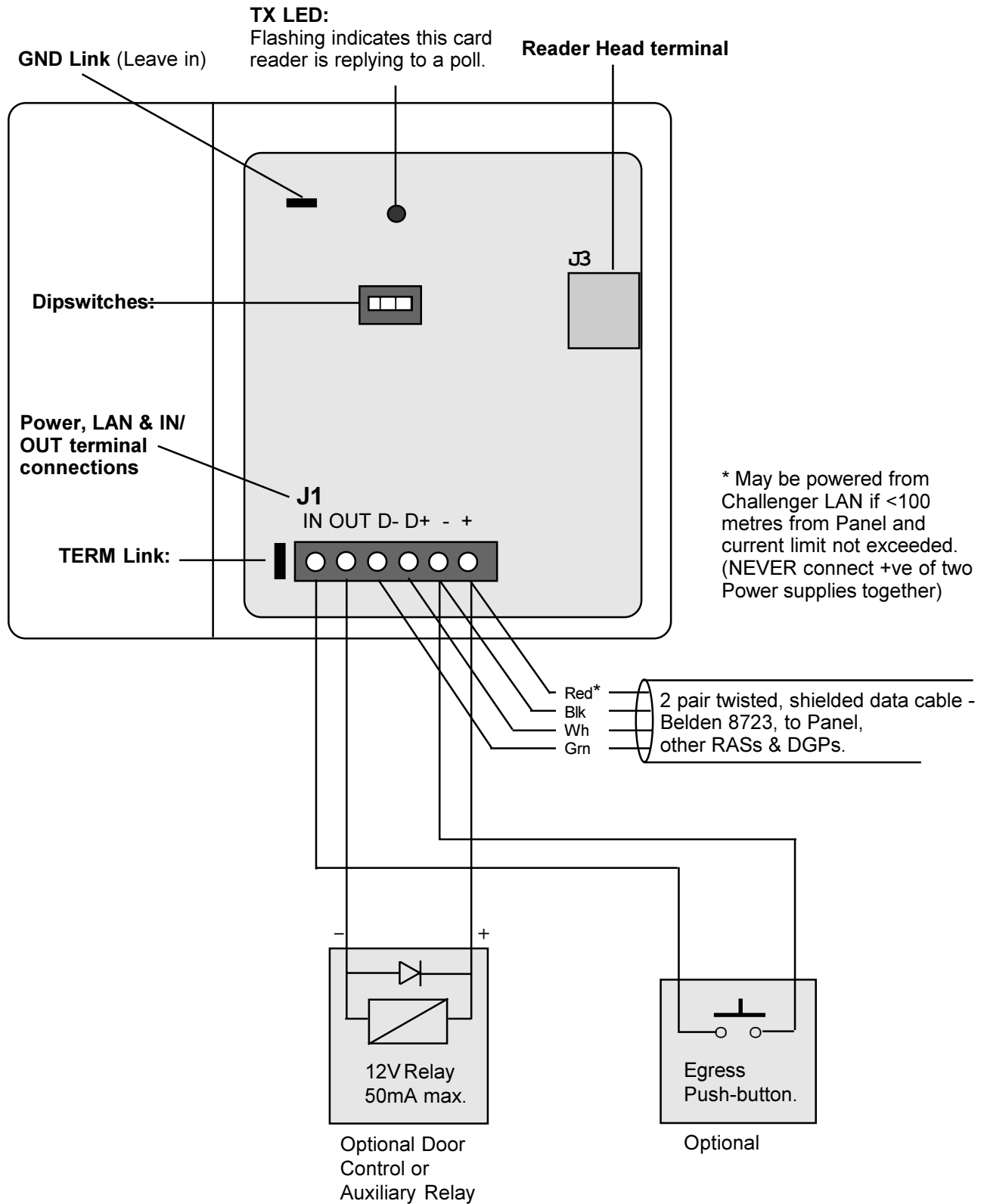
* Shield of Data Cable NOT connected at this end.



See: LAN & Earthing Details on Page 6.



Challenger Magnetic Card Readers
Models TS0007 & TS0008 — Installation Guide



See: Connection Details on Page 3.



Challenger Magnetic Card Readers **Models TS0007 & TS0008 — Installation Guide**

LAN connection:

The RS485 LAN is used to connect Arming Stations and Data Gathering Panels (to provide extra inputs) to *The Challenger* panel.

Magnetic Card Readers (RASs) must be connected via a 2 pair twisted shielded data cable (Belden 8723 is recommended) from the LAN connection.

The shield of any data cable connected to the Magnetic Card Reader (RAS) should be connected to earth at one end only. i.e. The Panel or DGP that the other end of the data cable is connected to.

It is recommended that where the distance between a **TS0007/TS0008** (Reader) and the nearest device is more than 100 metres, a separate power supply be used to power the RAS.

To power the Reader, **do not** connect '+' from the LAN. Connect '+' of the local power supply to '+' on the Reader and connect 0 volts from the power supply **and** 0 volts from the LAN connection to the terminal marked '-'.

See wiring diagrams on page 4.

PCB LEDs:

Tx: Tx LED flashing indicates RAS is replying to polling from the Challenger Panel.
Rx LED flashing but no Tx LED indicates RAS is not programmed to be polled or is addressed incorrectly.

Earthing:

The **earth terminals** on every piece of equipment in the system that is housed in a metal base, must be earthed by connecting them all to one common earth point via separate Earth wire **run with the LAN cable/s back to the Challenger Panel**. The separate Earth wire must be at least 2.5mm². A heavier gauge is recommended for runs of over 500 metres.

The "GND" link must remain fitted.

The RAS must not be connected to a local earth.

This method of earthing is the only way to guarantee that the difference in earth potential between any two Challenger products connected to the LAN remains at an acceptable minimum.

See wiring diagrams on page 4.



Challenger Magnetic Card Readers Models TS0007 & TS0008 — Installation Guide

Front Panel LED Indications:

- ACCESS:** Illuminates when at least one of the areas assigned to the reader is disarmed.
and
When a Card/PIN is used to open a door, the LED will flash for the access time.
- ALM:** (Alarm) Illuminates when an alarm has occurred in one of the areas assigned to the reader.
- RDY:** When connected to *The Challenger* :
Illuminates when the area is ready to be secured. ie. All inputs sealed.
or
When connected to an Intelligent Controller: Illuminates when ready to accept entry of a Card/PIN.
- SECURE:** Illuminates when the area is armed.
- TX LED:** (Inside unit) If the TX LED is flashing it indicates that the reader has been programmed to be polled by *The Challenger* and the reader is replying to the poll.
- All LEDs flash:** The reader is not being polled, is not addressed correctly, or there is a LAN cabling fault. i.e. All LEDs will flash when power is connected to the unit but there is no communication with the Challenger Panel.

Maintenance:

The reader should be mounted in a location where it will not be exposed to dust, as this will result in excessive wear of the cards and reader head.

Special cleaning cards are available, which can be used periodically to help prevent a build up of oxide and dust on the reader head.



Challenger Magnetic Card Readers Models TS0007 & TS0008 — Installation Guide

Compliance



N4131

Please note, 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.

Disclaimer

The customer is responsible for testing and determining the suitability of this product for specific applications.

In no event is GE Interlogix responsible or liable for any damages incurred by the buyer or any third party arising from the use or their inability to use the product.

Due to ongoing product development, the contents of this manual can change without notice. We make every effort to ensure the accuracy of this manual. However, GE Interlogix Australia assumes no responsibility for errors or omissions in this manual or their consequences. Please notify us if you find any errors or omissions.

Contact details and technical support

© GE Interlogix Pty Ltd

August 2002

646 Whitehorse Road, Mitcham, Victoria, 3132

Phone +61 3 9259 4700

Fax +61 3 9259 4799

Email: techsupport@tecom.com.au

Hours: Technical Support hours are: 9:00 to 5:30 p.m., Monday to Friday.

Part number: MAINST-TS0007/TS0008

(Redesigned with no changes to technical content; August 2002)