

# 8-Way Relay Card (TS1041) Installation Sheet

## Description

An 8-Way Relay Card (TS1041) adds relays to the Challenger series panels, Intelligent Access Controllers, Network Access Controllers or to standard DGPs.

In most instances, the TS1041 card adds eight relays. However, the first TS1041 card connected to a Challenger series panel provides only seven relays because relay 2 is the panel's strobe output.

A series of interconnected TS1041 cards can be used to expand the number of relays (outputs) at the panel's or the DGP's address, as permitted by the Challenger numbering system and by practical limitations.

For practicality, the workable limit for a series of physical relays is 512, which limits the number of 8-way relay controllers to a total of 64. This is limited to the specification of the Challenger panel.

## Product contents

Quantity	Item
1	TS1041 8-Way Relay Card with 10-way cable
2	2-way plug on screw terminal
8	3-way plug on screw terminal
7	M3x10 pan-head Phillips screw
6	PCB support stand off
1	Ring terminal
1	Installation Sheet

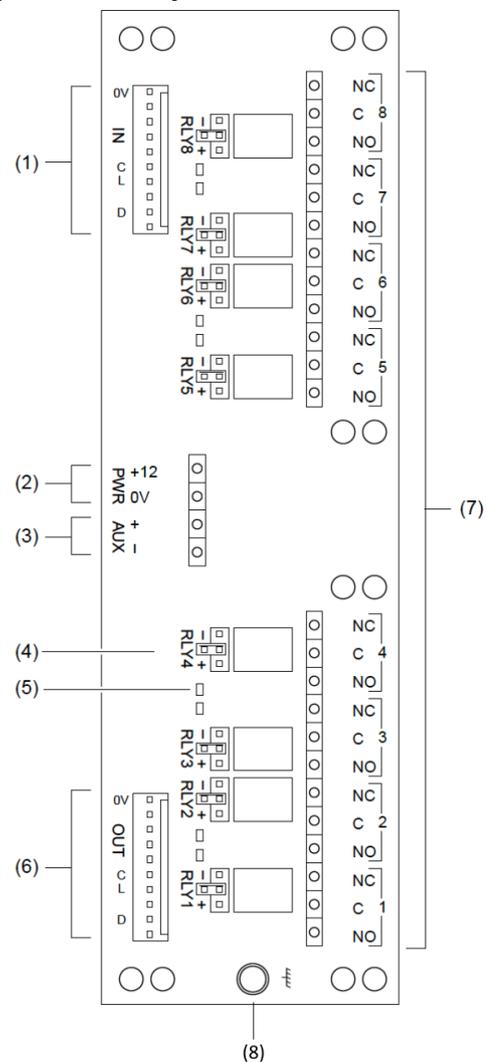
Inspect the package and contents for visible damage. If any components are damaged or missing, do not use the unit; contact the supplier immediately. If you need to return the unit, you must ship it in the original box.

## Installation

TS1041 cards are mounted on standoffs (supplied) using M3 x 10 mm pan head screws (supplied) inside a DGP enclosure or a separate enclosure. The TS1041 PCB is size 'BB'.

**NOTICE!** A qualified service person, complying with all applicable codes, should perform all required hardware installation

Figure 1: TS1041 layout and connectors



1. Data and power connection from Challenger panel, Intelligent Access Controller, Network Access Controller, standard DGP, or from a TS1041 card via ten-way LEV8-10-500P cable (supplied).
2. Optional +12 and 0V power terminals when using an external power supply or heavier gauge cable than the supplied 10-way ribbon. If used, remove the power from the ten-way cable (see "Wiring" on page 2).
3. Optional + and - auxiliary power terminals are separate from the +12 and 0V power terminals. The AUX terminals may be used to supply the relays' common contacts to + or - voltage, as set by the relays' links. 48 VDC maximum.

4. Links (for each relay) to connect + or – auxiliary power to the relays' common contacts, if required.
5. LEDs (for each relay) to indicate when the relay is active.
6. Data and power connection to a TS1041 card.
7. Eight single-pole relays with connection terminals to the common (C), normally open (NO), and normally closed (NC) contacts.
8. M3 threaded earth terminal.

**To install the card:**

1. Disconnect the plug pack and battery from the panel or DGP.
2. Insert six standoffs (supplied) into the DGP enclosure or a separate enclosure at a location suitable for the ten-way cable to connect the card to the control panel, DGP, or other card, as needed.
3. Use six M3 x 10 pan head screws to fix the card to the standoffs.
4. Connect the ten-way cable to the control panel, DGP, or other TS1041 card.
5. Connect the relay cables to the card as required.
6. Reapply power to the panel or DGP.

Configure the Challenger series panel, Intelligent Access Controller, or standard DGP accordingly:

- If connecting to a Challenger series panel, set the value of System Options > Relay Controllers to a value greater than 0 where 1 represents every 8 relays available.
- If connecting to an Intelligent Access Controller / Network Access Controller, set the value of Controller Options > Relay Controllers to a value greater than 0 where 1 represents every 8 relays available.
- If connecting to a standard DGP, set the configuration DIP switch segment 6 to ON.

**Wiring**

Connect the card via the IN connector, using the supplied ten-way cable, to one of the following devices (the connector number varies with the device):

- J14 on a Challenger series panel
- J21 on a 4-Door or 4-Lift Controller
- J8 on a standard (TS0820 or TS0824) DGP
- J200 on a Network Access Controller
- Out connector on a TS1041 card

8-Way Relay Cards may be daisy chained together. The IN connector of one card is connected to the OUT connector of another. See the Specification table for the number of daisy chained cards supported by each device.

Chains of 1 or 2 cards may be powered from the parent device listed above. The +12V link on the parent device must be closed with a jumper.

Chains of 3 or more cards must be supplied with +12V from an external supply to the power input terminals (Figure 1, item 2). The +12V link on the parent device must be open (jumper removed).

8-Way Relay Cards must be earthed (Fig 1, item 8).

**Before you begin:**

- Upon being powered up, relay cards may take up to 15 seconds to activate
- If relays are powered externally and power to the panel is lost, the state of all relays will reset (turn off) after 30 seconds
- Relays will indicate but not reliably operate when voltage is less than 9.5V

**Specifications**

Voltage	13.8 VDC supplied by Challenger panel, DGP, or auxiliary power supply
Number of relays	Eight NO or NC dry contact relays
Contact rating	1 A at 0 to 30 VDC, reducing to 300 mA at 48 VDC
Current	
Standby	50 mA
All relays active	250 mA at 13.8 VDC
Challenger panel max.	32 ~ 64 cards (practical limitation)
4-Door / Lift max.	2 / 32 cards (practical limitation)
Standard DGP max.	2 cards
Connection	10-way cable (supplied)
Dimensions (W x H)	Tecom 'BB' size (176 x 52 mm)

**Regulatory Information**

Manufacturer	Carrier Fire & Security Australia Pty Ltd 10 Ferntree Place Notting Hill, Victoria 3168
Year of manufacture	Manufacture date can be determined by the serial number: <b>276YYDDDDNNNN</b> <b>276:</b> Product code for TS1041 <b>YY:</b> 2 digit year format (eg 19 = 2019) <b>DDD:</b> 3 digit day of year (eg 014 = Jan 14) <b>NNNN:</b> 4 digit production number
Compliance	 ACMA C-tick for Australia and New Zealand

**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 Carrier Fire & Security Australia 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.firesecurityproducts.com.au](http://www.firesecurityproducts.com.au).